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**Improving Access to Health and Social Care  
for Vulnerable UK Armed Forces Veterans  
following Transition to Civilian Life**

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**A commentary submitted in partial  
fulfilment of the requirements of the  
University of Northumbria at Newcastle for  
the degree of Doctor of Philosophy by  
Published Work**

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## **Abstract**

This PhD by Publication brings together seven papers published between 2018 and 2020. The research that informed the published papers has identified key issues as well as the development and implementation of solutions to improve access for military veterans following transition from UK Armed Forces to civilian life. The commentary provides academic and policy relevant contributions to the field of military veteran studies and the papers influence discrete areas of research into access to health and social care. The central premise and the overarching theme of this body of work is that it is essential that health and social care providers understand the characteristics of the veteran population in addition to providing the potential to utilise the Veterans Vulnerability Framework that has been developed through the process of interpretative synthesis.

Central to the commentary is the value placed on peer-informed research to support investigation of a community defined as 'hard to reach' and the significance of the relationship between service providers and service users to help to shape health and social care provision to better facilitate access. Integral to the focus on peer-informed research is the development of a framework that attends to how vulnerabilities arise in relation to transition from the Armed Forces and, in turn, how the resultant barriers to seeking help and accessing support can occur. By providing a better-informed and evidence-based understanding of the phenomenon of access through the stories that veterans have told, recommendations are proposed for policy, practice, and future research. The Veterans Vulnerability Framework demonstrates to policy makers and those working in health and social care services how vulnerability following transition from the UK Armed Forces operates and where interventions could be applied to support veterans to access and engage with support services. The focus on transition and being outside of the Armed Forces provides an opportunity to identify vulnerability at this juncture and consider improving access to support to promote psychological, physical and social well-being after military service. The focus on transition and being outside of the Armed Forces provides an opportunity to identify vulnerability at this juncture and to consider improving access to support in order to promote psychological, physical and social well-being after military service.

The production of the synthesis argument to consider vulnerability, as a key concept, attempts to improve prediction and prevention of health and social problems and provide a more holistic and comprehensive response to challenges. Informed by themes derived from re-conceptualisation of the sample of seven published papers, underpinned by the knowledge gained from three empirical research studies, the commentary reflects on an alternative approach to developing 'veteran friendly' services and adopting impactful policy related practice with greater awareness of the sources of

vulnerability and the resultant impact. A pragmatic philosophy underpins and frames the commentary to fully consider the research inquiry into improving access to health and social care for vulnerable veterans.

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## List of Accompanying Materials Appendices

A	McGill, G., Wilson-Menzfeld, G., Hill, M., & Kiernan, M. (2019). Supporting the principles of the armed forces covenant in NHS trusts and clinical commissioning groups across England. <i>BMJ Open</i> 9(1), e022053.	Paper 1
B	Kiernan, M., D., Osborne, A., McGill, G., Greaves, P., J., Wilson, G. & Hill, M. (2018). Are veterans different? Understanding veterans' help seeking behaviour for alcohol problems. <i>Health and Social Care in the Community</i> 26(5), 725-733.	Paper 2
C	Caddick, N., Cullen, H., Clarke, A., Fossey, M., Harrington, B., Hill, M., McGill, G., Taylor, T. & Kiernan, M. (2018). Ageing, limb-loss, and military veterans: A systematic review of the literature. <i>Ageing &amp; Society</i> 39(8), 1582-1610.	Paper 3
D	Caddick, N., McGill, G., Greaves, P., J., Kiernan, M. (2018). Resisting decline? Narratives of independence among aging limbless veterans. <i>Journal of Aging Studies</i> 46 (2018): 24-31.	Paper 4
E	Wilson, G., McGill, G., Osborne, A., & Kiernan, M. (2020). Housing needs of ageing veterans who have experienced limb loss. <i>International Journal of Environmental Research and Public Health</i> 17(5), 1791.	Paper 5
F	McGill, G., Wilson, G., Foster, N., Osborne, A., Caddick, N., & Kiernan, M. (2020). Rehabilitation and transition in military veterans after limb-loss. <i>Disability and Rehabilitation</i> . 43(23), 3315-3322.	Paper 6
G	Leslie, C., McGill, G., Kiernan, M. D., & Wilson, G. (2020). Social isolation and loneliness of UK veterans: a Delphi study. <i>Occupational Medicine</i> , 70(6), 407-414.	Paper 7
H	Technical Report: Improving Access Report 2017 Understanding Why Veterans are Reluctant to Access Help for Alcohol Problems	Report 1
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## **Declaration**

I declare that no outputs submitted for this degree have been submitted for a research degree of any other institution. I also confirm that this work fully acknowledges opinions, ideas and contributions from the work of others.

Any ethical clearance for the research presented in this commentary has been approved.

**I declare that the Word Count for this commentary is 25,305 words**

Name: Gill McGill

Signature:

Date: 4 April 2022

## **Chapter One**

### **1.1 Introduction**

Chapter 1 provides background to the service provision available following transition from the UK Armed Forces, the context in relation to the submitted publications (Appendix A-G). It introduces and addresses the challenges reflected in the findings of the underpinning research (Appendix H-J) and debates the concept of 'access', as well as highlighting key contributions that this commentary has made.

### **1.2 Provision of health and social care services following military transition in the UK**

Around 15,000 people leave the UK Armed Forces every year (Office for Veterans Affairs, 2021). Based on the Office for National Statistics (ONS) Annual Population Survey results, the Ministry of Defence (MoD) estimated that there were 2.4 million veterans<sup>1</sup> residing in households across the United Kingdom (UK) in 2017, making up five per cent of household residents aged 16 and over. However, historically, veterans have not been identified in the UK census making it difficult to be accurate with regard to population numbers and geographical distribution. The national census conducted in 2021, asked people for the first time whether they had served in the Armed Forces (ONS, 2021). The process for developing the census question is intended to help the Government develop a common way of asking if someone has served in the Armed Forces. It is reported that this move will allow central and local government to better understand the profiles and needs of the ex-military community, in turn allowing for better data and understanding of the needs of this population (MoD, 2020).

Arguably, accurate information is important, particularly from an epidemiological perspective with the census data considered a central source of reliable population numbers (Bridge et al, 2007). However, there is a counter argument that supports the premise that help-seeking behaviour is a significant issue in the veteran population and there is a need to access a wider range and different types of data to counteract this issue (Iverson et al., 2010). As such, regardless of the potential to gather information on population numbers and location data in the future, research into the barriers that veterans face when seeking help has highlighted the extent to which health and social care professionals struggle to understand their distinct needs. This is compounded by veterans' negative

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<sup>1</sup> Veterans are defined as anyone who has served for at least one day in Her Majesty's Armed Forces (Regular or Reserve) or Merchant Mariners who have seen duty on legally defined military operations.

experiences concerned with service accessibility and the type of support that is offered (Kiernan et al, 2018).

The provision of health and social care services for UK Armed Forces service leavers (referred to throughout as veterans) has been widely debated over recent years (Buckman et al., 2013; Iverson et al., 2011). The debate is multi-faceted and includes issues around transition from military service to civilian life, which can result in service leavers feeling unprepared months, and even years, after leaving the Armed Forces (Bergman, et al., 2014).

The Ministry of Defence (MoD) is responsible for providing both basic and specialist healthcare for all serving personnel. Mental health care can be provided to UK Armed Forces personnel in a primary care setting by a Medical Officer or via outpatient or inpatient services staffed by specialist mental health clinicians provided by the MoD. When service personnel leave the Armed Forces, their healthcare is the responsibility of the NHS (Fulton et al, 2019). In the UK Government's Strategy for Veterans (MoD, 2018), there is recognition that there are many organisations, both Government and charity, that can be involved in delivering care to veterans. However, co-ordination of this multi-layered delivery can be problematic (Finnegan, et al, 2018) as the structures are often not in place that would enable partnership working or facilitate integrated practice (Pearson & Watson, 2018).

This commentary is written at a time when interest in the UK Armed Forces has increased significantly as a result of their involvement in over a decade of intense operations in Iraq and Afghanistan (Phillips et al., 2021). In 2011, the Armed Forces Covenant (AFC) was introduced stating that all veterans should be offered priority healthcare if their physical or mental health problems are associated with their service. Local authorities have been encouraged to sign the AFC as a formal declaration of their intention to support veterans and families within their communities to ensure they have access to services should they need to (Ministry of Defence, 2011). The AFC also outlines the importance of ensuring that public services, and the communities they serve, are aware of the specific needs of veterans and work together to ensure these needs are better met (Fulton et al., 2019). The introduction of the AFC into UK legislation in 2011 followed a period of extensive public debate about the treatment of injured veterans and strong political pressure from military and political leaders (Hines, et al., 2015). Consequently, National Health Service (NHS) providers are required to give due regard to the AFC and this requirement extends to the expectation that there is a set of common access policies to ensure equity of access for service personnel, including veterans and their families.

### **1.3 Service-based barriers to accessing health and social care services**

The term 'access' is frequently used with respect to the utilisation of health and social care service provision, yet any definition is often ambiguous and reliant on provider-led interpretation (Gulliford, et al., 2002). For service users in the general population, recognition of the need for services that offer both health and social care support is the first step to accessing support (Small et al., 2017; Shaw et al., 2008). The probability of utilising services depends on the balance between individuals' perception of their needs and their attitudes, beliefs and previous experiences of health and social care services. For example, if individuals had a negative experience of using such services in the past, they may be reluctant to seek support (Bee et al., 2017).

In addition, providing equitable access to health and social care services that are situated in a rural or a remote community is a well-recognised challenge that most service providers face (Khan & Bhardway, 1994). There are a number of models that have been developed across disciplines that explore the complexity of the concept of access and geographical distribution of services that focus on ensuring that service users' needs are met; either in relation to prevention of illness and promotion of health and wellbeing and/or treatment, support and aftercare. One of the most extensively used models in health services research is Andersen's Behavioural Model of Service Use (BMHSU). This model is primarily based on a national quantitative survey that explored how to better understand families' use of health services (Lederle et al., 2021) and has three main factors that seek to explain the utilisation of healthcare; pre-disposing factors (such as age), enabling factors (such as income) and need factors (e.g., health status). Other models include multi-dimensional views of access to healthcare and consider socioeconomic determinants; for example, Levesque's Conceptual Framework for Healthcare Access that calls for a greater understanding of the complexity of access to primary care. Levesque's model suggests that there are various stage of help seeking that could help to inform the monitoring of disparities in access, as well as recognising the variations across geographical regions. For Levesque, these challenges have the potential to accumulate and result in barriers to access, including for vulnerable groups (Levesque et al., 2013). Similarly, Penchansky and Thomas's Dimensions of Access model recognises that optimising access requires an understanding of different dimensions; namely, accessibility, availability, acceptable, affordability and adequacy of service design, implementation, and evaluation (Saurman, E., 2016).

The models (Andersen's BMHSU; Levesque's Conceptual Framework for Healthcare Access; Penchansky and Thomas - Dimensions of Access) described and discussed above support the view that the processes of access are subject to social and cultural influences and, as a result, service user expectation may not always be consistent with those of health and social care professionals'

expectations (Gulliford et al., 2002). Accessing support from health and social care services following transition from the UK Armed Forces, even after extended periods of time since leaving force's life, can be fraught with challenges (Kiernan et al., 2016). These challenges are often poorly understood among health and social care providers and research has highlighted the need to employ a culture-centred communication strategy that promotes both readjustment and engagement with support services (Weir et al., 2019; Cox et al., 2018; Randles & Finnegan, 2022).

There are a number of barriers that may impact on access to health and social care services. Research suggests that treatment and support offered by civilian services, NHS and third sectors organisations, is beneficial to veterans provided they access help when they need it (Kitchiner et al., 2012). However, evidence supports the view that veterans under-use these services (Greenberg, 2014) although, to date, research has largely focused on mental ill health and help seeking behaviour and the role of stigma (Mellotte et al., 2017) with research into improving access and enablers of help-seeking behaviour remaining scarce.

The models, frameworks and concepts developed through the work of Levesque, Penchansky and Thomas (Lederle et al., 2021) that seek to address socioeconomic determinants of health incorporate the ability of vulnerable individuals to seek help that resonate with the concept of vulnerability discussed in Chapter 3. It is also encouraging to see a focus on vulnerability in Duel et al.'s (2019) article, specifically highlighting the difficulties help-seeking veterans can face during transition. Duel, et al. (2019) carried out a literature review of factors that contribute to vulnerability within the service-leaver population and outline potential support mechanisms. However, there remains a dearth of literature that explores the assessment of vulnerability that is qualitative and supported by the real-life stories on how to facilitate access to services for veterans who are vulnerable. Further exploration of the literature also highlighted pertinent issues in relation to challenges in accessing health and social care in recent years (Goldberg et al., 2020; Randles & Finnegan, 2021), but, in the main, the issues addressed relate to mental ill health and problematic alcohol use. Other than literature such as 'The Veterans Review' (Ashcroft, 2014), and the work of Godier et al., 2018 and Bergman et al., 2014 (which focused on early service leavers), there is little emphasis on how the perception of civilian health and social care services and the disparity between service availability and service use/access come together to create vulnerabilities.

Although some health and social care issues that veterans face have attracted media attention and have been subjected to scrutiny, such as mental ill health and the prevalence of musculoskeletal problems, what is presented in this commentary is in an area of health and social care that suggests a different understanding is necessary to address the challenges some veterans face. Framed by a

methodology of pragmatism (Creswell & Tashakkori, 2007) and utilising a participatory lens (Reason & Bradbury, 2001) discussed in Chapter 2, this commentary establishes a clear case for the utilisation of the proposed Veterans Vulnerability Framework (Chapter 4) as an important step in the quest to improve access to health and social care for veterans. The present argument is rooted in the presented publications and related research and is underpinned by the ethos of the Northern Hub for Veterans and Families Research Hub at Northumbria University<sup>2</sup> of understanding the complexity of the challenges that some veterans face in a coherent way that is embedded in human-centred understanding of post-military lives, discussed in the next chapter.

Furthermore, health and social care systems, and pathways to care, do not exist in isolation and factors such as productivity pressures, changes in financing and the influence of outside information sources that may perpetuate stereotypes of ‘hard to reach’ (explored in Chapter 3) populations (Hass, 2005). Perception of those who serve in the Armed Forces in the wider society may influence health and social care professionals’ practice and patients’ expectations, such as the anticipation of being misunderstood or dismissed as ‘a difficult patient’ (Pyne et al., 2019). This possible misunderstanding of the issues faced has the potential to lead to vulnerability (explored in Chapter 4), characterised by transition from the Armed Forces and the loss of a shared culture, whilst recognising that individuals’ experiences are shared by a myriad of experiences occurring at the same time as post-military transitions are also occurring (Patel, 2015). Nevertheless, it is important to note that not all veterans are vulnerable. The concept of vulnerability is defined as arising from unmet need and the call for a better understanding of the challenges that some veterans face following transition: and access is concerned with equity and how engagement with health and social care services for veterans is determined, and negotiated, to address unmet needs, particularly with regard to allocation of resources and configuration of services. (Duel et al., 2019). This is discussed further in Chapter 3.

#### **1.4 Veterans’ perceived barriers to accessing health and social care**

There is a commonly held belief among the participants who took part in the studies embedded in this commentary (Appendix G-H), and in the available literature (Brunger et al., 2013; Finnegan et al., 2018; Fulton et al., 2018), that civilian-based services may not understand the unique experience of UK Armed Forces personnel (Finnegan et al, 2018). Therefore, it is assumed that health and social care

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<sup>2</sup> Established in 2014, the Northern Hub for Veterans and Military Families Research at Northumbria University works with the UK veteran community and their families to deliver translational research that seeks to influence policy and practice in health and social well-being.

services providers will be unable to help, resulting in unequal access to health and social care, with needs unaddressed. As a direct consequence, it is commonplace for many veterans to access services late, with the average delay between symptom, onset of problems and presentation to services being as much as 13 years (Fulton, et al, 2018).

A number of studies have looked at trying to understand the barriers that prevent veterans from seeking help, primarily for mental health difficulties (Mellotte et al., 2017). Findings from these studies suggest that factors such as stigma (Iverson et al., 2011), negative attitudes about mental health services (Kim et al., 2011) and poor recognition of the need for treatment (Zinzow et al., 2012) are barriers to help-seeking for veterans. Williamson et al., (2021) explored the experience and challenges faced by healthcare practitioners in providing treatment of veterans affected by moral injury – defined as the suffering some veterans experience when they engage in acts during combat that violate their beliefs about their own sense of what is right and what is wrong (Nash et al, 2009). Among the issues that were identified, maladaptive coping strategies and re-traumatization issues were highlighted as significant as well as the need to build a trusting therapeutic relationship with the providers of healthcare (Williamson et al., 2021; Nash et al., 2009). In addition, practical barriers to accessing care are also important and include problems associated with availability and accessibility of services (Lind et al., 2017).

In addition, services leaver's level of health literacy may impact on their ability to use services, brought about by a negative attitude towards civilian healthcare providers and the behaviour and attitudes of healthcare professionals towards the veteran population (Randles & Finnegan, 2022). This kind of limited health literacy hampers opportunities for vulnerable and disadvantaged groups to be actively involved in decisions about their health and social care over the life-course (Raynor, 2012). This can undermine the ability to take control of health and social care needs as they arise and impact on physical and/or mental health.

### **1.5 An overview of this commentary**

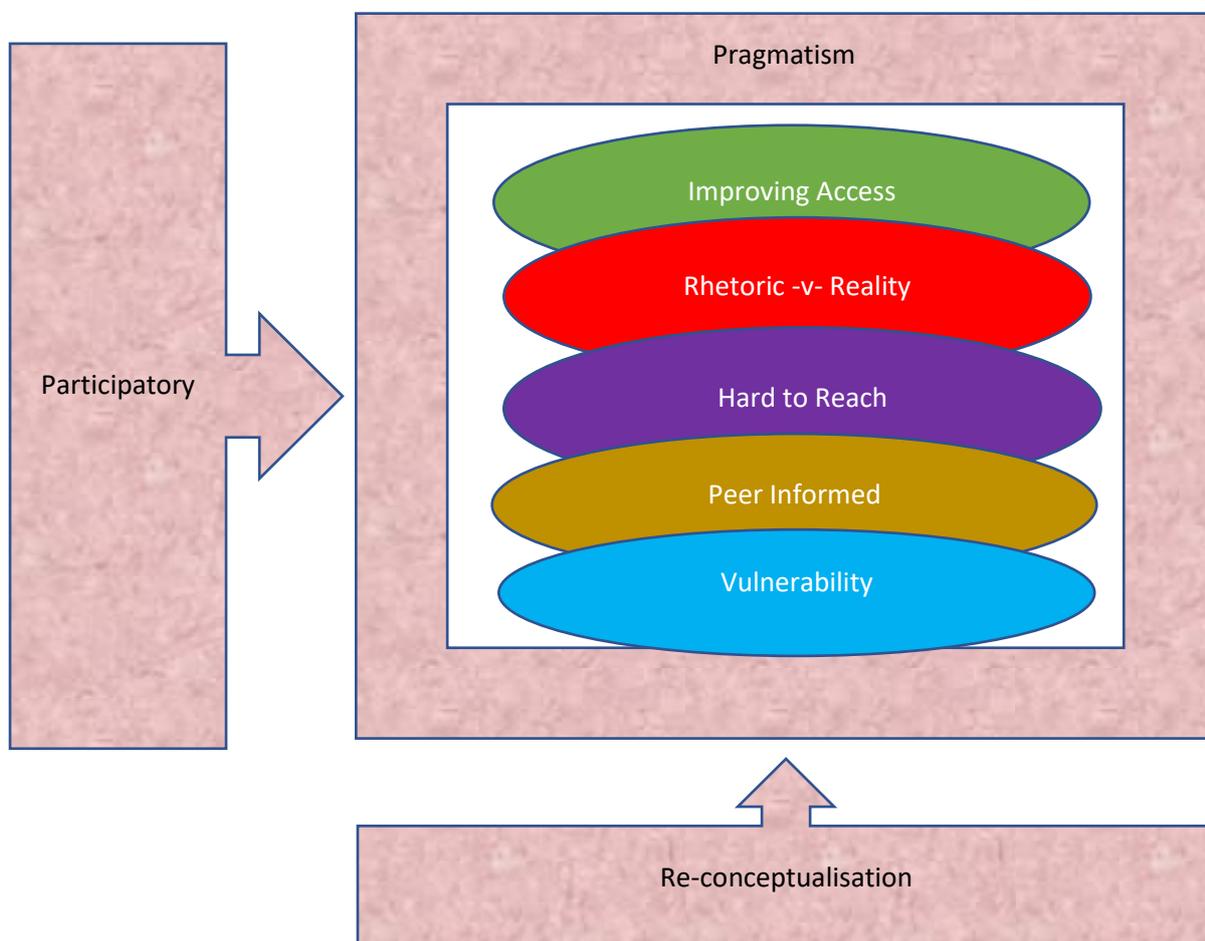
Facilitating access, as a concept, is relatively straight-forward since it is concerned with helping service users to utilise appropriate health and social care support in order to preserve or to improve their health. The concept of access itself is not consistently defined (Pemberton et al., 2019) but the definition that applies here relates to the need, provision and utilisation of health and social care services, including the process through which entry in the 'system' occurs. In this commentary, access

is examined in the context of the themes that have been arrived at by a review of the seven presented publications as a body of work.

A history of service life means that veterans are unfamiliar with civilian support services and, therefore, are inclined to favour assistance provided by the military (Randles & Finnegan, 2022). Services have not always been equipped to address the multiple and complex needs that veterans' present with, resulting in a stark contrast between care delivered by the MoD while serving in the Armed Forces and the disparate services, with no clear pathways, offered thereafter (Bricknell & Cain, 2020). Problems associated with transfer of care from MoD to civilian-based services include the beliefs that healthcare providers do not have sufficient knowledge of the military, the experiences Armed Forces personnel encounter or the Armed Forces distinct culture and language (Fulton, et al, 2018).

Together with exploration of the concept of vulnerability and access, this commentary presents an argument for an evidence-based, servicer-user led understanding of the need to improve access to health and social care services that recognises the impact of the challenges veterans who become vulnerable face following transition. This includes a critical exploration of the concepts of vulnerability and transition. The argument is informed by emergent findings from the sample of seven papers (Appendices A-G) that support this commentary. Framed by a methodology of pragmatism (Cresswell & Clark, 2007) and utilising a participatory lens, the commentary presents an informed position on improving access to health and social care for vulnerable veterans. Figure 1 represents the theoretical framework and themes from the reconceptualization of the presented publications and related empirical research. Figure 1 will be explained in-depth in the proceeding chapters by examining methodology, philosophy and re-conceptualisation (Chapter 2), and themes and key concepts (Chapter 3).

Figure 1: Theoretical Framework underpinning this commentary. Improving access is framed by pragmatism and influenced by the principles of participatory research (Chapter 2). These support the re-examination of submitted publications and underpinning research leading to key concepts developed and discussed in Chapter 3.



This introductory chapter provides background to the commentary on the exploration, analysis and findings from three underpinning empirical research projects (Appendices H-J) that informed the submitted papers (Appendices A-G). The research and publications support the view that it is essential that health and social care providers understand the characteristics of the veteran population and strive to enhance veteran-specific knowledge to support practitioners to improve care for veterans. It is also necessary to understand the structure and availability of services for veterans, and to explore the contrast between civilian health and social care provision for those who no longer serve in the Armed Forces and the provision that is available to serving personnel.

To enhance understanding, this introductory chapter (Chapter 1) describes the health and social care provision available following transition from the UK Armed Forces, within the context of the presented publications. As well as addressing the challenges veterans face and re-examining access in the context of veterans' health and social care needs, this chapter highlights key contributions of this commentary through new knowledge gained and policy and practice recommendations. Chapter 2 discusses the review of the submitted papers and related research with regard to methodology and philosophy to explain the re-conceptualisation. Chapter 3, explores the themes and key concepts that were generated from re-conceptualisation (Figure 1) of the presented papers and the research studies underpinning them, positioning the commentary within the context of access to health and social care for veterans. Within Chapter 2, the ontological and epistemological positioning of the thesis is discussed in order to offer a rationale for the development of a Veterans Vulnerability Framework with reference to the development of this in the context of translational research. Chapter 4 describes the proposed Veterans Vulnerability Framework and the potential impact of this in relation to improving access to health and social care. The commentary concludes at Chapter 5 with an exploration of the potential broader impact of the quest to improve access and the potential of adopting the Veterans Vulnerability Framework; with reference to current developments within the field of military veteran studies.

In this commentary, the presented papers are re-assessed, highlighting the original empirical, theoretical and methodological contributions the publications have made to the field of veterans' studies in the context of access to health and social care services. Using meta-inference to reconceptualise the qualitative research, a pragmatic approach has been taken to assess the research and develop theories that have emerged from the findings. Three key themes; 'rhetoric versus reality', hard to reach populations and peer-informed research (Figure 1), provide a research-grounded basis for understanding and applying new ways to address challenges and solve problems related to access to health and social care following transition from the UK Armed Forces.

The contribution to originality and knowledge by this work is found in the argument for improvements to be made in understanding of the challenges veterans can face in gaining and maintaining access to health and social care, driven by an understanding of the relationship between transition and resettlement. Underpinning this approach is the view that veterans who face challenges are potentially vulnerable, characterised by transition from the Armed Forces and the loss of a shared culture whilst recognising that individuals' experiences are shaped by a myriad of experiences occurring at the same time as post-military transitions are also occurring (Chapter 3). The emphasis

is on enabling a more embodied and personal account to better understand the lives and experiences of those affected. Appendix K provides reference to the outputs related to each of the seven publications with regard to the development of research design techniques and methodology, and author contribution related to the evidence submitted to inform the commentary.

## **Chapter Two: Methodology and philosophy: re-conceptualisation**

### **2.1 Introduction**

Chapter 2 develops further a coherent body of work for this commentary, framed by pragmatism and influenced by the principles of participatory research. Interpretative synthesis involved the essential tasks of induction and interpretation to develop key concepts (Dixon-Woods & Tarrant, 2009). The end result of the synthesis is not the aggregation of the data but rather exploration of the theory that is grounded in the studies included in this commentary. Concepts were generated from re-examining the research findings and the key contribution the methodology, design, data collection and analysis made, as a whole, to amass knowledge of what constitutes vulnerability and challenges that result in unmet health and social care needs. Specifically, how to better understand and improve military veterans' access to health and social care and to examine the concept of vulnerability (Table 1). The overall emphasis of the synthesis of the submitted papers was to draw out concepts that aimed to inform practice-level theory (as discussed in Chapter 3). The review of the papers led to re-conceptualisation of the findings that informed the construction of the themes (Table 1) and also to support the discussion of the Veterans Vulnerability Framework in Chapter 4.

### **2.2 Re-conceptualisation**

The methods used to understand the challenges faced by veterans attempts to break new ground by generating and synthesising multiple sources of evidence. It is intended to acknowledge the challenges faced by veterans and, utilising this knowledge, develop innovative ways to improve access to health and social care services. The evidence from the publications (and the research studies) were synthesised and organised into the themes discussed in Chapter 3.

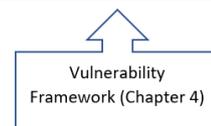
By identifying commonalities across the disparate qualitative sources, the synthesis generated a more in-depth level of evidence by examining veterans as 'hard to reach' in their social context. This was undertaken in order to shed light on veterans' understanding of access to, and their experiences of, health and social care services, systems and processes. No single source of evidence provided adequate information or had sufficient credibility to allow for a confident understanding of the challenges that veterans described or indeed, potential solutions. Synthesis of evidence from across these different studies and papers allowed for a more conceptual emphasis on the 'golden thread' of hard to reach, 'rhetoric -v- reality', peer-informed research and vulnerability, rather than any formal divergence from the papers. To be specific, veterans, as service users, emphasised the problems of alcohol misuse, social isolation, mental and physical health challenges following limb-loss, within the

respective papers/studies whereas this synthesis focused on the more on higher level engagement and accessing help and support – particularly the perceived difference between MoD and civilian health and social care service provision. The synthesis enabled a higher-level interpretation of the context of the findings as well as identifying insights into the challenges veterans faced with access to health and social care. The themes that reoccurred were highlighted as part of the re-conceptualisation process, underpinned by pragmatic characteristics that included the stories that veterans told of their own personal experiences (Table 1).

Table 1: The approach to synthesis adopted in this commentary. The use of qualitative and quantitative methods of inquiry (influenced by pragmatism) has been used to generate an interpretative synthesis.

Table 1: Synthesis Approach

Approach	Purpose	Search Strategy	Appraisal	Method of synthesis	Outcome
Interpretive synthesis	Contextualising the findings	Not comprehensive – theoretical sampling based on researcher knowledge	Includes all studies submitted as they provide insight into the phenomena of interest and inform theory	Identification of recurrent themes and development of a critique that informs theory generation	Re-conceptualisation of phenomenon. Critique of epistemological and normative assumptions of the submitted publications
Findings	Pragmatic Characteristics	Key Concept	Synthesis		
Misunderstanding/misinterpretation of commissioning responsibilities in relation to providing effective veteran-specific care and support.	Evidence to address practice and policy related questions	Policy is inadequate as a measure of commitment to providing accessible services (Rhetoric -v- reality)	Commit to employing locally knowledgeable veterans’ leads and maximise health needs assessment based on currently available data. Peer-led approach		
Veterans are disadvantaged in sourcing help and staying engaged with services	Critical understandings of phenomena	Transition – coping mechanisms are established during military service (Complexities)	Veteran’s experience difficulties/challenges that set them apart from general population		
Veterans are unaware of services available to them across the UK	Theme/findings supported by direct quotes from the research participants	Decreased social networks (peer-led support)	Building emotional resilience during transition is an important part of transition to civilian life		
Access to health and social care is a pre-requisite to obtaining quality care	Clear relationship between the researcher theme and participants’ expressed experiences	Unmet need (hard to reach)	Timely access to support across the life-course		



The Veterans Vulnerability Framework is highlighted as a potential framework for understanding exposure to risk and how this relates to transition from the Armed Forces. (Discussed in Chapter 4).

The underpinning primary research (Appendix H-J) that informed the submitted publications (Appendix A-G) aimed at understanding the challenges veterans face following transition and throughout their lives. The literature has been brought up to date as part of the process of re-conceptualisation and more recent research studies have been sourced and cited throughout this commentary, including a systematic literature review of the UK papers on alcohol covering the lifespan

of military personnel (Osborne et al., 2022)<sup>3</sup> that was published after submission of the prima-facie case for this commentary.

A key focus of the research design centred on recruiting veterans to take part and share their experiences of post-service life and help-seeking (Paper 2, 4, 5 & 6) and considered the issues faced by health and social care planners, commissioners (Paper 1 & 2) and providers of health and social care services (Paper 2 & 7). Both the primary research studies and the submitted publications suggested that utilisation of health and social care services was generally informed by ideas about what 'should be' and assumptions about the health and social care needs of veteran and availability of services (Cornwell & Goodrich, 2011). However, the body of work presented in this commentary specifically focuses on the challenges veterans have faced accessing services through the stories they have told, and the contributions that have been made by service providers and those who plan and influence service provision. The literature that was reviewed and referenced in the research studies (Appendix G-H) and the publications (Appendix A-G) included empirically based studies on long-term health outcomes, adapting to the use of prosthetics following limb-loss as well as disability and identity (Thomas, 2007; Frank, 2013; McGarry & Walklate, 2011).

It is evident from the synthesis of this collection of papers (Appendix A-G) and empirical research (Appendix H-J), that utilisation or receipt of health and social care is the outcome of many different complex processes, which all need to be recognised if access is to be properly understood. There must also be an awareness of what services are on offer and where they are. As well as a need for recognition that using health and social care services requires the mobilisation of a range of practical resources (Levesque et al., 2013) that may be variably available in the veteran population. There were several facets to inequality expressed by veterans who participated in the research (Appendix H-J) and the important aspects of their experiences detailed in the submitted publications helped to explain the challenges that they faced. For example, Paper 7 (Appendix G) explored the importance of assistance with transportation as a way to remove some of the barriers to access to support to combat social isolation and loneliness, as well as recognising financial constraints and physical limitations. The impact of the perceived failure of health and social care services to take responsibility for the care of veterans who experienced limb-loss and a lack of co-ordination of treatment was a further significant aspect of veterans' poor experience of care, resulting in a feeling of not knowing where to turn to for support (Papers 4, 5 & 6).

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<sup>3</sup> Osborne, A. K., McGill, G., Greaves, P. J., & Kiernan, M. D. (2022). Developing an Integrated Model of Care for Veterans with Alcohol Problems. *International Journal of Integrated Care*, 22(1).

Military culture comprises values, traditions, norms and perceptions that govern how members of the Armed Forces think, communicate and interact with one another and with civilian life (Redmond et al., 2015). By identifying commonalities across the disparate published work presented in this commentary, it became evident that the way in which health and social care professionals present themselves to veterans can be just as important as the care that they provide. Looking to understand how veterans are viewed and how services operate, from a planning and commissioning perspective, was a crucial aspect of shedding light on understanding of the processes of access in order to understand veterans' personal experiences and expressed opinions regarding accessing and engaging in health and social care. It was important review these experiences in order to gauge whether or not the experience of health and social care providers have of veterans is corroborated with the actual experience of veterans to address the discord between the cultural norms of health and social care organisation and their imagined ideal users (Terry & Coffey, 2019). To ignore this cultural dissonance would risk ignoring the potential to alienate veterans from health and social care services that appear to stereotype them or treat them with a lack of sensitivity and, therefore, lead to low permeability. Therefore, services that are easy to access because they require less qualifications of candidacy, which is concerned with the way individuals consider their eligibility for access health and social care, do not require a huge amount of resources (Tookey et al., 2018; Woods et al., 2012). However, services that are less permeable, require qualifications such as a referral or a pathway in and a high degree of cultural alignment between the service provider and the individual service users (Redmond et al, 2015).

A focus on the way veterans considered their eligibility for accessing services may help to start to identify where and when they are vulnerable. Recognising and acting on challenges to access and navigating routes to sustain engagement with services, has the potential to recognise where vulnerability may be amplified. By attending to how vulnerabilities arise in relation to arriving at and utilising services, the phenomenon of access can be better understood, and more appropriate recommendations made for policy, practice and future research.

### **2.3 Ontological and epistemological perspectives**

It is important to understand the relationship between service user needs (veterans) and service provision (health and social care) and being able to provide a clear perspective of the ontological and epistemological position of the commentary and the proposed Veterans Vulnerability Framework. As discussed in Chapter two, the Veterans Vulnerability Framework should be understood as an

independent concept, brought into being by engaging with the process of re-conceptualisation of the submitted papers (Appendix A-G).

A pragmatic philosophy underpins and frames the synthesis in order to fully consider the research inquiry into improving access to health and social care for vulnerable veterans. The seven publications present a progression of enquiry that has culminated in the presented body of evidence which illustrates the importance of understanding of the challenges faced based on lived experience and evidence from empirical research. The proposed development of a Veterans Vulnerability Framework (Chapter 4) is breaking new ground by connecting the concepts that have arisen from the synthesis (Chapter 3): 'rhetoric v reality', 'hard to reach' and peer-informed research to develop an innovative way of understanding the needs of veterans and proposing a vulnerability framework to address unmet need and the link to disparities in health and social care outcomes.

### **2.3.1 Pragmatism**

A major underpinning component of pragmatist epistemology is that knowledge is always based on experience and perceptions of the world that are influenced by social interaction (Bryman, 2006). The central tenant of this commentary is to consider why access to health and social care services is an issue for service leavers and how best to respond to the findings from the research that support the view that some veterans are potentially vulnerable. Taking a pragmatic stance, a service is not a service because it exists; it needs to achieve a purpose and access and engagement in health and social care provision needs to be consistent with the experience of service users (Kettles et al., 2011). Without understanding the experience of Armed Forces service leavers, it is not possible to focus on the consequences and meanings in a social context (Dixon-Woods & Tarrant, 2009).

Morgan (2014) summarises pragmatism as a doctrine of meaning, a theory of truth that relies on the argument that the meaning of an event cannot be given in advance of experience. Instead, the focus is on the consequences and meanings of an action or event in a social situation and specifically asking about the sources of our beliefs (Hall, 2013). For veterans, experience of serving in the Armed Forces has the potential to create meaning by bringing beliefs about civilian health and service providers and commonly held beliefs about practitioners' lack of understanding of the culture in contact with each other, reinforcing actions that affect access (McCormick et al., 2019).

Adopting pragmatism as a philosophy for this commentary supports the view that experiences create meaning that define actions and, in Dewey's support of this premise (in Morgan, 2014)<sup>4</sup>, there is no

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<sup>4</sup> In Dewey's approach to inquiry, there is no sharp boundary between everyday life and research. Instead, research is simply a form of inquiry that is performed more carefully and more self-consciously than most other responses to problematic situations.

clear boundary between what happens in everyday life and research. Research is simply a form of inquiry that is performed more carefully and more self-consciously than most other responses to problematic situations. Dewey’s systematic approach to inquiry involves five steps, which can be cross-referenced and summarised as follows (Table 2):

Table 2: Dewey’s model as applied to the of the work presented in this commentary illustrating the relationship between Dewey’s five steps and synthesis of the papers and research presented in this commentary.

Dewey’s five steps	Synthesis
Recognising a situation as problematic	Analysis of qualitative and semi-quantitative data on access to challenges related to health and social care for veterans in the UK
Considering the difference it makes to define the problem one way rather than another	Taking the research questions that were generated from the empirical studies and imagining as a coherent whole. Rich detail from the individual studies helped to draw out the strength of the narrative approach utilising storytelling methodology and peer led research.
Developing a possible line of action as a response to the problem	The quest for new knowledge, and the process of re-examination, has been extended to explore the concept of vulnerability and related themes of ‘hard to reach’ and ‘peer-informed research, ‘rhetoric -v- reality’.
Evaluating potential actions in terms of their likely consequences	Examination of the analysis and findings across the outputs highlighted veterans’ preferences for particular forms of healthcare and support, their perception of the accessibility of civilian services and influenced their inclination to use services and to seek support. The reluctance to access services was largely founded in the perception that it was an unreceptive environment dominated by a lack of understanding of military life, the culture and unique aspects of the challenges faced. As a result, to gain access and to utilise health and support services required considerable work on the part of veterans in the context of ‘hard to reach’ and vulnerability.
Taking actions that are felt to be likely to address the problematic situation	Development of a Veterans Vulnerability Framework. The framework may also be useful for seeking to respond to challenges arising following transition and helps improve understanding of the way in which threats materialise.

Examination of the analysis and findings across the outputs highlighted veterans’ preferences for particular forms of healthcare and support, their perception of the accessibility of civilian services and influenced their inclination to use services and to seek support. The reluctance to access services was largely founded in the perception that it was an unreceptive environment dominated by a lack of understanding of military life, the culture and unique aspects of the challenges they faced. As a result, to gain access and to utilise health and support services required considerable work on the part of veterans in the context of ‘hard to reach’ and vulnerability (discussed in Chapter 3).

### **2.3.2 Participatory Research**

The participatory research paradigm applies to the re-conceptualisation and the synthesis explained and explored in this commentary in that the defining principle throughout is essentially about participation of those who lives are the subject of the study and this affects all aspects of the research (Minkler & Wallerstein, 2011). In addition, the co-creation of knowledge described and discussed in this commentary has a practical application that has looked for solutions to the challenges faced collaboratively (Jull et al., 2017). The engagement of service providers and key stakeholders has also been an important aspect of seeking to improve access to health and social care by producing knowledge and action that may make a unique and important contribution to addressing health and social care issues (including health and social care provision), particularly with regard to issues related to the social determinants of health and health inequalities (Cropper et al. 2010).

Participatory approaches did not originate as a methodology for research but as a process by which communities can work towards change (Simpson, 2018) and, crucially, the defining characteristic of participatory research is not so much about the methods and techniques employed but the degree of engagement of participants, with and beyond the research encounter (Jull et al., 2017). When framing the commentary in this chapter and bringing the publications together as a body of work, it is this fundamental principle that is employed and that has influenced the key themes and the development of a Veterans Vulnerability Framework. Part of the strength of participatory research is that it adopts a variety of approaches and purposes that suit the re-conceptualisation of the papers and underpinning research in that it has helped to draw out the challenges emphasised by the research participants through their lived experience, as well as provide a focus on potential for solutions inherent in engagement with service providers and key stakeholders.

Participatory research has emerged in the past decades as an alternative research paradigm that has a focus on improving health and reduce health disparities (Allemang et al., 2022) but the use of participatory forms of research in health and social care is varied. However, in this commentary it is considered and discussed as an epistemological obligation in the study of access to health and social care for veterans. This is because the production of knowledge and the performing of reality are intimately linked, based on a partnership between researchers and those who are affected by the challenges they have faced in accessing health and social care, and fundamentally promoting the voice of those being researched.

Of course, the concept of patient and community involvement in research and health and social care practice is not new, particularly in a public health setting where it is primarily adopted to facilitate health and wellbeing needs (Wright, 1998). 'Peer-led' or 'respondent driven' sampling techniques

have been used extensively as a method to recruit from 'hard to reach' or 'seldom heard' populations (Mirick, 2016; Rockliffe et al., 2018) and evidence from the studies (Appendix H-G) highlighted the success and improved response rates by using this approach for recruitment of participants (further discussed in Chapter 3. Previous research on the effectiveness of 'peer-led' or 'respondent driven' techniques has focused on recruiting participants for large scale quantitative studies – such as clinical trials and intervention research (e.g. Kimani et al., 2014) and, although Patient and Public Involvement (PPI) is a clear priority for the Government, NIHR and other research organisations, little is known about the extent, quality and impact of PPI across a range of health care research (Brett et al., 2014). The most commonly reported impacts were individual health outcomes or clinical outcomes, leaving a degree of uncertainty about the strength of evidence for PPI with regard to collective involvement in healthcare and influencing policy and service improvement initiatives (Modigh et al., 2021).

One of the major challenges for participatory research is the question as to what level of participation warrants true meaning. Precise definitions are difficult and the criterion for participation is ambiguous, although there tends to be a general consensus that involvement is required throughout the research process (Bush et al., 2017). And, continued involvement of non-academic partners in research is important, rather than involvement in the decision-making process per se (Bush et al., 2017). For reasons outlined here, the term 'peer-informed research' has been adopted to describe and discuss one of the key themes that has been highlighted through the process of re-conceptualisation (please see Chapter 3). While involvement and engagement may overlap conceptually and practically, there is an important distinction to be made between the two (Heinsch et al., 2020). In this regard, criticisms include the involvement of community members to satisfy a grant mandate or the extent to which they are involved throughout the comprehensive process of designing the research questions, seeking funding, designing methodology, conducting the data collection, participating in the analysis and dissemination. Strengthened by the 'peer-informed research' theme explored in Chapter two, the empirical research studies submitted as part of this commentary are supported by the principle that knowledge is never created in a vacuum but rather responds to the cultural, social and material needs of interest groups (Nonaka & Toyama, 2015). The interest in knowledge production is not driven by funding requirements or different from the practical interests and knowledge sharing that seeks to improve access to health and social care for the benefit of veterans who are vulnerable.

What is key about the adopting the principles of participatory research in the development of the themes (discussed in the next chapter) is the emphasis on involvement of people in the research process, integration of action with research and the practice-based knowledge that is involved (Hannes & Lockwood, 2011). It sets itself apart from other action-orientated research because of the

central role non-academic partners play (Dixon-Woods et al., 2006) and the strength of this paradigm is that the challenges that need to be understood, tackled and resolved in relation to improving access to health and social care include veterans themselves who share problems in common and who can help to decide the best course of action and get involved in the research.

Critics of participatory research consider that it is not a universal panacea for addressing health and social care practice issues suggesting that it is biased, impressionistic and unreliable (Bergold & Thomas, 2012) - mainly because it becomes embroiled in the unproductive debate surrounding the qualitative versus quantitative divide with critics regarding its methods as 'soft' (Lunde et al, 2012). Although the term 'participatory research' undoubtedly covers a number of approaches and applications, in practice participatory research raises personal, political and professional challenges that go beyond the bounds of the production of information (Bergold & Thomas, 2012). However, when successful, participatory research, provides an understanding of the world through research efforts that are mirrored in the proposal for a Veterans Vulnerability Framework discussed in Chapter 4.

## Chapter Three

### 3.1 Introduction

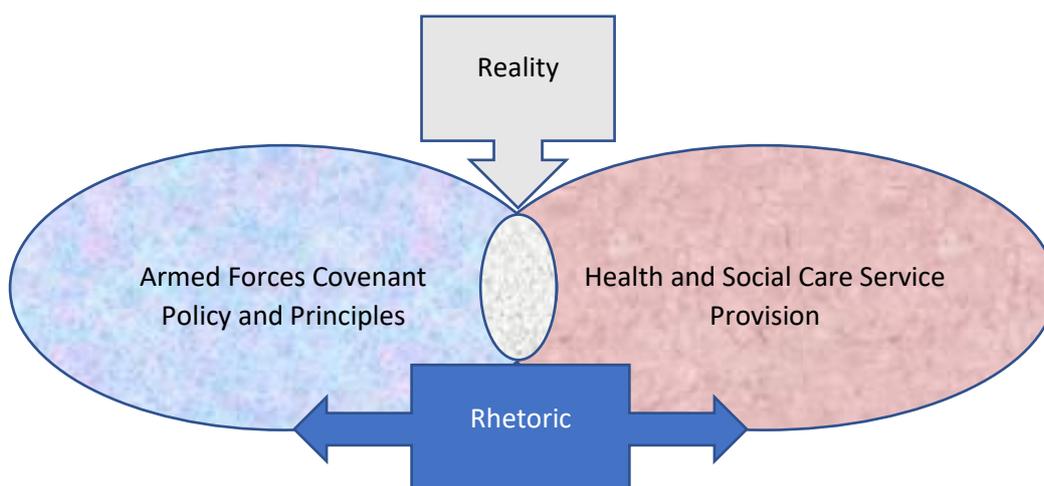
Chapter 3 explores the concept of improving access to health and social care services for veterans within the context of the themes that have been generated from this synthesis (Chapter 1, Figure 1):

- Rhetoric -v- Reality (Section 3.2)
- Improved Access to Health and Social Care (Section 3.3)
  - Peer-informed Research (Section 3.3.2)
  - Vulnerability (Section 3.3.3)
  - Hard to Reach (Section 3.3.1)

### 3.2. 'Rhetoric -v- Reality'

Since the introduction of the Armed Forces Covenant in 2011, various aspects of the health and social care provided for veterans have been highlighted and criticised (House of Commons, 2011). The distinction between *rhetoric* and *reality* has evolved around comparisons between the discourses found in national Government policy documents (AFC) and the provision of 'veteran-friendly' health and social care services for veterans in the UK (Appendix 1). In recent years, offering 'veteran friendly' services has become a hallmark for most health and social care service providers to denote a willingness to support veterans but there is a dearth of literature that explores the models for creating a veteran friendly culture (Kirchner, et al., 2020). Figure 2 highlights findings from Paper 1 and the concept that the rhetoric of policy aligned to health and social care service provision does not always match the reality of veterans' experiences. This theme resonates throughout this body of work and has come to light as a result of the re-conceptualisation presented in this commentary.

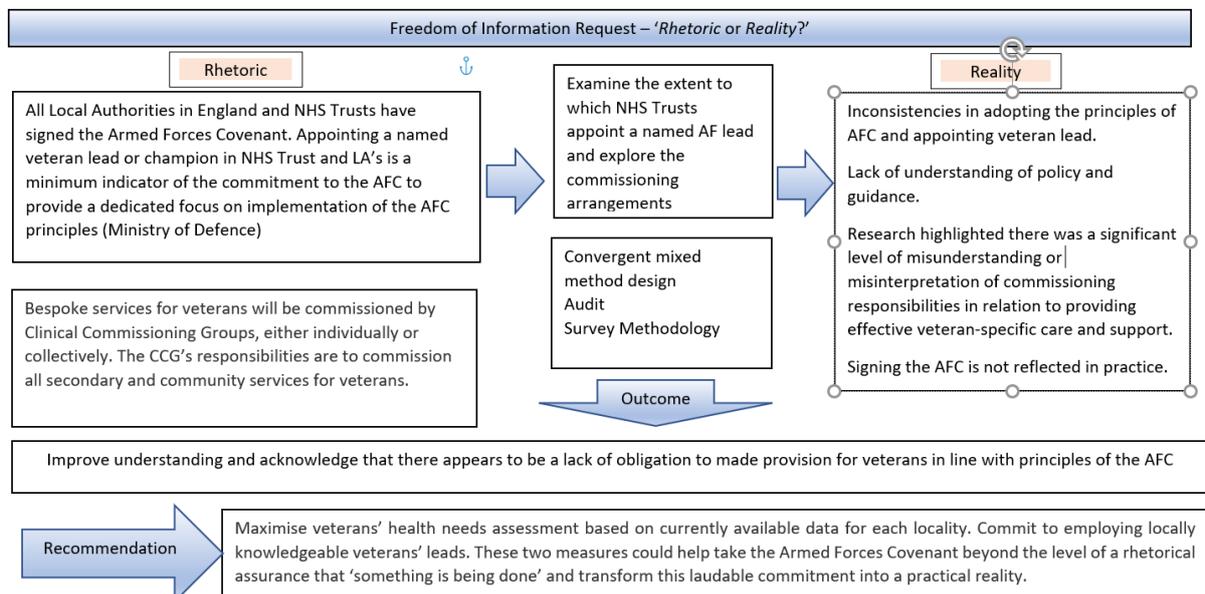
Figure 2: Rhetoric v Reality. The 'rhetoric' of Government policy and the 'reality' of health and social care service provision for veterans. The rhetoric occupies a larger space than the reality, overlapping between application of Armed Forces Covenant and service provision.



Veterans' care is placed at the centre of the Armed Forces Covenant (AFC) and located as a key issue in contemporary civil-military relations and public policy (Bricknell and Cain, 2020). Health and social care provision has become the principal demonstration of how the UK Government fulfils its duty of care towards military personnel, veterans and their families (Mumford, 2012). The AFC has received a noticeable amount of media coverage over the last few years as questions arose regarding the way in which care is delivered to veterans of the UK Armed Forces following discharge or retirement (Di Lemma, et al., 2022). There have been concerns expressed that, despite the significant number of signatories among UK wide health and social care providers (both statutory and third sector), there remains both a lack of consistency in applying the principles of the AFC (Fulton et al., 2018). Historically, a lack of awareness amongst service providers and veterans alike about what the AFC means in practice, particularly with regard to knowledge of dedicated services that are available and understanding the meaning of the term 'veteran' has also been reported (House of Commons Defence Committee, 2017; Fulton, et al., 2019; Randels, et al., 2022).

The research that informed the first paper (Appendix A), provided an analytical concept by which to examine recent developments in Armed Forces policy and the adoption of the principles of the AFC in practice. The underlying debate centred on whether sign up and commitment to the policy transcended sign up to the AFC with a significant degree of political focus on whether the AFC is a plausible vision, communicated effectively and interpreted in practice. In essence, the emphasis here is on equity of access and a commitment to making a discernible difference to the health and wellbeing of veterans. With this in mind, the Freedom of Information investigation sought to establish the nature and extent of veteran-specific NHS healthcare provision in England and, as a minimum standard, identification of the commitment to appointing a named veteran lead (Figure 3). Veteran leads, or champions, were reported as being the way forward in realising the potential of peer support networks for veterans and provided a single point of contact in health and social care services (Forces in Mind Trust, 2014). Figure 3 (below) illustrates what the rhetoric is, how this was examined and reported in Paper 1 and shows how the findings informed the reality of how the policy is applied in practice.

Figure 3: Freedom of Information Request - 'Rhetoric or Reality?'. Paper 1 utilised a Freedom of Information methodology and provided evidence of the inconsistencies in adopted the principles of the AFC and consider solutions to bridge the gap between rhetoric and reality.



Within this commentary a stance is taken that recognises the importance of the AFC in the sense of both its underlying principle and the potential to make a discernible difference. It is not to discard or deny the importance of signing up to the AFC, but to recognise that the underlying principles are not being fully embraced and that access to health and social care requires incorporation of the views of service users if the AFC is to move beyond the rhetoric of policy. A number of health policies recognise that communities should be involved in shaping health and social care services (McEvoy, et al., 2019) based on the principles of equity and participation and seeking a shift away from 'service-led' systems where people are fitted into the pattern of provision that have developed historically (Omeniet et al., 2014). The weight and value of service users' opinion have gained recognition in recent years and this approach is seen as an important element to measure and monitor the success of a modern consumer-focused health and social care system (Taylor et al., 2012). Since 2000, the Department of Health in England has given the National Health Service (NHS) a statutory duty to involve and consult with the public when planning or changing services (Department of Health, 2007). There is a growing acceptance that eliciting and learning from service users' views should be seen as an important means of improving the quality of health and social care in general (Black and Jenkinson, 2009; Omeniet et al., 2014).

### **3.3 Improved access to Health and Social Care**

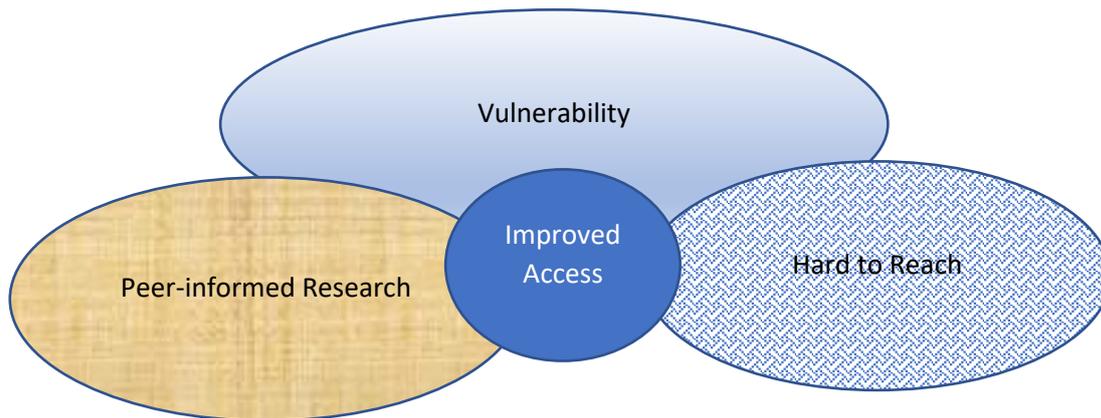
The term 'veteran' applies to anyone who has served for a day in Her Majesty's Armed Forces. This inclusive definition, arguably, goes some way to perpetuate veterans as a homogenous group and assumes a 'sameness' that can lead to civilian service providers offering 'one size fits all' approach to improving access to health and social care (Bricknell & Cain, 2020). It is important to recognise that most people leaving the Armed Forces regard themselves as physically and mentally well in order to be prepared for combat duties and for peacekeeping duties (Rona et al., 2006). As part of this process, military personnel undergo significant cultural, social and environmental changes in their lives while they are encouraged to be self-sufficient and strong as individuals and as part of the military institution (Fulton et al., 2019).

Undoubtedly, military identities are complex and continue to have an important bearing on post-service life (Herman & Yarwood, 2014). However, veterans represent a heterogeneous group and improving how they access civilian services needs to take into account the multiplicity of impacts that engaging in a close-knit institution had on their post-military experiences and the variety of challenges that can arise for some individuals negotiating health and social care support services in 'civvy street' (Walker, 2013; Woodward & Jenkins, 2011). Existing research has tended to emphasise the mental and physical health issues faced by veterans, contextually through a lens that is sensitive to the specifics of combat trauma (Larner & Blow, 2011). While these issues are significant, there is a risk of association with stereotypical descriptions and understanding of the nature of serving in the Armed Forces that perpetuate homogenisation and support generalisation that impact on how health and social care providers respond to veterans. Some of these assumptions include the idea that all veterans are affected in the same way by mental ill health and that this equates to Post Traumatic Stress Disorder (PTSD), or all veterans who have experienced limb-loss are 'wounded warriors' (Herman & Yarwood, 2014). Instead, there is a need for a more nuanced and holistic understanding of post-military lives that takes into account all of the changes and challenges that veterans face and what is unique and different from the general population (Papers, 2, 5 and 7).

Contextualising the argument for a need to improve access, the themes considered in this chapter relate to the concept of 'hard to reach' and the implications of this and the importance of peer-led approaches to developing services that are responsive and that acknowledge complexities of serving in the Armed Forces. In attempting to simplify this complexity, the characteristics of 'hard to reach'

and 'peer-informed research' support are prosed to reach an agreement about a person-centred construct of access to health and social care influenced and utilised by veterans (Figure 4)

Figure 4: Combined components of improving access to health and social care. 'Hard to Reach' is a theme that acknowledges the need to address inequalities and 'Peer-Informed' Research is a way to increase the potential for service users to engage in decision making and contributing to the construction of improving access to services and how considering both has the potential to address vulnerability.



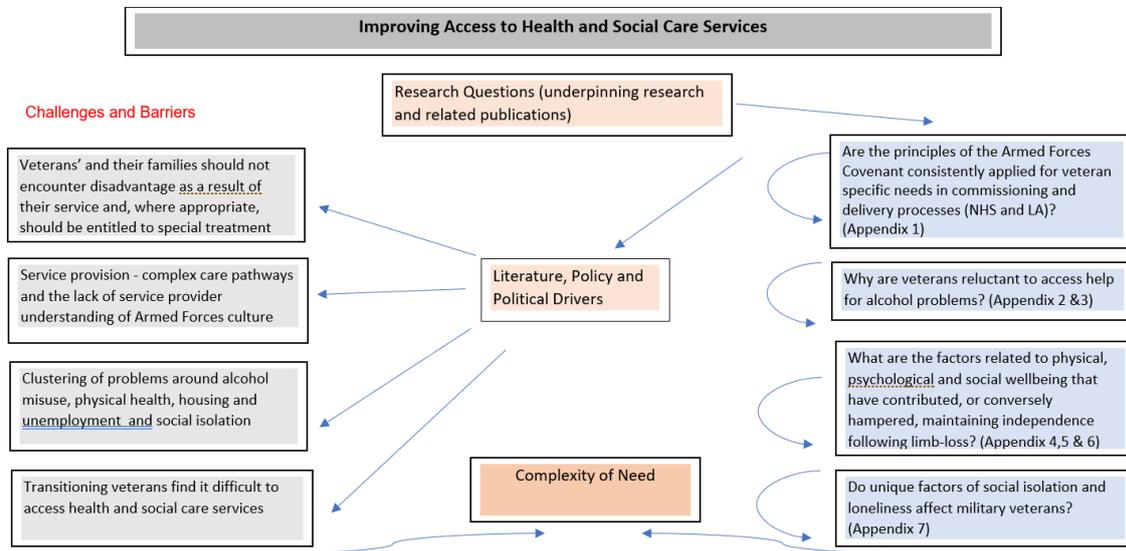
### 3.3.1 Hard to Reach

The work presented in this thesis contributes to service-user led understanding of veterans who are shaped by their military experience and focusing on how this, in turn, impacts on their ability to access health and social care services following transition from the Armed Forces (Figure 4). Research around the Veterans Strategy (MoD, 2020) revealed that those who leave the Armed Forces are reluctant to ask for help which affects the level of trust and representation between civilian service providers and veterans (Simpson & Leach, 2022). As a result, it is argued that health and social care practitioners providing help and support for veterans require an understanding of veteran-specific health and social care needs if they are to deliver evidence-based care. Engaging with the veteran population who are 'hard to reach' often cannot be done in a conventional manner but, utilising participatory methods to harness engagement and to drive improvements that address their needs, can offer the opportunity to support improvements in access to health and social care (Balbale et al., 2016).

Although the term 'hard to reach' has attracted criticism in some of the available literature (Pringle, et al., 2014; Sinclair & Alexander, 2012), its application to the body of work presented here relies on understanding the concept and meaning in context. The concept of 'hard to reach' in this thesis is actively constructed in the context of addressing health inequalities within the spheres of social care and health. Despite the apparent familiarity of the term and its use in public policy, it is acknowledged that there is a lack of consensus about the meaning. Within the literature, 'hard to reach' is often synonymised with other terms and the sheer multiplicity of alternatives reflects the divergence in the discourse as well as the difficulty in arriving at a definitive description of its meaning that is appropriate. Vulnerable, transient, marginalised, hidden, forgotten, underserved, unheard are all examples of terms that have been utilised in the literature pertaining to addressing issues faced by the 'hard to reach'. The 'hard to reach' theme examined here fundamentally acknowledges that trying to improve access to health and social care for veterans is an important area for service providers in that service availability is a limited measure of access. More importantly, if the significance of access is to be realised, veterans should not encounter difficulties in service provider understanding of their specific needs.

In general terms, issues remain about how to involve groups of service users who have been typically marginalised or excluded from service user participation, and the description 'seldom heard' (Breuer et al., 2021) was identified by the Social Care Institute of Excellence (established in 2001) to include homeless people with addictions, people from black communities, people with communication impairments and those with dementia in this debate (Breuer et al., 2021). However, the challenge in relation to improving access to health and social care service for veterans is about reaching them as well as listening to them. The use of the term 'hard to reach' in this thesis is not to emphasise that the onus is on the service user as this is inappropriate but instead relates to the barriers they face in accessing healthcare services that are often outside of their control and acknowledging the over-emphasis on the absence of population data on the part of service providers. Improving access does not just require veterans to identify their own needs but also improve understanding of the complexities and challenges that some face following transition proposed within the context of the presented papers (Figure 5).

Figure 5: The research questions are listed and linked to the challenges and barriers identified by the empirical research that underpins the seven submitted publications highlighting complexity of need. Revisiting the research questions supported the re-conceptualisation and formation of the key concepts and themes explored in this commentary.



Decision-making, on a local and national level with regard to how services are provided lacks an evidence base if priority is not given to understanding the experiences of people from ‘hard-to-reach’ groups who offer important insights into barriers to accessing care.

The issues raised in Paper 2 highlighted how veterans felt about talking to practitioners who lacked understanding of military culture:

*... I was talking to somebody who had no idea what it was like being in the military so there was no way I was going to talk to them (Participant 02, Paper 2)*

Of particular relevance is the preference to engage with care workers who were peers or had a good understanding of Armed Forces culture:

*We talked the same language (Participant 19, Paper 2)*

*You are on your own. You’ve got no structure, you’ve got no support network, you haven’t got people that have been through everything the same as you have (Participant 2, Paper 2)*

Conducting an interpretive review of the submitted publications identified characteristics of research participants experience that support the view that service users have to be willing to engage in services to gain benefit and without the same support networks and structures, many veterans struggle to adjust to civilian life. For veterans with a range of distinctive and unique difficulties that subtly differentiate them from the wider civilian population, the use of peer-support models (Perkins & Repper, 2019) may well help to alleviate the challenges faced accessing health and social care services and mitigate against disengaging, which will be explored next.

### 3.3.2 Peer-Informed Research

NHS England guidance stresses the importance of identifying a range of potentially viable options for service improvement by involving patients, the public and other stakeholders at an early stage in building a case for change (Salmi & Blease, 2021). Increasing participation of service users in decisions around treatment and service development has been central to the theme of ‘user involvement’ (Beresford, 2013) This move towards PPI has been shaped by a theoretical framework for user involvement based on ‘A ladder of Citizen Participation’ published in 1969 by Sherry Arnstein (MacKinnon et al., 2021). For Arnstein, the measure of participation is the power to make decisions and to take control by ‘citizen engagement’ (Tritter & McCallum, 2006). Each rung on the ladder is relevant to the degree to which citizens have attained decision making power. NHS England guidance on transforming participation in health and care uses a ‘ladder of engagement and participation’ to classify different ways in which patients and the public can participate with participation defined as the highest point (see Figure 6).

Figure 6: NHS England’s interpretation of Arnstein’s Ladder of Citizen Participation (NHS England, 2013)

#### The ‘Ladder of Engagement and Participation’

There are many different ways in which people might participate in health depending upon their personal circumstances and interest. The ‘Ladder of Engagement and Participation’ is a widely recognised model for understanding different forms and degrees of patient and public involvement, (based on the work of Sherry Arnstein?). Patient and public voice activity on every step of the ladder is valuable, although participation becomes more meaningful at the top of the ladder.

<b>Devolving</b>	Placing decision-making in the hands of the community and individuals. For example, Personal Health Budgets or a community development approach.
<b>Collaborating</b>	Working in partnership with communities and patients in each aspect of the decision, including the development of alternatives and the identification of the preferred solution.
<b>Involving</b>	Working directly with communities and patients to ensure that concerns and aspirations are consistently understood and considered. For example, partnership boards, reference groups and service users participating in policy groups.
<b>Consulting</b>	Obtaining community and individual feedback on analysis, alternatives and / or decisions. For example, surveys, door knocking, citizens’ panels and focus groups.
<b>Informing</b>	Providing communities and individuals with balanced and objective information to assist them in understanding problems, alternatives, opportunities, solutions. For example, websites, newsletters and press releases.



As with the example provided in Figure 6, organisations have adapted Arnstein's model to incorporate participation and quality engagement within their respective policy and guidance documents. However, although the NHS England stages provide more theoretical contribution within each stage, Arnstein's model and the adaptation of this model highlights limitations (Tritter & McCallum, 2006). For Tritter & McCallum (2006., pg. 7), Arnstein's model has a single focus on outcomes and does not focus on the process of involvement or the methods necessary to recruit service users. Therefore, its application is problematic because it does not reflect the different forms of participation and could be accused of not meeting the needs of patients who are 'hard to reach'. Seeking the views of those patients who are 'hard to reach' or 'seldom heard' ensures there are mechanisms in place to gain the views of non-users and this could be supported by participation in research, again not factored into Arnstein's model.

Actively involving patients and members of the public in the design of research projects and dissemination of findings is seen as a way of narrowing the gap between patient and practitioner priorities in health and social care and improve the implementation of evidence-based findings (Boote et al., 2015). The National Institute for Health Research (NIHR) expects researchers to demonstrate public involvement in proposals seeking NIHR funding in order to enhance research quality (Boote et al., 2011; Staniszewska & Denegri, 2013; Ratneswaren, A., 2020). The goal is for all patients and more public members to be aware of and involved in research by 2025 (Staniszewska et al., 2017). As a result, researchers are increasingly following this method of participatory research (as discussed in Chapter 3) in which people with lived experience of the issues being studied take part in designing and undertaking research (Lushley, 2017).

Along with the aspiration of the NIHR and the growth of patient and public engagement and involvement, peer research and community engagement with service users has become more prevalent in the last decade (Brett et al., 2014, Cabassa et al., 2014, Ellis & Kass, 2017). Nevertheless, there is often a lack of consistency and clarity about what constitutes peer-led research and the difference between involvement in research as a participant and participation as a service user (Haines et al., 2019). To avoid any ambiguity and following a process of re-conceptualisation within this thesis, the term 'peer-informed research' will be used as the most appropriate description of a model of involvement that views peers as those who bring with them their own lived experience (Dixon et al., 2019). This definition values peer experiential knowledge of both using and requiring health and social care services and those who have faced challenges with regard to access to services. It differs from peer-led research and peer research utilised in health research and discussed in this research because

it is not tied to the strict definitions. What is at the centre of peer-informed research is the experiential knowledge and inside understanding of what it is like to transition from the Armed Forces and to struggle adjusting to civilian life. This has enhanced the richness and nuance of the inquiry into improving access to health and social care services as a body of work. Other benefits include the potential for improving health equity and inclusion amongst the veteran community whose needs may be unmet.

As well as the being clear about the definition of peer informed research, it is important to also explore the term 'service user' as this can be ambiguous (Thomson & Hilton, 2011). Viewing service users as a homogenised group has the potential to observe people who use health and social care services in relation to only one aspect of their lives (McLaughlin, 2015) and this may act to reinforce service users as less powerful than service providers with whom they are closely linked and disregard other aspects of their lives, denying a multiplicity of potential identities and relationships (Brett et al., 2014). The term 'service user' also fails to capture those who are reluctant to use a service or may have been denied a service or those who are offered a service that they refuse (Evans et al., 2014). For the reasons outlined, and for the purpose of this commentary, when the term 'service user' is utilised, it should be defined as a person who is eligible to receive health and social care services.

The veterans who were actively involved took part in the empirical research studies (Appendix G and H), both as participants and as part of the research team, played a critical role as a conduit for the voices of the community to be heard, particularly in relation to engaging service users deemed 'hard to reach'. The processes and strategies adopted to recruit participants in these studies were practical and innovative, and the approach used was not limited to, or by, research studies with an explicit service improvement design. Inclusion in the research was not based entirely on the established methods of PPI and user-led research through the NIHR standards for public involvement, but was based on the principles of asking the both participants and peer researchers who have experienced challenges what is important or meaningful to address health and social care needs and hoping to deliver the solutions to improve lives were adopted.

The first research study into improving access to support for veterans with alcohol related issues involved peer-led recruitment and culminated in the co-production of a new 'Hub & Spoke'<sup>5</sup> model of

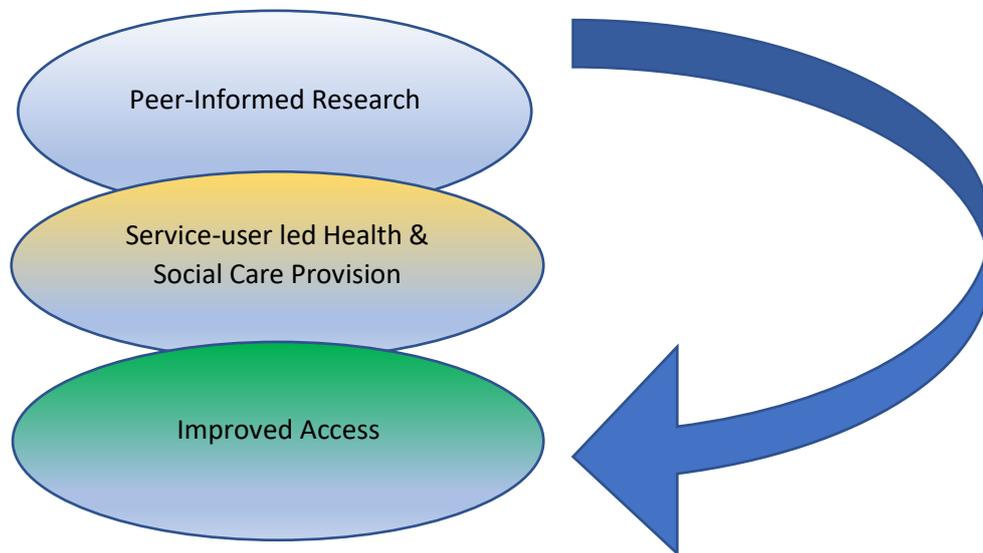
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<sup>5</sup> As an outcome of the research into improving access to alcohol services for veterans, the 'Hub and Spoke' model was proposed as a beneficial way of engaging veterans in health and social care services.

care (discussed in Case Study later in the chapter). The second study into the health and social wellbeing of veterans who experienced limb-loss employed peer researchers in the research team who co-ordinated the enrolment of the participants to the study and who were involved throughout, including inclusion in the dissemination of the findings (outlined in Extract A later in this chapter). The third study was a Delphi study that sought the views of those who had knowledge of social isolation and loneliness in the veteran population, including veterans themselves and those who work with veterans (Appendix G).

It is also important to acknowledge that the Principal Investigator (PI) who lead the research studies was a military veteran, with vast health and social care service user experience themselves. The same PI has been voted by the National Health Service (NHS) as a Patient and Public Voice (PPV) and sits on the NHS England PPV panel as an injured veteran. This 'insider' status and shared experience (Lushey, 2017) of having personal experience of seeking help as a veteran and having serviced in the Armed Forces was viewed as a valuable aspect of peer-informed research. Other veterans involved in participant recruitment, design and development of the research, often did not possess formal academic training. However, they were fully supported by the research team and the focus was primarily on the breadth of knowledge they held about their communities, culture and social connections that had a significant impact on the research. This peer-informed theme attempts to capture the important concept of participation in research that recognises individuals within any community being research that they themselves are competent agents, capable of taking part in research on a variety of levels, including as researchers. The concept of peer-informed research supports and adopts the principles of participatory research in health and social care settings and the values the narrative, story-telling methodology in order to facilitate 'lived experience' in the qualitative research that underpinning the submitted publications (Figure 7)

Figure 7: Peer-informed research leads to improved access. The programme of work undertaken has demonstrated that the peer-informed research can lead to health and social care provision that is informed by the needs and perspectives of those who use the services and can lead to better access to those services.



The peer-informed research theme is important for two key reasons. There are few published examples of the systematic engagement of veterans in the design of new models of care as a direct result of empirical research (Haines et al., 2019), however, there is a growing interest in peer support in health and social care settings to improve access (Watson, 2017). Research conducted within this body of evidence directly demonstrates the impact of the peer-informed approach.

The study into improving access to health and social care support for veterans with alcohol related issues (Appendix H) used a methodology that is generalisable to other forms of service improvement (Appendix H). Peer support models have developed through this service user-led, co-production approach where service users and service provider staff come together to use their skills and knowledge to explore utilising lived experience as a tool for support (Tafvelin et al., 2019). Case Study 1 outlines the final phase of the research (Appendix H) that took the form of a symposium made up of veterans, service commissioners, planners and providers, and explains how peer-informed research culminated in the development of a peer support model supported by empirical research and based on the principles of co-production.

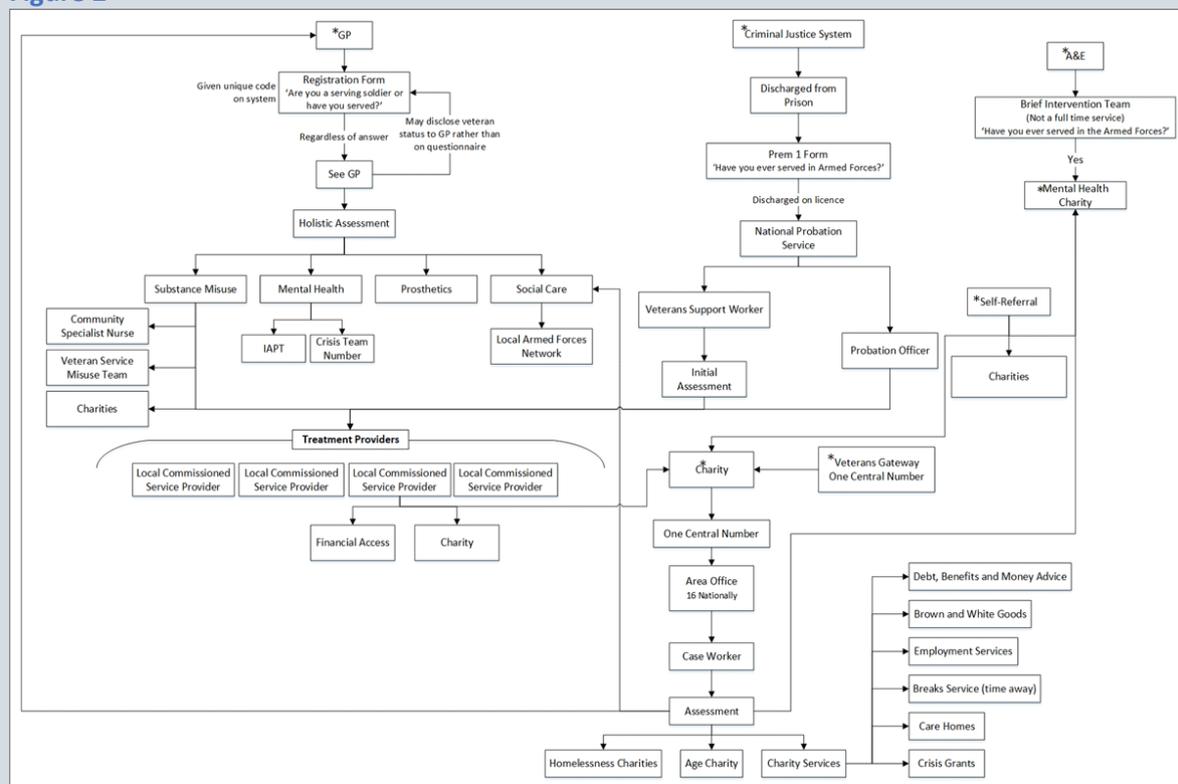
**Case Study 1:** Extract from a recently published paper that relates to the study into *Understanding Why Veterans are Reluctant to Access Help for Alcohol Problems* (Appendix H). Although this paper (Appendix x) was submitted for publication prior to submission of the Prima Facie case, it was not included as it was not published until after the start date of this PhD by Publication.

Osborne, A.K., McGill, G., Greaves, P.J., & Kiernan, M.D. (2022). Developing an Integrated Model of Care for Veterans with Alcohol Problems. *International Journal of Integrated Care*, 22(1).

**Existing Landscape: Current Commissioning of Services for Veterans**

**Figure 2:** Initial diagrams from each area group presented a very simple pathway for veterans accessing healthcare for alcohol problems. When this data was collated, it became evident that existing pathways into services were elaborate and complicated. **Figure 2** represents an example of current pathways for veterans with alcohol problems as identified by the participants. There was an acknowledgement from health and social care planners, public health leads, clinical commissioning groups, service providers, service users and academics that this highlighted the need to challenge the current thinking and understanding of service delivery and access to provision.

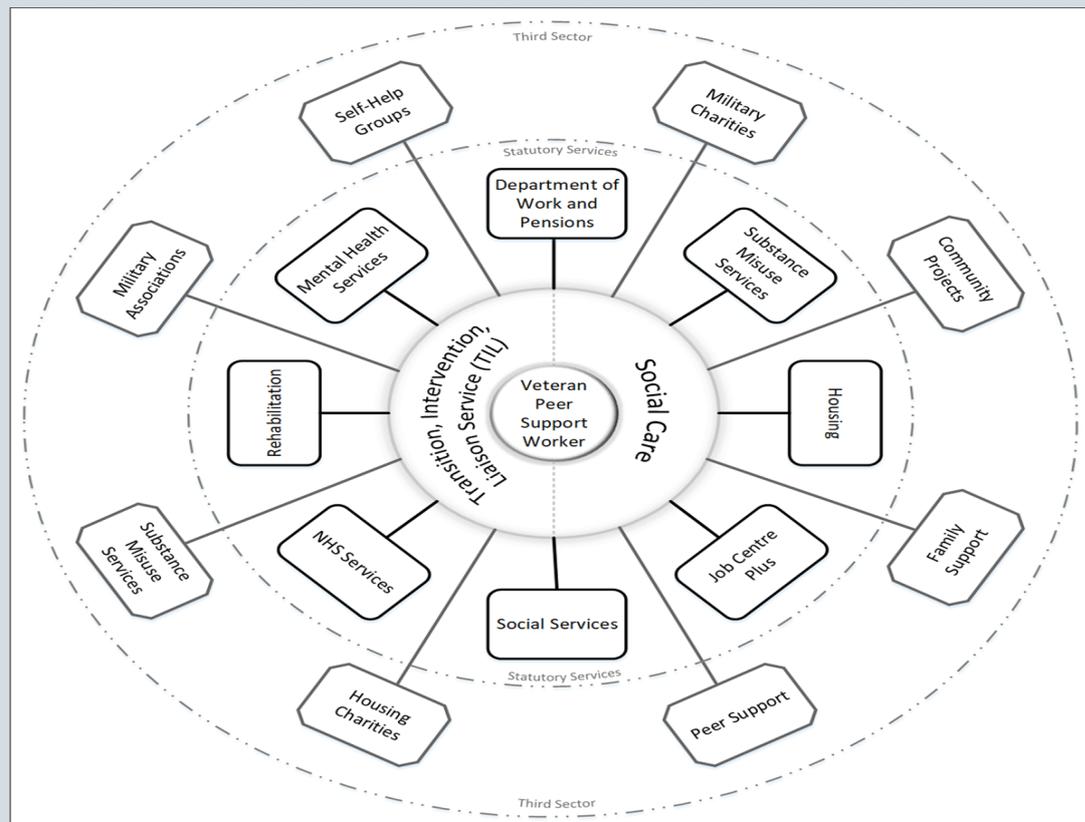
**Figure 2**



Health and social care planners, public health leads, clinical commissioning groups, service providers and service users started to define and describe an improved model of care. As a result, the service users and the wider participants of this study design and recommended a 'hub and spoke' model of care delivery.

(Importantly) the proposed model could hypothetically be implemented without the need for physically integrating health and social care budgets. A 'Veterans' Hub' was placed at the centre of this model, where veteran peer support workers would be integrated with the National Health Service veteran specific mental health service.

**Figure 5:** Hub and Spoke model for Improving Care and Care Pathways



Of course, there are a number of different ways that delivery of health and social care can be improved or modified, including changing the location that care is delivered from hospital to home, providing care within a group setting rather than to individuals or using technology to assist with the provision of care (Jessup et al., 2020). However, many health and social care systems are seeking ways to reduce the cost of care while improving service quality and population health and making changes to service delivery against this background can be challenging. Attempting to tackle issues around improving access and engagement in services can potentially provide meaningful and cost-effective solutions with regard to configuration of health and social care services. Engaging with service users in research that builds a theoretical evidence base for improvement can bring new insights based on people’s own experiences (Locock et al., 2019) and can help to enable service providers to understand the unique needs and experiences of ‘hard to reach’ populations. By eliciting the perspectives of both service users and services providers, a broader in-depth understanding of the potential barriers to accessing services can be gained and solutions devised collaboratively, potentially strengthened by the peer support model of care.

The challenge for the future is to ensure peer-led research generates knowledge in a participatory way that is action-orientated (Abadi et al., 2021) and combines research and practical work in a process that is influenced by service users experience. Acknowledging that the political imperative can generate problems where researchers engage with service users out of necessity rather than thoughtful commitment (Tafvelin et al., 2019). It is important to continue to critically examine the development of peer-led research and peer-support service improvement models and to identify ways in which peer-led research can avoid the danger of becoming a tokenistic exercise or being seen as a panacea. Development of the research into health and social care service provision for veterans has been advanced by a peer-influenced approach but, on reflection, we cannot successfully improve access to support services unless we consider vulnerability.

### **3.3.3 Vulnerability**

It is important to acknowledge vulnerability when addressing challenges related to access to health and social care services. Specifically, it is important to recognise that various risks exist for veterans, on various levels, which hinder help-seeking behaviour and successful transition (Kamanou & Morduch, 2002; Naude et al., 2009). Conceptualising and measuring vulnerability in this context are prerequisites for strengthening the ability of veterans and service providers to cope with risk and overcome the challenges transition may bring, despite being vulnerable.

The definition of vulnerability differs across disciplines but, commonly, vulnerability relates to a person who is at risk of an undesirable outcome such as the harm caused by physical, psychological or financial problems (Brooks et al., 2005). The risks veterans face are two-fold: vulnerability to exposure to civilian life and the ability to cope with changes that transition brings. Being outside of the military and life in the Armed Forces family can symbolise vulnerability for those service men and women who are unprepared for transition or struggle to adapt to civilian life (Gordon et al., 2020).

Military personnel are reputed to have a strong social resilience that is developed collectively as recruits progress through their training and, thereafter, their service together (Klein et al., 2012). This collective, social resilience is no longer available to draw on for support when individuals leave service and re-adjust to life outside the military. This is problematic because this is when personal resilience is needed and when it is likely to be lowest in those who are most vulnerable (Buckham, 2013). A study carried out by McDermott in 2009, found that recruits who joined the Armed Forces when they were young, or from a disadvantaged background, had not yet found their place in the communities

where they lived and they are, therefore, more likely to find the process of returning to civilian life especially challenging giving way to vulnerability (Brunger et al., 2013).

It is important to note that transition is an individual experience and, therefore, can raise unique challenges (Binks & Cambridge, 2018). The resilience of an individual is not easily isolated from the resilience of their family, their peers and the wider community (Distelberg et al., 2015). However, the literature in relation to resilience and serving in the UK Armed Forces is often conceptualised on an individual level that represents personal skills or traits that can be developed following transition (Cox et al., 2019). This individualistic perspective does not acknowledge the importance of time, age, gender and life circumstances that can vary, as can resilience and vulnerability, as it challenges can arise that are influenced by factors such as environment, shared common goals and social change (Gillespie et al., 2009).

Exposure to challenges following transition, such as adapting to limb-loss and physical mobility and maintaining independence, the threat of social isolation and loneliness, individual coping capacity are related to wider determinants of health consisting of a diverse range of social, economic and environmental factors which impact of people's health. Such factors are influenced by the local distribution of power and resources which shape the conditions of daily life. They determine the extent to which different individuals have the physical, social and personal resources to identify and achieve goals, meet their needs and deal with changes to their circumstances. The exposure to challenges has been highlighted as part of the synthesis as they emerged from the re-conceptualisation of the submitted papers and underpinning research. The lack of resources to deal with the challenges discussed in this commentary related to the wider determinants of health highlighted by The Marmot Review (2010<sup>6</sup>) which emphasises the strong and persistent link between social inequalities and disparities in health and social care outcomes (Marmot, 2020). To address this, a Veterans Vulnerability Framework is proposed and discussed in detail in Chapter 4.

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<sup>6</sup> In November 2008, Professor Sir Michael Marmot was asked by the then Secretary of State for Health to chair an independent review to propose the most effective evidence-based strategies for reducing health inequalities in England from 2010. The final report, 'Fair Society Healthy Lives', was published in February 2010,

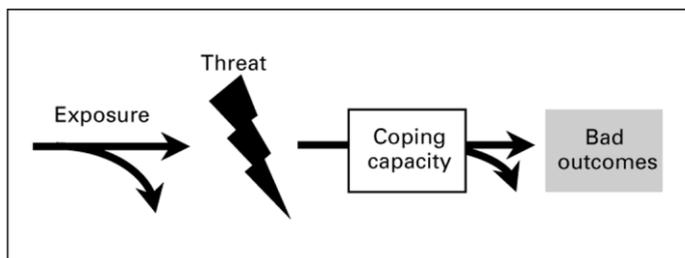
## Chapter Four

### 4.1 Introduction

This chapter introduces a Veterans Vulnerability Framework that I have adapted (see Chapter 1) and designed to demonstrate connectivity across the publications and to introduce new knowledge and originality to the field of veterans' studies. All the elements involved have been enhanced and supported by a reflective approach to the synthesis to demonstrate the significant of the publications (Appendix A-G).

The concept of vulnerability described and discussed in this commentary has been adapted to accommodate a framework that attempts of focus on how and where to intervene to improve access to service provision, and to consider how to prevent challenges accumulating into threats. As discussed in the Chapter 3, vulnerability is an abstract concept. It is defined in this commentary as related to exposure to the threat and the lack of defences or resources (i.e. coping capacity) to deal with the threat, leading to an adverse outcomes for the individual. Schröder-Butterfill & Marianti's (2006) vulnerability framework comprised four domains set out in Figure 8 below.

Figure 8. A framework for understanding vulnerability – four domains of exposure, threat, coping capacity and bad outcomes (Schröder-Butterfill & Marianti, 2006)



Using the concept of understanding vulnerability as set out by Schröder-Butterfill & Marianti (2006), key aspects of the domains that relate to the Veterans Vulnerability Framework are discussed and described in this chapter and below further detail is provided to demonstrate an understanding of relevance of threats and coping capacity in context of developing the Veterans Vulnerability Framework (Section 4.2):

- Threat: specific incident that has the capacity to drive an individual to a poor outcome unless they have the resources to alleviate the risk of adverse effects. Examples of threats include bereavement, long term illness, substance misuse, loss of income, loss of networks, and for veterans a threat can be exacerbated by the transition and adaption to civilian life.

- Coping capacity: to mitigate the risk of a poor outcome assets such as household relations, human capital (i.e. education and skills), social capital (i.e. access to social networks), health and social care provision and the ability to mobilise resources or support when affected by a crisis.

There are several models of vulnerability emerging from a range of disciplines (Dickinson, et al., 2020) and some acknowledge that it is multi-faceted in nature. More generally, it is argued that, rather than focusing on individuals, it is important to examine vulnerability in the context of social influences that contribute to its manifestation. Equally, Schröder-Butterfill & Marianti (2006) include enquiry into what an individual is vulnerable to and, also, who defines what it is? The debate about assessing vulnerability without a criterion that is objective rather than subjective is also raised as problematic (Aven et al., 2018). Here, relative to the body of work presented in this commentary, vulnerability is assessed as the result of unmet needs arising from the challenge faced following transition and the difficulties that arise when access to health and social care is inhibited or delayed. In addition, the concept of vulnerability is applied to actual situations at the heart of the challenges veterans have been exposed to following transition. This is in order to avoid the risk of losing the empirical aspect borne out of 'storytelling' and focus on policy and practical relevance connected, primarily, to qualitative research (Delor, & Hurbert, 2000).

To address questions of transformation and adaptation, it is essential to draw upon the experience of the *potentially vulnerable* veteran community in relation to access to health and social care. Resilience and vulnerability, as well as the related theories of adaptation and transformation, are central concepts in highly persuasive but different ways of framing analyses of social change and the challenges of sustainability (Miller et al., 2010). It is also important to investigate the related social and environmental factors connected to adapting to transition and the transformation from a serving member of the Armed Forces to civilian status and adapting to the challenges as and when they arise. Thinking about vulnerability in this way recognises that it encompasses external risks to which individuals are exposed, as well as internal risks such as feeling defenceless, lack of ability to cope with transition.

Discharge from Armed Forces life and integration back into civilian society has the potential to become a hotspot for a range of issues and because vulnerability can be exacerbated by inequalities, disempowerment that impact on access to health and social care, the distribution of risks of harm is uneven (Schröder-Butterfill & Marianti, 2006). This uneven distribution influences how veterans negotiate the challenges they face and mobilise the resources at their disposal. The possible adverse effects of transition to civilian life are recognised in relation to loss of status, financial difficulties, and

family readjustment as well as an understanding of access to health and social care to provide appropriate support following transition. The latter is less recognised. Some authors have considered the effects of combat and recognition of Post-Traumatic Stress Disorder (PTSD) as a significant adverse effect of serving in the Armed Forces but, in reality, the issues involved in transition and access to care are more complex and varied. In particular, the lack of advice on the social aspects of resettlement which is identified through the research and literature (Bergman, et al, 2014). Understanding this may well aid the development of appropriate strategies to better assist veterans to cope well with transition and further reduce the number who experience adverse outcomes, as well as helping in predicting vulnerability (Bergman, et al., 2014). Therefore, by separating and considering the inter-related domains that need to be understood it starts to become possible to examine vulnerability following transition from the Armed Forces across four domains, exposure, risks, coping capacity and outcomes, discussed and described fully in what follows in this chapter.

#### **4.2 Veterans Vulnerability Framework**

Veterans who successfully transition have been described in relation to a number of indicators of success (Cox, et al., 2019) including the ability to find employment, maintain physical health and mental health and wellbeing and sustaining family relationships. However, successful transition outcomes do not appear to be closely linked to health and social care provision or to maintaining health and wellbeing across the life course, and there is no clear criteria of what success looks like. Bearing this mind, and in order to better evaluate and identify challenges, it is hoped that the Veterans Vulnerability Framework presented in this chapter will enable a focus on how and where interventions to increase coping capacity or resilience can be targeted in order to prevent progression to a 'bad outcome' (Schröder-Butterfill & Marianti, 2006). The framework may also be useful for seeking to respond to challenges arising following transition and helps improve understanding of the way in which threats materialise.

The Veterans Vulnerability Framework separates the context of vulnerability into exposure, threats, coping capacities and outcomes (please see Table 6). The predictive design of the model enables interventions which aim to increase coping capacity or resilience to be better targeted, avoiding a poor outcome. The forward looking, dynamic aspect makes the framework useful to seek to understand the way that threats manifest themselves following transition from the Armed Forces. The four domains (Figure 8) were investigated as part of the re-examination of the outputs and consideration of the challenges faced by the research study participants and the specific threats that they encountered. Coupled with the knowledge gained through the literature reviews that informed

the publications and the narratives, consideration was also given to what might increase veterans' exposure to vulnerability and also what might mitigate poor outcomes.

The kind of challenges individuals face when they leave the Armed Forces differ from person to person and can change over time. However, the processes and mechanisms have distinct similarities as each challenge faced requires access to resources to adapt and overcome and this adaptation can be short-lived if the resources are well matched to the challenges. Alternatively, it can be long and anxiety provoking when the challenge is significant or when there are several challenges encountered at the same time resulting in complexity (Cox, et al, 2018). For some service leavers, adapting to civilian life brings a whole range of challenges and each time a veteran meets a challenge, the system of exposure to threats and resources needed to overcome these results in a state of imbalance as the individual is forced to adapt to his or her available resources to meet this particular challenge. Crucially, these resources may be insufficient or lacking entirely.

Each of the domains described in Figure 8, are elaborated in this Chapter (Tables 3 – 6 below) to illustrate the outcome of the synthesis. Each of the different domains can interact to compensate for each other or can be mutually exacerbating resulting in degrees of vulnerability both in an individual's proximity to harm and in the severity of the outcome. Figure 6 suggests the points at which interventions might be made, before the threat occurs, by reducing susceptibility or the likelihood and magnitude of the threat or afterwards by bolstering defences and preventing progression to serious outcome.

In addition, taking a life-course approach helps to consider the significant implications for physical, mental and social function in later life when military experience is also a lasting legacy on the identity and behaviour of veterans, shaping how they respond to challenges in civilian life. Across the studies and publications, poor social networks and being more likely to resist interventions for help, were factors that affected vulnerability following transition.

#### 4.2.1 Exposure

The first domain is *exposure*. Table 3 explores exposure to threats in the context of the commentary.

Table 3: Exposure in the context of the commentary

<b>Exposure in the context of the commentary</b>
<p>Early ambitions to join the military included the expectation that participants would serve for a full career and, therefore, veterans had devoted little consideration to what they might do when they left the military. Exposure to economic insecurity, social isolation and facing the differences between military care and care provided by the NHS, statutory organisations and third sector providers connected with the sense of loss for veterans. Exposure to alcohol as a big part of military culture resulted in a normalisation of drinking heavily and this continued after leaving the military.</p>
<b>Extracts from Related Outputs</b>
<p>Alcohol was identified as a big part of the military culture that the participants experienced; it was often used as a bonding tool to build trust and camaraderie and featured heavily in the socialisation of personnel. The participants explained how bonding was essential in developing trust between personnel, and as a result drinking was encouraged and not often viewed as an issue.</p> <p><i>It gets you together and it's social ... it's another way of getting use to bond together and to get to trust each other. (Participant 05)</i></p> <p><i>For alcohol. A lot of squaddies think it's normal. Actually, I thought it was normal the way I was drinking for a long time. It was normal in the army. (Participant 02)</i></p> <p>Alcohol use in the military was very much accepted and normalised and the behaviour associated with the use of alcohol for socialisation and coping during service often continued after leaving the military.</p> <p>Transitioning from military to civilian life can lead to further problems with veterans struggling to reconnect with civilian life:</p> <p><i>Being aware from normal life means it may take longer to integrate with civilians, neighbours, local facilities/amenities (Participant 2)</i></p> <p><i>They are a very unique community and often will interact with each other but don't necessarily interact with those who are not veterans (Participant 20)</i></p> <p>For veterans who experienced limb-loss, the feeling of being trapped within their own home was connected with mobility issues and difficulty in forming social relationships.</p> <p><i>Loss of mobility and the closing in of the environment for someone does include those feelings of despair, despondency, isolation and worthlessness (Participant 10)</i></p> <p><i>I think personally it's the leaving the nest syndrome that has hit me quite hard (Participant 9)</i></p>

#### 4.2.2 Threats

The second domain of the Veterans Vulnerability Framework is *threats* (Table 4). The interpretive synthesis highlighted threats as linked to transition from the Armed Forces that potentially move veterans towards poor outcomes when challenges, such as disability, alcohol misuse, social isolation and loneliness are encountered. Some of these threats are life-course dependent and can bring greater hazards as veterans age. Thinking about threats, in the context of the re-conceptualisation, is useful for understanding vulnerability. But also, the available literature referenced in this commentary supports the view that veterans are particularly vulnerable to problems that arise following transition, particularly for those who are labelled as ‘early service leavers’<sup>7</sup> (Ashcroft, 2014, Buckham et al., 2014, Godier et al., 2014, Braidwod, 2009). In a study carried out by McDermott (2009), it was found that recruits who joined the Armed Forces when they were young or from a disadvantaged background had not yet found their place in the communities where they lived and they are, therefore, more likely to find the process of returning to civilian life especially challenging.

Furthermore, military personnel develop a strong social resilience that is developed collectively as recruits progress through their training and, thereafter, their service together. This collective, social resilience is no longer available for support when individuals leave service and re-adjust to life outside the military. This is when personal resilience is needed and when it is likely to be lowest in those who are most vulnerable (Buckham, 2013). Since the challenges military personnel face whilst serving, and particularly in wartime, may be overcome by unhealthy coping strategies such as drinking heavily, access to support is seldom about searching for information or attempting to rationally solve problems (Ben-Shalom, & Benbenisty, 2016). Instead, peer support options could more effectively meet the needs of veterans and mitigate post-service challenges that result in poor outcomes.

In the context of the Veterans Vulnerability Framework (Figure 6), threats are specific events that move people towards a poor outcome. Examples include bereavement, declines in health and physical strength, disability, or loss of income and some are life-stage dependent. For the veterans who took part in the studies, the specific event is transition which resulted in the loss of networks and social processes alongside a renegotiation to identity and rediscovering a sense of belonging. Findings suggest that internal stigma, or perceived stigma, makes veterans feel reluctant to seek assistance and this was prevalent across all participants from all studies. This, in turn, impacted their ability to adjust to their limb-loss and transition back to civilian life – most notable was the perceived need and the effort to which participants went to project an image of normality in their daily life. Transition is not

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<sup>7</sup> Those who leave before completing the minimum term of their contract (between 3 and 4.5 years depending on Service branch), are known as Early Service Leavers (ESLs).

a neat phase of exiting the military and returning to civilian life - it is a protracted process of renegotiating identity and rediscovering a sense of belonging. This process is further complicating by the experience of limb amputation and loss of military identity. Threats in the context of the commentary are explored in Table 4.

Table 4: Threats in the context of the commentary.

<b>Threat</b>
<p>When support networks and coping strategies change on transition from the Armed Forces, well-established arrangements are also fractured. The transition from military to civilian life requires a veteran to re-learn the 'rules' of civilian life and adapt their military ways of being to civilian life and work.</p>
<b>Extracts from Related Outputs</b>
<p>There were a number of reasons for delayed engagement with alcohol services. Primarily it is suggested that veterans normalised their relationship with alcohol, and this prevented them from identifying that alcohol was causing difficulties. And they rarely or never reported to discuss their drinking patterns with health or social care services. Health and social care service provider's lack of understanding of the military culture was cited as a key reason for not engaging with care for their alcohol problems, with many of the participants citing their military services as a contributing factor to their alcohol misuse.</p> <p><i>... I was talking to somebody who had no idea what it was like being in the military so there was no way I was going to talk to them (Participant 02)</i></p> <p><i>After the military because you haven't got a support network. You're on your own. You've got no structure, you've got no support network, you haven't got people that have been through everything the same as you have (Participant 18)</i></p> <p>Much of the discussion around care centred on the differences between military care and care provided on transition. Connected with a sense of loss of military identity, participants particularly favoured care provided by the military.</p> <p><i>The GP can do nothing. District nurse says it's not their business and OTs no. physios no... who is looking after everything that you have that overarches all of these things ...</i></p> <p><i>... There's nothing from the military, there's no help and support. So yeah, I'm a damaged person that is trying to rebuild himself and its painful...leaves an extremely bitter taste in my mouth (Participant 2)</i></p> <p>Some participants recalled a change in the level of support they received after leaving the military, with this once again highlighting the risk that veterans may be left without support during the significant transitional period of early adjustment to limb-loss.</p> <p><i>While you're still in the military it's available, once you leave the military (switch noise) no Hedley Court. Nothing (Participant 5).</i></p>

### 4.2.3 Coping capacity

The third domain, ‘coping capacity’ describes the assets people draw on to protect themselves from poor outcomes, ranging from ill health and a lack of general wellbeing and including individual capacities, formal support, social networks (particularly access to peer support). Given the unique challenges that military personnel face, in addition to the challenges of adapting to transition, it is important to consider pathways to support and policy and practice in health and social care for veterans. Coping capacity in the context of the commentary is explored in Table 5.

Table 5: Coping capacity in the context of the commentary.

<b>Coping Capacity</b>
Resilience and individual capacity and access to resources including social networks, health and social care, education and skills influence how veterans cope and how they deal with challenges over the life-course – relationship resources, formal support and social networks and access to healthcare.
<b>Extracts from Related Outputs</b>
<p>Experts have expressed the need to build emotional resilience during and after transition as a way to tackle social isolation and loneliness. The military is a distinctive institution as it demands complete social integration as part of its culture and purpose. The uniqueness of social integration within military institutions has fundamental implications on social participation and social networks, and this in turn has an impact on service leavers.</p> <p><i>There was a particular benefit to overcoming or preventing loneliness from coming together to participate in activities with other veterans. (Participant 16)</i></p> <p>Events and activities provided by third sector charities worked to inspire confidence and hope by instilling a sense of accomplishment. Participants noted the importance of social networks and peer support forums. Veterans who accessed peer support groups suggested they had been integral to their ability to adjust. The support offered was considered mutually beneficial to both receiving support and giving support to others.</p> <p><i>You’ve got this comradery where you know it doesn’t matter what unit you’re in, whether your army, navy or air force, you just get together, you’ve been through similar things, you just get there and chat (Participant 27)</i></p> <p><i>Yeah, because I think if you’re helping other people ... they’re helping you as well (Participant 33)</i></p> <p>Having someone to talk to who had been through similar experiences was reported as beneficial, especially when facing challenges.</p> <p><i>I can’t open up the same to a civilian ... my support worker is a veteran. And this (Charity) is run by veterans...for me I can relate to them, and they can relate to me. And you have an instant bond and there’s a trust because you’ve all been through the same thing... so you have this common bond so it’s easier to open up and trust and listen than it is with a civilian. Which is something maybe the civilians don’t understand (Participant 05)</i></p>

#### 4.2.4 Poor outcomes

The fourth domain relates to poor outcomes (Table 6). Evidence across the studies has highlighted that transition is a difficult time, regardless of the outcome. The synthesis highlighted the importance of recognising that there are complexities involved when veterans need to access health and social care that should be acknowledged. In addition to alcohol problems and related issues, other areas of difficulty arise too, such as employment, mental ill health and homelessness (Bergman et al., 2014, Fossey, 2010, Iversen et al., 2011). Although resettlement programmes are designed to prepare service leavers for civilian life, it has been suggested that these programmes only appear to be aimed at a basic, vocational level, ignoring many issues associated with life after the military (Higate, 2001). Instead, consideration needs to be given to military transition as military-specific factors can already predispose serving personnel to experiences of social isolation and loneliness (Paper 7, Appendix G). Leaving the Armed Forces caused individuals to feel lonely and socially isolated due to the loss of military friendships. Poor outcomes in the context of the commentary is explored in Table 6.

Table 6: Poor outcomes in the context of the commentary and related to the interpretative synthesis.

<b>Poor Outcomes</b>
The outcomes associated with transitioning from military to civilian life have led to problems with social isolation and loneliness, a reluctance to access help for alcohol problems – the extent to which is different from the general population. Distinct clustering challenges around employment and transition. Social isolation and loneliness are prevalent issues for veterans of all ages because of physical limitations, bereavement, or family changes. These factors led to a decreased social network, including feeling unable to relate to others, particularly services providers perceived as lacking understanding of service life.
<b>Output Examples</b>
Transition from the military to civilian life was believed to have significant impact on experiences on outcomes – lived experiences:
<i>There is no help when leaving the military (Participant One – Delphi Study)</i>
<i>Points of transition are key risk factors for loneliness (Participant 20 – Delphi Study)</i>
<i>The bottom line is that the quality of service you get in the National Health Service is poor in relation to what you got when you were in the military ... the fact is that you are looked after for your health in the military whereas it's questionable whether you are as a civilian (Former Army Officer – Improving Access Study)</i>
<i>The GPs waste of space. I mean you go in a lot of surgeries now they just basically file you on a piece of paper ... like may need sleeping tablets (but) we won't provide them...Alright I'll just hit the bottle. That's my sleeping table (Participant 12 – Improving Access Study)</i>

*After the military because you haven't got a support network. You're on your own. You've got no structure, you've got no support network, you haven't got people that have been through everything the same as you have (Participant 02 - Improving Access Study)*

*... Being left with a leg that doesn't work properly and does not give me quality of life that I was told it would give me is extremely demoralising. I have my girlfriend; we have two dogs and if it hadn't been for my girlfriend and two dogs, I don't think I would be alive now. Because to me there is nothing worth living for personally from my own point of view. As I say, no job, no quality of life, no health, being abandoned, it's extremely grim (Participant 2 – Maintaining Independence Study)*

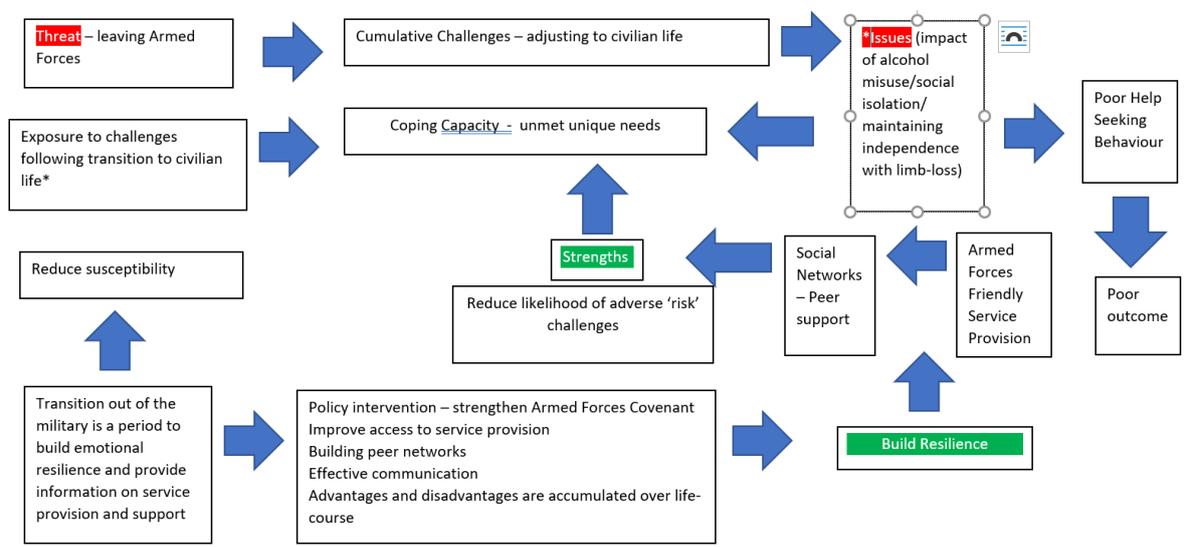
*I hadn't really given a lot of thought to well what will I do if I leave the army? What will I do if I got injured? You didn't think about that necessarily... Maybe one or two would, but I hadn't. I was so career-driven you know and focused on the army. I hadn't really thought about what if. So that was a big shock (Participant 29 – Maintaining Independence Study)*

*In the NHS there is a massive lack of qualified prosthetists who can actually deal with the robotic legs (Participant 2 – Maintaining Independence Study)*

#### **4.2.5 Summary of the development of the Veterans Vulnerability Framework**

Considering interventions to reduce accumulation of issues and to examine the important relationship between vulnerability and identifying, not only the threat, but also resilience and responsiveness her being highlighted by the synthesis as of significant importance. Analysing vulnerability in the context of the commentary also involved identification of opportunities that may help to understand how to offer support to avert negative effects of a changing environment by considering resilience (Moser, 1998). In this sense, resilience amounts to assets and entitlements that veterans have in the community, including access to services, peer support networks to mobilise and manage exposure to threats that led to vulnerability. The research and related outputs have addressed these issues and explored the concept of vulnerability in relation to adapting to civilian life. The capacity to respond to changes presented following transition depends not only on social cohesion and also on life cycle factors that can affect the ability to respond to external changes. The multifaceted nature of the leaving the Armed Forces is illustrated in the Veterans Vulnerability Framework (Figure 9) which outlines the complexity of transition for veterans in relation to facing challenges, and the dynamic nature of the concept of the domains: essentially the incremental outcome of a set of distinct but related risks, the risk of being exposed to a threat and the risk of a threat materialising and the risk of lacking the defences to deal with the threat. This framework is built on the Schröder-Butterfill (2012) vulnerability model about the application of domains of exposure, threat, coping capacity and outcomes.

**Figure 9: Veterans Vulnerability Framework**



It is envisaged that the Veterans Vulnerability Framework can be used as a model that enables consideration to focus on how and where interventions to increase coping capacity or resilience can be targeted to prevent progression to a poor outcome. This makes the framework useful for those seeking to improve access to health and social care for veterans following transition by developing a greater understanding of vulnerability and resilience, how they impact on veteran’s lived experience and how they are shaped by policy and practice in a health and social care setting.<sup>8</sup>

### 4.3 Summary

In this chapter, the potential for veterans to become vulnerable has been defined around the domains (Figure 8) of the *risk* of poor outcomes due to the *threats* posed by the challenges encountered on and following transition from the Armed Forces. The lack of resources to help mitigate the challenges may result from a variety of social, psychological or physical challenges accumulating across the life-course illustrated by examples from the submitted publications; veterans who live with limb-loss, alcohol misuse and who face social isolation and loneliness, have faced significant barriers that

<sup>8</sup> The Veterans Vulnerability Framework is set in the context of transition and life after service as an opportunity to identify and engage with individuals and populations acknowledging that transition is not the sole cause of vulnerability.

complicate access to healthcare. As discussed in Chapter 2, this is compounded by the fact that veterans appear to be less likely to seek out and use health and social care services, despite their higher needs for these services resulting in the need to identify effective ways to implement health and social care service improvements that are targeted at vulnerable veterans.

In summary, it is hoped that the Veterans Vulnerability Framework will be useful for advancing and guiding the research agenda within the context of access to health and social care and vulnerability. To recognise this concept requires a collaborative effort between researchers, health and social care providers and policymakers to establish how resources might be allocated to further analyse factors that make some veterans vulnerable and establishing methods to counter this. Among the important implications for future research, prevention and policy reviews is the need to assess veterans who are several steps away from a problem to understand both the sources and the consequences of vulnerability. In this commentary, I have argued for a systematic approach to the study of vulnerability and presented a framework that identifies its constituent risks. The study of vulnerability requires attention not only to the ways in which exposure factors are created and distributed over time, but also to the ways in which individuals manage or fail to mobilise social, material and public resources to protect themselves from poor outcomes. Chapter 3 considered ways to mitigate this by employing veterans as peer-researchers, which is unique in this field of research nationally and internationally. It was clear from the synthesis that this was not only significant in relation to improved participant recruitment, but also in the quality of the data collected.

It is encouraging to see a focus on vulnerability in more recent literature highlighting the difficulties veterans can face during transition. *Duel et al., (2019)* carried out a literature review of factors that contribute to vulnerability and also outline potential support mechanisms. However, a comprehensive review of the factors that are most relevant to the implementation of policy and practice in health and social care settings serving veterans is also needed to appropriately tailor implementation strategies based on prevention of vulnerability. To do this, it is important that the research community seek to identify relevant factors that could prove effective at reaching the veterans at risk, considering the four domains of exposure, threats, coping capacity and poor outcomes in order and identify gaps that indicate further investigation is needed. As research on health and social care becomes progressively sophisticated, there is an ever-increasing need for defining a comprehensive preventative research agenda. The majority of current research has focused on documenting health disparities or outlining their underlying causes rather than considering vulnerability and there is a need for a comprehensive framework for detecting and understanding how to design interventions that will reduce or eliminate un-met need by providing a more precise definition of vulnerability in the

context of health and social care and to improve access to support for veterans who face challenges following transition from the Armed Forces.

## **Chapter Five**

### **5.1 Introduction**

This chapter seeks to summarise the commentary and explain how it has achieved its aim, through synthesising the studies/papers presented in this commentary, to produce key pertinent themes and subsequently provide an understanding of what constitutes vulnerability (Chapter 4) in the UK Armed Forces veteran population and how this contributes to the risk of leaving their health and social care needs unmet. As discussed in Chapter 1, veterans' experiences of serving in the Armed Forces is often poorly understood by health and social care providers (Paper 1, Appendix A; Paper 2, Appendix B). This lack of understanding meant that providers held a different view about access and pathways to help and support veterans in civilian society. A significant proportion of academic literature has had a focus on the cause of mental health problems within the Armed Forces and how this relates to combat, particularly PTSD (Finnegan et al., 2020). This focus on combat-related causes and symptoms of mental ill health has resulted in the commissioning of what is termed 'priority' veteran-specific NHS service provision for veterans with military related conditions or for rehabilitation of veterans using prostheses (Bacon et al., 2022) rather than on veterans' own needs and priorities.

### **5.2 Improving Access**

This commentary has formulated and discussed a set of themes that underpin a complex body of evidence from empirical research and resultant publications, used to generate theory (i.e., 'rhetoric - v- reality', 'hard to reach', peer-informed research and vulnerability). The synthesis of this work is not limited to an appraisal of the methodological specificities of the individual papers but, instead, draws out the key concepts in relation to improving access to health and social care services for veterans.

The re-conceptualisation (Chapter 2) involved the generation of themes from available evidence and allowed for those themes to be subjected to scrutiny as part of the review process. The seven papers have been considered together as a research journey and have been reviewed with the aim of identifying their original contribution to improving access to health and social care services for vulnerable veterans. The resulting Veterans Vulnerability Framework (Chapter 4) recognises explicitly that complex problems can and do arise for some services leavers and applies a methodology for considering how to overcome and tackle the onset and impact of these complex problems. The key themes that are important when considering improving access and applying the Veterans Vulnerability Framework are summarised in this chapter under the respective sub-chapter headings.

### 5.2.1. Improved access to health and social care

Complex problems have led to the creation of health and social care services (Reeve et al., 2016) so it is unsurprising that effective interventions can be complex to develop. It is important therefore, to consider the opportunities arising from translating research findings into quality improvement measures as a recognised way of implementing solutions to complex challenges (Sturmberg & Martin, 2014). This approach has been particularly successful in healthcare and the management of long-term conditions through evidence from clinical trials (Estape et al., 2014) and significant efforts have been made to establish evidence-based medicine (Reeve et al.; Estape et al., 214). The clinical trial process is linear, in that the results are incorporated into clinical guidance and recognised as good practice which then informs policies (Lean et al., 2008). However, the process of transforming non-clinical research into practice application is not linear and different forms of evidence are needed at different stages involving a number of stakeholders; this is increasingly informed by translation research methodology and philosophy (Sturmberg & Martin, 2014).

Translational research has emerged relatively recently and requires us to think beyond the academic environment since it advocates partnerships with the health and social care community as well as service users (Malmberg et al., 2019). With an emphasis on translating research discoveries into practice, it holds promise for addressing health disparities and is well suited to improving access and increasing the effectiveness of health and social care interventions for ‘hard to reach’ or ‘seldom heard’ populations. Partnerships between academics and practitioners, as well as with veterans themselves, was crucial in building an evidence base for best practice and for capturing the unique factors related to social isolation and loneliness (Appendix J; Paper 7). The study (Appendix J) employed the Delphi method<sup>9</sup> to gather expert consensus relating to the cause impacts and ways to tackle the effect of social isolation and loneliness on the military veteran population (Paper 7). This work highlighted the importance of the period of transition and the role of social prescribing as an important initiative to tackle this issue and help to eliminate the gap between research and practice.

Awareness of the potential for social prescribing to improve access, coupled with the introduction of the ‘veteran-friendly’ status for GP practices under a new national scheme to improve care and treatment for veterans, provided an opportunity to influence practice by working with NHS England and South West of England Integrated Personalised Care Team. I played an instrumental role in first

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<sup>9</sup> The Delphi method is a process used to arrive at a group opinion or decision by surveying a panel of experts. Experts respond to several rounds of questionnaires, and the responses are aggregated and shared with the group after each round.

developing this work in the North East as a pilot project based on the research findings discussed and described in this commentary and this has now developed into an e-learning module to support social prescribers to better understand the veteran community (please see Box 1). GP practices can qualify for veteran friendly status, via a national wide NHS England and Royal College of GPs (RCGP) initiative, by offering extra support for veterans and increase knowledge about service provision. The work that the research team, together with NHS partners, has the potential to improve access to primary care and social support and has the potential to address the ‘rhetoric versus reality’ argument by applying a policy directive and evidence-based practice (discussed further in section 5.5.2).

Box 1 describes the social prescribing module development that is currently near completion.

***Social Prescribing and the Armed Forces Community module now available***

*A new eLearning module to support the health of the armed forces community (AFC) has now been added to Health Education England eLearning for Healthcare (HEE elfh)’s Social Prescribing – Learning for Link Workers programme.*

*Social Prescribing and the Armed Forces Community is designed to enhance social prescribing link workers (SPLWs)’s support for current serving personnel, military veterans and their families. While many aspects of their health needs are the same as other members of society, there are sometimes significant differences from other patients, particularly conditions related to life in the forces, and the overall impact of military life on the family.*

*This module – developed in partnership with NHS England and NHS Improvement – provides an overview of the unique challenges of service life and how SPLWs can support this community. On completion of the programme, learners will gain new skills such as:*

- *gaining knowledge of the key legislation and policies in relation to the AFC*
- *identifying a range of services and what they offer to the AFC*
- *reflecting on social prescribing processes from own and client perspectives and evaluate implications for the AFC*

*It also includes sources of further information and support. Primarily this module is aimed at SPLWs but may also be of interest to anyone supporting the armed forces in their local community.*

*The module has been developed as part of a 2-year demonstrator funded by NHS England and NHS Improvement’s Armed Forces Health Team, the Armed Forces Covenant Fund Trust and supported by Northumbria University - The Northern Hub for Veterans and Families Research and the South West Integrated Personalised Care Team.*

### **5.2.2 Influencing practice**

Chapter 3 discussed how a history of service lives results in veterans struggle to access civilian support services and chapter 4 explored the result of this struggle in the context of vulnerability resulting in unmet need culminating in the understanding that access to health and social care is a pre-requisite

to obtaining quality care and care that is appropriate, regardless of whether it is provided by the MoD or by civilian health and social care service providers. Much of the discussion resulting from the study into maintaining independence following limb-loss (Appendix I) centred on the differences between military care and care provided by civilian providers and transition between the two (Paper 6, Appendix F). The synthesis highlighted the importance of recognising that there are particular circumstances that need specific attention with regard to threats and the risk of vulnerability as well as a more general consideration. For example, veterans who experience limb-loss as a result of peacetime operations or during civilian activities may be at a significant disadvantage with regard to the level of financial and practical support available to them following their injury (Appendix I). Whether there are specific circumstances or more general considerations with regard to transitioning from the Armed Forces, transforming this type of evidence into actionable recommendations for practice is key, particularly in relation to peer-support networks and support groups. Peer support groups provide a forum for veterans to make social comparisons with others in a similar position to themselves and can provide significant physical and psychological benefits for veterans affected by limb-loss and for those affected by social isolation and loneliness (Papers 6 and 7). In this context, the work of the military charity sector is also highly valued and provision of this form of support may be particularly important during the early stages of adjustment to civilian life. Both peer support networks and national and local charities offer understanding via a shared experience of being a veteran and this has the potential to mitigate the risk of a poor outcome and mobilise resources to deal with the exposure to difficulties (Chapter 4, Veterans Vulnerability Framework).

Despite the recognition of the need for priority veteran specific provision, commissioning of these services has largely focused on specific mental health services (Macmanus & Wessely, 2013) with dedicated services such as 'Op Courage' and the Veterans' Mental Health and Wellbeing Service for those physically injured during their time in the Armed Forces (Grant & Simpson, 2022). The development of these dedicated services has not been accompanied by a requirement for formal educational or training programmes to care for the specific health and social care needs of veterans (Finnegan et al., 2020) and the unaddressed issue remains; that mental ill health and PTSD are not suffered in isolation and are often accompanied by a number of co-morbidities and increased physical and social challenges. One of the key issues is alcohol misuse. Alcohol has played a prevalent, historic role in military life where it has been used as a means of mediating stress, both in combat situations and in the aftermath of battle (Jones & Fear, 2011). Used in social bonding and comradeship (Jones and Fear, 2011), drinking has become a common and accepted behaviour in military culture, surpassing alcohol use in the general population (Bray et al., 2013, Buckman et al., 2013, Murphy & Turgoose, 2019, London et al., 2020). Alcohol misuse is commonly reported to be co-morbid along

with PTSD and other mental health issues such as anxiety and depression, serving as a coping mechanism (Aguirre et al., 2014). As discussed in Chapter 1 and linked to Paper 2 (Appendix B), an understanding of the Armed Forces culture is particularly important since, due to the social norms associated with mental ill health and alcohol use in the Armed Forces, personnel often do not seek help (Kiernan et al., 2016).

Examples of how the research and publications presented have influenced practice are an important part of this commentary when considering the contribution to new knowledge and innovation. There is the potential to build on the successful impact that the research and publications have had to date with regard to influencing practice. In response to the findings of the research into the utilisation of the Armed Forces Covenant (AFC) in NHS Trusts and Clinical Commissioning Group (Paper 1, Appendix A) I sought to develop a Masterclass for health and social care practitioners. Freedom of Information investigation revealed that signing up to the AFC alone does guarantee that health and social care staff will have an understanding of what this means in practice or adopt a common set of access policies in order to ensure equity of access for veterans. In 2017, I was awarded a grant by Northumberland Tyne and Wear NHS Foundation Trust (NTW) to develop the Masterclass and deliver a series of sessions for staff in NTW and Cumbria Northumberland, Tyne and Wear Foundation Trust (CNTW). The aim of the Masterclass was to improve understanding and awareness of military culture and explore the challenges that some veterans face following transition, particularly those who present with complex needs who may need/be entitled to priority treatment for service attributable conditions. I was appointed as Principal Investigator to also evaluate the effectiveness of the Masterclass in practice (please see Box 1). Key to the delivery of the Masterclass sessions was the inclusion of veterans themselves who provided a live narrative.

Box 2: This an extract from an Impact Case Study submitted to REF 2020 that outlines the impact of the Masterclass delivery. Permission was granted by the Joint Director of Research, Innovation and Clinical Effectiveness at Cumbria Northumberland, Tyne and Wear Foundation Trust who provided this testimony.

**Box 2: Extract from Testimony accepted for REF 2020**

*Northumbria University developed a Masterclass to support 200 clinical staff working with veterans with complex mental health needs across the North East. Supported by the Veterans and Military Families Research Hub, the Masterclass sessions were delivered by veterans themselves so they could communicate their experiences and needs directly. As a result, the 200 staff have increased awareness and understanding of the unique care and support needs of veterans and have been able to adopt new working practices to meet them. This culture of collaboration and co-production underpins our operations for veteran care now so we tailor our services to recognise the realities and particular needs of groups which can be often excluded.*

The success of the educational approach was largely based on the acknowledgement by both NHS Trusts that staff did not fully understand the unique needs of the veteran population or how to apply the principles of the AFC. What was valued was the veterans 'lived experience' as part of improving understanding of the needs of veterans and the importance of this approach in informing service change and new ways of working.

### **5.2.3 Hard to reach and peer-informed research**

Engaging with the veteran community and focusing on the everyday lives of individuals moving from serving personnel to civilians has the potential to enhance understanding of the challenges some veterans face, to ensure that they do not result in a potentially incapacitating stasis of being continuously trapped between military and civilian life (Herman & Yarwood, 2014). Strong interpersonal bonds between veterans' mirror relationships with comrades in the military (Green et al, 2010) and it is evident from the stories that participants told as part of the research and published papers presented in this commentary, that the relationships were based on trust, friendship and mutual support. This close bond has the potential to mitigate the risk of vulnerability and should be considered as a way of negotiating the challenges of transition, strengthened by solidarity through interactions with past serving personnel and deconflicting between the experiences of service life and civilian life by utilising peer-support models as a feature of transition.

In statutory services that offer health and social care support, veteran's champions are thought to be one way in which to raise awareness of the issues faced by the Armed Forces community following sign up to the Armed Forces Covenant (Walker et al., 2020). As part of signing up to the Armed Force Covenant, Local Authorities in England have pledged to appoint an Armed Forces Champion and a Lead Officer. Part of the role is to support the Armed Forces community (including veterans and their families) in relation to Local Authority policies and service delivery (Paper 1, Appendix A). Although the research into understanding why veterans are reluctant to access help (Appendix H) was specific to alcohol related issues, it is based on a methodology that can be replicated and this is discussed further under the *Illuminating the way ahead* section of this chapter.

The 'Hub and Spoke' model development (discussed in Chapter 3) aimed to challenge and change current thinking about how veterans access substance misuse services based on evidence from the empirical research (Appendix H). We, the research team, set out to facilitate a solution focused approach to improving access to substance misuse services by translating research findings (using an iterative approach) into a practice setting. This work attracted attention from a local area with regard to implementation of the model and feedback received from Sunderland City Council has proved the success of the model in practice (please see Box 2). The implementation phase of this research project

was jointly funded by The Royal British Legion and Sunderland City Council. I was appointed Principal Investigator with regard to the Sunderland City Council funded aspect of this research and my role was to help to facilitate appointment of a peer-support worker and set up and chair stakeholder committee meetings to implement the new model of care (Box 3).

Box 3: This is an extract from an Impact Case Study submitted to Research Excellence Framework (REF<sup>10</sup>) 2020 and highlights the importance of the peer-influenced research and impact of service delivery (substance misuse) relevance and impact of the research into improving access to alcohol services (Appendix H). Permission was granted by the Public Health Business Manager, Sunderland City Council who provided this testimony. Sunderland City Council has been awarded gold AFC status.

**Box 3: Extract from Testimony accepted for REF 2020**

*We have worked with the Northern Hub for Veterans and Military Families since 2018 as both a partner in the projects and in providing funding for them to improve our understanding of veteran issues and to help improve the delivery of our services. The Northern Hub completed a two-year project the with us to research and develop a peer-led support model for veterans who experience issues with substance misuse. The research findings provided us with innovation in service delivery as well as insight into the value of placing veterans at the heart of the design and practice of care and support.*

*Veterans were empowered to lead workshops and deliver training with service providers that shared the veteran's unique experiences of substance misuse, and their feelings about the complex causes. Northumbria's research highlighted that very different treatment and care pathways were necessary to support veterans because of their unique experiences. The standard models of care and treatment were designed for issues of mental health and substance misuse for all, but the research insights exposed that there needed to be a greater inclusivity for veterans to draw out the particularities of their experiences. Without the changes we made due to Northumbria's research we would have continued to have greater trouble with veterans accessing services, not just from the perspective of initial referral and engagement, but also relating to sustaining engagement by creating a supportive and effective environment.*

*As a result of the success of the Northern Hub research we implemented the new peer-led service design model for Sunderland via a cost-neutral service that is independent of council funding. The local veteran population have benefitted greatly from the improved accessibility and greater inclusivity of the services and care pathways. We have seen the degree and manner with which veterans engage with our services become much more effective, and the collaborative method developed by Northumbria research has greatly improved the practices of our service providers. So successful has this innovation been that we have shared it as a model of good practice across our other regional services, beyond veteran support, so that we have been able to enhance service delivery across multi-disciplinary service networks regionally.*

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<sup>10</sup> The Research Excellence Framework (REF) is a research impact evaluation of British higher education institutions. Its stated aims are to provide accountability for public investment in research, establish 'reputational yardsticks' and achieve an efficient allocation of resources. The most recent REF was 2021.

Co-production was seen as one of the potential solutions to improve access for veterans deemed hard to reach (Chapter 3). The 'Hub and Spoke' model was informed by peer-influenced research to provide an evidence-base and to focus on lived experience as a means of understanding of the challenges faced by veterans. One of the significant challenges was acknowledging that some veterans wait in excess of 10 years before seeking formal support (Fraser, 2017) and, when they do access services, it is at crisis point. Evidence also supports the view that veterans are more like to engage with a dedicated service, where there is an understanding of Armed Forces culture, regardless of whether their condition was related to military service (Randles & Finnegan, 2022). This holds true for veterans across the country and there needs to be a broader acceptance that dedicated services may provide an opportunity to reach a large group of individuals who sometimes struggle with mainstream NHS and/or Local Authority services (Fraser, 2017).

Practitioners, working in NHS of mental health care services, described that many veterans did not seek help and only accessed treatment once at crisis point. As a result of the research, the NHS providers who took part in the co-production workshops, reported that they were better able to engage directly with veterans and create a new way of working utilising a peer-support model. Because the development of the 'Hub and Spoke' model of care used an innovate methodology developed by the research team, the Cumbria Northumberland, Tyne & Wear NHS Trust (The Trust) Trust felt able to take a new and proactive approach to targeting the complex health needs. The culture of co-production and collaboration underpinned The Trust's operations for veteran care and, as a result, they were able to tailor their services to recognise the needs of veterans (Box 4).

Box 4: Cumbria Northumberland, Tyne & Wear Foundation Trust (The Trust) has signed the Armed Forces Covenant. This is an extract from an Impact Case Study submitted to REF 2020 and highlights the relevance and impact of the research into improving access to alcohol services (Appendix H). Permission was granted by the Joint Director of Research, Innovation and Clinical Effectiveness at Cumbria Northumberland, Tyne and Wear Foundation Trust who provided this testimony.

**Box 4: Extract from Testimony accepted for REF 2020**

*In the North East, Veterans Wellbeing Assessment and Liaison Service is delivered by Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust and Tees, Esk and Wear Valley NHS Foundation Trust. The service is set up to help to develop and deliver mental health services for veterans. Northumbria research highlighted how a lack of detailed understanding of veteran culture inhibited the effective and sustained care delivery to veterans in need of support, contributing to high rates of disengagement from services, relapse into dependency, and a sense of isolation and abandonment amongst an already neglected group. Veterans' unique experiences and the complex, interacting causes of mental health problems and alcohol and substance abuse and dependencies require care policies, planning, and provision designed to understand, reflect, and meet their needs. The usual care and support policies for those struggling with mental health and alcohol and substance abuse*

*do not meet the needs of this community, or the standards of care we set for ourselves. Northumbria's research and implementation of it into the design and development of our care policies and support offering has been a significant improvement for our delivery and for the wellbeing of the veterans.*

*As a result of the research project Understanding Why Veterans are Reluctant to Access Help for Alcohol Problems led by (name) and Gill McGill, our care providers were able to engage directly with veterans and create a new model to overhaul the way we create and deliver veteran care policies. The new model, named 'Hub and Spoke' uses an innovative methodology developed by the Northumbria researchers to enable veterans to co-produce care provision and planning policies through collaborative workshops. This new operative policy is more cost-effective than our previous methods and represents not only an improved way to develop care policy but represents a real cost-saving. These costs can be re-purposed to deliver improved and more sustained care to veterans because giving them a voice in their care plans and delivery results in fewer veterans leaving care and becoming more vulnerable to alcohol and substance misuse, and other potential dangers to their mental health and wellbeing.*

The example above helps to articulate how accepting that there is a need to adapt services, based on evidence from research, has the potential to create conditions in which veterans struggle less with access and engagement with mainstream health and social care services. When practitioners and service users work together to recognise potential barriers and to mutually identify and address modifiable areas, it is possible to making impactful changes to improve access.

### **5.3 Veterans Vulnerability Framework**

The synthesising argument around access to health and social care and veterans who face challenges following transition, has been set around central concepts and the core category of vulnerability. Vulnerability functions as a construct because it is the product of the re-conceptualisation of the body of work presented in this commentary into a new conceptual form. By attending to how vulnerabilities arise in relation to transition from the Armed Forces and, in turn how the resultant barriers to seeking health and social care can occur, the phenomenon of access can be better understood, and more appropriate recommendations made for policy, practice and future research.

Among the important implications for research is the need to consider how to mitigate risks that transition poses when veterans are some distance away from a problem and this requires an understanding of both the sources and consequences of vulnerability. In this commentary, I have argued for a systematic approach to the study of vulnerability and presented a framework that identifies its constituent risks. The aim, therefore, is to explore further how this framework could be utilised as a methodology for further research.

As discussed in Chapter 4, the Veterans Vulnerability Framework is influenced by Schröder-Butterfill & Marianti's (2006) model for understanding vulnerability in old age. Its core components set vulnerability in the context of exposure to a threat and the lack of defences or resources (i.e. coping capacity) to deal with the threat, leading to a poor or detrimental outcome for the individual. It is envisaged that future health and social care service development will utilise the Veterans Vulnerability Framework dissemination to deter the extent to which different individuals have the physical, social and personal resources to identify and achieve successful transition and to access services to support their needs, through dealing with their change in circumstances. Further research is needed to consider what the pre-existing circumstances of service leavers might be as indicators of poor outcomes and whether we can build a set of indicators (based on complex needs and vulnerability as discussed in this commentary) across a range of domains that highlight threats and risks and coping capacity/assets.

Aligned to the limitation discussed in this Chapter (5.5), there is a need to better understand the lived experience of women who have served in the UK Armed Forces before considering applying the Veterans Vulnerability Framework to female veterans. It cannot be presumed that it is an appropriate model for women; and research with women as co-researchers is essential to fully utilise a peer-informed approach. To take this work forward requires an exploration and investigation of their military service, transition, and post-military life (Dodds & Kiernan, 2019) and an examination of what constitutes successful resettlement into civilian society or, conversely, what might hamper this with regard to access to health and social care services and poor outcomes that may lead to vulnerability.

#### **5.4 Illuminating the Way Ahead**

Peer-informed research and participatory methods are key to providing an evidence-base for improving access that involves both stakeholders and service users. Understanding the concept of 'hard to reach' (Chapter 3) and utilising peer-influenced research has provided the research team with a powerful tool. The success of the work outlined in the testimony extracts (Box 3 and Box 4) has resulted in an influential methodology and research design that has led to successful bids for continued research. In addition, the breadth of the work has expanded to consider aspects of serving in the Armed Forces on families of service personnel.

Completed in March 2021, an exploration was undertaken into the impact of bereavement on military families who received a casualty notification of death in service. The study adopted an exploratory, sequential mixed method design to develop an evidence base by using narratives from those affected. The data from the narrative interviews informed the design of a survey with the results from both triangulated. Spouses of veterans were involved in all phases of the research from study design

consultation, peer recruitment, data collection, analysis and dissemination. A peer researcher was appointed to support the funding application and was named on the bid. This was fundamental to creating research tools underpinned by experience and with the necessary sensitivity with regard to the subject under investigation. The most significant challenge in undertaking this research was access to this 'hard to reach' and potentially vulnerable community. The peer researcher is a co-author on the resultant output and is now employed as a Research Assistant in the research team. This peer-influenced approach and co-production methodology has developed further over the last 12 months and has led to a successful bid, in partnership with Fighting with Pride, who are a charity offering support to Lesbian, Gay, Bisexual, Transgender Plus (LGBT+) veterans, serving personnel and their families, to incorporate an evidence-based approach to establishing and developing a network of support for veterans from the LGBT+ community who may feel socially isolated and to offer solutions where barriers exist.

I am also the co-investigator on a study that aims to better understand and work to reduce suicide among the Armed Forces veteran population. The research team is working as part of a consortium to carry out research to address suicide risks among the veteran population with a view to co-producing a veteran-specific model of safety and intervention for those identified at highest. The project has been designed in collaboration with military families who have been bereaved by suicide through a series of pre-study focus groups.

All three of the research studies described above adopted the design and principles of peer-informed research, 'lived experience' and participatory methodology that has gathered strength and demonstrated impact as a result of the research and publications submitted as part of this PhD by Publication. Narrative inquiry (Wang & Geale, 2015) has been used for the first phase in year one of a two-year project and the data will be used to focus on co-production workshops to develop models of care for phase two in the second year.

In addition, the body of work presented in this commentary has now extended to include further publications that have been accepted by respective journals or are in the process of review (Table 7).

Table 7: Publications that have been accepted by journals or are being reviewed by editors/reviewers.

Output	Authorship	Status
<i>Developing an Integrated Model of Care for Veterans with Alcohol problems.</i>	Osborne, A. K., McGill, G., Greaves, P. J., & Kiernan, M. D. (2022).	Published 2022 International Journal of Integrated Care
<i>“Knock on the Door”–Exploration of Casualty Notification and the Long-Term Impact on Military Families in the UK.</i>	McGill, G., Wilson-Menzfeld, G., Moreland, M., & Kiernan, M. D. (2022).	Published 2022 Journal of Loss and Trauma
<i>Bereaved military families: a mixed methods study on the provision of practical and emotional support.</i>	Fadeeva, Mann, McGill, Wilson-Menzfeld, Moreland, Melling & Kiernan (2022).	Published 2022 Death Studies Journal
<i>Bereaved Military Families: Relationships and Identity</i>	Mann, McGill, Osborne, Moreland, Kiernan, Wilson-Menzfeld (2022).	Submitted to Journal of Loss and Trauma 2022 (under review)
<i>Exploring the Relationship Between Military Service and Alcohol Use: A Systematic Narrative Review</i>	Osborne, Wilson-Menzfeld, McGill & Kiernan (2022)	Published 2022 Occupational Medicine
<i>Enhancing Veteran Study Participation by Engaging Veterans in the Research Process: A Practical Guide</i>	Barker, Hartmann, Dunlap McGill, Wilson-Menzfeld (2020)	Published 2022 Journal of Comparative Effectiveness Research

#### 5.4.1 International influence

Developing the peer-informed theme also attracted interest from academic colleagues in the United States Veterans Health Administration (VA) with a common commitment to veteran engagement in research. Together, both institutions (VA and Northumbria University) developed and co-authored a paper consisting of case examples to describe how, as researchers, we have benefited from the contribution and knowledge of veterans and their families as ‘experts’ through the personal experience of serving in or being a family member of someone in the Armed Forces (please see Table 7). As part of the writing process, we have jointly developed a toolkit that includes general guidance on how to engage veterans that would be relevant to both the UK and the United States that we hope will be published in the near future. The toolkit describes steps at different points in the research process underpinned by the philosophy of participatory research with veterans as active participants rather than ‘subjects’ (McLaughlin, 2015, Videmsek, 2017). For the research team in the UK, this model began to develop as part of the maintaining independence following limb-loss study (Appendix I) and was presented as a case study discussion and published in the conference proceedings at the

3<sup>rd</sup> World Conference for Qualitative Research in Lisbon in 2020<sup>11</sup> (McGill et al., 2018). The case study presented outlined the important role of the peer recruiters to support identification of eligible participants and to help them make an informed decision about participation.

#### **5.4.2 New Knowledge and Recommendations**

#### **5.4.2 New Knowledge and Recommendations**

This commentary has illuminated the way ahead and has influenced current research discussed in this chapter and, with further testing, this new knowledge could continue to benefit research in the field of veteran studies. In Chapter 3, the concept of the wider determinants of health was explored with regard to the link between social inequalities and disparities in health and social care outcomes. Through interpretive synthesis this concept introduces and recommends consideration of the scope of public health to explore, through participatory research, the underlying determinants of health inequalities and equity of access to health and social care services for veterans. The knowledge gained through understanding of the key themes (Figure 1, Chapter 1) and the Veterans Vulnerability Framework (Chapter 4) can be applied, through professional practice, to develop and improve social policies that focus on preventing vulnerability and improve access to avoid cumulation of risks factors. The scope of public health research has the potential to address and reduce social and health inequalities by utilising the Veterans Vulnerability Framework as a methodology. As discussed in Chapter 3, exposure and an individual's coping capacity are related to wider determinants of health, a diverse range of social, economic, and environmental factors which impact on people's health. Such factors are influenced by the local, national, and international distribution of power and resources which shape the conditions of daily life. They determine the extent to which different individuals have the physical, social and personal resources to identify and achieve goals, meet their needs and deal with changes to their circumstances.

The commentary has also addressed inconsistencies in relation to adopting the principles of the Armed Forces Covenant (Paper 1, Appendix A) and explored the theme of 'rhetoric versus reality' that was highlighted by the synthesis. The AFC has been in operation for over ten years and has the potential to improve the lives of Armed Forces personnel, veterans and their families through the pledges that are made if health and social care services implement procedures and initiatives linked

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<sup>11</sup> The World Conference on Qualitative Research (WCQR) is an annual event that aims to bring together researchers, academics and professionals, promoting the sharing and discussion of knowledge, new perspectives, experiences and innovations on the field of Qualitative Research.

to the principle of the policy. Nevertheless, as discussed in Chapter 1 and throughout this commentary, the synthesis has highlighted those veterans still face disadvantage in accessing health and social care services as a result of ineffective policy and a lack of understanding of the unique nature of service in the Armed Forces. This commentary puts forward the recommendation that there needs to be measurable, enforceable national standards that providers and commissioners of health and social care services adopt in practice are held accountable for tangible improvements to access for vulnerable veterans. This commentary also recommends utilising participatory methodology, peer-informed research and co-production design to support the implementation of the 'veteran-friendly' service provision in local areas to address the policy-practice gap and to develop good practice, evidence-based design of health service delivery.

Further research is necessary to consider implementation of the Veterans Vulnerability Framework as a methodology to examine the distinct risks and symptoms which predict vulnerability in the veteran population and examine the relationship between threats and coping capacity.

The next steps for this work include utilising the framework as an opportunity to evaluate how the structure and background can be applied as a methodology by recognising vulnerability as a key construct and allowing specific research questions that relate to transition, coping capacity and resilience. Application of the Veterans Vulnerability Framework to improve access to health and social care will rely on continued future collaboration of researchers, policy makers, the MoD and service providers, utilising an integrated approach to consider what constitutes a successful transition to civilian life after service in the UK Armed Forces. This has the potential to develop interventions and inform service delivery that focus more strongly on the needs of those affected by threats and challenges that may lead to vulnerability to better address questions of candidacy for health and social care. There is a growing need to translate conceptual insights into operational assessment methodologies, guidelines and procedures that are easily accessible to practitioners and decision makers. One step towards this could involve the development of an integrated vulnerability and resilience assessment to act as a guide for researchers, together with policy makers and practitioners, and allow for a strength-based approach to build coping and adaptation strategies and activities that address both physiological challenges and social change.

## **5.5 Limitations**

It is important to acknowledge that a limitation associated with my work is that few participants recruited to the studies were women and this limits the generalisability of the commentary and the submitted publications. Women have served in the Armed Forces for more than a century and can now apply for all the same roles as men and between 31 March 2020 to 31 March 2021, women made

up 11.8 per cent of the intake of personnel into the UK Armed Forces with more than 3,000 servicewomen and female veterans (House of Commons Defence Committee, 2021). This leaves a significant gap in our understanding of how serving in the Armed Forces and the experience of transition impact on access to health and social care if and when challenges arise. The risk of bias towards male-orientated research into improving access to health and social care for veterans limits the generalisability of some of the findings and this needs to be considered when interpreting the outcome and application of the Veterans Vulnerability Framework.

## **5.6 Conclusion**

Based on seven published papers (Appendix A-G) and three research studies (Appendix H-J) this commentary has identified and discussed key issues and developed solutions and recommendations to improve access for military veterans following transition from the UK Armed Forces to civilian life.

It would have been possible to produce an account of the synthesis limited to the themes discussed above and in Chapter 3. However, it was important to produce an interpretation of the evidence that could produce new insights and fresh way of understanding how to improve access to health and social care by including the development of a Veterans Vulnerability Framework. The production of the synthesis argument to consider vulnerability as a key concept, is produced from a privileged position of an 'authorial voice' and I was employed as a Research Assistant on all of the research projects which influenced the re-conceptualisation process. My conclusions can be defended on the basis that the themes and commentary are grounded in evidence that is plausible, that offers insights that are consistent with the available evidence and that it has generated empirically valuable research questions for the future.

Fundamentally, this commentary has aimed to stimulate new thinking about how we consider issues of risk as they pertain to outcomes in transition. Better understanding the veterans who struggle and who are not accessing health and social care services that most need our attention, should lead to the refinement of service provision and accurate targeting of resources. As transition continues to define itself as a key period of change, it becomes increasingly important to understand successful transition through this stage. Through reconsideration of risk and protective factors we can clarify veterans needs and work towards the development of a more unified agenda from which to support veterans during this period.

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## Glossary of Terms

Annual Population Survey	The Annual Population Survey (APS) is a combined statistical survey of households in Great Britain which is conducted quarterly by the Office for National Statistics (ONS).
Armed Forces	The combined military – the British Armed Forces also known as Her Majesty’s Armed Forces, are the military services for the defence of the United Kingdom. The Armed Forces consist of: The Royal Navy, Royal Marines, British Army, Royal Air Force and Reservists.
Armed Forces Covenant	By signing the Armed Forces Covenant, an organisation demonstrates its intention to support the Armed Forces community. It is a pledge that acknowledges and understands that those who serve or who have served in the Armed Forces, and their families, should be treated with fairness and respect in the communities, economy and society they serve with their lives.
Civilian Life	Non-military population
Clinical Commissioning Groups (CCGs)	Clinical Commissioning Groups (CCGs) are NHS organisations set up by the Health and Social Care Act 2012 to organise the delivery of NHS services in England.
Commissioning	Commissioning is the continual process of planning, agreeing and monitoring services.
Co-production	Co-production is a practice in the delivery of public services in which citizens are involved in the creation of public policies and services.
Discharge	Discharge means an Armed Forces member who has permanently left the Armed Forces. All of those who have been discharged will hold a certificate of discharge.
Freedom of Information Act	The Freedom of Information Act 2000 provides public access to information held by public authorities. It does this in two ways: public authorities are obliged to publish certain information about their activities; and. members of the public are entitled to request information from public authorities.
Government Strategy for Veterans	Government Strategy for Veterans sets the principles and aims to continue to support older veterans and establishes the right conditions that will empower and support the newer generation and their wider community.
Health Equity	Health equity arises from access to the social determinants of health, specifically from wealth, power and prestige. In order to achieve health equity, resources must be allocated based on an individual need-based principle.
Healthcare	Healthcare relates to the efforts made to maintain or restore physical, mental or emotional well-being especially by trained and licensed professionals.
Health Inequalities	Health inequalities are avoidable and unfair differences in health status between groups of people or communities.
Health Literacy	Health Literacy is the ability to obtain, read, understand and use healthcare information in order to make appropriate health decisions and follow instructions for treatment.

National Health Service (NHS)	<p>The NHS is Government-funded medical and health care services that everyone living in the UK can use without being asked to pay the full cost of the service. Services include:</p> <ul style="list-style-type: none"> <li>• Visiting a doctor or a nurse at a doctor’s surgery</li> <li>• Getting help and treatment at a hospital if you are unwell or injured</li> <li>• Seeing a midwife if you are pregnant</li> <li>• Getting urgent help from healthcare professionals working in the ambulance services if you have serious or life-threatening injuries or health problems - this might include being transported to hospital</li> </ul> <p>Most health care services are ‘publicly funded’ – money is collected through UK residents paying tax.</p>
NHS England	NHS England leads the National Health Service in England. It's an independent body whose main role is to set the priorities and direction of the NHS, whilst at the same time improving health and care across England.
NHS Trust	NHS trusts are public sector bodies established by parliamentary order by the secretary of state for health to provide healthcare services to the NHS. They have a board of executive and non-executive directors and are accountable to the secretary of state.
National Institute for Health Research (NIHR)	National Institute for Health Research is a United Kingdom government agency which funds research into health and social care.
Northern Hub for Veterans and Military Families Research	The Northern Hub for Veterans and Military Families Research Hub at Northumbria University was established in 2015 and is a multi-disciplinary team of academics, peer-researchers and PhD students researching the Armed Forces Community.
Local Authority	A local authority is an organisation that is officially responsible for all the public services and facilities in a particular area. Local authority adult or children's social services support family members who have additional needs beyond what health, education or community services can help with. They also have a duty to safeguard children and vulnerable adults who may be at risk of harm, whether from family members or others.
Marmot Review	The Marmot Review into health inequalities in England was published on 11 February 2010. It proposes an evidence-based strategy to address the social determinants of health, the conditions in which people are born, grow, live, work and age and which can lead to health inequalities.
Planners	Planners are part of the process of defining community health problems, identifying needs and resources, establishing priority goals and setting out the actions that are needed to reach those goals.
Principal Investigator	A Principal Investigator or PI is the individual responsible for the preparation, conduct, and administration of a research grant, cooperative agreement, training or public service project, contract, or other sponsored project.

Provider Services	A health or social care provider is an organisation acting as a direct provider of health or social care.
Public Health	Public health is the health of the population as a whole. The branch of medicine dealing with public health includes hygiene, epidemiology, and disease prevention.
Royal College of General Practitioners (RCGP)	The Royal College of General Practitioners is the professional body for general practitioners in the United Kingdom. The RCGP represents and supports GPs on key issues including licensing, education, training, research, and clinical standards.
Research Excellence Framework (REF)	Research Excellence Framework is a research impact evaluation of British higher education institutions. The most recent Research Excellence Framework was in 2021.
Service Improvement	Service improvement is defined as the combined and unceasing efforts of everyone to make changes that will lead to better patient outcomes (health), better system performance (care), and better professional development (learning).
Social Care	Social care services provide support to people with learning disabilities, physical disabilities/illnesses, and mental ill health. This support can cover practical activities, personal care, and social work, intended to help the people receiving social care to live comfortably.
Social Prescribing	Social prescribing is when health professionals refer patients to support in the community, to improve their health and wellbeing.
Stakeholder	Stakeholders in health and social care are an individual or organisation that has an interest in decisions made in the health and social care industry. They have a vested interest in planned changes and proposals within the health and social care sectors.
Statutory Care Services	Social care services are services that are paid for and provided by the government e.g., National Health Service (NHS), school nursing, social services. Private. These are services that are run as a business to make a profit e.g., private hospitals, residential homes, private nurseries.
Third Sector Providers	Third sector are voluntary and community organisations (both registered charities and other organisations such as associations, self-help groups and community groups), social enterprises, mutuals and co-operatives. Third sector organisations are generally independent of government.
Veteran	Veterans are defined as anyone who has served for at least one day in Her Majesty's Armed Forces (Regular or Reserve) or Merchant Mariners who have seen duty on legally defined military operations.
Wider determinants of health	Wider determinants, also known as social determinants, are a diverse range of social, economic, and environmental factors which impact on people's health. Such factors are influenced by the local, national, and international distribution of power and resources which shape the conditions of daily life.

## APPENDIX A

### PAPER 1

**McGill, G.,** Wilson-Menzfeld, G., Hill, M., & Kiernan, M. (2019). Supporting the principles of the armed forces covenant in NHS trusts and clinical commissioning groups across England. *BMJ Open*.

# BMJ Open Utilisation of the principles of the Armed Forces Covenant in NHS Trusts and Clinical Commissioning Groups across England: a freedom of information investigation

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## ABSTRACT

**Objectives** To determine the extent to which National Health Service (NHS) service providers appoint a named Armed Forces veteran lead or champion, and to explore the commissioning of veteran-specific services by Clinical Commissioning Groups.

**Design** A convergent mixed method design was used to improve understanding obtained from the information provided by respondents on their practice. The study comprised two parts: phase 1 involved NHS Trusts, and phase 2 involved Clinical Commissioning Groups.

**Setting** All NHS Trusts and Clinical Commissioning Groups in England were contacted using a freedom of information request.

**Participants** All NHS trusts and Clinical Commissioning Groups across England.

**Interventions** Initially, existing national websites were searched to gather information within the public domain. An audit was carried out, using the Freedom of Information Act (FOIA) 2000 to gather further information.

**Primary and secondary outcome measures** The FOIA 2000 applies to UK Government departments and public authorities, including NHS Trusts in England, Wales and Northern Ireland.

**Results** Responses from the freedom of information requests illustrate inconsistencies in relation to adopting the principles of the Armed Forces Covenant. The inconsistencies extend to the practice of appointing an Armed Forces Veteran Lead or an Armed Forces Veteran Champion. There is also evidence to suggest a lack of commitment to and understanding of policy guidance in relation to Clinical Commissioning Group responsibility for commissioning veteran-specific services.

**Conclusions** Findings from this study support the case for making improvements to, and improving the consistency of, commissioning practices for veterans.

## INTRODUCTION

Since 2008 when the Ministry of Defence (MOD) and the National Health Service (NHS) funded the first veterans' mental health pilot services there has been an increasing concern about and focus on

## Strengths and limitations of this study

- The freedom of information (FOI) request method allowed this study to capture a large amount of nationally representative data within time and financial resources available.
- Despite the legal obligation to reply to FOI requests, not all of the organisations contacted replied.
- Consistency of responses varied as the FOI request was inevitably open to subjective interpretation by the responders.
- Responses were included in this study only if the organisation replied within 20 working days.
- The evidence from this study provides scope for further discussion and an opportunity to build on the knowledge gained.

veterans' mental and related health needs. The MOD<sup>1</sup> describe the Armed Forces Covenant as an agreement between the armed forces community, the nation and the government. Through employing the principles of the Armed Forces Covenant in practice, NHS Trusts have the opportunity to build their reputation as an Armed Forces friendly organisation. It is expected that treatment providers will have due regard to the Armed Forces Covenant and ensure equity of access to services for armed forces personnel and their families across England.<sup>2 3</sup> This was given further emphasis and priority with the publication of the Murrison Report<sup>4</sup> and the Armed Forces Covenant.<sup>5</sup> The Armed Forces Covenant states:

Veterans receive their healthcare from the NHS, and should receive priority treatment where it relates to a condition which results from their service in the armed forces, subject to clinical need. Those injured in service, whether physically or mentally, should be cared for in

a way, which reflects the nation's moral obligation to them, whilst respecting the individual's wishes. For those with concerns about their mental health, where symptoms may not present for some time after leaving service, they should be able to access services with health professionals who have an understanding of armed forces culture.<sup>5</sup>

NHS England is expected to ensure that services are commissioned to support consistent high standards across the country. NHS England are specifically responsible for promoting the NHS Constitution and delivering requirements of the Secretary of State's Mandate,<sup>6</sup> in line with the commitments made by the Government under the Armed Forces Covenant.

In practice, NHS providers are required to have a set of common access policies to ensure equity of access for service personnel and their families. NHS England expect providers to have due regard to the Armed Forces Covenant in managing their waiting lists and interprovider transfers. There is an expectation that priority treatment will be offered to veterans for service attributable conditions, subject to the clinical priorities of other patients. There is also an expectation that some bespoke services for veterans will be commissioned and that a national veterans' mental health service will be procured.

Mental health services for those leaving the armed forces and veterans now include a dedicated community based service, Mental Health Transition Intervention and Liaison Service (TiLS).<sup>7</sup> This service provides treatment for early signs of mental health problems and access to therapeutic treatment for complex mental health difficulties/trauma. NHS England is responsible for the commissioning of TiLS. However, Clinical Commissioning Groups (CCGs) are responsible for the wider commissioning of mental health services in their area and, as part of this, need to understand and take into account the health needs of veterans and their families. It is expected that there will be close working between CCGs, local authorities and third sector organisations, through utilisation of the Armed Force Covenant and reflected in joint strategic health assessments.<sup>8</sup>

One of the significant initiatives implemented in England in 2015 was the specific inclusion of health commitments of the Armed Forces Covenant in the NHS Constitution and Mandates. In this regard, there is also an expectation that there will be co-ordination between NHS employers and all Trusts to nominate a Covenant Champion and point of advice and guidance across the Trusts. NHS England is also working with the clinical commissioners to further raise awareness.<sup>9</sup> It is expected that bespoke services for veterans (such as mental health services) will be commissioned by CCG either individually or collectively. The CCG's responsibilities are to commission all secondary and community services required by Armed Forces' families (registered with NHS General Practitioner practices) and services for veterans.<sup>3</sup> Therefore, this study had two main aims<sup>1</sup>: to understand

the extent to which NHS Trust appoint a named veteran lead or champion and<sup>2</sup> to investigate the commissioning of veteran-specific services by CCG.

## METHODS

### Design

The study used a convergent mixed method design. The mixed method approach to the study was sequential in order to conduct the necessary degree of quantitative research, analyse the results and then build on the findings.<sup>10</sup> This approach supports the aim to improve understanding rather than to measure or quantify what has been obtained from the information provided by respondents on their particular practice.<sup>11</sup>

The Freedom of Information Act (FOIA) 2000 applies to UK Government departments and public authorities, including NHS Trusts in England, Wales and Northern Ireland. A freedom of information (FOI) request survey methodology was chosen from two main reasons. First, the practical difficulties of discovering the required information from a search of each organisation's website or by securing access through negotiation with each organisation, and second, the advantages of a standardised request in facilitating a qualitative and quantitative comparison on the responses. To gather the data for the study itself, a standardised FOI request was created so that responses from separate NHS Trusts could be compared. This allowed for an acceptable level of validity as well as facilitating a level of replicability.

The study is based on the premise that appointing a named veteran lead or champion in NHS Trusts is a minimum indicator of commitment to the Armed Forces Covenant to provide, what the MOD describe a dedicated focus to implementation of the Covenant principles.<sup>1</sup> Armed Forces Champions are a key factor in raising awareness of the covenant commitments and embedding them into the healthcare system.

### Study sample

FOI email requests were sent to all NHS Trusts and CCGs in England. For NHS Trusts, the FOI request was organised into four subgroups consisting of: 59 Mental Health Trusts, 156 Acute Trusts, 19 Healthcare Trusts and 8 Ambulance Trusts. For CCGs, 209 were contacted. Before the FOI request was made, a thorough search of the existing national websites was made to determine if any of the information was already in the public domain.

### Data collection

A survey method was employed to collect data using FOI requests. In order to obtain accurate information, the request was inclusive of all organisations identified as either having the ability to appoint a named veteran lead or having responsibility for commissioning services to meet the needs of veterans. The study was conducted in two phases to adequately support monitoring, analysis and reporting of the findings. This study was conducted

**Box 1 Freedom of information request questions**

**Phase 1:**

► Do you have a lead/champion for Armed Forces veterans or military families? Please indicate Yes or No. If yes, can you provide contact details in a return email?

**Phase 2:**

► In your area, do you commission Armed Forces veteran-specific healthcare service(s)? If yes, can you please provide the service commission by the Clinical Commissioning Group (CCG) in your area? If no, can you tell us if veteran-specific healthcare provision for your area is part of your CCG commissioning intentions for the future?

in two phases as they were related to two questions, for two different organisations; the first targeted NHS trusts, and the second CCGs (box 1).

Based on the intent of the Armed Forces Covenant, we judged the minimum action by a trust which had signed up to appoint a named lead and the questions are based around this premise.

**Data sources**

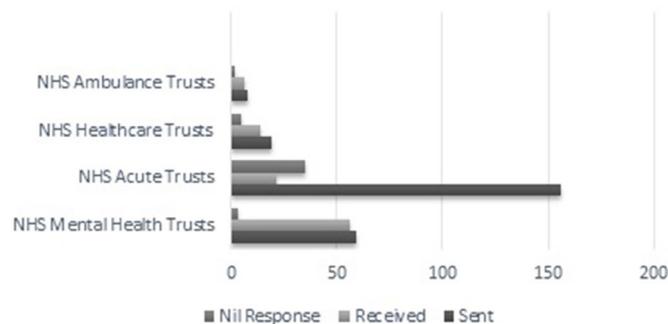
Between 1 July and 31 October 2015, identical FOI requests were sent to 272 NHS Trusts in England. In addition, between October 2015 and January 2016, identical FOI requests were sent to all 209 CCGs in England.

**Patient involvement**

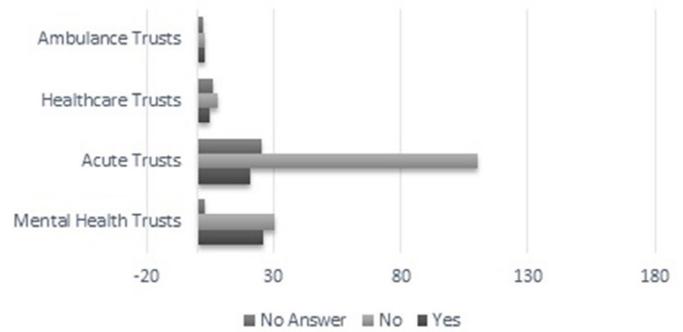
No patients were involved in setting the research question or the outcome measure, nor were they involved in developing plans for recruitment, design or implementation for the study. No patients were asked to advice on interpretation or writing up of the results. There are no plans to disseminate the results of the research to study participants or the relevant patient community.

**Analysis**

Separate analysis of the quantitative and qualitative data was carried out in parallel with the responses to the closed and open-ended survey question integrated in the FOI survey tool. This methodological approach was based on the method of data merging by Ross and Whittaker.<sup>12</sup> Descriptive statistics were used to describe response,



**Figure 1** Comparative response rate of freedom of information request National Health Service (NHS) Trusts.



**Figure 2** Comparative response to part 1 of the study—'do you have a named veteran lead'—from all National Health Service Trusts.

engagement and distribution of responses, and content analysis was used for the textual data. In content analysis, responses are coded in order to identify and report patterns within the data.<sup>11 13</sup> Patterns were identified based on representative responses from across the data.

**RESULTS**

The results are divided into two parts based on phase 1 and phase 2 of the study. The information provided in response to the survey covered a range of descriptions about the Armed Forces Covenant, the Joint Strategic Needs Assessment (JSNA) process and commissioning responsibility, as well as about the nature and extent of veteran-specific services. Of the 272 NHS Trusts and 209 CCGs that the FOI request was sent to, the response rate was 86% (n=236) and 74% (n=155), respectively. Although the FOIA imposes a statutory duty to respond to request for information within 20 working days, 13% of responding NHS Trusts (n=272) and 26% of responding CCGs (n=209) did not meet this statutory requirement along with those that did not respond at all.

**Phase 1**

Figure 1 shows the response rate from all the NHS Trusts contacted. Of the 156 NHS Acute Trusts contacted, only 21 responded to this FOI request. Six of eight NHS Ambulance Trusts, 14 of 19 NHS Healthcare Trusts and 56 of 59 NHS Mental Health Trusts also responded.

Figure 2 reports whether the Trusts had appointed a veteran lead within their organisation. As with figure 1, the Mental Health and Ambulance Trusts had the highest response rate. However, little more than a third had appointed veteran leads (36% n=151).

Of the Trusts that did not have appointed leads, some provided additional information on future intentions:

Not yet but we have signed Armed Forces Covenant and intend to appoint a lead. (Respondent 143)

No lead – we refer to military services commissioned by ... CCG (Respondent 14)

In addition to the inconsistencies with appointing a veteran lead, it was evident that there was little consensus



**Figure 3** Job titles provided by National Health Service Trusts who confirmed a named veteran lead or champion. RMN, Registered Mental Health nurse.

as to who within an NHS Trust should be appointed into this role. **Figure 3** demonstrates that appointment of a veteran lead is inconsistent across trusts, and who is appointed appears to be significantly random and inconsistent.

The majority of appointed leads were reported as being managers or management leads ( $n=85$ ; 23%) with a number described as directors or deputy directors in the Trusts ( $n=85$ ; 18%). Others are described as chief executives, co-ordinators, consultants and a registered nurse. As such, it was difficult to extract from the data what the role undertaken by the named leads was, and how it related to the Armed Forces Covenant.

## Phase 2

A significant finding within the phase 2 CCG data was the apparent confusion around veteran commissioning responsibilities. Of the 155 CCG responses, 22% ( $n=34$ ) were redirected to NHS England with the respondents suggesting that the responsibility for commissioning veteran-specific services sat with that NHS organisation:

services for veterans are commissioned by NHS England and not at a local CCG level (Respondent 6)

CCG services are commissioned to meet the needs of their demographics including veterans, but they do not have specific veteran pathways. (Respondent 20)

When reflecting on future commissioning, 26% ( $n=40$ ) of CCG respondents reported that they had no future plans for commissioning veteran-specific services:

we are not considering in any forthcoming commissioning or service decision decisions. (Respondent 35)

...no specific intentions however CCG is committed to honouring the military covenant in full (Respondent 25)

In contrast to those respondents that have commissioned veteran-specific services, 25% ( $n=39$ ) described collaborative arrangements with partners and stakeholders. Data

demonstrate that they provide veteran-specific community-based services to secure CCG investment in improving services in secondary care. Where veteran-specific services were commissioned, they were generally mental health services (specialist/consultant led treatment), in partnership with NHS Foundations Trusts. Respondents also described Improving Access to Psychological Therapies (IAPT) as a service available to veterans, provided within the NHS trust and aligned to CCG geographical areas. Although these services were not specifically aimed at veterans, they were aimed at offering National Institution for Health and Care Excellence-approved psychological therapies to individuals who experience common mental health problems.

veterans and reservists are a particular cohort of the population which IAPT aims to support, given the relatively high incidence of mental health problems experience by this part of the local population (Respondent 31).

In addition, service provision is described by one 'cluster' of CCGs as being commissioned within a complex arrangement attached to one commissioning support unit and mapped according to the respective geographical areas. For example, in one geographical area, there is a total of 25 CCGs attached to one commissioning unit with a 'host' commissioning lead for a veteran-specific service covering a number of areas in one particular region.

## DISCUSSION

This study demonstrates the inconsistencies in NHS trusts and CCGs relating to the Armed Forces Covenant. Inconsistencies arose in the response to the FOI request, the appointment of a veteran lead, the job roles of the veteran lead and the commissioning of veteran-specific services. In response to the Defence Committee Armed Forces Covenant Report,<sup>14</sup> the Government expressed disappointment that 10 years after the policy of priority access to healthcare for veterans, professional awareness

and implementation remain inadequate. This rapid survey appears to evidence the lack of veteran leads and veteran-commissioned services across healthcare services in the UK.

Health Education England (HEE) promote the benefits of employing a veteran champion and discuss how they help to raise awareness about the issues faced by the armed forces community, veterans and their families. HEE described the veteran champion role as central to ensuring that government policies are considered appropriately so that veterans' rights are protected. In practice, veterans' champions will ensure the organisation is aware of, and follows, the Armed Forces Covenant which ensures that veterans and their families are not disadvantaged in their treatment. At best, veteran champions are arguably invaluable in raising awareness of the Armed Forces Covenant and essential when embedding the principles into a healthcare organisation.<sup>9</sup> However, the findings of this study demonstrate that dedicated veteran leads/champions have not been adopted by many NHS trusts in England. The Murrison Report<sup>4</sup> identified the appointment of a veteran champion as one of the key themes that emerged as a critical success factor that should be taken into consideration by NHS Trusts in England.<sup>7</sup> Some local NHS trusts have adopted this practice, such as NHS South Central have appointed local veterans champions across their NHS trusts, including GP champions to provide single points of contact. In addition, Tees, Esk and Wear Valley NHS Foundation trust have a network of veteran champions who represent the mental health teams from within the Trust. In terms of resource implications, there is potentially a pool of existing clinicians who are veterans, or family members of veterans working in the NHS and who may be willing to act as champions.

An additional and unexpected finding was the relatively poor response to FOI requests, notwithstanding FOI legislation. This is not an unknown phenomenon, and Bourke *et al*<sup>15</sup> highlight similar issues of poor response to FOI requests. However, these authors do maintain that the benefits of using FOI request in research still outweigh this potential challenge.

The findings from this study have provided an insight into the variable levels of commitment towards appointing named veterans leads within NHS Trusts. More importantly, some limited insights into how the Armed Forces Covenant is applied in practice is provided: this includes inconsistencies between the job roles of individual veteran leads. Variable levels of commitment is at odds with the recommendations of the Veterans' Transition Review<sup>16</sup> which advocated for a network or Armed Forces Champions in order to ensure that armed service leavers have as much information as possible about health and other services. Where there was evidence of the Veteran Champion role existing, it was not clear as to whether this was viewed (organisationally) as an obligation or that there is a distinct role profile clearly outlining the duties involved. Responses from the NHS Trusts indicate that there are few veteran leads or veteran champions

employed and, where this role is allocated, there is no evidence of a consistent approach or of a thoughtful process to appoint a champion. Similar concern is also outlined in the Armed Forces Covenant Annual Report,<sup>9</sup> where the lack of progress made to identify armed forces champions, linked to CCG priorities and general practice, is discussed. We would suggest that those responsible for overarching policy developments in this area might wish to give additional consideration to the appropriate role profile for a veteran lead in NHS settings.

CCGs are the 'responsible commissioners' for veteran services and are key to setting fundamental objectives for commissioning. These objectives are ostensibly based on assessing the nature of health challenges for veterans and deciding how best to respond. JSNAs are accepted as an essential element in assessing local need, yet there is no evidence of a consensus of approach in relation to veterans' needs and future commissioning arrangements.<sup>3</sup> JSNAs aim to improve community health and well-being and reduce inequalities for all ages.<sup>17</sup> This study has highlighted some significant gaps in the extent to which the needs of veterans are included in future commissioning plans. The findings also highlighted inconsistencies in CCG approaches to service provision for veterans and commissioning intentions for the future in this regard.

NHS England<sup>3</sup> asserts the aspiration to develop services for veterans that are designed for their particular needs. This includes services that are accessible and offer the 'right' care and support regardless of when people leave the armed forces. Despite this claim, 23% of the CCGs who responded to the FOI request, stated that it is not their intention to commission veteran-specific services in the future. A smaller number of the respondents to the study described offering innovative services describing, for example, a 'one-stop shop' approach, while others described have a single member of a team covering a large area. Despite the clear guidance and policy directives, the responses from the CCG to the study highlight that there appears to be a significant level of misunderstanding or misinterpretation of commissioning responsibilities in relation to providing effective veteran-specific care and support.

There was a prevalent discourse throughout this study that maintained that it was/is the responsibility of NHS England for the commissioning veteran-specific healthcare. This claim arose repeatedly within the data analysis phase of the study. However, in contrast, current NHS guidance states that bespoke services for veterans, such as mental health services, should be the proper responsibility of CCG. Furthermore, there is an aspiration to make such commissioning practices intelligence-led, developed in partnership with the local authority and other local key stakeholders. The overarching intention is therefore for those commissioning health and social care services to do so on the basis of an accurate picture of local needs. Considering the Armed Forces as part of a JSNA should be used as a way of meeting the Community Covenant commitments. Being able to understand the unique

circumstances faced by the Armed Forces community is vital for front-facing staff.<sup>1</sup>

The evidence from this study provides scope for further discussion and an opportunity to build on the knowledge gained, in order to identify instances of good practice. Findings from this study support the case for making improvements to, and improving the consistency of, commissioning practices for veterans. In line with recommendations made, NHS Trusts and CCG need to ensure services available to veterans are supported by a named veteran lead who is a trained member of staff and who understands the culture of the Armed Forces.<sup>2</sup> The current fragmentation of commissioning arrangements and ‘ad hoc’ arrangements between localities across England (in their current form) would appear to be unsustainable. We would therefore advocate both (a) the maximisation of veterans’ health needs assessment based on currently available data for each locale, and (b) a commitment to employing locally knowledgeable veterans’ leads. These two measures alone would perhaps help take the Armed Forces Covenant beyond the level of a rhetorical assurance that ‘something is being done’ and transform this laudable commitment into a practical reality. Collectively, these measures would appear to underpin the instances of best practice collaborative commissioning identified in this study.

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**Competing interests** None declared.

**Patient consent** Not required.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data sharing statement** Information gained through FOI Act is publicly available.

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## Correction: *Utilisation of the principles of the Armed Forces Covenant in NHS Trusts and Clinical Commissioning Groups across England: a freedom of information investigation*

McGill G, Wilson G, Hill M, *et al*. Utilisation of the principles of the Armed Forces Covenant in NHS Trusts and Clinical Commissioning Groups across England: a freedom of information investigation. *BMJ Open* 2019;9:e022053. doi: 10.1136/bmjopen-2018-022053.

The previous version of this manuscript contains an error in 'Data sources' section figure as well as 'Results' section percentage rates. It should appear as:

### Data sources

Between 1 July and 31 October 2015, identical FOI requests were sent to 242 NHS Trusts in England. In addition, between October 2015 and January 2016, identical FOI requests were sent to all 209 CCGs in England.

### RESULTS

The results are divided into two parts based on Phase One and Phase Two of the study. The information provided in response to the survey covered a range of descriptions about the Armed Forces Covenant, the Joint Strategic Needs Assessment process and commissioning responsibility, as well as about the nature and extent of veteran specific services. Of the 242 NHS Trusts and 209 CCGs that the FOI request was sent to, the response rate was 40% (n=97) and 74% (n=155) respectively. Although the FOIA imposes a statutory duty to respond to request for information within 20 working days, 13% (n=31) of responding NHS Trusts and 34% (n=54) of responding CCGs did not meet this statutory requirement along with those that did not respond at all.

#### Phase 1

Figure 1 shows the response rate from all the NHS Trusts contacted. Of the 156 NHS acute trusts contacted, only 21 responded to this FOI request. Six of eight NHS ambulance trusts, 14 of 19 NHS healthcare trusts and 56 of 59 NHS mental health trusts also responded.

Figure 2 reports whether the Trusts had appointed a veteran lead within their organisation. As with Figure 1, the mental health and ambulance trusts had the highest response rate. Just over half of all responses 56.7% (n=55) had appointed veteran leads.

Instead of

### Data sources

Between 1 July and 31 October 2015, identical FOI requests were sent to 272 NHS Trusts in England. In addition, between October 2015 and January 2016, identical FOI requests were sent to all 209 CCGs in England.

### RESULTS

The results are divided into two parts based on phase 1 and phase 2 of the study. The information provided in response to the survey covered a range of descriptions about the Armed Forces Covenant, the Joint Strategic Needs Assessment (JSNA) process and commissioning responsibility, as well as about the nature and extent of veteran-specific services. Of the 272 NHS Trusts and 209 CCGs that the FOI request was sent to, the response rate was 86% (n=236) and 74% (n=155), respectively. Although the FOIA imposes a statutory duty to respond to request for information within 20 working days, 13% of responding NHS Trusts (n=272) and 26% of responding CCGs (n=209) did not meet this statutory requirement along with those that did not respond at all.

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## APPENDIX B

### PAPER 2

Kiernan, M., D., Osborne, A., **McGill, G.**, Greaves, P., J., Wilson, G. & Hill, M. (2018). Are veterans different? Understanding veterans' help seeking behaviour for alcohol problems. *Health and Social Care in the Community*

# Are veterans different? Understanding veterans' help-seeking behaviour for alcohol problems

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## Abstract

Alcohol misuse in the United Kingdom's veteran community is not an isolated phenomenon. Internationally, alcohol and wider substance misuse would appear to be an historic and current global issue within veteran communities. Although research has been undertaken both in the United Kingdom and the United States into why veterans are reluctant to seek help for mental health problems, little is understood as to why veterans encounter difficulties in engaging with treatment for alcohol misuse. The aim of this study was to understand why veterans in the United Kingdom are either reluctant or have difficulty in accessing help for alcohol problems. An applied social policy research methodology was used, employing in-depth semi-structured interviews with 19 UK veterans in the North East of England, who had a history of alcohol misuse. The findings showed that participants appeared to excuse or normalise their excessive alcohol consumption, which led to a delay in meaningful engagement in substance misuse services, resulting in complex and complicated presentations to health and social care services. The findings of this study clearly suggest that veterans who misuse alcohol have a range of distinctive and unique difficulties that subtly differentiate them from the wider civilian substance misuse population, and that the use of peer-support models would appear to mitigate against them disengaging from alcohol treatment services.

## KEYWORDS

Alcohol, barriers to care, peer support, qualitative research, stigma, veterans

## 1 | INTRODUCTION

Alcohol misuse in the United Kingdom's veteran community is not an isolated phenomenon. Internationally, alcohol and wider substance misuse would appear to be an historic and current global issue within veteran communities (Aguirre, Greenberg, Sharpley, Simpson, & Wall, 2014; Bohnert et al., 2012; Fear et al., 2007; Helzer, 1984; Jakupcak et al., 2010; Kehle et al., 2012; McKenzie et al., 2006; McKenzie, Brooks, Maisto, & Possemato, 2013; Seal et al., 2011; Steindl, Young, Creamer, & Crompton, 2003).

It has long been documented that alcohol has been an integral part of British Military life (Hudson, 2007, pp. 67, 94, 131). Consumption in large quantities was not necessarily discouraged,

and some doctors believed that alcohol gave a degree of protection against various lethal diseases and was safer to drink than water (Howard, 2000). Arguably, alcohol continues to play a part in the modern UK military, where it is used in social bonding and comradeship (Alcohol Concern, 2012; Jones & Fear, 2011), surpassing alcohol use in the general population (Fear et al., 2007). Traditional military celebrations, such as promotion ceremonies, mess nights, command parties and "hail and farewell" gatherings, typically include alcohol.

Patterns of excessive drinking established during service may be difficult to change upon leaving. Research undertaken on alcohol consumption in the UK ex-service personnel population is limited, despite there being a clear indication that excessive alcohol use is a

risk among veterans (Bergman, Mackay, & Pell, 2015; Fossey, 2010). Recent research shows that there is no statistical difference in alcohol misuse between serving and ex-serving personnel (Iversen et al., 2009), which suggest that those misusing alcohol continue to do so after they leave military service.

With alcohol misuse being accepted widely as an ongoing issue within the veteran communities worldwide, recent research has examined the efficacy of treatment models (Jaconis, Santa Ana, Killeen, Badour, & Back, 2017; O'Shea, Watkins, & Farrand, 2017; Oslin et al., 2014; Pedersen et al., 2017). Although research has been undertaken both in the United Kingdom and the United States into why veterans are reluctant to seek help for mental health problems (Garcia et al., 2011; Hines et al., 2014; Iversen et al., 2010, 2011; Langston et al., 2010; Woodhead et al., 2011), little research has been undertaken in recent years to identify and understand why veterans are reluctant to seek help for alcohol misuse problems (Ossip-Klein, Vanlandingham, Prue, & Rychtarik, 1984). More importantly, little is understood as to why veterans encounter difficulties in engaging with treatment and whether those difficulties differ from those experienced by the wider population. The aim of this study was to understand why veterans in the United Kingdom are either reluctant or have difficulty in accessing help for alcohol problems.

## 2 | METHOD

An applied social policy research methodology was used, employing in-depth semi-structured interviews with UK veterans who have a history of alcohol misuse. Applied social policy research concentrates on finding solutions to immediate practical problems and has a key role in providing insight, explanations and theories of social behaviour (Ritchie & Spencer, 2002). This study was undertaken as part of the second phase of a larger four-phase study looking to understand the complexities veterans experience in accessing substance misuse care (Kiernan, Moran, & Hill, 2016). The study was undertaken in the North East of England between August 2016 and February 2017 with 19 veterans who had a history of alcohol misuse. Purposive sampling and the maximum variance sampling matrix developed for this study ensured that the 19 participants who took part reflected the experiences of the veteran community accessing substance misuse services within the North East of England. Purposive sampling with maximum variation is a non-probability sample where a deliberate strategy to included cases which vary widely from each other are selected in relation to a particular phenomenon or event (Ritchie, Lewis, Nicholls, & Ormston, 2014). Once informed written consent was obtained, an in-depth semi-structured interview schedule was used which explored the participants' relationship with alcohol, how or if they sought help, their experiences of engaging with services, and how being a veteran may have impacted accessing and engaging with substance misuse services. The key advantage to a semi-structured interview was that all participants were asked the same question, but most notably the freedom was there to expand and explore any new phenomena that arose (Morse, 1992). Interview

### What is known about this topic

- Alcohol misuse in the veteran community would appear to be an historic and current issue.
- Research undertaken on UK veteran's is limited, despite there being a clear indication that excessive alcohol use is a risk among ex-service personnel.
- Little is understood as to why veterans encounter difficulties in engaging with treatment for alcohol misuse.

### What this paper adds

- Veterans who misuse alcohol have a range of distinctive and unique difficulties that subtly differentiate them from the wider civilian substance misuse population.
- Normalisation of excessive and regular alcohol consumption leads to delayed engagement and complex case presentation.
- Peer-support models appeared to mitigate against veterans disengaging from alcohol treatment services.

transcripts were imported into NVivo, a qualitative data analysis computer software package, where framework analysis was carried out. Framework analysis was designed in the United Kingdom specifically for applied or policy relevant qualitative research (Ritchie & Spencer, 2002; Ritchie et al., 2014) and was chosen for this study for the capacity it has to handle data in a rigorous, transparent and logical process of textual analysis. The study was granted scientific and ethical approval from Northumbria University Newcastle and the regional National Health Service ethics boards.

## 3 | FINDINGS

The cohort consisted of 19 service users, 18 males and one female with a UK military service history. The mean age was 45.05 years ( $SD = 7.320$ ), ranging from 35 to 64 years at interview. On average, participants accessed meaningful help for their alcohol misuse problems 17.37 years ( $SD = 8.276$ ) after discharge from the UK Armed Forces (Table 1).

Figure 1 demonstrates data reduction during framework analysis. The thematic framework shows that 10 themes were identified within the data which were further conceptualised into three superordinate themes: Normalisation of Alcohol Consumption, Delayed Meaningful Engagement and Complex Presentations.

### 3.1 | Normalisation of alcohol consumption

Alcohol was identified as a big part of the military culture that the participants experienced; it was often used as a bonding tool to build trust and camaraderie and featured heavily in the socialisation of

**TABLE 1** Participant characteristics (N = 19)

Age at interview (years)	
M (SD)	45.05 (7.230)
Range	35–64
Gender	
Male	18
Female	1
Service	
Royal Navy	2
Royal Marines	1
Army	14
Royal Air Force	0
Reserve Forces	2
Age on Enlistment (years)	
M (SD)	17.58 (2.364)
Range	15–22
Length of Service (years)	
M (SD)	9.30 (7.113)
Range	5 months–24
Early leavers ( $\leq 4$ years)	6
Operational deployments	
Deployed	11
No deployments	8
Years post service to engage in help (years)	
M (SD)	17.37 (8.726)
Range	1–30

personnel. The participants explained how bonding was essential in developing trust between personnel, and as a result drinking was encouraged and not often viewed as an issue.

*It gets you together and it's social ... it's another way of getting us to bond together and to get to trust of each other.* (Participant 05)

*For alcohol. A lot of the squaddies think it's normal. Actually I thought it was normal the way I was drinking for a long time. It was normal for the army.* (Participant 02)

Alcohol use in the military was very much accepted and normalised and the behaviour associated with the use of alcohol for socialisation and coping during service often continued after leaving the military. Most participants did not acknowledge that these drinking patterns developed in the military, constituted instances of binge drinking or alcohol misuse. In many cases, even after treatment, service users still did not see their drinking habits in the military as problematic, just a part of their service life.

Participants often drew comparisons with civilian counterparts, noting that it was typical behaviour at that age. There appeared to be a difficulty in understanding or accepting that they had an issue with

alcohol, or at least a historic problem, due to the normalisation of alcohol consumption in the military. This cultural acceptance of excessive alcohol consumption suggests that the participants' relationship with excessive alcohol intake has been normalised and contributes significantly to their inability to identify that their alcohol consumption is problematic. This appears to be a significant contributing reason for difficulties in service engagement. The study participants reported that they believed that the amount of alcohol they had been consuming, and the regularity at which they consumed it, was not out of the ordinary for service life, and on the contrary, did not view excessive alcohol consumption as a bad thing, but more as a badge of honour in that they could drink heavily but still function the next day.

*It's all work hard, play hard. It's all around that. You hear it all the time and it's ... its norm to you because it's pumped into you. And it's not just like oh well we might go down the bar, it was like everybody will be in the bar and you just stay there.* (Participant 10)

It would appear that excessive alcohol consumption became part of the participants' veteran identity, and that they were proud of the ability to be able to "work hard and play hard." The participants within this study all had a long history of brief interactions with health and social care services after leaving the armed forces. What was most significant was that when they eventually did engage with meaningful treatment, the primary presentation was not for substance misuse. Most commonly, they presented with mental health issues or social problems, such as homelessness. Only following assessment was substance misuse identified as the primary cause of their problems. This normalised relationship with alcohol, and the failure to identify the effect that it was having on them, led to a denial of the problem and a delayed engagement with services to help.

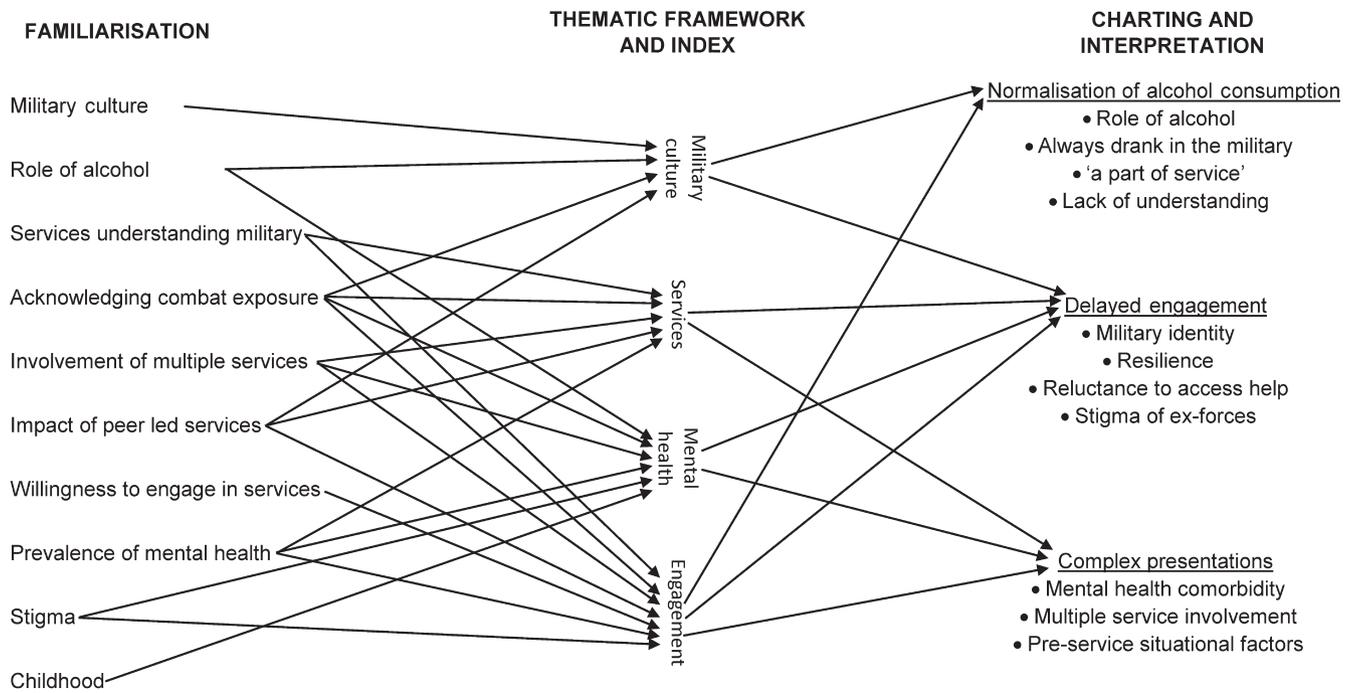
### 3.2 | Delayed meaningful engagement with alcohol services

It is argued that the participants' normalised relationship with alcohol prevented the individual from identifying that alcohol was causing them any difficulties. Subsequently, they would rarely, or never, report or discuss their drinking patterns with health or social care services.

Health and social care service providers' lack of understanding of military culture was cited as a key reason for not engaging with care for their alcohol problems, with many of the participants citing their military service as a contributing factor to their alcohol misuse:

*But that was again I was talking to somebody who had no idea what it was like being in the military so there was no way I was going to talk to them.* (Participant 02)

This lack of understanding was emphasised when the participants reported that when being assessed and discussing their military service, they found themselves having to explain terminology. Health and



**FIGURE 1** Framework analysis

social care workers not understanding “military” terminology were a relatively common reason for service users disengaging with services. More importantly, participants seemed to engage well with care workers who were peers or had a good understanding of their background. One participant, in particular, who was receiving care from a third sector provider noted:

*He was great because he talked ... we talked the same language.* (Participant 19)

A lack of understanding of terminology appeared to be a barrier to engagement in services. Participants reported that service providers who have no military experience or experience of the military “just don’t get it.” As an extension of this seeming incommensurability of world-views, some respondents reported being on the receiving end of inappropriate and unhelpful curiosity from their non-military peers.

As with many health problems, service users have to be willing to engage in services for it to be beneficial. The data suggest that accepting alcohol consumption as a problem potentially challenges their “military identity.” Participants often referred to being trained to be resilient, where needing help or reporting sick was often seen as a sign of weakness. Upon leaving the military, participants continued to ascribe to this identity, suggesting that they remained reluctant to access help for fear of being seen as weak:

*It is about being trained not to be weak. You are trained not to go sick.* (Participant 10)

Despite the belief that accessing help is seen as a sign of weakness in the military, if help was needed, participants reported a nostalgic

view with regard to how good the military help was in comparison to their civilian experiences:

*The military would provide all these services...* (Participant 12)

*The army was supportive then ... my unit itself was supportive.* (Participant 18)

In addition, participants had the support of their colleagues. Participant 18 noted support from the Army and their unit after diagnosis for alcohol problems. However, without the same support networks and structures participants had within the military, many personnel struggled with the adjustment to civilian life:

*After the military because you haven't got a support network. You're on your own. You've got no structure, you've got no support network, you haven't got people that have been through everything the same as you have.* (Participant 02)

When participants accessed services, they did not always feel they received the care they needed, which ultimately led to them disengaging. These prior experiences with health and social care services created a seemingly cyclical effect, impacting upon the participants’ subsequent willingness to engage in services in the future:

*The GPs waste of space. I mean you go in a lot of surgeries now they just basically file you on a piece of paper... like may need sleeping tablets “because we won't provide*

*them, blah, blah, blah." Alright I'll just hit the bottle.  
That's my sleeping tablet. (Participant 12)*

*primarily down to [CHARITY] pushing rather than the  
NHS<sup>1</sup> side of it. (Participant 02)*

Meaningful engagement in alcohol services appeared to be facilitated primarily by the acceptance that help was needed. The availability of peer-supported services, where the service provider understood the participants' personal experiences, also appeared to sustain engagement once initial contact had been made. Almost all participants were referred for alcohol treatment secondary to other significant and multiple problems such as housing issues, unemployment and mental health problems. Paradoxically, even in the presence of such multiple and complex needs, participants still appeared to retain a "blind spot" by failing to connect these problems to patterns of alcohol misuse. The pervasive and normalised relationship with excessive alcohol consumption, and the lack of insight that their addiction had on all other aspects of their life, therefore appeared paramount in delaying meaningful engagement with addictions services, resulting in the complex and complicated case presentations described.

### 3.3 | Complex presentations

The following data are emblematic of the complex, and complicated case presentations alluded to *above*:

*When I got out (umm) when I got out of the military  
(umm) obviously I had to get my own GP and I was still  
suffering from (umm) anxiety, depression, paranoia, this,  
that and the other. (Participant 03)*

Typical combinations of presenting problems included mental health problems, physical illness, relationship difficulties and breakdown, housing problems and unemployment. Often, it was not until this toxic combination of circumstances precipitated a crisis that the participants committed to meaningful engagement with services. As previously reported, what was most significant was that help was rarely achieved through the veteran primarily seeking help for their alcohol problem: It was frequently left to other services—mental health teams, housing agencies etc.—to identify and define the primary underlying cause as alcohol misuse.

The data suggested that typical participant presentations often challenged service providers and invariably required engagement with multiple agencies. For some, the involvement of multiple agencies seemed beneficial, but the majority of respondents referred to a pervading confusion for both themselves and the service providers. Involvement of service charities was reported by many as being most beneficial, and these agencies were characteristically cited as the ones providing the greatest support. There was a suggestion that service charities provided the most consistent support and helped in the communication with multiple services across sectors, ensuring participants received the "right care":

*No there isn't and it never did seem connected. It was a  
lot more connected this time. (umm) But I think that was*

Some respondents gave voice to the belief that heavy reliance on service charities to provide support and care ought to be the responsibility of state providers, for example, National Health Service, Local Government, and Social Services.

As highlighted earlier, data appeared to affirm that meaningful service engagement was facilitated by access to peer-led services. Peer-led services were those where the case worker was linked to or had prior experience of military service. These respondents typically suggested that more involvement from ex-service personnel (or peer-led services) would be highly beneficial in terms of both accessibility and sustaining engagement. It would appear that knowledge and insight into military life on the part of the provider improved rapport, decreased suspicion, and thus helped to "breakdown barriers." When faced with case workers who had no experience of the military, participants reported being reluctant to explain or discuss their experiences of military service and the (sometimes subtle) significance of these experiences. Too often in such circumstances, respondents decided early that they "couldn't be helped." as the provider "did not understand." The following data were typical of the claim that having veterans as case workers was beneficial:

*I can't open up the same to a civilian ... my support  
worker is a veteran. And this [CHARITY] is run by veter-  
ans ... for me I can relate to them and they can relate  
to me. And you have an instant bond and there's a trust  
because you've all been through the same thing. Not nec-  
essarily the same trauma, but because you've been sol-  
diers or you've been whatever ... whatever service you've  
been in. So you have this ... have this common bond so  
it's easier to open up and trust and listen than it is with  
a civilian. Which is something maybe the civilians don't  
understand. (Participant 05)*

In addition to citing military service as underlying their alcohol consumption, many participants also reported exposure to alcohol from a young age. Claims by respondents that their own parents endured significant difficulties with alcohol were reported frequently among this sample. For instance:

*It was always around the house and stuff with my parents  
and stuff like that, they always drank predominantly on a  
weekend. I knew my mother drank as well slyly during the  
day, ...So I'd always had alcohol around. (Participant 11)*

*I would say about ... maybe seven year old. I would say  
a seven year old really, yeah, my mum was a drinker, she  
was an alcoholic. (Participant 13)*

It is possible that early exposure to alcohol played an important role in "preparing the ground" for the processes of alcohol normalisation

frequently experienced during military service. Collectively, these patterns of socialisation may have resulted in later difficulties in acknowledging problematic drinking and subsequent acceptance of help in later life. However, for some respondents, it was clear that joining the military was viewed as an opportunity, offering an escape route from challenging family and/or social circumstances:

*Well I joined the infantry when I like was leaving school because like at the time there was no job prospects in [area they lived].*

*I Joined the army, new beginning, new everything.*  
(Participant 12)

The presence of significant pre-enlistment factors such as alcohol exposure at a young age and using the military as a means to escape challenging environments clearly limits the extent to which strong causal claims can be made about the role of military socialisation in subsequent alcohol misuse and treatment seeking. In presenting “common themes” or “typical presentations,” the authors are also acutely aware that individual formulations often reveal subtle differences. Furthermore, while military service played a defining role in the identity formation of all respondents in this study, attempting to abstract these experiences from the totality of a person’s biographical experience can lead to unwarranted conclusions. For instance, those respondents who reported that they used the military as a means to escape often also reported returning to the same locations post-discharge, where typically attendant problems still existed (e.g. high unemployment). It is, therefore, highly likely that the totality of an individual’s formulation will inevitably have a bearing upon the presence of complex presentations and delayed meaningful engagement.

## 4 | DISCUSSION

This study has identified three main findings, which presents a conceptual understanding of why veterans with alcohol problems may be “different” to substance misuse service users from the wider general population. A normalised relationship with alcohol, which (at very least, partially) appears to stem from the culture of military service, subsequently appears to delay meaningful engagement with alcohol/substance misuse services. The lack of insight exhibited by respondents in relation to the role alcohol has played in their lives, and attendant delay in engagement, frequently resulted in multiple morbidity and complex presentation. Data suggested that the participants’ alcohol misuse impacted upon the totality of their own and families’ lives (physical, psychological, social and financial etc.). Such complexity of presentation typically requires a complex, multi-agency response spanning both health and social care and state and voluntary sectors.

As identified in previous studies (Jones & Fear, 2011), it was clear that for respondents in this study, military socialisation was, and continued to be, a pervasive influence and often the defining feature of identity intrinsically linked to their alcohol use. Almost exclusively, part

of this socialisation process involved a normalisation of excessive and regular alcohol consumption. A further (strong) element of military socialisation appeared to include a belief in the virtue of resilience and the belief in self-reliance and the avoidance of help-seeking behaviour. This strong functional view of health, in which injury and illness are viewed as weakness, appears to be an embedded belief in military personnel and veterans, and is clearly a barrier to help seeking (Iversen et al., 2010). Reflecting upon these beliefs, it is easy to see why respondents not only viewed their alcohol consumption as acceptable and normal but were also, potentially, very proud of the extent to which they could drink. It is argued that this expressed pride had its roots in a functional view of health and rested upon the belief that as long as they were fit for exercise and work the next morning, their drinking was clearly not an issue. Any suggestion that alcohol consumption was hazardous, harmful or problematic, therefore, posed a fundamental challenge to identity and a fundamental contradiction to their underlying belief system. Rather, counter-culturally, the ability to “drink hard” was a desirable aspect of their military and veteran identity, and conversely, accepting alcohol consumption as problematic potentially represented a sign of weakness. As noted *above*, even when in obvious and dire need, it was often left to other agencies to formally identify problematic drinking as the common denominator to a cluster of social and health problems. One interesting aspect of this particular finding relates to the thoroughgoing functional view of health. Stacey (1976) suggested that health can variously be viewed as a positive concept—“wellness” or a “reserve” or, conversely, as a negative concept—“not ill” or “being able to function.” Functional definitions of health are typified by the paramount status accorded to “being able to work,” regardless of illness or incapacity, and the “work hard, play hard” mantra, identified in the participants in this study, typifies this position. However, Bowling (2005) identified that undue emphasis placed upon “function” underplays the extent to which environment—including prevailing culture—negatively influences individuals. Respondents in this study vividly reported a military counter-culture in which the ability to “drink hard” was viewed as a socially desirable facet. That this aspect of military life both existed in reality, and was potentially harmful to military personnel, has received tacit acknowledgement in recent attempts to address alcohol misuse within the UK armed Forces (MoD, 2017).

The study identified that “meaningful” engagement with substance misuse services was common among the service-users interviewed. A belief that healthcare professionals who had no connection with the armed forces did not understand veterans, or have the ability to help, was prominent. This belief among participants appeared to have led to a reluctance to engage in services meaningfully. One factor repeatedly cited as promoting positive service engagement was when service providers were peers and had a stock of military credentials on which to base their understanding of service users. However, even in services where peer-support workers were present, service engagement still appeared to present a fundamental challenge to the service-users’ military identity and continued to be viewed as an admission of weakness. Previous research on serving personnel similarly found that anticipated stigma served as a barrier to care (French, Rona, Jones, & Wessely, 2004; Iversen et al., 2011). Iversen

et al. (2011), when studying mental health stigma in the British Armed Forces, reported that 73% of serving personnel believed that their commanders would treat them differently if they sought help for mental health problems, and 46.5% felt that they would be seen as weak by those (peers, family) who are important to them. Data from this study have identified these same beliefs in the participants and suggest that anticipated stigma remains a salient contributing factor in delaying meaningful engagement in substance misuse services.

A delay in engagement impacted on many other aspects of the participants' lives and not acknowledging an alcohol problem meant that the route to substance misuse services was varied across the study participants. There is a consensus that veterans presented with a wide range of social, physical and sociological needs caused by or contributing to their alcohol problems (Aguirre et al., 2014; Fear et al., 2010; Kiernan et al., 2016). Almost all participants in this study had experienced (concurrently) mental health problems, physical illness, housing problems and unemployment. Most of the participants had accessed third sector charities for help, primarily dealing with homelessness, unemployment and the resettlement of ex-offenders. Characteristically, it was these agencies who were able to re-frame the service-user's difficulties as being alcohol related. The Transtheoretical Model of Stages of Change (Prochaska & DiClemente, 1983) described how individuals typically cycle through a "sequence" of five discrete phases: pre-contemplation, contemplation, preparation, action and maintenance, before finally attaining long-term abstinence. Data from the current study would suggest that this model, still influential with practitioners, poorly accounts for respondents' experiences, with some arguably never engaging in active "contemplation," because of the failure to conceptualise their accompanying complex cluster of health and social problems as alcohol related at all.

#### Limitations.

An early limitation was identified in participant recruitment. Commissioned NHS services were found to have mainly older veterans and to achieve the maximum variance sample target for this study, the sampling strategy was changed, and the remaining participants were recruited through partnerships with third sector charities. It is noteworthy that nearly all respondents interviewed were ex-servicemen. While it is believed that men appear to have greater levels of alcohol consumption than women, the absence of female military veterans from this study and other research in this area remains a significant limitation.

## 5 | CONCLUSION

The findings of this study clearly suggest that veterans who misuse alcohol have a range of distinctive and unique difficulties that subtly differentiate them from the wider civilian substance misuse population. This distinctiveness appears to be underpinned by several significant theoretical insights. First, the effects of military socialisation appeared to be a pervasive influence and often the defining feature of identity within veteran respondents. Almost exclusively, part of this socialisation process involved a normalisation of excessive and regular alcohol

consumption. However, the presence of significant pre-enlistment factors such as alcohol exposure at a young age must be considered, as it clearly limits the extent to which strong causal claims can be made about the role of military socialisation in subsequent alcohol misuse. Second, a military culture, counter to civilian norms and expectations, appeared to exist in which a belief in the virtue of resilience was central, and that injury and illness are viewed as weakness.

Consequently, delays in "meaningful" engagement with substance misuse services were pervasive among the service-user interviewed. In many instances, delayed engagement appeared to be exacerbated by a cycle of mutual mistrust between service providers and veteran service users.

Delayed engagement invariably resulted in complex presentations in which concurrent mental health problems, physical illness, housing problems and unemployment were often present. Most of the veteran respondents were typically unable to contemplate that alcohol misuse may be the common denominator to the "presenting problems," and it was frequently left to other agencies to re-frame the service-user difficulties as being alcohol related.

Finally, it would appear that veterans presenting with a complex and toxic hybrid of physical illnesses, social and mental health problems could often be poorly served by the (relatively) fragmented mixed economy of health and welfare provision currently in place within the United Kingdom. The confused, often duplicated, plethora of services available coupled with complex care pathways appeared to contribute to veterans disengaging with care. Once again, peer-support models appeared to mitigate against disengagement.

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## CONFLICT OF INTEREST

The Royal British Legion part funded this study.

## ENDNOTES

<sup>1</sup>NHS is the National Health Service in the United Kingdom which provides all the health care needs for veterans, free at the point of delivery.

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## APPENDIX C

### PAPER 3

Caddick, N., Cullen, H., Clarke, A., Fossey, M., Harrington, B., Hill, M., **McGill, G.**, Taylor, T. & Kiernan, M. (2018). Ageing, limb-loss, and military veterans: A systematic review of the literature. *Ageing & Society*.

# Ageing, limb-loss and military veterans: a systematic review of the literature

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## **ABSTRACT**

The impact of losing a limb in military service extends well beyond initial recovery and rehabilitation, with long-term consequences and challenges requiring health-care commitments across the lifecourse. This paper presents a systematic review of the current state of knowledge regarding the long-term impact of ageing and limb-loss in military veterans. Key databases were systematically searched including: ASSIA, CINAHL, Cochrane Library, Medline, Web of Science, PsycArticles/PsychInfo, ProQuest Psychology and ProQuest Sociology Journals, and SPORTSDiscus. Empirical studies which focused on the long-term impact of limb-loss and/or health-care requirements in veterans were included. The search process revealed 30 papers relevant for inclusion. These papers focused broadly on four themes: (a) long-term health outcomes, prosthetics use and quality of life; (b) long-term psychosocial adaptation and coping with limb-loss; (c) disability and identity; and (d) estimating the long-term costs of care and prosthetic provision. Findings present a compelling case for ensuring the long-term care needs and costs of rehabilitation for older limbless veterans are met. A dearth of information on the lived experience of limb-loss and the needs of veterans' families calls for further research to address these important issues.

**KEY WORDS** – limb-loss, amputation, military veterans, lifecourse, health care.

## **Background**

Limb-loss as a consequence of military service has been thrust into the public consciousness and on to political agendas as a result of recent conflicts in Iraq and Afghanistan (Caddick and Smith 2014). The injuries produced

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by these conflicts have created a legacy that veterans and the societies they are part of will need to deal with for many years to come, throughout the life-course of limbless veterans (Edwards *et al.* 2015; Geiling, Rosen and Edwards 2012). For example, a Congressional report from the United States of America (USA) revealed that 1,645 US veterans lost a limb during the US-led global war on terror,<sup>1</sup> whilst United Kingdom (UK) Defence Statistics indicated that 301 British veterans sustained an amputation through service in Iraq or Afghanistan.<sup>2</sup> The lifelong impact of traumatic limb-loss is also particularly relevant for older veterans who served in (among others) the Second World War, Korea, Northern Ireland, Vietnam and the Falklands, and whose health issues may be exacerbated by age-related changes and comorbidities, including the long-term psychological consequences of war (Geiling, Rosen and Edwards 2012; Hunt and Robbins 2001).

The research literature on limb-loss in veterans has increased rapidly in volume as a result of the conflicts in Iraq and Afghanistan (*e.g.* Wool 2015). Indeed, most of the studies have appeared post-9/11, indicating a renewed interest in this issue among researchers. This increasing interest dovetails with (and is partially derived from) the political imperative to care for veterans who lose limbs as a result of service. In the UK, the Armed Forces Covenant, which was enshrined in law in 2011, dictates that veterans and their families should not encounter disadvantage as a result of their service, and that where appropriate they should be entitled to special treatment (Ministry of Defence 2011). The Covenant explicitly states that those who have 'given the most' – including injured veterans – are to be given special consideration. Importantly, disadvantage experienced as a result of service may be taken to include the age-related after-effects of service-related injury and amputation (Edwards *et al.* 2015).

Military personnel undergo amputations for a variety of reasons (Cifu 2010). Firstly, there are those whose injuries are 'service attributable', experienced as a result of combat or training accidents. These are the amputations for which military institutions are most directly accountable. Secondly, there are those who become injured whilst serving but 'off-duty', *e.g.* in motor vehicle accidents. Thirdly, some former personnel suffer chronic illness (such as diabetes) which results in amputation typically at 'older' ages (*e.g.* >50 years old). Whilst acknowledging an abundance of literature in this third area of older veterans who undergo amputations late in life (most of which appears to emanate from the US Veterans Administration (VA) health-care system; *e.g.* Kurichi *et al.* 2015; Littman *et al.* 2014), our focus in this systematic review is on the first group whose injuries are 'service attributable'. It is this cohort which will have aged *with* limb-loss over many years and will have required significant health-care input throughout their lifetime (Geiling, Rosen and Edwards 2012).

### *Definition of terms*

For the purpose of this review, the term ‘veteran’ refers to any former member of the Armed Forces who has served for more than a single day. This aligns with the UK government definition of a veteran, and is the most inclusive of any country. Whilst other countries’ definitions differ along the lines of deployment experience or length of service, the UK definition arguably provides the broadest scope for inclusion of research within our review. Some of the articles we reviewed did not state participants’ length of service, yet given the majority focused on traumatic limb-loss sustained on active duty, they were self-evidently longer-serving than the minimum required for ‘veteran’ status.

‘Limb-loss’ or ‘limbless’ refers to any individual who has undergone a ‘major’ amputation (*i.e.* above the level of ankle or wrist) (Kurichi *et al.* 2007). This may include those with multiple amputations (*e.g.* a bilateral lower-limb amputee) and those with amputations at different levels (*e.g.* above knee or below knee; AK/BK). In relation to veterans, this may include combat-related traumatic limb-loss (*e.g.* as a result of blast injury or damage from projectiles), injuries sustained in training accidents or those acquired during the course of normal duties. Given the terms ‘ageing’, ‘older’, ‘elderly’ and ‘later life’ are often used inconsistently or left undefined, following previous reviews (*e.g.* Cattan *et al.* 2005) we adopted any criteria used by the studies in this review.

### *Aims of the review*

In this paper, we systematically review the literature on ageing and limb-loss in military veterans in order to (a) comment on the current state of knowledge regarding the long-term impact of limb-loss in veterans, (b) explore avenues for developing research in this area, and (c) highlight health and social care implications for older limbless veterans. Our aim is to extend the literature by providing a critical summary of the strengths, limitations, omissions and biases of current knowledge (Jesson and Lacey 2006), thereby guiding future research in this area and stimulating informed policy reflection and decision-making.

## **Methods**

### *Inclusion criteria*

- *Participants:* older limbless military veterans. Excluded were younger (*e.g.* Iraq/Afghanistan-era veterans). There were no restrictions on the type or cause of limb-loss, other than meeting the above definition of ‘major’

limb-loss and that the injury was sustained during the service person's military career.

- *Comparators*: where available, studies were included which drew explicit comparisons between 'older' (e.g. Vietnam-era) and 'younger' (e.g. Iraq/Afghanistan-era) veterans.
- *Outcomes*: long-term impact of limb-loss, health-care needs, and age-related complications or comorbidities associated with limb-loss. Excluded were studies focused solely on short-term rehabilitation.
- *Study design*: empirically based studies of any study design. Excluded were commentaries, reviews, etc.

For the purpose of this review, we wanted to include all studies relating to the long-term effects of limb-loss. Since the majority of service-related amputations happen to young military personnel in their mid-twenties (Geiling, Rosen and Edwards 2012), we included articles whereby participants were described as 'middle-aged' or older, thus ensuring that participants had been living with limb-loss for multiple decades at the time of study. For example, if ages were not stated explicitly, articles were included wherein date of publication or 'time since amputation' exceeded two decades from the end of the conflict in which participants were injured.

### *Search strategy*

Guidelines for systematically searching and selecting papers for review were followed (Centre for Reviews and Dissemination 2009). Key databases were searched including: ASSIA, CINAHL, Cochrane Library, Medline, Web of Science, PsycArticles/PsychInfo, ProQuest Psychology and ProQuest Sociology Journals, and SPORTDiscus. The search terms included were as follows:

- 'aging' OR 'ageing' OR 'older' OR 'elder\*' OR 'later life';
- 'veteran' OR 'veterans' OR 'ex-military' OR 'ex-service' OR 'ex-force\*' OR 'army';
- 'limbloss' OR 'limb-loss' OR 'limb loss' OR 'limbless' OR 'amput\*' OR 'prosthe\*' OR 'artificial limb'.

Given the large range of potential outcomes of interest, outcomes were not included in the search strategy. Rather, the above three search strings were used to capture *all* potentially relevant papers on older limbless veterans, with key outcomes highlighted during the initial phase of searching. Citation scanning was conducted for all papers included at the final stage. A special issue in the *Journal of Rehabilitation Research and Development* – in which one of the searched-for articles was published – was searched, and the authors also searched their personal collections of articles.

*Selection of studies, data extraction, quality assessment and synthesis of results*

For screening, article titles and abstracts were scanned for relevance by one reviewer and checked against the inclusion criteria by five members of the review team and discrepancies were resolved by discussion. All relevant articles were subsequently read by three reviewers and a standardised data extraction form was used to record key findings from each study. This form was also used to capture details on the type of study, location and sample characteristics including age, gender, type/cause of amputation and (where relevant) conflict in which limb trauma originated.

Previous review studies (Bunn *et al.* 2008; Cattan *et al.* 2005; Wilson *et al.* 2016) as well as recognised assessment tools (CASP 2013; EPHPP 2010) were used to guide processes of quality assessment. For qualitative studies, judgements were based on the suitability of the research design and recruitment processes for addressing the study's aims, the rigour of data collection and analysis processes, and whether there was a clear statement of the study's findings (CASP 2013). For the quantitative studies, quality was determined by an overall assessment of the appropriateness of the study design and methods in relation to the study's aims and objectives (Cattan *et al.* 2005). Studies were judged accordingly – by the same three reviewers who completed data extraction – as strong, moderate or weak according to their methodological quality, and any discrepancies were resolved by discussion.

The research we identified was grouped into a number of 'themes' based on the content and focus of individual articles. These themes were identified and agreed upon by five reviewers at a meeting of the review team. The themes provided categories and sub-headings for organising the results and are as follows: (a) long-term health outcomes, prosthetics use and quality of life (QoL); (b) long-term psycho-social adaptation and coping with limb-loss; (c) disability and identity; and (d) estimating the long-term costs of care and prosthetic provision. Included papers were too heterogeneous (*i.e.* with regard to methodology, outcomes and focus of the studies) to attempt a meta-analysis. Following guidelines on producing systematic reviews (Centre for Reviews and Dissemination 2009) and previous review studies (Cattan *et al.* 2005), a narrative synthesis (as opposed to meta-analysis or other methods of integration) was therefore chosen as the most suitable means of synthesising findings from methodologically diverse studies.

## Results

The search process yielded an initial 1,512 hits, which after screening resulted in a total of six articles relevant for inclusion (*see* Figure 1). Citation scanning resulted in an additional 16 articles. Given that many papers that were deemed

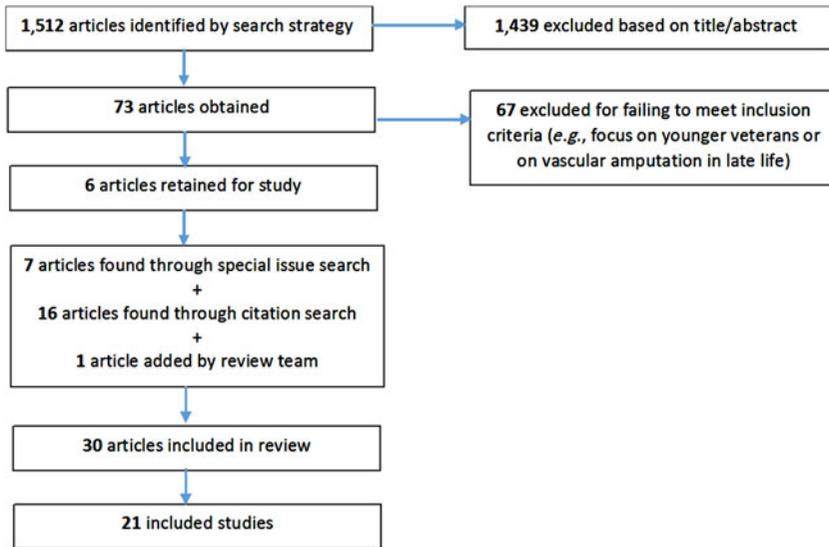


Figure 1. Flow diagram of identification of eligible studies.

relevant reported age and time since amputation of their samples, but did not refer to ‘ageing’, ‘older’ or ‘elderly’ veterans, a larger number of papers were identified through citation scanning than through the initial keyword search. Hand searching a special issue of *Journal of Rehabilitation Research and Development* led to the discovery of an additional seven articles. The authors’ personal collections of articles yielded one further study.

A total of 21 studies were identified, with one study – the VA’s ‘Survey for Prosthetic Use’ (2010) – reported in ten separate articles (of which eight were published in a *Journal of Rehabilitation Research and Development* special issue). Nine out of the 21 studies were conducted in the USA, with most of these (five of the nine) taking place within the VA health-care system. Four studies were conducted in Iran, one in Nicaragua and seven in the UK. Most studies (15 of the 21) were surveys of various long-term physical and psychological outcomes, three used qualitative or mixed methods (Foote *et al.* 2015; Machin and Williams 1998; Meyers 2014) and three (Blough *et al.* 2010; Edwards *et al.* 2015; Stewart and Jain 1999) used a form of economic modelling to estimate the long-term costs of caring for limbless veterans. The characteristics of all the studies are summarised in Tables 1 and 2.

### *Long-term health outcomes, prosthetics use and quality of life*

The largest collection of studies identified for review (16 of the 21) focused broadly on assessing long-term physical health outcomes (including pain

TABLE 1. Summary of papers from the Veterans Administration's (VA) 'Survey for Prosthetic Use' (2010) study

Author	Focus of article	Number of participants and aetiology of limb-loss (% male, mean age, mean time since limb-loss)	Key findings
1 (i) Berke <i>et al.</i> (2010)	Satisfaction with prosthetic care (sub-sample from VA cohort)	1. N = 230 Vietnam veterans with combat-related traumatic limb-loss (100%, 61, 39 years) 2. N = 251 OIF/OEF veterans with combat-related traumatic limb-loss (97%, 29, 3 years)	Vietnam veterans reported lower care satisfaction and pain-free prosthetic use compared with OIF/OEF veterans Prosthetic-fit issues common across both groups
1 (ii) Blough <i>et al.</i> (2010)	Economic modelling and long-term projection of prosthetic device costs	1. N = 298 Vietnam veterans with combat-related traumatic limb-loss (100%, 61, 39 years) 2. N = 283 OIF/OEF veterans with combat-related traumatic limb-loss (97%, 29, 3 years)	Average lifetime costs of prosthetic provision estimated up to 6.2-fold higher for OIF/OEF veterans compared to their older Vietnam counterparts
1 (iii) Dougherty <i>et al.</i> (2010)	Health outcomes and prosthetic use in multiple limb amputees (sub-sample)	1. N = 73 Vietnam veterans with combat-related traumatic limb-loss (100%, 61, 39 years) 2. N = 61 OIF/OEF veterans with combat-related traumatic limb-loss (95%, 28, 3 years)	Significantly more age-related comorbidities in Vietnam compared to OIF/OEF group
1 (iv) Epstein, Heinemann and McFarland (2010)	Factors associated with QoL	1. N = 298 Vietnam veterans with combat-related traumatic limb-loss (100%, 61, 39 years) 2. N = 283 OIF/OEF veterans with combat-related traumatic limb-loss (97%, 29, 3 years)	Vietnam cohort reported worse overall QoL compared with OIF/OEF cohort Higher number of comorbidities associated with worse QoL in both groups
1 (v) Gailey <i>et al.</i> (2010)	Prosthetic use and functional outcomes in unilateral lower-limb amputees (sub-sample)	1. N = 178 Vietnam veterans with combat-related traumatic limb-loss (100%, 61, 39 years) 2. N = 172 OIF/OEF veterans with combat-related traumatic limb-loss (98%, 29, 3 years)	Compared with OIF/OEF veterans, Vietnam veterans had lower self-reported health, functional ability and QoL, used fewer prosthetics, and had a higher prevalence of arthritis and CTD
1 (vi) Laferrrier <i>et al.</i> (2010)	Factors influencing mobility and use of assistive technology (sub-sample)	1. N = 245 Vietnam veterans with combat-related traumatic lower limb-loss (100%, 61, 39 years) 2. N = 226 OIF/OEF veterans with combat-related traumatic lower limb-loss (98%, 29, 3 years)	Sole or supplementary use of wheelchair for mobility common in both groups, with more Vietnam veterans abandoning use of all prosthetics

1 (vii) McFarland <i>et al.</i> (2010)	Satisfaction and prosthetic use in unilateral upper-limb amputees (sub-sample)	<ol style="list-style-type: none"> <li>N = 47 Vietnam veterans with combat-related traumatic lower limb-loss (100%, 60, 39 years)</li> <li>N = 50 OIF/OEF veterans with combat-related traumatic lower limb-loss (98%, 30, 3 years)</li> </ol>	<p>Higher prevalence of arthritis and CTD among Vietnam veterans compared with OIF/OEF veterans</p> <p>Presence of comorbidities associated with reduced upper-limb activity in Vietnam veterans</p>
1 (viii) Reiber <i>et al.</i> (2010)	Health outcomes and prosthetic use	<ol style="list-style-type: none"> <li>N = 298 Vietnam veterans with combat-related traumatic limb-loss (100%, 61, 39 years)</li> <li>N = 283 OIF/OEF veterans with combat-related traumatic limb-loss (97%, 29, 3 years)</li> </ol>	<p>Overall health reported as good in both groups but lower in Vietnam veterans than OIF/OEF</p> <p>Vietnam veterans used fewer prosthetics, were less active and had lower functional capabilities</p>
1 (ix) Dougherty <i>et al.</i> (2012)	Health outcomes, QoL and prosthetic use in bilateral AK amputees (sub-sample)	<ol style="list-style-type: none"> <li>N = 23 Vietnam veterans with combat-related traumatic limb-loss (100%, 60.4, 39 years)</li> <li>N = 10 OIF/OEF veterans with combat-related traumatic limb-loss (100%, 27.2, 3 years)</li> </ol>	<p>Self-reported health lower in Vietnam veterans compared to OIF/OEF veterans</p> <p>QoL reportedly comparable between groups. Prosthetic use problematic, particularly in older veterans</p>
1 (x) Dougherty <i>et al.</i> (2014)	Health outcomes, QoL and prosthetic use in bilateral lower-limb amputees (sub-sample; one AK and one BK)	<ol style="list-style-type: none"> <li>N = 13 Vietnam veterans with combat-related traumatic limb-loss (100%, 61, 39 years)</li> <li>N = 11 OIF/OEF veterans with combat-related traumatic limb-loss (95%, 28, 3 years)</li> </ol>	<p>Vietnam veterans reported lower functioning and use of prosthetics. Both groups reported similar QoL and a moderate-to-strong impact of dual AK/BK amputation on their lives</p>

*Notes:* AK: above knee. BK: below knee. CTD: cumulative trauma disorder. OEF: Operation Enduring Freedom (Afghanistan). OIF: Operating Iraqi Freedom (Iraq). QoL: quality of life.

TABLE 2. Summary of the remaining studies included in the systematic review

Author and location of study	Design and focus of study	Number of participants and aetiology of limb-loss (% male, mean age, mean time since limb-loss)	Key findings
2 Desmond and MacLachlan (2006), UK	Cross-sectional. Coping strategies and long-term psycho-social adaptation to lower limb-loss	N = 796 members of Blesma with lower limb-loss (96%, 74, 42.6 years); 82.8% of amputations reported as traumatic aetiology	Problem solving, seeking social support and increasing time since amputation positively associated with adjustment to amputation
3 Desmond (2007), UK	Cross-sectional. Coping strategies and long-term psycho-social adaptation to upper limb-loss	N = 138 members of Blesma with combat-related traumatic upper limb-loss (100%, 75, 50 years)	Avoidant coping strategies associated with psychological distress and poorer adjustment
4 Dougherty (1999), USA	Survey. Long-term outcomes for bilateral AK amputees from Vietnam War	1. N = 23 Vietnam veterans with combat-related traumatic bilateral AK amputations (100%, 48, 28 years) 2. N = 145 age- and sex-matched controls	Decreased physical functioning among Vietnam amputees. Majority had been employed since injury, yet few were current prosthetic users
5 Dougherty (2001), USA	Survey. Long-term outcomes for unilateral BK amputees from Vietnam War	1. N = 28 Vietnam veterans with combat-related unilateral BK amputations 2. N = 44 Vietnam veterans with combat-related unilateral BK amputation plus one or more major injuries (1 and 2: 100%, 48, 28 years) 3. N = 141 age- and sex-matched controls	Veterans with additional (secondary) injuries had worse health outcomes and made more use of psychological support services
6 Dougherty (2003), USA	Survey. Long-term outcomes for unilateral AK amputees from Vietnam War	1. N = 18 Vietnam veterans with combat-related unilateral AK amputations 2. N = 28 Vietnam veterans with combat-related unilateral AK amputation plus one or more major injuries (1 and 2: 100%, 48, 28 years) 3. N = 141 age- and sex-matched controls	Both veteran groups had worse health outcomes than controls. Majority of veterans were currently employed and used prosthetics for on average 13.5 hours per day
7 Ebrahimzadeh and Fattahi (2009), Iran	Survey. Long-term clinical outcomes in unilateral AK amputees	N = 31 veterans of Iran–Iraq War with combat-related unilateral AK amputation (100%, 43 years, 17 years)	High prevalence of pain and psychological symptoms including PTSD

8	Ebrahimzadeh and Hariri (2009), Iran	Survey. Long-term clinical outcomes in unilateral BK amputees	N = 96 veterans of Iran–Iraq War with combat-related unilateral BK amputation (100%, 43, 17 years)	High prevalence of pain and psychological symptoms including PTSD
9	Ebrahimzadeh <i>et al.</i> (2013), Iran	Survey. Long-term clinical outcomes in veterans with hip disarticulation	N = 76 veterans of Iran–Iraq War with combat-related hip disarticulation (96.1%, 44, 26.6 years)	High prevalence of back pain, phantom pains and stump spasms. Lower QoL scores for pain and physical function compared to population norms. Sports participation associated with higher QoL
10	Edwards <i>et al.</i> (2015), UK	Economic modelling. Long-term cost of care for British veterans of Afghanistan	N = 265 veterans of war in Afghanistan with combat-related traumatic limb-loss (ages and time-since-injury not reported)	Long-term (40-year) cost of prosthetic provision for lower-limb amputee cohort estimated at £288 million (\$US 444 million) in today's currency
11	Foote <i>et al.</i> (2015), USA	Survey and qualitative interviews. Long-term health and QoL among Vietnam veterans	N = 257 Vietnam veterans with combat-related traumatic limb-loss (age, sex and time since amputation not reported) (sub-sample of N = 20 for qualitative interviews)	High prevalence of pain and comorbid arthritis. Interviews revealed that – even 40 years post-injury – mental health problems and ageing/pain-related comorbidities had a strong negative influence on QoL
12	Hoaglund <i>et al.</i> (1983), USA <sup>1</sup>	Survey. Prosthetic problems and needs in veterans with lower-limb amputations	1. N = 133 veterans with service-connected traumatic limb-loss (100%, 47, 21 years) 2. N = 42 veterans with dysvascular disease-related limb-loss (100%, 60, 2 years)	High prevalence of ‘moderate to severe intensity’ residual limb pain, along with high prevalence of back pain, phantom pain and prosthetic problems
13	Kulkarni <i>et al.</i> (1998), UK	Medical examination. Prevalence of osteoarthritis and osteopenia	1. N = 44 Second World War veterans with combat-related unilateral lower limb-loss (100%, 73, 47 years)	High prevalence of hip osteoarthritis on both amputated and non-amputated sides. AK amputees had significantly more osteoarthritis (and of greater severity) than BK amputees
14	Machin and Williams (1998), UK	Survey and semi-structured interviews. Phantom pain and coping strategies	1. N = 26 Second World War veterans and members of Blesma (100%, 76.8, not reported). All injuries described as traumatic and either combat or service-related	A dominant ‘stiff upper lip’ approach to coping with phantom pain was identified, with little recourse to social support or medical assistance

TABLE 2. (Cont.)

Author and location of study	Design and focus of study	Number of participants and aetiology of limb-loss (% male, mean age, mean time since limb-loss)	Key findings
15 Meyers (2014), Nicaragua	Qualitative ethnographic. Disability and identity among veterans with limb-loss	Participant numbers unstated. Participants described as male middle-aged veterans of Nicaraguan Civil War of 1980s with either combat-related amputations or loss of limb function	Depending on social and political context, limbless veterans may identify as 'disabled' or as 'war wounded', and may distance themselves from, or alternatively align themselves with, 'other' disabled groups
16 Norvell <i>et al.</i> (2005), USA <sup>1</sup>	Survey and retrospective cohort design. Prevalence of knee pain and osteoarthritis	1. N = 62 veterans with traumatic lower limb-loss (100%, 63, 31 years) 2. N = 94 veterans without amputation (100%, 65)	Higher prevalence of knee pain and knee osteoarthritis in amputees compared with non-amputees. Prevalence of knee pain also higher in AK amputees than BK amputees, linked to gait abnormalities
17 Sherman and Sherman (1983), USA <sup>1</sup>	Survey. Prevalence of phantom pain	N = 764 veterans with combat or service-related amputations (100%, 51, 27 years)	Persistence of phantom pain severe enough to cause at least occasional debilitation is the norm rather than exception for combat amputees. Veterans reported not being listened to when seeking treatment for phantom pains, and self-medicating with alcohol
18 Sherman, Sherman and Parker (1984), USA <sup>1</sup>	Survey. Prevalence of phantom pain	N = 2,694 veterans with combat or service-related amputations (100%, 53, 28 years)	Very high prevalence of moderately intense phantom pain. Many have given up on treatments and have had poor experiences with clinicians
19 Stewart and Jain (1999), UK	Epidemiological survey. Analysis of prosthetic costs over 50-year period	N = 98 veterans with combat-related traumatic limb-loss (100%, 74, 48 years)	50-year costs of prosthetic limb provision estimated at £69 million

20 Taghipour <i>et al.</i> (2009), Iran	Survey. Long-term QoL outcomes in lower-limb amputees	N = 141 veterans of Iran–Iraq War with combat-related traumatic lower limb-loss (100%, 45.2, 21.6 years)	Poorer mental and physical HRQoL among amputees compared to population norms. Low back pain most important contributor to poorer HRQoL
21 Wartin <i>et al.</i> (1997), UK	Survey. Prevalence of phantom and stump pain	N = 590 members of Blesma with traumatic limb-loss (100%, 73, 50 years)	High prevalence of phantom limb pain and stump pain. Intensity of phantom sensations a significant predictor for time-course duration of phantom pain

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*Notes:* 1. Study took place at US Veterans Administration. AK: above knee. BK: below knee. Blesma: British Limbless Ex-Servicemen's Association. CTD: cumulative trauma disorder. HRQoL: health-related quality of life. OEF: Operation Enduring Freedom (Afghanistan). OIF: Operating Iraqi Freedom (Iraq). PTSD: post-traumatic stress disorder. QoL: quality of life. UK: United Kingdom. USA: United States of America.

and comorbidities) associated with limb-loss, levels of prosthetic utilisation by older limbless veterans, and the impact of health outcomes and prosthetic use on QoL. The largest of these studies was the VA's 'Survey for Prosthetic Use'. This was a national survey comparing health outcomes, QoL and use of prosthetics among 298 Vietnam veterans with combat-related traumatic limb-loss (mean age = 61 years; time since amputation = 39 years) and 283 of their younger Operation Iraqi Freedom/Operation Enduring Freedom (OIF/OEF) counterparts (mean age = 29; time since amputation = 3 years). It was noted that using prosthetic devices can improve functional ability, enhance mobility and safety, facilitate higher levels of activity, and can also reduce the risk of secondary comorbidities and problems resulting from overuse of intact limbs among limbless veterans (Gailey *et al.* 2010; Reiber *et al.* 2010). The survey aimed to document differences in health status and device-use between older and younger veterans, and to forecast changes in the use of prosthetic devices. It used a combination of validated and bespoke measurement tools, as well as analysis of medical records data.

Overall, findings from the survey revealed that health status (as measured on the SF-36 health questionnaire) was reported as good, very good or excellent among 70.7 per cent of Vietnam veterans and 85.5 per cent of OIF/OEF veterans (Reiber *et al.* 2010). Compared with OIF/OEF veterans, fewer of the older Vietnam veterans (90.5% versus 78.2%, respectively) were current prosthetic users (Reiber *et al.* 2010). Findings on prosthetic use were further described with regard to the different types of amputation. Among lower-limb amputees, sole use of a wheelchair for mobility was more common in the Vietnam cohort compared with the OIF/OEF cohort, at 18 and 4 per cent, respectively (Laferrier *et al.* 2010). Seventeen per cent of the Vietnam lower-limb amputees reported abandoning use of all prosthetic devices, rising to 33 per cent among bilateral lower-limb amputees, and 30 per cent among upper-limb amputees (Laferrier *et al.* 2010; McFarland *et al.* 2010). Vietnam veterans reported more problems with their prosthetics and more pain when using them compared to OIF/OEF veterans (Berke *et al.* 2010). Other studies included in this review also revealed that prosthetic usage varied by type of amputation. For instance, a series of long-term follow-up studies of Vietnam veterans conducted by Dougherty (1999, 2001, 2003) revealed that 87.5 per cent of unilateral AK amputees were current prosthetic users (average of 13.5 hours per day) compared with just 22 per cent of bilateral AK amputees (average of 7.7 hours per day), thereby highlighting the significant additional impact of multiple compared to single limb-loss.

A high prevalence of comorbidities and pain was identified across the studies in this review. Most studies which assessed arthritis revealed

prevalence rates of between 54 and 71 per cent among older limbless veterans (Dougherty *et al.* 2014; Foote *et al.* 2015; Gailey *et al.* 2010; Kulkarni *et al.* 1998; Reiber *et al.* 2010), with one study of unilateral lower-limb amputees reporting a lower prevalence of 16.1 per cent (Norvell *et al.* 2005). This compared with around 15 per cent of OIF/OEF veterans reporting arthritis (Dougherty *et al.* 2010). Three papers (Dougherty *et al.* 2010; Gailey *et al.* 2010; McFarland *et al.* 2010) reported a higher incidence of cumulative trauma disorder (CTD; overuse injuries resulting from reliance on the intact limb) among Vietnam veterans, which compromised their ability to use prosthetics and reduced their prosthetic satisfaction levels relative to younger veterans. Coincident with the ageing process and the occurrence of comorbidities, some Vietnam veterans' prosthetics therefore became too heavy, uncomfortable and painful to use, resulting in more abandonment of prosthetics (Laferrier *et al.* 2010).

Pain was reported as so prevalent among limbless veterans that it was often under-evaluated (Berke *et al.* 2010). Prevalence rates of numerous types of pain are described in Table 3. It was suggested by one study that phantom limb pain was often a persistent condition that stayed with the amputee for the remainder of life (Wartan *et al.* 1997). Another study described back pain and pain in contra-lateral (non-amputated) limbs as 'disabling and progressive problems of long-term surviving amputees' and argued that such problems were as great as phantom pains but were often overlooked (Ebrahimzadeh and Fattahi 2009: 1876). Eight papers reported the prevalence of mental health comorbidities among older limbless veterans (Dougherty *et al.* 2010, 2014; Ebrahimzadeh and Fattahi 2009; Ebrahimzadeh and Hariri 2009; Foote *et al.* 2015; Gailey *et al.* 2010; McFarland *et al.* 2010; Reiber *et al.* 2010). These studies reported rates of depression between 9.7 and 28 per cent and post-traumatic stress disorder (PTSD) between 15 and 46 per cent.

Despite the high prevalence of pain and comorbidities, QoL was reported as good, very good or excellent in 72.8–79.7 per cent of older limbless veterans (Epstein, Heinemann and McFarland 2010; Foote *et al.* 2015). One reason for this may be that veterans tended to deal with pain via silent acceptance or a 'stiff upper lip' approach to coping (Machin and Williams 1998). One study (Taghipour *et al.* 2009) reported significantly poorer QoL among limbless veterans compared to population norms. Among the factors related to poor QoL, Epstein, Heinemann and McFarland (2010) revealed that poorer self-reported QoL was significantly associated (in both Vietnam and OIF/OEF veterans) with the need for assistance with activities of daily living. Such assistance was required by one-third of upper-limb amputees in both older and younger veterans (McFarland *et al.* 2010). Among bilateral lower-limb amputees, Dougherty

TABLE 3. *Prevalence of pain among older limbless veterans*

Type of pain	Average pain prevalence identified in reviewed studies (%)	Number of papers reporting prevalence statistics
Phantom limb pain	17–90.8	14
Residual limb pain	32–92.2	10
Chronic back pain	8–76.6	9
Pain in contra-lateral (non-amputated) knee (lower-limb amputees)	38–79.4	4
Prosthetic-related pain	33–51	3
Hip pain on ipsilateral (amputated) side in lower-limb amputees	14.8	1
Knee pain on ipsilateral (amputated) side in below-knee amputees	13	1

*et al.* (2010) noted that 33 per cent of Vietnam veterans (compared with just 6% of OIF/OEF veterans) could no longer walk. In addition, fewer Vietnam veterans were participating in ‘high-impact’ activities such as skiing and basketball, compared with the younger cohort (*see also* Reiber *et al.* 2010). In the only study to include qualitative analysis of older veterans’ QoL experiences, Foote *et al.* (2015) provided vivid descriptions of the effects of impairment and restrictions on activities caused by amputation and by not being able to walk long distances due to pain. Declining mobility with age was linked strongly to poorer QoL in the narrative of one veteran interviewed in the study by Foote *et al.*

Other factors related to poorer QoL included a higher number of comorbidities, higher levels of pain and mental health problems (Dougherty *et al.* 2010, 2014; Epstein, Heinemann and McFarland 2010; Foote *et al.* 2015; Hoaglund *et al.* 1983; Reiber *et al.* 2010). Several papers noted the impact of age-related changes, pain and declining mobility on veterans’ QoL (Dougherty 2001; Dougherty *et al.* 2010; Ebrahimzadeh and Fattahi 2009; Foote *et al.* 2015), with mental health problems such as depression and PTSD – endured for many decades in some cases – described as among the biggest reasons for poor QoL among older limbless veterans (Ebrahimzadeh and Fattahi 2009; Epstein, Heinemann and McFarland 2010; Foote *et al.* 2015).

Finally, several papers considered the long-term impact of limb-loss on employment and personal relationships (*e.g.* Dougherty 1999, 2001, 2003; Dougherty *et al.* 2010, 2014; Foote *et al.* 2015; Reiber *et al.* 2010). In a long-term follow-up of bilateral AK amputees from Vietnam,

Dougherty found that 70 per cent of veterans were or had been employed outside the home since their injury. Reiber *et al.* (2010) similarly reported a 78.7 per cent current employment rate among Vietnam veterans. The vast majority of veterans were also married and had had children (Dougherty 1999, 2001, 2003; Ebrahimzadeh and Fattahi 2009; Ebrahimzadeh *et al.* 2013). Accordingly, Dougherty (1999) argued that Vietnam veterans had lived 'relatively normal lives' within the context of their physical limitations and that, contrary to media narratives, did not on the whole experience insurmountable emotional and physical scars. Indeed, Foote *et al.* (2015) suggested that older Vietnam veterans with limb-loss had continued to make major life transitions and experienced positive QoL, but that problems with pain, physical ailments exacerbated by ageing and mental health problems could also adversely affect QoL, thus underscoring the importance of ongoing care and rehabilitation.

### *Psycho-social adaptation and coping in older limbless veterans*

Three studies (Desmond 2007; Desmond and MacLachlan 2006; Machin and Williams 1998) discussed coping and psycho-social adaptation among older limbless veterans. Desmond and MacLachlan (2006) surveyed coping strategies and psycho-social adaptation with a sample of elderly lower-limb amputees (mean age = 74 years) who were members of the British Limbless Ex-Servicemen's Association (Blesma). The term 'psycho-social adaptation' was not defined in this paper but was described in relation to an individual's ability to adapt to a range of challenges, including impairments in physical functioning, prosthesis use, pain, changes in occupation, and alterations in body image and self-concept. The authors reported that problem solving and seeking social support were coping strategies associated with fewer depressive symptoms and greater psycho-social adaptation among older veteran amputees. Avoidant coping strategies (*e.g.* denial, alcohol use) were associated with poorer psycho-social adjustment, echoing wider findings about the maladaptive use of avoidant coping strategies in adaptation to disability. Greater time since amputation was also positively related to adjustment, with the average length of time being 42.6 years among the Blesma veterans.

In a separate study, Desmond (2007) then explored coping and adjustment with upper-limb amputees from the Blesma cohort. In this study, psycho-social adjustment was conceptualised as 'the absence of clinically elevated symptoms of anxiety and depression and evidence of positive adjustment to amputation and prosthesis use' (Desmond 2007: 17). Findings broadly mirrored those of the earlier study, although the associations between seeking social support and adjustment were not evident. As

Desmond argued, the findings of this and the previous study hold relevance for the care of older veterans, in particular the importance of promoting adaptive, problem-focused coping strategies designed to enhance long-term adjustment and QoL.

Machin and Williams (1998) also explored coping strategies in relation to phantom pains. They reported that veterans generally made little use of strategies such as problem solving or emotional support, preferring a ‘stiff upper lip’ approach to coping and a silent acceptance of pain. Many had also given up on medical assistance, making comments such as ‘I have had no success with treatments so far, so there is no point in even trying’ (Machin and Williams 1998: 293).

### *Disability and Identity*

One study by Meyers (2014) focused on the identity politics of disability and amputation amongst middle-aged veterans of Nicaragua’s civil war of the 1980s. Meyers’ qualitative study drew upon interviews and participant observations conducted with opposing sides of the conflict in order to understand how each side positioned themselves with regard to the broader category of ‘disability’. For the ex-Contra rebels (politically marginalised following their defeat by the Sandinista regime), adopting the social identity of ‘disabled’ became a means of arguing for equal rights and the protection of disability benefits. On the other hand, the Sandinistas under the ‘Organization of Disabled Revolutionaries’ (ORD) sought to distance themselves from ‘other’ disabled people, preferring to emphasise their privileged status as ‘war heroes’. Their amputations were symbols of valour, setting them apart from other disabled groups and protecting them from ‘stigmatised’ disabled identities. Sandinista veterans thereby adopted an ambiguous relationship to other disabled people: choosing to set themselves apart yet occasionally being compelled to identify with wider disability movements in order to gain access to benefits and resources.

Meyers’ findings showed that the political and military context in which veterans were injured was an important feature of their long-term adjustment to ‘disability’ and negotiations around personal and social identity. By highlighting matters of social identity, Meyers also situated the study of older veteran amputees within the wider literature on critical disability studies (*e.g.* Meekosha and Shuttleworth 2009), with which the literature on older veterans has otherwise yet to engage. Indeed, one insight from Meyers’ paper – mirroring the perspective of disability scholars more broadly (Meekosha and Shuttleworth 2009) – was that disabled and amputee veterans were not a homogenous group in terms of their social identities and experiences of disability, and that various ‘intersecting’

identities (particularly in relation to age, gender, race and combat-era) were important in understanding their lives.

### *Estimating the long-term cost of prosthetic provision for limbless veterans*

In line with the aims of this systematic review to evaluate the long-term impact of limb-loss, three papers considered the long-term financial burden of prosthetic device provision required to meet veterans' mobility needs (Blough *et al.* 2010; Edwards *et al.* 2015; Stewart and Jain 1999). Using Markov model analysis, Blough *et al.* (2010) projected the cost of prosthetic device provision for US veterans over five-year, ten-year, 20-year and lifetime periods. Using the 'Survey for Prosthetic Use' sample (*see above*), the authors contrasted the estimated lifetime cost of provision for Vietnam veterans compared with OIF/OEF veterans. Given the greater number – and greater technological advancement – of prosthetics used by OIF/OEF veterans, the cost of provision for the younger cohort was significantly higher than for the Vietnam cohort. Costs were also compared by type of amputation, with unilateral upper, unilateral lower, bilateral upper and multiple limb-loss forming separate categories for analysis. Given that lower-limb prostheses were typically more expensive and complex than upper limbs, costs were also highest in the 'multiple limb-loss' category, such that the lifetime projected costs of provision for a single Vietnam and OIF/OEF multiple-limb amputee were US \$750,000 and \$3.4 million, respectively. This compared with lifetime costs for a unilateral upper-limb amputee at US \$300,000 for Vietnam and US \$1.1 million for OIF/OEF. Blough *et al.* asserted that future costs of prosthetic provision could be manageable for the VA and for the Department of Defence, but that their estimates were 'conservative' because of potential outliers and the cost of future emerging technologies.

In a similar study with UK veterans, Edwards *et al.* (2015) argued for the imperative of long-term planning to meet the prosthetic and rehabilitative needs of Iraq and Afghanistan veterans. Using a simplified version of the Markov model of Blough *et al.* (2010), Edwards *et al.* estimated that the long-term (40-year) cost of rehabilitation and prosthetic provision for the entire UK veteran cohort of Iraq and Afghanistan was £288 million (US \$444 million) in 2015 currency. Prior to the conflicts in Iraq and Afghanistan, Stewart and Jain (1999) conducted a retrospective cohort study based on 98 British amputee veterans from previous conflicts in order to produce an estimate of lifetime costs. Extrapolating from their sample to the rest of the UK population of war amputees, the figure they produced was £69 million, which did not account for any related, hidden or future costs and, according to the authors, was likely to be a significant under-calculation.

None of the cost-estimate studies were, however, able to account for variations in the cost of care provision through chronic disease, age-related changes (*e.g.* in mobility) and comorbidities such as mental health problems that limbless veterans are likely to encounter ‘downstream’ (Geiling, Rosen and Edwards 2012). As Geiling, Rosen and Edwards (2012: 1237), in their commentary on the ‘medical costs of war in 2035’ put it, there was a need to consider the ‘secondary and tertiary consequences in middle age [which] might include decreased mobility, weight gain, coronary artery disease, and diabetes mellitus’. Accordingly, Geiling, Rosen and Edwards emphasised the need for early interventions – including prevention and treatment measures – to help mitigate the likely additional costs to society. Indeed, as Edwards *et al.* (2015: 2854) also cautioned, their estimates should be considered merely as ‘the start of a challenge to develop sustained rehabilitation and recovery funding and provision’, and that ongoing assessment of injured soldiers and their care would be required as the population ages.

### *Quality of the literature on ageing and limb-loss in veterans*

The literature as a whole is over-reliant on the self-report survey method (17 of the 21 studies). Whilst many of these were large, well-designed surveys which included comparison groups, there are limitations associated with this dependence on survey methodology. For instance, 11 studies discussed the potential representativeness of their samples, including questions over the presence of selection bias and differences between respondents and non-respondents. In particular, evidence that some veterans self-medicated with alcohol to deal with phantom pain (Sherman, Sherman and Parker 1983) and avoided contact with clinicians when treatments were deemed ineffective (Machin and Williams 1998), could indicate that non-respondents had potentially more severe problems with mental health or alcohol use. It could also be argued that the use of a single five-point scale to assess QoL within the VA ‘Survey for Prosthetic Use’ was an overly simplistic measure for a complex, multi-faceted construct. Whilst 11 studies used validated measurement instruments (12 also incorporated bespoke measurement tools), only one study (Kulkarni *et al.* 1998) used medical assessments to determine the presence of comorbidities. There was also an absence of longitudinal follow-up studies which would have been able to determine the impact of limb-loss over time or throughout the lifecourse (Murrison 2011).

Of the studies based in full or part on qualitative methods (Foote *et al.* 2015; Machin and Williams 1998; Meyers 2014), only one (Meyers 2014) provided sufficient information on data collection and analysis procedures for methodological rigour to be assessed. This study was classified

as strong, based on the quality and extent of data collection, well-documented relationship between researcher and participants, clearly articulated findings and implications, and good grounding in theory. With the exception of this paper, however, the literature on older limbless veterans lacked theoretical depth and engagement with critical social issues such as ageing and disability, identity and independence (*e.g.* Schwanen and Ziegler 2011). Overall, the quality of the literature on ageing and limb-loss in veterans may be categorised as weak-to-moderate. Despite an over-reliance on the self-report survey method, findings do appear consistent across the literature (*see* Tables 1 and 2), and the measures used possessed some face validity. Accordingly, the literature reviewed can be considered useful for drawing some conclusions regarding the long-term impact of limb-loss on veterans, whilst also recognising the need for further well-designed research studies (both quantitative and qualitative), and prospective, longitudinal studies.

## **Discussion**

### *Summary of results*

This systematic review makes a contribution to the existing literature on ageing and limb-loss in military veterans by analysing the results of numerous studies, and by identifying key factors associated with the long-term impact of limb-loss. We were also able to identify the strengths, limitations and omissions of this body of research. Key findings emphasise that, whilst limbless veterans are generally able to achieve a good QoL, limb-loss is still a progressive and degenerative injury involving enduring experiences of pain, comorbidities and sometimes mental health problems which undermine veterans' health, wellbeing and QoL. Furthermore, it is evident that approaches to coping, as well social and political context, exert an important influence on veterans' long-term adjustment and identity in relation to limb-loss. Finally, the literature highlights the substantial cost of caring for limbless veterans throughout the lifecourse and the financial commitments required to safeguard their long-term health and care needs.

### *Comparison to other literature*

Only two prior reviews could be identified regarding the impact of limb-loss on veterans (Christensen *et al.* 2016; Robbins *et al.* 2009). One review (Robbins *et al.* 2009) focused on long-term health outcomes associated with war-related amputation, but was not systematically conducted and

the focus was solely on clinical outcomes. The other (Christensen *et al.* 2016) was a systematic review of the physical and social factors determining health-related quality of life (HRQoL) for veterans with lower-limb amputation. Whilst some of the included studies focused on long-term impact, this was therefore limited to the outcome of HRQoL in lower-limb amputees. As such, the present study remains the only systematic review to have captured the long-term impact of limb-loss in older veterans across a broad range of outcomes and studies.

Whereas the studies on coping and psycho-social adaptation among older limbless veterans focused predominantly on the physical impact of limb-loss, exploration of the long-term psychological effects of traumatic injury has been largely overlooked. Indeed, other research indicates that the psychological consequences of war trauma can be very long lasting, and that those with a physical disability may experience even greater distress as their injuries become more disabling through ageing (Burnell, Coleman and Hunt 2010; Hunt and Robbins 2001). It is unfortunate, therefore, that the literature on coping among older veterans shows a lack of engagement with the potential psychological consequences of traumatic limb-loss.

Within the wider literature on limb-loss (*e.g.* Heavey 2013; Wool 2015) and ageing veterans (*e.g.* Burnell, Coleman and Hunt 2010; Hunt and Robbins 2001), there are numerous studies which explore the narratives and experiences of ageing and disability. Such studies show how the stories people tell about their lives help them assign meaning to their experiences, and how these meanings are themselves derived from cultural narratives about ageing and disability (Phoenix, Smith and Sparkes 2010; Smith and Sparkes 2008). This topic is largely ignored, however, within the research we describe in this review. The omission of narrative research from the literature on older limbless veterans is significant, particularly when considered in light of a rich body of work in narrative gerontology (*e.g.* Kenyon, Bohlmeijer and Randall 2010) which attests to the value of stories both for understanding and improving the lives of individuals, and in a broader sense for understanding history from the perspective of those who lived through significant events. Accordingly, we suggest that research with older limbless veterans may productively adopt a narrative approach to understand better the lived experience of war and limb-loss throughout the lifecourse.

### *Strengths and limitations*

This review is limited by the lack of a protocol published prior to carrying out the study. Whilst the PRISMA (Preferred Reporting Items of

Systematic Reviews and Meta-Analysis) checklist (Moher *et al.* 2009) was used during the write-up to ensure accuracy of reporting, the omission of a protocol from the study design limits transparency regarding any changes between protocol and systematic review. Furthermore, the limited quality of evidence in the studies reviewed inevitably restricts the conclusions that can be drawn, due in part to the questionable representativeness of some studies and the fact that the most isolated and severely disabled older veterans may not have been reached (Foote *et al.* 2015).

Strengths of this review include the broad inclusion criteria and wide search strategy which meant that a large number of diverse studies were able to be reviewed and synthesised. We were therefore able comprehensively to identify all relevant studies across a number of different domains, and were able to highlight consistent findings regarding the long-term impact of limb-loss on older veterans.

### *Implications for policy makers*

One clear strength of the literature is that a wide range of age-related changes and comorbidities have been identified among older limbless veterans, as has the potential impact of these various conditions on independence, mobility, health and QoL. Amputation is not a static disability, but a ‘progressive deteriorating condition’ that affects the health status of amputees over time (Ebrahimzadeh and Fattahi 2009: 1873). It is important to note, therefore, that age-related changes may complicate the process of long-term recovery and capacity for prosthetic use, with subsequent health-care implications for older veterans (McFarland *et al.* 2010). The findings of this systematic review indicate significant challenges regarding the long-term physical and mental health of limbless veterans. There is thus a compelling case to ensure that (very) long-term care requirements, including the cost of repairing and replacing prosthetic devices and of mental health care, are adequately considered when the future costs of care provision are estimated (Blough *et al.* 2010; Edwards *et al.* 2015; Geiling, Rosen and Edwards 2012). In addition, given the majority of veterans were long-term prosthetic users, ensuring the continuation of health-care staff trained in advanced prosthetic technology will be necessary to meet future care needs and to maintain expertise in the absence of current military conflict (Blough *et al.* 2010).

Several US papers included in this review also noted the influence of a ‘paradigm shift’ concerning the goals and purpose of rehabilitation for limbless veterans (Berke *et al.* 2010; Gailey *et al.* 2010; Laferrier *et al.* 2010; McFarland *et al.* 2010). This shift was described in terms of providing veterans with the opportunity to return to active duty (should they wish to),

with 18–21 per cent successfully returning at the time of the research compared to 2–7 per cent in previous eras (Laferrier *et al.* 2010). In the UK, research by Dharm-Datta *et al.* (2011) revealed that 63 per cent of a sample of 52 limbless veterans had returned to work in the services, with four veterans able to re-deploy to Iraq or Afghanistan. However, the implications of this ‘paradigm shift’ in rehabilitation were not discussed. For example, veterans are undergoing rehabilitation for limb-loss in militarised settings such as the Walter Reed Army Medical Centre (USA) and Headley Court (UK). Yet, it is unclear to what extent a military-style rehabilitation and a return to military life may prepare limbless veterans for independent living in the long term and a future civilian career post-service.

As part of the wider paradigm shift, Messinger (2010) examined how a sports-based model of rehabilitation might prepare veterans for a future post-limb-loss. Messinger identified a dominant sports-based approach to rehabilitation in military settings, whereby returning to high-impact activities such as running, hiking, skiing and basketball was seen as symbolic of, if not constitutive of, recovery (Messinger 2010). In the case study of an Iraq War veteran amputee that Messinger presented, this model of rehabilitation – with its intense focus on the restoration of physical functioning – came into conflict with the veteran’s own wishes and desires in terms of intellectual development and preparation for a future career beyond the military. The sports programme was ‘not elastic enough to encompass the alternative notions of rehabilitation and recovery’ held by the veteran himself (Messinger 2010: 299). More broadly, the use of sport for/as rehabilitation is epitomised in new initiatives such as the Invictus Games which offers an international, Olympic-style sporting competition for injured veterans. The narrative associated with such events centres on ‘battling back’ or ‘overcoming’ amputation through sport (Batts and Andrews 2011). Notwithstanding the benefits that such sporting events may bring to limbless veterans (for a review, *see* Caddick and Smith 2014), one question that has yet to be answered is what happens to these veterans *after* the events, when the limelight has disappeared and they begin to encounter the long-term challenges of limb-loss, as identified in this systematic review.

### *Implications for research*

One limitation of the literature is that much of the knowledge is concentrated in the USA, and specifically on Vietnam veterans cared for within the VA health-care system. Given that different conflicts tend to produce different kinds of traumatic injuries (such as the increase in ‘polytraumatic’ injuries and traumatic brain injuries which Iraq and Afghanistan veterans are now surviving; Dharm-Datta *et al.* 2011), it is uncertain to what extent

knowledge based on Vietnam veterans will generalise to the current generation of limbless veterans as they age. Furthermore, differences in the ways care is organised across different national and cultural contexts means that findings might not transfer easily outside the US context. In the USA, veterans' health care is organised under the large, separately funded US Department of Veteran Affairs. By contrast, in other countries such as the UK, care for veterans is predominantly delivered by civilian providers and third-sector organisations. More specifically, within the UK once a service-person leaves the armed forces, the responsibility for care passes from the Ministry of Defence to the National Health Service (NHS). Invariably the NHS care for veterans is supplemented or supported by third-sector organisations such as Blesma, Help 4 Heroes, Combat Stress, *etc.* Academics and policy makers in the UK and elsewhere should therefore adopt a cautious approach to extrapolating from US findings, and should seek to expand the knowledge base on older limbless veterans in other national contexts.

There are further omissions from the literature. None of the papers in this systematic review considered the issue of social isolation as a potential long-term outcome associated with limb-loss in older veterans. This is despite the fact that social isolation has been identified as an important concern among older veterans (Ashcroft 2014) and among older amputees in general (Briggs 2006; Murray 2005). Indeed, Murray (2005) suggested that reluctance to use a prosthetic limb may result in isolation among older amputees; a possibility that was not considered in the papers that dealt with prosthetic use. Additionally, the impact of traumatic limb-loss on families and social relationships was not explored in the studies reviewed. Yet, as Fossey and Hacker Hughes (2014) argued, the needs of family members – whilst poorly understood at present – should be taken into consideration as part of care planning and provision for limbless veterans. Future research with older limbless veterans should therefore consider the life-long impact of care-giving upon families, *e.g.* with regard to the financial and psychological impact of caring (Fossey and Hacker Hughes 2014; Griffin *et al.* 2009).

## Conclusions

This systematic review highlights the long-term impact of limb-loss in veterans and the associated need for ongoing rehabilitation and care throughout the lifecourse. The following recommendations are possible for researchers and policy makers. Firstly, it is important to understand the specific health-care needs of older veterans, and to deal with the

multiple comorbidities and age-related changes they are likely to encounter as they move throughout the lifecourse. These are the secondary and tertiary consequences of limb-loss and must be considered as part of the traumatic legacy of combat injury. Secondly, researchers should seek to explore older veterans' experiences of limb-loss in order to appreciate fully the long-term personal and social impact of amputation. The lives and experiences of family members should also form part of this research agenda. Thirdly, the issue of social isolation – reported to be a matter of concern among older amputees in general – should be given greater consideration in research with older limbless veterans. Finally, the clinical and academic interest in older limbless veterans in the US context should be mirrored by other countries, particularly as part of government commitments to support those injured by conflict.

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### NOTES

- 1 See <https://fas.org/sgp/crs/natsec/RS22452.pdf>.
- 2 See [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/449400/AnnexA\\_20150730\\_DAY-RELEASE\\_Quarterly\\_Afghanistan\\_Iraq\\_Amputation\\_Statistics.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/449400/AnnexA_20150730_DAY-RELEASE_Quarterly_Afghanistan_Iraq_Amputation_Statistics.pdf).

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## APPENDIX D

### PAPER 4

Caddick, N., **McGill, G.**, Greaves, P.,J., Kiernan, M. (2018). Resisting decline? Narratives of independence among aging limbless veterans. *Journal of Aging Studies*.



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## Resisting decline? Narratives of independence among aging limbless veterans



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### ABSTRACT

‘Maintaining independence’ is a core project for many older people; a project which has received critical attention within aging studies. In this paper, we extend the critique by exploring how aging intersects with disability and militarism as additional critical subjectivities. The empirical focus of the paper is the narratives of older military veterans who had lost a limb either during or post-service. Data reveal the long legacy of military experience in the lives of these veterans; a legacy which is manifested in both negative and positive outcomes. A dominant narrative of ‘struggling against decline’ is identified, while ‘minimization’, ‘victimhood’, and ‘life-as-normal’ emerged as further narrative types through which veterans articulated their experiences of aging with limb loss. Findings from this study highlight both resilience and vulnerability as features of older veterans’ experiences of aging with limb loss. Building on previous critiques, we add further nuance to understandings of how older people might respond to the narrative of decline, and illustrate multiple possible meanings of claims to ‘normality’. By sharing the stories of older limbless veterans, we aim to contribute to – and connect – several fields of study including aging studies, critical disability studies, and critical military studies. Findings are discussed in light of current trends in each of these fields.

### Introduction

Growing older with a physical impairment complicates the contemporary individual imperative to remain ‘independent’ into old age. (Minkler & Fadem, 2002; Raymond & Grenier, 2015). Independence, and the ability to sustain it, is considered a hallmark of the responsible individual citizen; contributing, able, and not dependent on welfare or care provision (Breheny & Stephens, 2012; Rudman, 2015). Exclusionary aspects of aging discourse, such as the devaluing of older people with greater mobility problems and levels of dependence, have consequently been the focus of increasing critical attention with the social gerontology literature (e.g., Breheny & Stephens, 2012; Lamb, 2014; Mendes, 2013; Schwanen & Ziegler, 2011). The imperative to maintain independence presents particular practical and ideological challenges to older people living with impaired bodies (Breheny & Stephens, 2012; Mendes, 2013; Smith, Braunack-Mayer, Wittert, & Warin, 2007). In this paper, we examine the narratives of older military veterans with limb loss in order to highlight possible responses to these challenges from one group of older people.

Understandings of ‘independence’ have broadened because of recent work in aging studies (Breheny & Stephens, 2012; Schwanen, Banister,

& Bowling, 2012; Schwanen & Ziegler, 2011; Smith et al., 2007). Independence is conceived as a ‘collective achievement’ (Schwanen & Ziegler, 2011), and a ‘complex and fuzzy notion’ involving a range of bodily capacities, technologies, social networks and other elements (Schwanen et al., 2012). Theorists recognise that independence is a concept with multiple meanings (Smith et al., 2007), with many such meanings encompassing more progressive notions of reciprocity and *inter-dependence* (Breheny & Stephens, 2009; Fine & Glendinning, 2005). Whilst therefore recognising the plurality of meanings attached to ‘independence’, in this paper we examine how the concept shows up in veterans’ narratives about aging with a disability.

Whereas the majority of military veterans – in population terms – are over 65 years old, relatively scant attention has been paid to older veterans’ experiences within either the gerontology or military studies literatures (Burnell, Crossland, & Greenberg, 2017; Capstick & Clegg, 2013; Hunt & Robbins, 2001a; Settersten, 2006; Spiro, Settersten, & Aldwin, 2016; Williams, Allen-Collinson, Evans, & Briggs, 2017). Yet, as Settersten (2006) argued, there is often a lifelong legacy of military service with significant implications for physical, mental, and social functioning in later life. This legacy is most visible in physical wounds such as limb amputations that some military personnel experience

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through service, and the long-term after effects of these injuries (see Caddick et al., 2018). As Cooper, Caddick, Godier, Cooper, and Fossey (2018) argued, however, military experience also exerts a more subtle enduring legacy on the identity and behaviour of veterans, shaping how they respond to challenges in civilian life. Accordingly, the effects of military service should be considered as: long-term, experienced across multiple life domains and social relationships, contingent upon the social and historical context of service, and manifested in potentially both positive and negative outcomes (Spiro et al., 2016).

By focusing on independence in older limbless veterans, we aim to explore how lives are experienced at the intersections of aging, disability and militarism. As “complex embodied legacies of war and war-preparedness” (Bulmer & Eichler, 2017; p. 162), veterans carry the residual imprint of military power and institutional socialisation. The military culture in which they were formerly embedded is one which privileges a tough, uncompromising form of masculinity (Cooper et al., 2018). As Açıksöz (2012) argued, however, disability creates an ambiguous subjectivity for the veteran; simultaneously at the apex of cultural masculinity as veteran/hero yet also de-masculinised as weak, dependent and ‘victim’ (see also Woodward, Winter, & Jenkins, 2009). Aging presents further contradictions, whereby increasing bodily vulnerability and decline contrast with a gloried former military self and an active, disciplined body (Williams et al., 2017). Notably, such contradictions complicate the use of coping strategies (such as a ‘stiff upper lip’ approach to dealing with pain and distress) which veterans might have relied upon throughout their military and post-military lives (Capstick & Clegg, 2013; Hunt & Robbins, 2001a; Machin & Williams, 1998). Understanding how limbless veterans narratively construct the aging process might, therefore, shed light on how the imperative to be ‘independent’ is experienced within a web of embodied contradictions and personal challenges.

Previous research has identified the long-term consequences of war and military service for veterans' later life experiences (e.g., Burnell, Boyce, & Hunt, 2011; Burnell, Coleman, & Hunt, 2010; Hunt & Robbins, 2001a, 2001b; Settersten, 2006; Spiro et al., 2016). Hunt and colleagues (Burnell et al., 2010; Hunt & Robbins, 2001a, 2001b) indicated that many veterans still experienced psychological distress 50 years after serving in war. The ability of veterans to construct a coherent narrative of their military service, along with social and emotional support in the form of family and veterans associations, were revealed in this research to be important coping mechanisms for veterans in later life. Also influential was the societal narrative attached to particular wars: whether conflicts were judged to be ‘justified’ had an important bearing on veterans' later life adjustment and well-being. Research specifically on limb-loss in older veterans mirrors dominant biomedical framings of aging by adopting a mostly clinical focus. A recent systematic review of aging and limb-loss in veterans (Caddick et al., 2018) highlighted that a high prevalence of pain and comorbidities (e.g., arthritis, back pain, residual limb pain) was undermining veterans' quality of life several decades post-amputation. Amputation, therefore, is not a static disability, but a “progressive and deteriorating condition” (Ebrahimzadeh & Fattahi, 2009; p. 1873) which affects veterans for the remainder of life.

#### *Conceptual framing: narratives of later life and disability*

Narratives provide us with resources for conceptualising self and society; for understanding who we are, how to live, and what to do (Frank, 2010). Further, narratives help us to make sense of the past, suggest how we should live in the present, and orient us toward the future (Freeman, 2010). In this sense, narratives are an important vehicle for personal knowledge and action in the lives of individuals. They are also deeply, thickly, social (Smith & Sparkes, 2008). Operating at a social level, narratives perform important roles by shaping dominant perceptions of groups of people, communities and organisations (Plummer, 1995). As well as working on individual people by shaping

their self-knowledge and possibilities for action (Frank, 2010), narratives perform important social and political work, for example by legitimizing and de-legitimizing particular forms of aging (Biggs, 2001). Grasping the potential of narratives for conceptualising key issues in aging studies, researchers have embraced the sub-field of narrative gerontology in order to generate new knowledge and ways of understanding older people's lives (e.g., Kenyon, Clark, & de Vries, 2001; Phoenix & Smith, 2011; Phoenix, Smith, & Sparkes, 2010; Rudman, 2015).

Prevailing social narratives of aging position ‘dependent’ older people as burdensome, destined only for further deterioration within the ‘narrative of decline’ (Gullette, 2004). The narrative of decline has been identified as the dominant master narrative of aging in Western societies (Gullette, 2004). Aging is depicted as a process of inevitable mental and physical deterioration, an accumulation of losses, and a fading into irrelevance, dependence and isolation. Aging is ‘medicalized’, deemed a social problem to be solved or cured (Phoenix & Smith, 2011). Moreover, the narrative of decline is oppressive, downplaying expectations of older people and limiting their prospects and possibilities for a fulfilling experience of later life (Randall & McKim, 2008). While many older people *do* indeed experience their lives as ‘in decline’, and loss of independence *does* impact negatively on physical and mental wellbeing (Schwanen et al., 2012), they also encounter narrative harms as a result of aging narratives that define dependence as personal failure, and that privilege independence as a primary marker of responsible citizenship (Lamb, 2014; Rudman, 2015).

There is a need for more nuanced narratives of older people – particularly those with physical impairments – which can represent complex lived experiences of aging and in/dependence. As Frank (2006) suggested, stories ‘compete’ for our attention; the more stories are competing, the greater the freedom of expression. Phoenix and Smith (2011) highlighted the power of *counterstories* to give expression to alternative modes of aging by resisting dominant master narratives. In their example, a group of mature bodybuilders offered various levels of resistance to the narrative of decline through counterstories which distanced themselves from ‘normal’ older people (i.e., individual resistance), or stories which highlighted the negative, socially constructed nature of the master narrative itself (i.e., wholesale resistance). In the remainder of this paper, we consider the ways in which older veterans' stories enabled them to resist (or not) being in decline, and ask what ‘kind’ of older limbless veteran their stories allowed them to be?

#### **Methods**

Data for this paper are derived from a study of older limbless veterans' health and wellbeing which was funded by the Armed Forces Covenant Aged Veterans Fund (UK). Participants were recruited from among the membership of the British Limbless Ex-Servicemen's Association (Blesma) by means of two ‘peer recruiters’. These peer recruiters – both veterans – were part of the project steering group, and one was also a Blesma member who was known to some of the participants, able to quickly and easily establish rapport, and trained to deliver information about the project and gauge members' interest in participating in the research.<sup>1</sup> Participants included both veterans whose limb-loss was service-connected (e.g., injuries sustained in combat or training accidents), and non-attributable to service life (e.g., motor vehicle accidents, disease-related and post-service limb-loss). Rather than emphasising the mechanism of injury, our purpose was to consider a) the links to a military biography regarding how individuals might approach disability in later life, and b) veterans' approaches to dealing with mobility and impairment in later life. Our focus reflects the membership structure of Blesma who have two levels of

<sup>1</sup> Detailed reflections on this peer recruitment strategy are the subject of an additional paper (forthcoming).

membership: full members (limb-loss due to military service) and associate members (limb-loss unconnected with or post-military service). While our study was therefore inclusive of both membership categories, we sought to tease out any distinctions in the stories veterans told about limb-loss during the data analysis process.

Veterans (all were men) taking part in this research spanned a range of ages and life stages – from ‘mid-life’ through to very old age – and had served in historical conflicts from World War II through to Gulf War 1, UN peacekeeping missions, and those who never deployed on operations. Our intention was thus to capture a broad range of military and limb-loss experiences. Interviews with the veterans took place over the course of a year and took the form of detailed life-history interviews (Brinkmann, 2013). These were spread over one to three occasions depending upon the depth and detail with which each veteran was able to recall and describe his experiences. The interviews were broken down into life stages – covering life before, during, and after military service – and were relatively unstructured, following the lead of the participant but with probing questions used to elicit further reflections on the challenges of living with limb loss where required. Three researchers were involved in interviewing participants across the north and south of England, with follow-up interviews being conducted by the same researcher in all but one case. The research team kept in regular contact throughout the year of data collection to discuss how the interviews were progressing. Ethical approval for the study was granted by Northumbria University.

Veterans' stories were interpreted using Frank's (2010) method of dialogical narrative analysis. The method assumes an *active* role for stories in the life of groups and individuals. Therefore the purpose of dialogical narrative analysis is to understand what a particular story *does* in the life of the teller and in relation to listeners and other people. Frank (2010) explains the active role of stories thus:

People do not simply listen to stories. They get *caught up*, a phrase that can only be explained by another metaphor: stories get under people's skin. Once stories are under people's skin, they affect the terms in which people think, know, and perceive. Stories teach people what to look for and what can be ignored; what to value and what to hold in contempt. (p. 48; original emphasis).

The ‘dialogical’ aspect of the method conveys the notion that stories are told – and lived – in dialogue with other people and other stories. Dialogue, moreover, does not (only) refer to literal spoken communication, but to the social process through which stories are shared, circulated, and acted upon. Accordingly, dialogical narrative analysis calls attention to the intrinsically social process by which stories ‘breathe’<sup>2</sup> people into being who they are and doing what they do. The analytical process begins with techniques of data familiarization and coding common to many forms of qualitative research. The more distinctive aspect is its use as a ‘method of questioning’ (Frank, 2010), by which the analysts interpret the data through a series of ‘dialogical questions’. For example, how does the story shape people's sense of what is possible, what is permitted, and what is responsible or irresponsible? What kind of response does the story call for or seek to provoke from different listeners? And what particular truths about aging limbless veterans do their stories seek to communicate? Such questions serve to open up the analysis process and are explored through writing as a further form of analysis.

### Stories of limb-loss

Like all stories, veterans' stories of limb loss were narrated within a wider context that shaped their telling. Public discourse in the UK mostly provides a supportive context for veterans. British social attitudes hold the Armed Forces and veterans in high regard, despite

widespread opposition to recent wars of intervention (Hines, Gribble, Wessely, Dandeker, & Fear, 2015). The public ‘visibility’ of veterans peaks annually around Remembrance Sunday, with older veterans in particular often heavily represented on parades and as poppy-sellers.<sup>3</sup> At other times, positive undercurrents of support notwithstanding, veterans mostly recede into the background of public life, apart from when ‘veterans’ issues’ are made the focus of commentary and criticism in the popular press. A large and often vocal military charity sector is a core component of the support to UK Armed Forces veterans. The sector includes the organisation ‘Blesma’ who provide support and advocacy on behalf of limbless veterans and with whom the research was conducted. Situated within this social context, veterans told us their stories of life after limb-loss.

Veterans' stories are illustrated by means of a typology (Smith, 2016); a cluster of ‘narrative types’ which each express something unique about participants' experiences. We identified four main narrative types including “*struggling against decline*”, “*minimization*”, “*victimhood*” and “*life-as-normal*”. A fifth type “*dramatic overcoming*” was conspicuous by its absence from the data, and is therefore critiqued in the discussion. These narrative types evoke the core threads commonly structuring the veterans' stories. Some stories map more or less exactly onto the narrative types while others are more fluid, perhaps with multiple overlapping stories being told or emphasised at different points.

In presenting our findings as a typology of narratives, our intention is to highlight commonality among veterans' stories whilst also preserving their complexity, showing how the same narrative threads were used skilfully by individual storytellers to describe their experiences. We do not wish to imply that participants' remarks can be easily pigeonholed into convenient categories. Frank (2012; p. 46) notes that one advantage of a typology is to “render orderly what initially seems merely individual in its variety”. The corresponding disadvantage is that participants' stories can seem squashed into the various types, with complexity reduced to category. To guard against this interpretation, we note that the narratives we identified should be understood as the general, prevailing themes of participants' stories; stories that are always more complex than any individual report can do justice to. We also consider the narrative types as *relational*, with the fluidity and interplay between them represented by the following conceptual model (Fig. 1).

#### *Struggling against decline*

Many veterans' stories of aging and limb-loss hinged on a core tension: struggling against decline whilst striving to maintain independence. In most cases, this struggle was narrated as a plucky, spirited one, rather than a gloomy or oppressive ‘battle’. Veterans' stories thus revealed a strong sense of agency in their efforts to build and maintain their independence despite problems like impaired mobility and debilitating pain. Nevertheless, these stories also showed the pervasive and threatening qualities of the narrative of decline in shaping veterans' experiences and expectations of aging:

I think the age thing is definitely a factor. I mean there was a case I broke two [assumptions about older people] in one week; well one was rock-climbing and one when I jumped out of an aeroplane! And they [others] said ‘Well what are you doing?’ And I said ‘Well, because I can’. I mean age is a stigma really. You only get older when you get unfit. If you get unfit, then you get older in my opinion. So if I'm given the chance to do these things, I'll jump at it. Whether I'm sixty or eighty... I feel eighteen. It's only when I try to do things that the age gets in the way... In my mind I can't see anything changing. But my heart is saying it's going to. My wife says I'll be a terrible

<sup>3</sup> The poppy flower being the traditional symbol of Remembrance. Older veterans, dressed in regimental jackets and wearing their Service medals, can often be seen selling poppies at train stations and outside supermarkets to raise money for veterans' charities.

<sup>2</sup> To use Frank's (2010) title trope of ‘*Letting stories breathe*’.

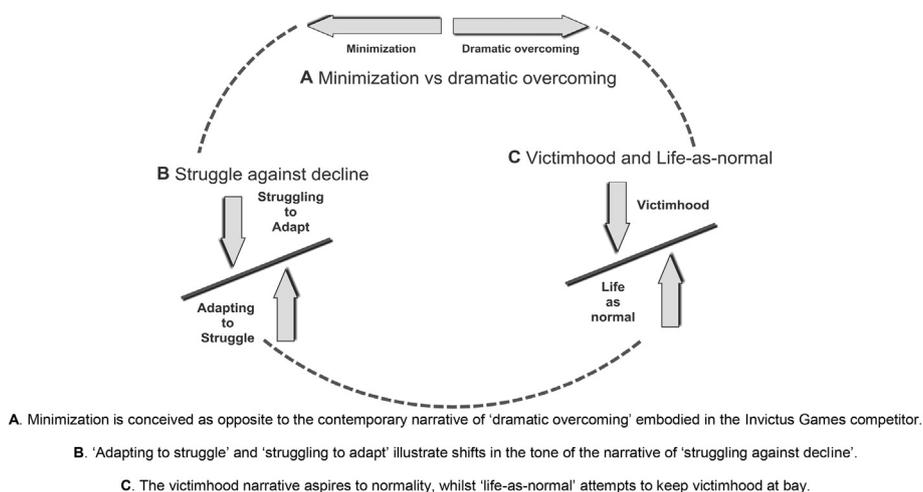


Fig. 1. Conceptual model of limbless veterans' aging narratives.

man to live with when I'm in a wheelchair, but I hope I'm not because it's going to come. It's going to come. I'm not looking forward to it. But I've tried a wheelchair one-handed and it's quite difficult. So I'll just have to adapt it in some way, and, God, I – in my mind I don't want it to come even though it's going to. I'm dreading it, absolutely dreading it. (64, above-knee amputee + limited use of hand, industrial accident post-service).

Mirroring wider fears about aging (Higgs & Gilleard, 2014), veterans' stories revealed a desire to delay decline while doing their best to remain independent. A palpable fear of bodily decline ran through these stories, along with a fear of the 'really' disabled (e.g., paralysed, wheelchair-bound) or 'elderly' other (cf. Heavey, 2013; Jefferies, Gallagher, & Philbin, 2017). Some veterans went as far as to suggest they would prefer to 'end things on their terms' rather than end up in a state of high dependence or living a "pointless, daytime television existence". For these veterans, the fear was that amputation and its comorbidities would accelerate personal degeneration into a fearful, abject 'fourth age' (Higgs & Gilleard, 2014). At the same time, their stories were full of descriptions of what they could *still do*; activities that enabled them to narratively place themselves in the categories of abled and 'not old' (Heavey, 2013; Rudman, 2015). Tasks such as walking, driving, adapted physical activity, and fixing things around the house provided evidence that their bodies were still useful and that they belonged to the realm of 'independent' older people. That these tasks would sometimes be carried out in spite of debilitating – sometimes crippling – joint, back and stump pain highlighted their importance to the veterans' image of independence (Williams et al., 2017). The image was one of independence as a moral virtue, something that needed to be worked at and defended (Breheny & Stephens, 2012). In contrast, dependence was a 'trap' that one 'fell into' if one became lazy and allowed other people to carry out too many tasks on one's behalf (Rudman, 2015). Continuing to engage in productive activity was therefore self-reinforcing for limbless veterans' independence in that it both proved independence and helped to sustain it.

Together with engaging in activity, older limbless veterans emphasised the importance of "having the right attitude" in order to prevail in the struggle against decline. The right attitude toward the challenge of aging with limb-loss can be summarised thus:

Personally I'm the sort of bloke who says I don't care, it don't matter, I'll get over it. That's my attitude. And whatever happens in your life, if you've got to adapt to something different, you either adapt or you go under as far as I'm concerned. And if someone comes up to me – I mean my sister said when I come back from Northern Ireland, and I'm on R&R<sup>4</sup> one day and she said 'You aren't half hard!' I said 'You've got to be'. You know you can't go softly-softly at all. You've

got to be aware of everything all the time. And if something goes wrong in your life, you've got to say 'Oh well I've had a kick in the fucking- sorry, a kick in the teeth! Get up and deal with it or suffer. You can sit there and feel sorry for yourself, why should you? Other people are feeling enough sorry for you. But you've just got to have the right attitude. But I've been through life like that. Alright you get kicked in the teeth, knocks you down, you get up, something else comes along, kicks you in the teeth, knocks you down, you get up again. You think 'Oh fuck it! Is it all worth it?' And then when you look around and you think 'Oh it ain't too bad really', and you get on with it. (69, above-knee amputee, post-service disease-related).

The exhortation to 'get on with it' echoed with particular frequency throughout the interviews. The brief phrase signifies a positive approach to coping with problems and staving off decline, foregrounding an upbeat sense of resolve and resilience (Caddick, Smith, & Phoenix, 2015). Further examples – "I just get on with it, no use bellyaching" ... "The Army don't give you time to grieve, you just carry on and get on with it" – illustrate the manner in which it was deployed. It is possible to trace a narrative lineage for this 'get on with it' attitude to the veterans' days in military service. Indeed, the phrase resonates strongly with Ledwidge's (2011) description of the Army's 'cracking on' mentality; a relentlessly positive, forward-looking approach that may be defined as "getting on with whatever is at hand with enthusiasm" (p. 144). Tellingly, the veterans in this study continued to embody the 'get on with it' approach to remain active despite experiencing limited physical mobility, and to withstand various forms of pain and comorbidities (see Caddick et al., 2018; Williams et al., 2017). The approach highlights both the lifelong legacy of military ways of being (Caddick et al., 2015; de Medeiros & Rubinstein, 2016), and the continuity of traditional ideals of masculinity in the lives of older men more generally (Thompson & Langendoerfer, 2016). When asked from where they derived this positive coping mentality, the veterans typically asserted that "that's how I've always been", thus illustrating a strong thread of continuity between past and present selves (Breheny & Griffiths, 2017). Moreover, the same approach was evident in the stories of veterans injured during and post-service, demonstrating both the pervasiveness of the military mentality and its commonality within different biographies of limb-loss.

Despite the positive 'get on with it' approach to struggling against decline, a distinction emerged between those who were *adapting to struggle*, and those who were *struggling to adapt*. Adapting to struggle meant that veterans had achieved relative levels of satisfaction with

<sup>4</sup> Rest and recuperation.

their ability to overcome the limitations of pain and immobility caused by their impairments, were holding back decline, and were reasonably independent. They were effectively 'getting by' (Gilleard & Higgs, 2010) and were assimilating disability into active 'third age' identities. Struggling to adapt, however, meant that the impairment effects (Thomas, 2007) of amputation increasingly hampered veterans' efforts to preserve their independence, and led to bodily vulnerability, frustration, and in some cases, isolation and loneliness. The distinction was revealed in the tone and structure of the stories (Smith, 2016), which were less relentlessly positive and more susceptible to decline among those struggling to adapt:

Interviewer: And do you get around the town much?

Participant: No. No not much. I've an electric chair outside. I haven't used it for a long, long time while she [wife] was in hospital. And I'm frightened to use it now in case it breaks down while I'm out. So I don't use it. I don't go on my own into town very much. I don't drink or anything so I don't need to go in pubs or anything. Obviously I'm a bit wary of going out on my own ... I don't ask anyone for help really. I've been a bit too independent really for that kind of thing [support]. I've always tried doing it for myself, yeah ... I've always just got on myself and done it. (79, injured in RTA<sup>5</sup> during service, later above-knee amputation).

I've always had an attitude of happy-go-lucky. I'm very 'if it happens, it happens', all this kind of thing. And sometimes – a lot of people think I'm – or that I get on with things and all that carry on. You know, they don't know with all this carry on [limb-loss]. But what I can tell you is that sometimes, all I want to do is when I get back home is just sit and just relax a bit. (69, RTA while on duty resulting in above-knee amputation and other injuries).

After years of straining their injured bodies to carry on walking, working, and being productive, some veterans felt less able to resist physical and psychological decline. The body's *corporeality* – its fleshy, material (and decaying) presence – could no longer sustain the veteran's *embodiment* of a tough, 'get on with it' military identity (Gilleard & Higgs, 2018). Evident above is a sense that some veterans were *less willing* to oblige the masculine imperative to 'get on with it' if that meant portraying a false image of limitless energy and enthusiasm (de Medeiros & Rubinstein, 2016). Alternatively, they would continue striving to embody this approach to coping 'independently' despite mounting physical difficulties and social isolation. The meaning of 'get on with it' was therefore flexible, and could mean different things in different situations (Caddick et al., 2015). For veterans struggling to adapt to age-related changes in their condition, it could turn from being a psycho-social coping mechanism to a burdensome ideology, or barrier to seeking support (Machin & Williams, 1998). Struggling to adapt could also entail a loss of the continuity (e.g., continuity of self-image, bodily capability and masculine potency) which upheld the resolve and resilience of veterans adapting to struggle. For those with diminishing personal resources with which to resist decline (e.g., relative old age, greater severity of impairment), this loss of continuity could give rise to transient or more permanent feelings of despair. As one veteran commented, "Last two or three years I've lost the 'go' in me... I get annoyed when I'm trying to do things and I can't do what I want to do. So frustration takes over."

### Minimization

For a number of the veterans we interviewed, limb-loss was not the story they wished to tell. The real story lay elsewhere, typically in long and successful careers which they had enjoyed post-injury. These veterans consistently sought to minimize the relevance of limb-loss to their life stories, to downplay its impact in their lives. Indeed, some

veterans barely talked about limb-loss during their interviews. On occasions where limb-loss was discussed, normality was often emphasised:

I was determined that I was going to you know walk as normally. And in fact most people up until quite recently, don't realise that I wear a prosthesis. And that's what I wanted. I wanted to be you know, accepted as normal. Actually I'm not really very much in favour of the way that the modern amputees look on their prosthesis because you know they don't care about the bits of leg sticking out below the trousers and all the rest of it. Whereas you know as far as I'm concerned, I prefer to be normal. (88, below-knee amputation, disease-related during service).

I don't think it really affected me. In fact I'd only say the main trouble was – it always has been, still is, it's bothering me enormously at the moment – is getting a comfortable leg... So I can't honestly say that it stopped me doing things very much. I would like to have played a bit more cricket, but then I think if I tried I could perhaps have done. Nowadays there's more opportunities. (95, below-knee amputation caused by World War II landmine).

This [limb-loss] is fine. I mean, it's no problem. (66, below-elbow amputation caused by explosive during post-Falklands War 'clear-up').

Typically, though not exclusively, those whose stories minimized limb-loss had sustained lower-level amputations (e.g., below-knee) and experienced fewer impairment effects as a result. For these veterans, limb-loss was a fact of life and did not impinge on their sense of self; in Watson's (2002) terms, it was "ontologically unimportant" (p. 524). Unimportance, however, did not mean that these veterans were unconcerned with how their injuries made them appear socially. For example, the first of the above quotes reveals a concern with presenting or *passing* (Goffman, 1968) as normal. That is, veterans held a desire to avoid a stigmatized disabled identity and to be accepted as normal by others (Winance, 2007). Inconspicuous and well-fitting prosthetics were an important part of sustaining this sense of normality, as one participant commented "I feel lost without my artificial limb now because it does so much for me". In contrast to 'modern' military amputees, for whom visibility of prosthetic devices is more likely to be associated with heroic sacrifice than bodily deviance (Grabham, 2009; Wool, 2015), older veterans who minimized limb-loss in their narratives tended not to want to "advertise" their injuries. Instead, they described feeling satisfied when others would express surprise upon finding out they were missing a limb: the surprised reactions validating their efforts at normalisation (Murray, 2005).

Another defining feature of minimization was an emphasis on making an equal contribution to that of their able-bodied peers. The centrality of *work* in their post-injury lives played a significant role in enabling older veterans to claim such equality. As one veteran explained:

You've got to prove to yourself that you can do a job and just as important prove to others. I don't remember it as being particularly difficult because you know I wasn't out of work for a long time or anything like that. Had that happened, it may have been very different. But it wasn't. Things have just turned up. (75, above-knee amputation resulting from landmine blast).

In her historical study of post-war rehabilitation in Britain, Anderson (2011) identified sport and work as two key means by which disabled ex-serviceman restored a sense of masculinity. In particular, restoring injured veterans' economic capacity was crucial to regaining independence and to moving from emasculated invalid to productive contributor in the eyes of society. Some of the veterans in this study are old enough to have experienced directly the national post-World War II rehabilitation effort Anderson describes. Regardless of age or conflict era though, the legacy of this approach to rehabilitation as minimizing disability and maximising independence and masculine identity is

<sup>5</sup> Road traffic accident.

evident in the narratives of these veterans. Their stories, which focused mainly on career exploits, demonstrate the importance of work in minimizing the impact of limb-loss in a post-amputation biography. Work did not necessarily have to be military-related to fulfil this normalizing role, though for some participants the thought of accepting a medical discharge as a result of limb-loss was anathema. Nor was career success limited to those whose narratives minimized limb-loss. Rather, what these stories demonstrate is the crucial role of work as a *normalizing process* (Winance, 2007), enabling veterans to minimize struggle and maximize independence.

Furthermore, minimization might also be considered a counterpoint to the seemingly dominant contemporary narrative of ‘dramatic overcoming’, embodied in the Invictus Games<sup>6</sup> competitor, which currently appears to define the meaning and process of rehabilitation for limbless veterans. Whereas Invictus narratives make injury the central feature of veterans’ stories (as that which is dramatically overcome through sport), minimization pushes limb-loss aside, declaring it a non-issue. Despite the cultural prominence of Invictus narratives, veterans in our sample seemed to prefer minimization as a form of narrating limb-loss, perhaps as a way of quietly ‘getting on with it’.

### Victimhood

Alongside notions of heroism and vulnerability, a narrative of ‘victimhood’ has become a core medium through which military experiences are expressed when personnel encounter harm as a result of their duties (McCartney, 2011; McGarry, 2017; McGarry & Walklate, 2011). This narrative – which focuses predominantly on personnel killed or injured in *combat* – elicits from the public both sympathy toward veterans and their families and anger toward the government for allowing victimisation to occur. It is not a popular mode of expression among older limbless veterans. Some explicitly distanced themselves from it with comments such as “I don’t like sympathy”. For one veteran we interviewed, however, victimhood seemingly provided the only workable story for expressing his woeful experiences with limb-loss:

I honestly can say that what happened to me and the aftereffects, I felt abandoned, I felt alone. I felt so dejected and unwanted and uncared for. I wanted the military to help me. I wanted them to guide me, support me and to help me to try and rebuild a life. And they– after my initial injury, they just washed their hands of me. And all they were prepared to do was just carry on paying me. There was no aftercare. I honestly felt like I was– I meant nothing to the military. I felt so alone and I didn’t know who to turn to, I didn’t know who to go and get help from. I was angry. I saw my career being destroyed because of my knee injury. I saw my quality of life destroyed. I saw my physical fitness destroyed. Where is the help to help me to rebuild my life? There was nothing... Those that have served Queen and country by being injured through peacetime, they get nothing. Big discrepancy. Because there’s no charities out there for military personnel injured in peacetime. And if you go to the National [Memorial] Arboretum, there’s not a memorial there for military person that have died in peacetime, nothing. It’s all about the conflicts. And I find it absolutely distasteful and shameful that that’s how this country treats us. It leaves an extremely, extremely bitter taste in my mouth. (44, injured during training later resulting in above-knee amputation).

For older limbless veterans (and ‘younger’ ones too, for that matter), the military victimhood narrative is potentially *both* oppressive and strategically useful. Curiously, this is because ‘victim’ status can simultaneously be devalued but also celebrated by society. On the one hand, victimhood is a useful story because it confers the political

advantage of legitimizing anger and strengthening calls for compensation and support. As McCartney (2011, p. 50) put it, “Adopting the mantle of victimhood helps to justify challenges to authority”, and suggests that preferential treatment should be given. The veteran quoted above has acquired his victim status in his capacity as a ‘state servant’ (McGarry, 2017), yet, as his comments reveal, the state constructs a *hierarchy of wounding* with combat-injuries positioned above non-combat or ‘peacetime’ injuries. The participant thus claims the powerful rhetorical status of the forgotten or discarded hero (Woodward et al., 2009); disabled through noble service but inadequately compensated by a callous and uncaring state. This is the status for which he seeks recognition, but since recognition is not forthcoming he is unable to shake off his story of victimhood. Being stuck in victimhood compounds the oppressive elements of this narrative. Despite being strategically useful, victimhood is stigmatized and unwanted. In many respects, it is the antithesis of the heroic, masculine ideal of the soldier because of the connotations of weakness, vulnerability and passivity attached to the concept of victimhood (McGarry & Walklate, 2011). Soldiers and veterans generally do not want to imagine themselves as ‘vulnerable’ (McGarry & Walklate, 2011), therefore victimhood can feel uncomfortable and socially awkward. In this narrative, decline – of health, livelihood, independence and quality of life – is already a reality, a situation described in the participant’s own words as “extremely grim”.

### Life-as-normal

Just like minimization, “life-as-normal” narratives present strong claims to normality. But, unlike minimization, these claims are undermined by the weight of the trauma that is held within. Frank (2013) describes life-as-normal narratives as a choice *not* to share illness or traumatic experiences, in order to preserve normality. Trauma is not denied, but is held in the background “as much as possible, for as long as possible” (Frank, 2013; p. 195). The narrative only breaks down when normality becomes an unsustainable pretence, for example when the burden of a damaged and deteriorating aging body becomes too much to bear. One veteran’s story evoked this narrative type while another transitioned through it, later recognising the limitations of this form of narration. For the former, ‘normal’ was a mask that seldom slipped, but gave way to grief when it did:

Everybody thinks I’m a nice guy, but underneath it all I have got anger issues and the frustrations of being caught out by the IRA putting a bomb under my car, as a military policeman, as a blooming bodyguard, as a close protection person, to have been caught out by somebody putting a bomb under the front of my car. And it all came piling out – yeah, the frustrations of life, you know not being able to move sideways, not being able to reach things on the shelves, not being able to carry the kids upstairs... It’s not something that I have held 100% behind, but it might be something that I’ve held within for twenty years. And because it’s like a blowhole, it’s like it’s a release and it’ll never go away, it’s just you let it go once and it’ll still be there in another ten years’ time if I’m still around. It’s part and parcel of just being a victim of terrorism; me being you know, a sad story, most of the time, 99% of the time you know it doesn’t come across, it doesn’t worry at all. It’s nearly the norm. I feel normal in a way. (60, double lower limb amputee caused by car bomb).

One aim of telling a life-as-normal narrative appears to be resisting victimhood, for exactly the reasons outlined above regarding victimhood as oppressive and stigmatizing. ‘Normal’ is a much better story, for as long as it can be sustained (Frank, 2013). However, the costs of telling ‘life-as-normal’ are evident here also, particularly in terms of the emotional and psychological burden of keeping grief under wraps. Another aim of the ‘life-as-normal’ narrative is highlighted by the other veteran for whom this story once resonated, but who later moved on to tell other stories about his life post-limb-loss:

<sup>6</sup> The Invictus Games, initially organised in 2014 and now an annual event, is a Paralympic-style international sporting competition for injured veterans.

I was getting on with my life. I was physically over it really. I think I was very lucky physically I got through the amputation and physically no problems really. And I felt I built a wall around myself to protect me, but also to protect my family and close friends. Because I threw myself into doing crazy challenges like doing the marathon and stuff like that. In '96 I did the London Marathon so it was a year afterwards. And I did it because I wanted to anyway, to prove to myself like you've got to get on, but it was also I did it for my family to see I'm ok. But I wasn't really... I think that what was devastating was that loss of limb obviously, but also loss of career and loss of direction. And that if anything was more disabling than actually the loss of limb, for me. (45, below-knee amputation caused by landmine).

In addition to keeping victimhood at bay, 'life-as-normal' can therefore be a story one tells for others' benefit. As Frank (2013; p. 196) explained with regard to illness stories, "The risk of the life-as-normal narrative is that the healthy people around the ill person are choosing to treat *their* lives as normal, and the ill person is subtly (or not) coerced into accommodating their anxieties" (original emphasis). Accordingly, Frank suggested, it is important to consider whom is making claims to normality about whose life, why such claims are being made, and what they might be concealing.

## Discussion

Different narratives convey different possibilities for aging 'independently' with limb-loss. Our findings show veterans struggling – more or less effectively – to live their lives as best they could while facing down the challenges that aging with limb loss presented them. Their stories demonstrated a considerable sense of agency and resilience in their approach to dealing with the challenges of limb-loss in old age, and the threat this posed to their independence. The long-term legacy of a military biography is thus revealed to be positive in the sense that it furnished veterans with the psychological resources required to adapt to the struggles of impaired mobility and debilitating pain (Spiro et al., 2016). At the same time, the resilient 'get on with it' attitude favoured by these veterans could become burdensome if it refused to yield in the face of mounting physical, social and psychological difficulties (Caddick et al., 2015). The strong appeal of 'normality' was also identified (Jefferies et al., 2017), taking on different connotations depending on whether normality was a reflection of minimal impact (minimization) or a mask (life-as-normal).

Our findings contribute to several disciplines, each infrequently interconnected within the academic literature. For aging studies, this paper highlights the continued need for counter-narratives to challenge the restrictive master narratives which condition older people's experiences of aging and independence (Phoenix & Smith, 2011; Raymond & Grenier, 2015; Rudman, 2015). The 'getting on with it' approach to resisting decline is revealed here as a personal counter-narrative that helped veterans to preserve resilience and independence, but may inadvertently leave them complicit in sustaining notions of dependence as passive and burdensome (Schwanen et al., 2012). Accordingly, we reiterate calls for social narratives which capture the strengths and resilience of older people whilst also permitting "meaningful decline" (Lamb, 2014; p. 41). Furthermore, we highlight a pressing need to consider different versions of aging by focusing on specific populations; thus revealing the *intersectionality* of aging (King & Calasanti, 2013). In what ways, for example, might victimhood narratives emerge from structured inequalities converging on the bodies and identities of female or ethnic minority veterans, or other groups of older people in general? Or, as de Medeiros and Rubinstein (2016) examine, how does the intersection of aging, military identity, masculinity, and mental health problems impact on the well-being of older veterans living in a retirement community? Following King and Calasanti (2013), we therefore suggest that a theoretically informed combination

of scholarship from numerous areas offers potential for developing more nuanced understandings of aging and uncovering relations of inequality and disadvantage where these exist. As Gilleard and Higgs (2013) also suggest, there are as yet unrealised opportunities to enrich aging studies' social critique of aging by deepening its engagement with other critical areas of study.

For critical disability studies, we illustrate how Frank's (2013) 'life-as-normal' narrative can play out to distressing effect among those determined to present themselves as 'normal'. The narrative demonstrates how normative ideals of (masculine) personhood – abled, capable, successful in work and relationships – can operate to shape the expectations of disabled male veterans, and induce frustration when such images of normality are unattainable (Shuttleworth, Wedgwood, & Wilson, 2012). Highlighting the 'life-as-normal' narrative in the context of disability adds to recent theorising on the desire to be 'just normal' among amputees (Jefferies et al., 2017). Jefferies et al. (2017) showed that being 'just normal' was the prevailing concern of prosthesis users, and detailed the steps these users took (e.g., rationalising difficulties, continuing to use prosthetics despite discomfort) to preserve normality. Our analysis mirrors these findings and shows not only the strong appeal of 'normal', but also the dangers of 'life-as-normal' as the *preferred* narrative; the story others prefer to hear the disabled individual telling. While disability therefore has multiple meanings (Heavey, 2013), so too does 'normal', and those who support limbless veterans (e.g., prosthetists, physical therapists), may be encouraged to consider the context(s) in which normality claims are being made.

For critical military studies, our research demonstrates the long-term impact of military experience in both negative (e.g., limb-loss and its after-effects) and potentially positive (e.g., resilience, adaptability) forms. These findings add empirical weight to the notion of a 'military habitus', drawing upon Bourdieu's (1990) notion of the habitus as the unconscious dispositions which structure our actions and perceptions, and suggesting that military ways of being are deeply rooted in the individual (Cooper et al., 2018). These ways of being may influence a veterans' identity and behaviour long after they transition into civilian society in complex and sometimes contradictory ways, as we highlight throughout this paper. Also important to note for critical military studies and other scholars are the militarized narratives that are *not* being shared by older limbless veterans. In particular, narratives of dramatic and heroic overcoming of disability have been made culturally prominent by initiatives such as the Invictus Games, but were absent from the stories told by older veterans. Such narratives celebrate the triumphant sporting achievements of disabled military veterans, but often with little critical reflection on war or how to properly care for these veterans (Batts & Andrews, 2011). That older limbless veterans did not share stories of dramatic and heroic overcoming through sport possibly suggests that such sporting opportunities were less relevant, available, or appealing to them, or that younger veterans are the focus of these initiatives. Indeed, when asked about activities that helped to keep them engaged and active, veterans in this study typically mentioned more mundane pursuits like photography. Such activities – rather than high-octane, headline-grabbing sporting endeavours – were what generally helped to provide limbless veterans with a sense of meaning and independence in old age.

## Conclusion

Aging with a physical impairment such as limb loss throws up challenges for living independently. Added to these challenges are social narratives of aging which privilege the moral virtue of independence and devalue 'dependence' on others. Our paper illustrates a range of narratives through which older military veterans approach the multiple challenges of aging with a disability. These are not the only stories that might be told, and we encourage others to be shared to increase the possibilities for expression. In particular, stories which enable veterans and others to resist decline and which value their efforts at dealing with adversity are called for.

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## APPENDIX E

### PAPER 5

Wilson, G., **McGill, G.**, Osborne, A., & Kiernan, M. (2020). Housing needs of ageing veterans who have experienced limb loss. *International Journal of Environmental Research and Public Health*



Article

# Housing Needs of Ageing Veterans Who Have Experienced Limb Loss

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**Abstract:** Military veterans can experience limb loss as a direct result of conflict, an accident, illness or injury. Whatever the cause, there is a need to recognise the long-term consequences and challenges of limb loss on maintaining independence in one's home. This study aimed to examine the housing needs of veterans experiencing limb loss, and the impact of limb loss on housing needs and home adaptations of ageing military veterans. Thirty-two military veterans (aged 43–95) participated in this study and up to three life-story interviews were carried out with each participant. Two themes were generated: availability of support and changing housing needs. It is evident from the findings that military veterans are unique in various ways, specifically due to military culture, geographical relocation and the additional support that is available to the Armed Forces Community. This must be considered in long-term support to maintain independence in the home.

**Keywords:** housing; home adaptations; military veteran; older adult; healthy ageing; maintaining independence

## 1. Introduction

World War One left the United Kingdom with a legacy of over 41,000 Armed Forces personnel requiring major limb amputation. A further 9000 experienced limb loss as a result of World War Two, and recent military operations have added to the population of service personnel who have experienced limb loss. Military amputees generally include both victims of actual military conflict and of non-combatant trauma [1]. The impact of losing a limb extends well beyond initial recovery and rehabilitation, with long-term consequences and challenges requiring health and social care commitments across the life-course [2]. Existing literature highlights that veterans who have experienced limb loss are, for the most part, able to achieve and maintain good quality of life [3]. Nevertheless, the amputation of a limb, or limbs, is a progressive injury. It involves enduring experiences of pain, co-morbidities and, sometimes, mental health problems.

There is some debate with regards to how unique military veterans are in comparison with those citizens that have lost limbs due to industrial or road traffic accidents. In the United Kingdom there is a distinct difference which is enshrined in government policy, i.e., the Armed Forces Covenant and its direction to the National Health Service (NHS), with regards to how Armed Forces personnel and veterans should be treated. Most notably the policy states, 'that special consideration is appropriate in some cases, especially for those who have given the most such as the injured or the bereaved' [4]. This is further enshrined in NHS England's implementation of that policy with clear direction being given when commissioning services [4].

Limb loss within the Armed Forces Community has often occurred traumatically and suddenly. As a result, the cost of health and social care provision for veterans who have experienced limb loss is necessarily higher, as this group may need additional support compared to their peers. In most cases, at the point of injury, these individuals will be dislocated from their immediate family by geographical distance. Furthermore, their limb loss may ultimately lead to the total loss of military employment and career, the loss of their home (military accommodation) and a geographical relocation for post-military settlement. This invariably leads to individuals moving through multiple hospital and care providers as the transition from the military occurs, resulting in a fractured care pathway. It was as a direct result of these experiences and concerns that the Murrison Review into military amputees was undertaken [5]. The review made key recommendations that not only benefited military amputees but also civilian amputees. The most notable key recommendations included the specialist commissioning of prosthetics and rehabilitation through five centres in England to cater for those veterans leaving the Armed Forces. Furthermore, recommendations specify that veterans should be able to access mainstream NHS provision through a Disablement Services Centre (DSC) of their choice, and there should be a programme of military/civilian exchange for healthcare professionals to grow the specialist prosthetic and rehabilitation network rapidly [5]. Over the subsequent years since 2011, the Murrison Report has led to the establishment of five regional Murrison Centres, Nine Disablement Service Centres, and the Veterans Trauma Network, which provide enhanced services for wounded, injured or sick veterans. This comprehensive network of veteran-specific services cater for the unique health and social care challenges that military amputees face during their recovery, rehabilitation and throughout the rest of their lives [6].

The home has long been recognised as one of the main settings to influence both health and well-being [7], and suitable housing and appropriate home adaptations are essential in order to promote independence and maintain a good quality of life amongst those affected by limb loss [8]. The experience of transition from a hospital setting back into the home during early recovery from amputation may be a significant challenge for amputees and their families, and individuals must then learn how to navigate their own home. The Care Act (2014) reinforced statutory obligation, explicitly outlining the importance of suitable living arrangements alongside appropriate home adaptations [9]. In England and Wales, funding in the form of a Disabled Facilities Grant (DFG) may be provided to help an individual modify their home, and is based on a needs assessment, most often carried out by an Occupational Therapist or a social worker [10]. Home modification funding is also available in Scotland and Northern Ireland, although different to the DFG. Although adapting one's home can be a cost-effective way to maintain independence and prevent falls and injuries [11–13], mainstream housing is often unsuitable for adapting to meet accessibility needs [12–14].

Even without an injury, transition from the military back to civilian life and relocation can be challenging. Invariably military personnel will always relocate geographically on leaving the Armed Forces. Service leavers must register with a civilian General Practitioner, living in a civilian local authority, and have access to services they have not accessed before. In 2015, Simpson and Leach reported that only 8% of UK veterans were correctly registered with a General Practitioner or Family Doctor practice [15]. This low figure is despite a NHS website informing veterans of the healthcare benefits and there are no perceived barriers that specifically prevent veterans from registering. Two years later, and despite significant investment in veterans' health and social care, a recent study indicated little change. However, in a cost effective six-week intervention this was increased to 26% [16].

It is therefore argued that veterans transitioning from military service following limb loss are a unique group and there is a dearth of research examining the impact of limb loss on their relocation, housing needs and how to ensure long-term independence in their home throughout the life span. This study aims to address that gap, by examining the housing needs of veterans experiencing limb loss, and the impact of limb loss on housing needs of ageing military veterans.

## 2. Materials and Methods

### 2.1. Design

In order to explore the housing needs and home adaptations of older veterans who have experienced limb loss, a qualitative approach was employed to explore the experiences of ageing military veterans. The findings in this paper were extracted from a project looking at maintaining independence, specifically focusing on the health and social well-being of older veterans who have experienced limb loss [2].

### 2.2. Participants

Utilising peer-recruiters, 32 veterans who had experienced limb loss were recruited throughout the UK via Blesma, the Limbless Veterans Charity. Participants were aged between 43 and 95 (mean = 69.4, SD = 14.56), 30 were male and two were female. All services of the UK Armed Forces were represented: Royal Navy and Royal Marines ( $n = 7$ ), British Army ( $n = 19$ ) and Royal Air Force ( $n = 5$ ); one participant was a Cadet.

Of the 32 participants, 59.4% ( $n = 19$ ) had experienced operational deployment during the course of their military service, while 40.6% ( $n = 13$ ) were never deployed. Those with deployment experience served in a range of conflicts, including World War II, Suez Crisis, Northern Ireland, Falklands and the Gulf War. The mechanism and nature of participants' limb loss was also recorded (see Table 1).

**Table 1.** Mechanism and nature of participants' limb loss (N = 32).

	Number	Percentage
<b>Mechanism of Limb Loss</b>		
<i>In-Service Attributable</i>	11	34.4
<i>In-Service Non-Attributable</i> <sup>a</sup>	2	6.2
<i>In-Service Unclear</i>	1	3.1
<i>Post-Service Accident</i>	9	28.2
<i>Post-Service Attributable</i> <sup>b</sup>	2	6.2
<i>Post-Service Illness</i>	7	21.9
<b>Nature of limb loss</b>		
<i>Above-knee</i>	14	43.8
<i>Below-Knee</i>	10	31.3
<i>Arm</i>	1	3.1
<i>Double amputee</i>	1	3.1
<i>Quadriplegic</i>	4	12.5
<i>Monoplegic</i>	1	3.1
<i>Through-knee</i>	1	3.1

<sup>a</sup> Participants who lost their limb during service but not as a result of their military service. <sup>b</sup> Post-service attributable acknowledges those that lost their limb post-service as a direct result of their military service.

### 2.3. Data Collection

Before participants agreed to take part in the study, peer-recruiters disseminated study information and answered questions about potential involvement in the study. Because the peer-recruiters were members of the charity Blesma, they brought with them a shared understanding, and they shared experiences with potential participants. If participants wished to be part of this study, they were asked to sign a written consent form. At a later date, a member of the research team visited the participants to carry out the interviews.

Face-to-face, semi-structured life-story interviews were conducted in the participants' own homes (with the exception of one participant who was interviewed via email on request). The semi-structured interview provided a framework to explore the physical, psychological and social well-being of veterans who experienced limb loss across the life-course. From each interview, researchers were able

to ascertain factors that contributed to the ability of veterans who experienced limb loss to maintain their independence. In order to allow sufficient time for participants to share their respective full life story, up to three interviews were carried out per participant. Each interview lasted between 90 and 180 min and was recorded using a Dictaphone.

#### 2.4. Data Analysis

Interviews were transcribed and entered in NVivo 12 for qualitative analysis. Thematic Analysis was used to analyse the semi-structured interview data. The six steps of Braun and Clarke [17] were followed: familiarisation with the data, generation of initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report.

This study was granted ethical approval through Northumbria University's Ethical Approval System.

### 3. Results

Two overarching themes were generated from the data: availability of support and changing housing needs (Table 2). Both themes consist of multiple sub-themes.

**Table 2.** Overarching themes and related sub-themes generated from the data.

Theme	Sub-Theme
Availability of support	Navigating sources of support Support from military charities Stoicism
Changing housing needs	Unsuitable housing Adapting behavior

#### 3.1. Theme 1: Availability of Support

Whether limb loss occurred during or after service, individuals often struggled to navigate sources of financial support for their housing needs or home adaptations, as they were unsure if this was the responsibility of the military, statutory services or other. In many cases, individuals relied upon military charities to support them. However, there was also a level of stoicism that affected the support they received due to the reluctance to ask for help.

##### 3.1.1. Navigating Sources of Support

As military veterans, participants were often unsure of who would 'take responsibility' for them and meet their needs. Participants were often uncertain if this responsibility lay with the Ministry of Defence, military charities or statutory services.

*"You're in the military so who's going to pay for me? Who's actually going to take responsibility and say 'We're going to look after you?'" (P005)*

*"I don't know what the options [for financial help with adaptations of home maintenance] are." (P008)*

For Participant 002, there were inconsistencies in the support received from the military, and it was felt that support was inequitable. This participant felt disadvantaged because limb loss was not related to active service.

*"I don't want just money, I ... you know I'm after help and support in helping to move my life forward. Where is it? Its non-existent. Unless it ... unless because of what happened to me and being so ... being a peacetime injury, it's ... it has no bearing, it's not important compared to those that are hurt through conflict." (P002)*

Participants described being misinformed or having received no information with regards to the support they were eligible for. This often meant that they missed out on financial support to which they were entitled.

*“A rep [from a military charity], he got me up here. And he was great, but as soon as I got up here and he was giving me the wrong advice. I said ‘How do I get reinstated to get my benefit back up?’ Because they’d cut it. He said ‘Oh you’ve got to go and see your doctor?’ So I made an appointment and went to see the doctor, the doctor said ‘No you’re not supposed to be coming to see me, you’re supposed to write a letter and then they send you to see me’. So he cost me three weeks and he was supposed to be my welfare officer.” (P008)*

*“I told you I come out of hospital and they ... no one tells you about benefits and what you can get [ ... ] But it would help you know. Because I didn’t know about disability living allowance until six months after I could have claimed it.” (P023)*

Barriers did not end when individuals found the correct source of support they were entitled to, and there were also issues with ‘entitlement’ as individual need did not meet specified criteria.

*“I’ve asked for help and they’ve said basically this ‘Unless you need ... can you wash yourself?’, ‘Can you dress yourself?’, ‘Yes’, ‘Can you cook a meal?’, ‘Yes’, (umm) and ‘Can you take yourself to the toilet? Well if you can do all them four things ... ’ (P008)*

*“I was in a bungalow that I could only use the back door. I couldn’t get out the front door because there was a series of steps so I could only use one. They wouldn’t adapt it for me, the housing association refused to adapt it.” (P008)*

For Participant 008, the issues arose when they were living in privately owned accommodation as opposed to housing owned by the local authority.

*“Private houses, but not council, private ... yeah they didn’t want to pay to have it adapted.” (P008)*

Participants had often lived abroad for long periods of time whilst in the military and this added an additional layer of complexity which impacted ‘eligibility’ checks for new housing.

*“I went to buy my house out in [PLACE] and to get a mortgage you had to put down your last three years of where you were living. So the year previous I was in [PLACE] so I had an address, two years prior to that I was [ABROAD]. So I said it was [PO Box]. ‘Oh what about utility bills?’ ‘Never had a utility bill, came out of my wages’ ‘What about a phone?’ I said ‘No didn’t have a phone. No didn’t have a phone’. ‘Well how can you prove you lived there?’ [ ... ] I gave it to them and they wrote back to the mortgage company saying ‘Never heard of this fella!’ So I had to live in the house for a further two years so I could tell the mortgage company where I lived for the prior three!” (P013)*

Some participants paid for their own home adaptations due to ‘desperation’.

*“I had to pay for stair lift myself.” (P020)*

*“We even brought a ramp, you know (umm) for to get the wheelchair up and down. (umm) We then had to get the door widened and a low threshold. (umm) Nothing from the ... what do you call? Social service or whatever, no help at all, no. We paid for it because we were desperate. I’d spent weeks trapped in that lounge, I couldn’t get out of the lounge because I couldn’t get to the kitchen because it was a step down and to get to the toilet was ... was down.” (P021)*

### 3.1.2. Support from Military Charities

Military veterans are entitled to access financial support and received financial support in the form of compensation or their pension.

*“I can’t imagine and not having the financial assistance that pensions and compensation have given me as a person with all these other problems with the cancer, limb loss and all this . . . and then two young children . . . I haven’t had a financial worry (umm) you know the kids went to private school, (umm) I can have my own hobbies, the house is paid for, (umm) and you know I don’t deliberately save all my money up and you know so I live well. And you know I’m very grateful to having the system that we’ve got and it is a welfare system isn’t it? Army pension, war pension and then criminal compensation.” (P005)*

Many participants are not used to navigating the system for support to get housing adaptations because of the culture of the military; everything is done for them, and they do not utilise civilian support services. This is in contrast to civilians who have maintained their own home throughout their lives—either by owning or renting their own home. Individuals often struggled to identify non-military support services, and relied on military contacts.

*“Thanks to Blesma I . . . I’m able to apply for a grant to help me with my gardening and Blesma’s my . . . they’ve given me each year and it helps me to help myself and my partner to have some sort of work done in our garden. (umm) But I’ll be brutally honest, that’s the only financial help I get.” (P002)*

*“We didn’t know how to go about getting the council to do the extension and all the rest of it. So yeah [military charity 1 and military charity 2] helped.” (P010)*

*“No-one tells you about benefits and what you can get. We’ve had . . . [military charity 1] has been really good and [military charity 2].” (P016)*

Many of the participants praised various military charities for providing funding for housing adaptations (either in the form of a loan or grant), general support with housing and garden maintenance and navigating the system between military support and statutory services.

*“They gave me a grant to get my (umm) stairs and landing decorated because I . . . again I could do it, but I’d probably fall of the ladder and . . . look if there are any specific needs like adaptations to house, don’t always provide them themselves. I think they’ll go through local authorities, but if I needed anything like that I’d probably . . . maybe phone up [Bill] who’s my (umm) welfare officer, have a quick chat or email him usually saying ‘Right’ you know if I need ‘X, Y, Z’ like . . . a grant I had in my bathroom which I’m going to.” (P006)*

*“[Military charity] have been brilliant to me. Absolutely brilliant.” (P016)*

*“[Military charity]—they’ve widened the doors, they’ve done the wet room.” (P027)*

In some instances, this financial support was provided by a combination of organisations—both military charities and statutory services.

*“So they got the [local authority, military charity 1 and military charity 2] and I think someone else all put some money in to have an extension with a wet room.” (P010)*

### 3.1.3. Stoicism

Stoicism was one of the barriers to accepting financial or practical support from any military or statutory organisation. Participants described having a ‘get on with it’ attitude and were reluctant to receive any help. For Participant 005, it was important to consider what help was most needed, rather than asking for multiple forms of support.

*“As long as you’re not too proud to not ask for assistance. And I think there is something in that, I’m a [military position], I am so independent, it is difficult to actually go to them and actually say (umm) ‘In need of help’ And what is more vital? Practical help, financial help, welfare assistance, you’ve got to just (umm) accept . . . ” (P005)*

Like Participant 005, others discussed the importance of adjusting their own attitudes in asking for help to ensure they were able to receive support from others.

*“Accepting help where it’s needed. I’m more inclined to accept a little bit of help these days than I previously was. But (umm) and asking for help it . . . as well you think you know something you can’t do on your own.” (P012)*

*“Doing stuff for myself, only asking for help when I really need . . . well I know I need something (umm) I’ll ask. But that’s just a normal thing isn’t it so (umm) yeah independence is massively important. You know don’t ask people for money and all this sort of stuff so (umm) and . . . be self-supporting.” (P006)*

This sense of stoicism was often felt to be directly associated with being in the military and translated into their attitude to adapting and coping with their injuries. Whilst this coping mechanism promoted individual resilience, it often led to individuals not asking for help from others.

*“I’ve lost my leg and I’ve got to get on with it and you’ve got no choice!” (P004)*

*“The military coping at the time was don’t be a cry-baby, just go out, get [drunk] and get over with it [ . . . ] get over it, soldier on.” (P001)*

*“If I was a civilian I don’t know if I would have coped. Being a military, it was let’s just move on and carry on.” (P005)*

### 3.2. Theme 2: Changing Housing Needs

Participants’ housing needs changed suddenly due to the nature of their limb loss. This suddenness affected their responses to their own home and adjusted housing needs, including home adaptations. Participants were often living in unsuitable housing for long periods of time and in many cases had to adapt their own behaviour and ways of living in the absence of suitable home adaptations. The complexities in daily living were heightened by the inconsistencies with their prosthesis; sometimes participants were more mobile than others who experienced complications with their prosthesis.

#### 3.2.1. Unsuitable Housing

For many participants, their homes became unsuitable post limb loss, and many could no longer function within their home. Participant 008 describes the difficulty in maintaining his own home.

*“It takes me all day just to keep this house going.” (P008)*

Participants could often no longer function in the same way as they had previously. Participant 002 gives the example of cooking. As they could no longer cook food for their family, the participant now relied upon takeaway food deliveries.

*“It was my responsibility to sort out food and I would end up having to phone takeaways and the takeaways got to know me so well that they would even just knock on the door and let themselves in and bring my food for me.” (P002)*

Other participants relied upon housing adaptations and many experienced difficulties without these modifications, particularly those helping them to get up and down stairs, making the upper level of the house inaccessible.

*“My wife at the time, she (umm) decided that my bed was going to be safer downstairs and that’s where I slept for . . . since having the total knee replacement and then the amputation. The settee was my bed.” (P002)*

*“I was living in the front room had a blow up bed, a double with me and my wife. She came down with me and I was having to have strip washes in a bowl of water for me, strip washes or clean my teeth and that and obviously couldn’t get upstairs to the toilet or through to the other one.” (P010)*

*“[Before having a stair lift] I used to go upstairs . . . I had to go upstairs on my back . . . on my bum.” (P033)*

Another issue relating to unsuitable housing was the lack of external accessibility to enter and exit, meaning that many felt stuck in their own homes.

*“I am bored being stuck at home and it allows me to ponder and think long and hard about this and it does make me angry and it does get me upset.” (P002)*

*“I used to arrive home and I used to have to stay in the house virtually.” (P014)*

*“We had some fun and game (umm) we had a terraced house (umm) they just about managed to get me in with a wheelchair.” (P021)*

Being stuck in the home often led to feelings of social isolation.

*“While I was in this bungalow, this house. Very isolated, but . . . anyway I used to have to do my shopping on the internet to get anything because I couldn’t go anyway.” (P008)*

### 3.2.2. Adapting Behaviour

The nature of limb loss meant that individuals suddenly had to adapt their daily living, including the way that they moved around and used their own home. Individuals described the impact of this sudden change.

*“I basically learnt to adapt because it’s a case of all of a sudden ok I’m in the house, the old house . . .” (P001)*

The participants described various way in which they had to adapt their own behaviour to enable them to function within their own home.

*“Not being able to move sideways, not being able to reach things on the shelves [ . . . ] you know not being able to carry the kids (umm) upstairs or you know it’s a big palaver to be . . . you know to hold a child, to go into the lift, to go up in a lift to go through your bedroom to their bedroom, down steps. It was not all wheelchair friendly this house isn’t wheelchair friendly for me. It’s not . . . it’s not wheelchair for everybody.” (P005)*

*“I was getting in the bath the wrong way, my leg was on the inside of the bath near the wall so . . . I couldn’t get out with my stump. So now I realise that I’ve got to turn around. Foot facing the taps, so this comes out first and then I’ve got the support and I just push up . . . and it’s so much easier.” (P027)*

*“I clean the oven out, alright I don’t have my leg on because I sit on my bum doing it, but you normally anyway I mean because the ovens low down. So how else are you going to do it? You’re going to have to sit down or stoop down, but it’s stupid stooping down, you’ve got to sit down.” (P012)*

The need to adapt behaviour was diverse in this population. For some, the complexity of the prosthesis, stump pain and multimorbidity impacted when they were able to use their prosthesis. This in turn impacted the way in which they were able to use their own home, and often meant that their needs were not consistent and constantly changed over time.

*“My [Genium X-5] (umm) but when (umm) when it’s not working properly and when I’m in spinal pain and pelvic hip pain, I can’t wear my leg so I have to go around on elbow crutches.” (P002)*

*“And the deterioration side of things because of the accumulation of injuries and then the compounding effect of each against the other, means that maintaining mobility, independence is much more difficult than it was.” (P009)*

#### 4. Discussion

This study aimed to address the current gap in the field by examining the housing needs of veterans experiencing limb loss, and the impact of limb loss on housing needs and home adaptations across the life course of ageing military veterans. There were two overarching themes generated from the life-story interviews: availability of support and changing housing needs.

The results from this study demonstrated that participants often struggled to navigate the processes of acquiring financial support. For example, transitioning from service life brought significant structural barriers and led to inequity of access to healthcare. There are few, if any, jobs or careers outside the military that require as much adjustment as that of leaving the Armed Forces and returning to a civilian lifestyle. Veterans often find that their service life bears little or no resemblance to that experienced as a civilian member of society. Furthermore, wider research carried out with veterans who had experienced lower-limb amputation demonstrates that there are health literacy issues that impact on health-related quality of life [18]. The veterans’ transition review [19] recognises the influence of stereotyping and discrimination by employers towards veterans, such as preconceptions that they are institutionalised or aggressive. As such, veterans who experience limb loss are likely to encounter ‘double jeopardy’ because of limited employment opportunities and assumptions about capability that are made based on their disabilities. Securing appropriate housing or support for home adaptations from local authority, social care providers and third-sector housing organisations, facilitated a shift in direction of veterans’ stories while striving to maintain independence. In some cases, this was due to the sudden nature of limb loss and geographical relocation. Individuals were unsure who was responsible for this care and relied on military charities as a source of support to help navigate the system, or to provide their own source of financial support. Although circumstantially different, limited awareness of available funding, such as the DFG, and the options individuals have in modifying their home, is also common within the wider older population [20], prompting the need to raise awareness and widely promote this available support. Adams and Hodges [20] acknowledged the necessity of the breadth and consistency of information and advice services provided by local authorities across the UK, and recommend establishing a minimum standard. This research supports this need, and also the importance of recognising and supporting diverse needs and circumstances.

One source of provision available to military veterans that is inaccessible to the general population is the support from multiple military charities who offer housing support, housing maintenance and funding for home adaptations. The Royal British Legion offers financial advice on home adaptations [21] in assisting members of the Armed Forces Community to understand the financial support provided by local authorities and social care providers. In the first instance, the Royal British Legion state that they direct individuals to the Local Authority, but if an individual is ineligible they are redirected to the Independent Living service—a service which supports installation of small home adaptations, personal alarms or new equipment [21]. Similarly, volunteers at SSAFA (Soldiers, Sailors, Airmen and Families Association) provide guidance in accessing home adaptations and equipment. Blesma, the limbless veterans’ charity, provided grants for provision of wheelchairs, stair lifts and home and garden adaptations, as well as home and garden maintenance [22]. This online/telephone support was beneficial as one method of raising awareness to the statutory financial assistance that individuals may have been eligible for or, if eligibility for this financial assistance was not met, provided funding for home adaptations or modifications.

A further aspect which impacted access to home adaptations, although a characteristic that is not solely related to being in the military, is the stoic determination of participants to achieve success.

The data suggests that this stoic attitude may prevent adaptive problem-orientation and the acceptance of home adaptations because it discourages emotional expressions and inhibits help-seeking behaviour. In addition, previous research has shown that military veterans can often set themselves apart from other disabled groups by identifying as 'war heroes'. Veterans are known to be reluctant to engage in help-seeking behaviour, particularly when there is a perceived social stigma attached to those with those problems [18,23] and subsequently individuals can have quite varied levels of awareness of the support available [24]. The military context is important, as it links the ability to adjust to 'disability' with identity. This results in portrayal of personal disability due to limb loss as a symbol of courage.

Individuals described the multiple ways in which their home was no longer suitable, and they relied upon home adaptations to maintain daily living as well as modifying their own behaviour in order to be able to better manage their environment. Many participants did not use the prosthesis in their home as they felt that it restricted their movement. Some participants described using prosthetics intermittently because of pain and discomfort.

Following amputation, limb-fitting services, along with rehabilitation, are of significant importance in order to improve the prospect of maintaining independence. Resnik [25] suggests that the provision of suitable upper limb prostheses and rehabilitation services can improve satisfaction with a prosthetic limb itself and generally improve quality of life. However, some military veterans who have experienced upper limb amputation choose to abandon or refuse to use their prostheses because they are ill fitting and uncomfortable. It is imperative to consider the individuals' own needs, and to understand that these needs may continuously adapt and evolve. Evidence within the field stresses the importance of personalisation, as modifications and adaptations are much more successful if an individual's functional and emotional needs are considered, and when people are involved in the decision-making and installation processes [20,26]. Personalisation is necessary when considering home adaptations for individuals who have experienced limb loss, due to the intermittent use of their prostheses, pain and changing needs. Ongoing assessments would allow for understanding of an individual's changing need.

This study has its limitations. It does not fully represent female veterans who have experienced limb loss as only two females took part in this study. Furthermore, all participants involved in this study were members of the limbless military charity, Blesma. Therefore, the findings are potentially not transferrable to non-members.

## 5. Conclusions

It is evident from this study that the housing needs of military veterans who have experienced limb loss are unique. The findings of this research reflect those of the Murrison Report [5] in that military veterans with limb loss are a unique service-user group in various ways: most specifically, in the notion of and nostalgia for their military culture, the challenges of transition to civilian life along with geographical relocation and the transfer of health and social care into local civilian services. This contextual complexity impacts individuals' needs and access to required financial resources and services. However, in addition to the negative uniqueness, there are also positive uniqueness with the development of multiple parallel third sector services specifically for wounded, injured and sick veterans. Large UK military charities such as The Royal British Legion and Help for Heroes run specific veteran rehabilitation programmes that aim to address the unique challenges veterans with injuries face. Most importantly these are through life support services which all veterans will have access to. Arguably, the greatest challenge faced is the veterans' own understanding and perception of the availability of support from the armed forces community and the NHS throughout their lifespan.

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## APPENDIX F

### PAPER 6

**McGill, G.,** Wilson, G., Foster, N., Osborne, A., Caddick, N., & Kiernan, M. (2020).  
Rehabilitation and transition in military veterans after limb-loss. *Disability and  
Rehabilitation.*



## Rehabilitation and transition in military veterans after limb-loss

Gill McGill, Gemma Wilson, Nick Caddick, Natalie Forster & Matthew Donal Kiernan

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RESEARCH PAPER



## Rehabilitation and transition in military veterans after limb-loss

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### ABSTRACT

**Purpose:** This study aims to explore the physical, psychological and social wellbeing of veterans who have experienced limb-loss and to ascertain the factors that contribute to the ability of veterans to maintain their independence at various stages in their lives.

**Methods:** Sixty two life-story interviews were conducted with 32 veterans (aged between 40 and 95) who had experienced limb-loss either during or after military service.

**Results:** Three overarching superordinate themes and related sub-themes were generated from a detailed Framework Analysis "*Barriers to transition*" describes issues related to employment, legal support and compensation, stigma and loss of identity. "*Disparity of care*" highlights the issues related to military and civilian care and prosthetics service user experience. The final superordinate theme, "*Enduring challenge of limb loss*," considers stoicism, dealing with pain, mobility, physical isolation and social networks.

**Conclusions:** The outcomes offer an opportunity to shape future health and social care policy around the requirements of veterans who have experienced limb-loss by understanding the complexity, and ascertaining the factors that contribute to, maintaining long-term independence.

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### KEYWORDS

limb loss; military veteran;  
life-course; health and  
social care

### ► IMPLICATION FOR REHABILITATION

- The outcomes offer an opportunity to shape future health and social care policy around the requirements of veterans who have experienced limb-loss by understanding the complexity, and ascertaining the factors that contribute to rehabilitation and maintaining long-term independence.

## Introduction

Research with regard to older people who have lost limbs reveals that many older amputees experience difficulties taking part in social activities, are restricted in carrying out daily activities such as self-care, household tasks and visiting friends, and are at increased risk of social isolation [1,2]. Mental health has likewise been identified as a key challenge, with one review suggesting limb amputation in older adults can lead to an "accumulation of losses" including self-esteem, image, independence, social integration, financial security and physical health [3]. Furthermore, age at amputation can influence a person's adjustment to amputation, with younger age typically leading to better long-term prognosis and, therefore, better adjustment.

World War One left the United Kingdom (UK) with a legacy with over 41 000 armed forces personnel requiring major limb amputation [4]. A further 9 000 experienced limb loss as a result of World War Two. Recent military operations have added to the population of service personnel who have experienced limb loss. Military amputees are generally a younger group who include both victims of actual military conflict and non-combatant trauma including military exercise and road traffic accidents [4]. However, despite the rapid increase in the number of veterans experiencing limb loss as a result of the conflicts in Iraq and Afghanistan, research on limb-loss in the veteran population is less varied than studies conducted with the general population.

There are numerous reasons why military personnel may undergo amputations [5]. Some injuries are defined as being attributable to active service or conflict, whilst others occur as a result of illness or injury (e.g., diabetes). Veterans who have lost limbs in recent conflicts in Iraq and Afghanistan have received political and public attention through both medical and political agendas [6]. As with any serious or life-changing injury, loss of a limb entails a substantial period of rehabilitation and adaptation. For personnel injured during military service, this adaptation period is often complicated by loss of their military career and subsequent enforced transition to civilian life. For those injured post-service, the biographical influence of a military career may shape the coping mechanisms an individual deploys to deal with amputation [7]. This paper focuses on (a) the ongoing challenge of adapting to civilian life with one or more limb amputations, and (b) the influence of a military background on coping responses to amputations experienced post-service.

Regardless of the cause or conflict, the consequence of losing a limb in military service extends well beyond initial recovery and rehabilitation, and there are long-term consequences and challenges that require physical, mental health and social care commitments across the life-course [7–9]. The physical and psychological impact of limb-loss places veterans at risk of losing their independence, uncontrolled levels of pain, ill-fitting or uncomfortable prosthetics, co-morbidities, and mental ill health [7].

As with the general population, the amputation creates ongoing challenges for health and social care providers, with specialist prosthetic care often considered a priority [1], and mental health and other support sometimes an afterthought. However, despite their similarities, there are also important differences between these two populations. Military experience itself can influence the behaviour of ex-service personnel, shaping how they respond to challenges in civilian life [10]. In this regard, it is essential that health providers understand the characteristics of the veteran population and are aware of the cultural sensitivities associated with having been a member of the Armed Forces in order to ensure the provision of clinically appropriate care [11].

In the UK, the Armed Forces Covenant was enshrined in law in 2011. The Armed Forces Covenant asserts that, when appropriate, veterans should receive special treatment above and beyond that which may be expected by a civilian. The Covenant mandates that veterans and their families should not encounter disadvantage as a result of their service and that, where appropriate, they should be entitled to special treatment [12]. Disadvantage experienced as a result of service may be taken to include the long-term aftereffects of injury and service-related injury amputation. However, others have previously argued that a separate investigation is called for to compare the different circumstances of combat-related limb-loss compared to “civilian” amputation [13]. While serving, healthcare is delivered to service personnel by the Ministry of Defence (MoD). In the UK, the MoD is responsible for providing primary care, dentistry, occupational medicine, community mental health services and rehabilitation, whilst secondary and specialist healthcare is provided by the National Health Service (NHS). Coll et al. argue that veterans returning to the civilian world may need support to adjust to a different landscape in terms of access to health care in the community [14].

There are limited studies which have considered the impact of limb-loss for military veterans across the life-course, and fewer have used approaches in which veterans who have experienced limb-loss were able to provide accounts of their own lived experiences. This study aims to explore the physical, psychological and social wellbeing of veterans who have experienced limb-loss, and to ascertain the factors that contribute to the ability to maintain their independence at various stages in their lives. This study is part of a wider multiple method convergent study.

## Materials and methods

This paper used a qualitative methodology. This approach allowed insights into the explanations and theories of social behaviour identified in the experiences of the participants and produces solutions for policy issues or questions [15]. The study was granted ethical approval from Northumbria University’s Faculty of Health and Life Science ethical committee.

Participants were recruited using purposive and snowball sampling which allowed for variation in the sample with regard to age, military rank (non-commissioned and commissioned rank), mechanism of limb-loss (whether this was during or after military service), nature of limb-loss (upper or lower limb/single, double or triple amputee) and military service (Royal Navy, Air Force and Army). The research was carried out with the military charity Blesma, a support service for UK former service personnel who have lost limbs through any service or post-service causes.

The study included participants who had lost limbs due to conflict in military service, accidents or illness in military service (but not directly due to combat) and various “post-service” causes (Table 1). This maximum variance sample reflects the two levels

Table 1. Participant Characteristics ( $N = 32$ ).

Age at interview (years)	
Mean (SD)	69.40 (14.56)
Range	43–95
Sex	
Male	30
Female	2
Service	
Royal Navy/Marines	7
Army	19
Royal Air Force	5
Cadet	1
Operational service	
Deployed	19
No deployments	13
Mechanism of limb loss	
In-service attributable	11
In-service non-attributable	2
In-service unclear	1
Post-service accident	9
Post-service attributable	2
Post-service illness	7
Nature of limb loss	
Above knee	14
Below knee	10
Through knee	1
Arm	1
Double amputee	4
Quadriplegic	1
No limb loss but loss of use	1

of membership of Blesma: full members (limb-loss due to military service) and associated members (limb-loss unconnected with service). This sampling strategy can be considered a strength to this study as it ensured a heterogeneous sample and, therefore, a range of narratives and experiences.

Two peer recruiters, who were members of Blesma and the research team, were able to use their experience and knowledge to effectively recruit participants to the maximum variance matrix, recruiting all participants involved in this study. The role of the peer-recruiters was to disseminate study information to potential participants, answer questions about involvement in the study, and to act as a bridge between the research team and limbless veteran community. Importantly, both peer recruiters were involved with Blesma and had a shared understanding and shared experiences with potential participants. This “insider’s perspective” was beneficial in the recruitment process itself. The shared experiences and shared understanding between peer recruiters and potential participants were perceived as a positive influence on recruitment, in that it provided reassurance and reduced/removed barriers. In addition to recruiting participants, peer-recruiters also re-visited participants after data collection in order to ensure that they had not suffered negative consequences from discussing emotional events.

Life story, face-to-face interviews were collected over a period of eight months from September 2016 to July 2017. The data was gathered over multiple interviews with each participant. The interviews lasted between 1.5–3 h and took place in the participant’s home with follow up interviews being carried out by the same researcher, in all but one case. Up to three interviews per participant were carried out. The first interview aimed to cover life prior to the forces, with the second interview covering joining the forces and the third hearing about recruitment, training and operational duties. The second explored the injury and rehabilitation, and the third explored discharge and life after the services. However, it was recognised that participants may want to talk about certain periods in their life in more depth than others, or

might go back and forth between different times and experiences. As such, this allowed individual participants a flexible approach to the interview time allocated, to allow sufficient freedom to tell and order their stories as they wished. All interviews were digitally recorded and transcribed for analysis.

Interview transcripts were imported into NVIVO (QSR International), a qualitative data analysis computer software package, and the data was analysed using the Framework Analysis Approach. Framework Analysis was used as it was specifically developed for applied qualitative research that is undertaken to generate policy. In particular, the trustworthiness and transparency of Framework Analysis made it the preferred choice to meet the set objectives of this investigation, and was chosen for this study due to its capacity to handle large quantities of textual data in a rigorous, transparent and logical process of textual analysis [16–18].

The initial stage of this method of analysis involves immersion in data contained in the transcripts of all participant interviews. Transcripts were added systematically to NVIVO to begin to catalogue emerging themes. In line with the Framework Analysis process, interview transcripts were analysed, and an initial thematic framework was generated using traditional coding, which was then cross-referenced across the dataset using the auto-coding function of NVIVO. This initial thematic framework was highly grounded in the specific details of participant accounts and provided a comprehensive index of themes, which then provided a foundation for further stages of analysis. The next stage of analysis focused on interpreting and explaining the meaning and broader significance of sub-themes. This stage involved a reorganisation of sub-themes around the developing super-ordinate themes, with decisions around the consolidation, amalgamation and reduction of themes driven by the extent to which these were supported across participant accounts. The final stage of analysis involved a process of further conceptualisation of themes. This was undertaken by three Senior Research Assistants (GW, GMc, NF) in consultation with the Principal Investigator (MK). Researchers maintained a particular focus on the aims and objectives of the study, whilst considering the implications of the findings for policy provision. This approach to analysis enabled us to work in an incremental process from themes grounded in the data, through to the more abstract interpretations of the wider significance and meaning of these themes.

This method to facilitate systematic thematic analysis of data and to create a balance between reducing and summarising data and remaining attuned to individual cases [15,19]. A cyclical process was used to refine the superordinate themes. A key strength of Framework Analysis is to provide a clear audit trail of how conclusions were derived from the data.

## Results

Thirty-two participants took part in this study. The sample consisted of 30 males and two females, aged between 40–95 years (mean = 69.4, SD = 14.56). Participants represented all three branches of military services, with 19 having been deployed and 13 not having been deployed during their careers. Limb-loss was attributable to service for 14 of the sample, whereas 18 individuals experienced post-service limb-loss. Most individuals experienced lower limb loss, but the nature of limb loss differed over the sample.

Three superordinate themes were generated from the data: Barriers to transition, disparity of care, and the enduring challenge of limb-loss (Figure 1).

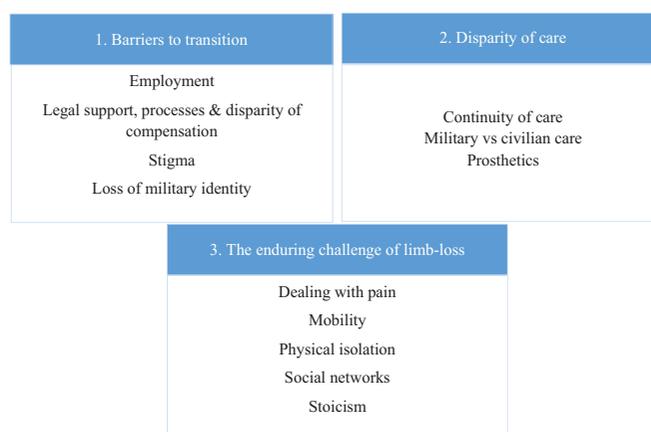


Figure 1. Superordinate themes.

### Barriers to transition

The data were analysed with a guiding assumption that transition is not a discrete and linear phase of exiting the military and returning to civilian life, but a protracted process of renegotiating identity and rediscovering a sense of belonging. This process is further complicated by the experience of limb amputation, which caused disruption to the veterans' intended life. Military and post-military employment was affected, and individuals felt that disparities existed in legal support and compensation, as well as stigma and loss of military identity.

### Employment

Finding suitable employment was crucial to maintaining independence when transitioning back to civilian life. This was true of independence in a financial sense, but also in a social-relational one; the feeling that veterans could still use their skills and could be recognised as productive individuals, contributing to society. Education and skills developed through the military were not necessarily transferable to the civilian sector, with limitations imposed by limb-loss further restricting options for a new career.

They'd advise you "Well really looking at what you did in the army, I mean really your skillsets [name] are you know well maybe you can do bricklaying? Oh no you're an amputee now, you might struggle on sites and well really your bricklaying days are over (Participant 29, aged 43, male, deployed, post-service limb-loss)

Many participants reported difficulties in obtaining employment after limb-loss and preferred not to disclose their disabilities to potential and actual employers in order to counter the risk that they be may discriminated against.

I didn't want people to know I had one leg basically... So when I applied for a job I would never tell them I had a disability... they need to find it out if they want to know (Participant 6, aged 55, male, non-deployed, in-service but not attributable limb-loss)

The majority of participants articulated a preference to continue working after they had lost a limb, but found difficulty finding employment and this impacted greatly on their sense of self-worth, reporting that they found the whole process "demoralising" (Participant 2 aged 44, male, non-deployed, post-service attributable limb-loss) at times. The determination not to be seen as "disabled" and in receipt of charity was very strong and the harmful effects of unemployment were evident across the study population:

I don't want to be seen as a charity. I want to know that I can go out there, earn the money in my own right ... That's why I won't apply for all the disability benefits because I don't want them... I don't want ...

for the country to label me as a scrounger and as a dole-dosser ... I want a job (Participant 2, aged 44, male, non-deployed, post-service attributable limb-loss)

As such, it was clear that from the veterans' perspective, gaining meaningful employment post-injury was a key contributing factor towards not only psycho-social wellbeing and a sense of feeling and being "independent," but also an important marker of successful transition. Indeed, for some participants who were injured in-service, there was a dual transition to be made; from being able-bodied to disabled, and from military to non-military employment. This dual transition created turmoil from some, but was somewhat eased if veterans were able to embark on new career projects which brought them meaning and a new source of income.

#### *Legal support, processes and disparity of compensation*

Receipt of some form of financial compensation, such as a War Pension or an award under the Armed Forces Compensation Scheme (a scheme in the UK service personnel injured in service are compensated for their injuries or illness and awarded a pension dependent on the nature of the injury or illness) appeared important in signifying recognition of military contribution. There was variation in the level of compensation received by participants. Furthermore, some participants highlighted a perceived inequality regarding the entitlement to compensation of those who lost a limb during service, and those injured during active or operational service, and those injured during peacetime or outside of the military.

So those that would be in my situation, but through conflict they get the best of the best. Those that have served Queen and Country by being injured through peacetime, they get nothing. Big discrepancy (Participant 2, aged 44, male, non-deployed, post-service attributable limb-loss)

The process of applying for compensation was described as lengthy, impersonal and remote. Participants reported feeling uninvolved in the compensation and war pensioning process and they felt unable to question the outcome.

But then a blooming...an accountant person sits there on a machine and reduces your claim by 30%. And we have to accept it. We have to accept what the barriers and the lawyers and people say (Participant 5, aged 60, male, deployed, in-service)

Participants also felt that there was a poor awareness at the time of their injuries of the pensions, compensation and benefits to which they were entitled. Indeed, many participants reported a lack of awareness of their financial rights, and received limited advice in this area, which significantly impacted their transition back to civilian life, and their ability to maintain independence.

And they [military] provided no advice on war pensions (Participant 6, aged 55, male, non-deployed, in-service, non-attributable limb-loss)

Participants also encountered difficulties navigating the compensation processes reporting a sense of disempowerment when navigating these systems.

Even through the process of applying for war disability pension (umm) it has been a nightmare (Participant 2 aged 44, male, non-deployed, post-service attributable limb-loss)

Access to compensation was perceived as a means to financial security. Participants described how inadequate compensation hindered their capacity to transition successfully into civilian life. From the participants' point of view, they felt alienated from the decision making process around their compensation entitlements

and felt unable to challenge the outcome of the decisions making due to the cost of legal representation.

#### *Stigma*

The findings suggest that internal stigma, or the perceived stigma that makes individuals reluctant to seek assistance was prevalent across all participants. Participants reported that the stigma associated with limb loss had a significant impact on their desire to help, or even accept help when it was offered to them. This in turn appears to impact on their ability to adjust to their limb-loss and transition back to civilian life. What was most notable was both the perceived need and the effort to which participants went to project an image of "normality" in their daily life.

I don't want to declare myself as a technically (umm) a severely disabled person. Because in your head you don't want to be that person, in your head you want to be normal (Participant 5 aged 60, male, deployed, in-service limb-loss)

The internalised stigma felt by participants was often exacerbated by what appeared to be unintentional stigma enacted through the attitudes and treatment of others encountered in daily life. Some participants reported feeling patronised by both members of the public and healthcare professionals, as well as an element of macabre voyeurism in relation to the mechanism of injury,

I still didn't find it easy to talk to ... normal ... non-disabled people ... there's no empathy with you, I mean you're just ... you're just asking me all these questions because you're nosey! (Participant 14, aged 66, male, deployed, in-service limb-loss)

However, a consistent theme across all participants was the observed change in the attitudes towards veteran limb-loss over recent years. Some attributed this to the work of charitable organisations who have increased public awareness, as well as events such as the Invictus Games and the Paralympics, which they felt may benefit younger veterans who have experienced limb-loss due to "*greater acceptance.*"

I think purely because of media exposure, people's attitudes have changed ... I think it's purely based on the number of people being injured, people probably met many more injured ex ... you know servicemen and women there's ... sporting ... sporting events on Paralympics on TV. A lot of my friends were absolutely glued to it. There is a general acceptance of disability and level of education to be brought is such that there's much greater acceptance (Participant 6, aged 55, male, non-deployed, in-service, non-attributable)

#### *Loss of military identity*

Participants described a sense of grief over the loss of their military career, networks and identity. While some participants were able to continue serving in the military post limb-loss, most were not. Participants who described their early ambitions to join the military and envisioned serving for a full career, reported that they had devoted little consideration to what they might do if, or when, they have to leave the military.

I hadn't really give a lot of thought to well what will I do if I leave the army? What will I do if I got injured? You didn't think about that necessarily. Maybe one or two would, but I hadn't. I was so career-driven you know and faced on the army. I hadn't really thought about "what if." So that was a big shock (Participant 29, aged 43, male, deployed, post-service limb-loss)

However, even where it was possible to continue serving, participants expressed their frustration that they would be unable to advance their careers as planned. Greater experience of civilian life prior to joining the military appeared to facilitate better

adjustment during this transitional period. The following participant drew comparisons between their experience, and those who joined the military at a young age.

I mean I knew a bit of it before I went in so I was basically more prepared to come out on Civvy Street than someone who got in when they were young, did their service and then come out... oh!! I can't imagine it. You know it must have been really hard for some of them. That's why... a lot of them end up on the streets because they can't cope. It's all done for you (Participant 12, aged 69, male, deployed, post-service limb-loss)

Many participants described having satisfied ambitions by developing a career outside of the military, or in the military charitable sector. Nevertheless, the findings of this study suggest that there are increased vulnerabilities associated with transitioning back to civilian life for those participants who joined the military at a young age and suffered limb loss.

### **Disparity of care**

The findings suggest that participants had varying experiences of care over the life-course, linked to how and when the limb loss occurred. Most notable were the disparities reported between military and NHS treatment. For instance, the ability to gain timely access to effective care and support was associated by participants with extended periods of increased pain, reduced physical activity and limitations in mobility. The repair, replacement and adjustment of prosthetic limbs emerged as the primary care need affecting them throughout the life-course. The speed and quality of prosthetic care was described as a key factor along with gaining timely access to specialist prosthetic services. Disparities highlighted under this theme demonstrated several facets to inequality in the care experienced by participants and mark important aspects of experience which help to explain variation in the subsequent trajectories of participants' personal stories, as they adapt to and re-build their lives following limb-loss.

### **Continuity of care**

Participants reflected on disparities experienced in relation to the provision of prosthetics, the process of rehabilitation and experiences of unsatisfactory care. They commonly expressed the need for ongoing healthcare, specifically tailored to amputees, throughout the life-course.

Poor continuity of care is a significant challenge for veterans affected by limb-loss. Participants described the negative physical impact of ineffective communication between different services (e.g., general practice and physiotherapy services), excessive waiting times between healthcare appointments and a paucity of long-term specialist prosthetic care.

The GP can do nothing. District nurse says it's not their business and (umm) [Occupational Therapists] no, physios no (Participant 25, aged 82, male, non-deployed, post-service limb-loss)

Participants described variation in the quality of care between different limb centres, sometimes describing a "postcode lottery" with respect to accessing care. In response, some participants resorted to paying for private care, while others were forced to travel long distances to access required services.

The physio it was a... a fifty mile round trip, three times a week (Participant 8, aged 56, male, non-deployed, post-service limb-loss)

Participants also reported the impact of poor continuity of care between named healthcare professionals, with this increasing the time taken to receive prosthetics and resulting in "conflicting information" (Participant 2, aged 44, male, non-deployed, post-

service attributable limb-loss). The participants perceived failure of health services to take responsibility for the provision of care, and a lack of co-ordination of treatment, was intrinsically linked to a poor experience of care, resulting in a feeling of not knowing where to turn to for support.

### **Military vs civilian care**

Much of the discussion around care centred on the differences between military care, and care provided by the NHS, including the transition between the two healthcare services. Connected with the sense of loss over a military identity articulated above, participants typically favoured care provided by the military. Some preferred military-based care as they felt that the care provided by the NHS was substandard. In addition, many participants drew attention to a lack of specialist treatments available within the NHS in terms of both mental health, and particularly around the ability to fit and manage prosthetics.

In the NHS there is a massive lack of qualified prosthetists who can actually deal with the robotic legs (Participant 2, aged 44, male, non-deployed, post-service attributable limb-loss)

It needs to be acknowledged that service personnel, 10 years post-injury, may not be aware of the Veterans Trauma Network (which provides specialist care to veterans with service-specific traumatic injuries) or Murrison Centres (providing enhanced services to veterans who have lost a limb as a result of their service in the armed forces). The issue here is not in relation to paucity of services but rather a need to raise awareness of available services among the veterans population across the lifespan.

Despite the general preference for military care over that provided by the NHS, some participants reported that the military did not provide them with sufficient follow-up care for their needs, and discussed their disappointment with the lack of support they received post-injury. Indeed, one participant recalled a change in the level of support they received after leaving the military, with this once again highlighting the risk that veterans may be left without support during the significant transitional period of early adjustment to limb-loss.

While you're still in the military it's available, once you leave the military [switch noise] no Headley Court. Nothing (Participant 5 aged 60, male, deployed, in-service)

Given the perceived lack of support provided by the military post-service, participants highlighted the importance of support provided by Blesma and other charitable organisations.

### **Prosthetics**

The participants also highlighted problems with prosthetics and fittings which veterans are able to access. Those with limb-loss in service, and/or attributable to service, gave examples of multiple limbs they had received since amputation. In particular, participants described the importance of socket fit and major issues caused by ill-fitting sockets.

Forget the fancy knee joints and technology below it, but the fit is the main thing (Participant 6 aged 55, male, non-deployed, in-service, non-attributable)

Some participants highlighted the different regulations of acquiring limbs for younger amputees, and the higher quality prosthetics available to those injured during compared to outside of service as a further illustration of disparity in care.

I mean look at them now, they get £50,000 legs and aftercare and everything. But before it was just a case of get on with it, you're a wimp (Participant 27, aged over 80, male, deployed, in-service attributable limb-loss)

Rehabilitation was pivotal in the care process post-amputation. Due to this continued and “*life-long*” rehabilitation, one participant referred to the prosthetist as the “*most important person in your life, next to your family*” (Participant 7, aged 95, male, deployed, in-service attributable limb-loss). However, not all individuals experienced the same degree of rehabilitation, with some individuals (both those with limb-loss attributable to service and those with non-attributable limb-loss) describing non-existent or inaccessible prosthetics services, or long waiting processes post-amputation.

It were a month or so before I could get my first prosthetic limb (through the NHS) because obviously you're all angry, your stumps all angry and sore and sorting yourself out (Participant 30, aged 79, male, deployed, in-service attributable limb-loss)

(The NHS have) given you the leg, we've told you how to walk, off you go and you just get on with your life (Participant 2, aged 44, male, non-deployed, post-service attributable limb-loss)

### **The enduring challenge of limb-loss**

There were a number of challenges individuals faced throughout their life course as a result of limb loss. These included persistent stump pain and phantom pain, mobility issues which in turn impacted social connections. It appeared that veterans' dominant response to dealing with such issues was adherence to a mostly inflexible stoicism and a military “get on with it” approach.

#### **Stoicism**

Participant attitudes to living with limb loss were often characterised by stoic acceptance, the majority of whom self-ascribed to the philosophy of “getting on with it” or “carrying on” in relation to managing and adapting to their limb-loss.

You've got to get on with it, it's not going to change (Participant 19, aged over 80, male, non-deployed, post-service limb-loss)

You've got to have the right attitude to these things I think. But personally I'm the sort of bloke who says I don't care, it don't matter. I'll get over it. That's my attitude. And whatever happens in your life if ... you've got to adapt to something different, you either adapt or you go under as far as I'm concerned get on with it, it as far as I'm concerned (Participant 12, aged 69, male, deployed, post-service limb-loss)

so it was just carry on as normal really wasn't it (Participant 15, aged 73, male, non-deployed, post-service limb-loss)

Participants also professed their independence and expressed a reluctance to rely upon others or to ask for help or assistance. While this potentially created a barrier to accessing formal and informal sources of support, this was not always the case, and one participant described an increased willingness to accept help as he got older.

As long as you're not too proud to not ask for assistance. And I think there is something in that... I am so independent, it is difficult to actually go to them and actually say (umm) I need help' And what is more vital? Practical help, financial help, welfare assistance, you've got to just (umm) accept... (Participant 5 aged 60, male, deployed, in-service)

#### **Dealing with pain**

A number of participants talked about the challenges of managing pain. A considerable amount of pain was attributed to ill-fitting prosthetic limb sockets. Pain levels were largely uncontrolled, and individuals described pain having an impact on their sleep,

mood, and mobility (either directly or by preventing them from using their prosthetics).

Phantom pain is also a bore. About once a month it comes on in my right stump which jumps around and prevents me walking or sleeping (Participant 7, aged over 80, male, deployed, in-service attributable limb-loss)

I've got constant pain twenty-four hours a day, all the time (Participant 8, aged 56, male, non-deployed, post-service limb-loss)

Participants also suggested that clinicians struggled to manage their pain levels effectively and often prescribed high doses of strong painkillers. They expressed concern about becoming medication-dependent and there was little evidence of any alternative approaches to pain management.

they give you a carrier bagful of medication, Tramadol, Oramorp... and I obviously did... I got addicted to morphine (Participant 23, aged 75, male, deployed, in-service attributable limb-loss)

In addition, it was felt that such high quantities of medication could potentially constitute a risk to the veterans' safety.

I'd stacked all the morphine and all the other tablets I had and I sat there with a pint glass and I emptied a blister of tablets into my mouth (Participant 2, aged 44, male, non-deployed, post-service attributable limb-loss)

#### **Mobility**

As a result of the pain or ill-fitting limbs, many participants described mobility issues which impacted their ability to undertake everyday activities, impinging on their quality of life, their self-esteem and their ability to maintain independence.

I was always (umm) a very practical person. I've done everything in houses. I've built extensions (umm) and (umm) maintained cars and all that sort of thing throughout really. And of course you can't do these things now, not well enough to be satisfied with it (Participant 26, aged 55, male, deployed, post-service attributable limb-loss)

While some participants were able to stay active and maintain their engagement in fitness and leisure pursuits, others described their struggle to undertake more basic activities of daily living. The age at which limb-loss occurred also affected the regaining of mobility, with younger veterans described as more able to become accustomed to walking with prosthetics. Likewise, participants described the complications that limb-loss posed to the usual ageing process due to the stress that walking with prosthetics imposed on the body, and the co-occurrence of limb-loss with other long-term conditions. Risk of falling when walking with prosthetics was also a common issue, becoming more difficult to endure with age and inhibiting mobility.

I think the younger... the guys, the twenties and the thirties and what not that you know have a lot of years to go and were fitter and what not and could resist... make the falls without breaking things and what not. (umm) They were able to master this thing (Participant 26, aged 55, male, deployed, post-service attributable limb-loss)

#### **Physical isolation**

For some participants who describe being very fit and active prior to injury, changes in physical capability sometimes required psychological adjustment, potentially resulting in frustration at not being able to fulfil usual activities and social roles. Some described how difficulty getting out of the house had resulted in “*worthlessness*” and “*despair*” (Participant 10, aged 49, male, non-deployed, post-service limb-loss), and feeling “*trapped*” within their own home (Participant 27, aged over 80, male, deployed, in-service attributable limb-loss).

This physical isolation resulted in feelings of loneliness among some participants. One participant described a particular vulnerability to loneliness at certain transition points in life, for instance, the death of their partner and when their children left home. Another described how the loneliness worsened during specific times of the year.

I think personally it's the (umm) leaving the nest syndrome has hit me quite hard. (Participant 5 aged 60, male, deployed, in-service)

It doesn't mean I don't get lonely. I do and I sometimes feel it badly. Times like Christmas are appalling for me (Participant 9, aged 58, male, non-deployed, in-service, non-attributable limb-loss)

### Social networks

Some participants described how limb-loss had altered their ability to form and maintain relationships due to concerns around self-image, an inability to engage in similar activities to others, or other people's assumptions that veterans who have experienced limb-loss and their families would become reliant upon them. Opportunities provided by third sector organisations were extremely important in helping participants to stay socially connected. The most beneficial group were with peers – either ex-military or other amputees.

Like-minded people with limbs missing or the loss of use of limb. It's great banter, it's military, it's (umm) social and (umm) I you know I don't think I could do without it (Participant 5 aged 60, male, deployed, in-service)

## Discussion

This study illustrates that veterans who are affected by limb-loss require timely access to quality support and specialist healthcare services. Participant narratives highlighted key factors that were important in supporting physical, psychological and social well-being, as well as the maintenance of independence. Special attention must be paid to older veterans who experienced limb-loss prior to contemporary medical advances in prosthetic care.

The analysis identified three superordinate themes within the participant's life stories: Barriers to Transition, Disparity of Care and The Enduring Challenge of Limb-loss.

Our findings resonate with previous research on long-term adaptation to limb-loss. For instance, a review of research on psychosocial adjustment to lower limb loss revealed that individuals must adapt their physical and social functioning in response to amputation, and that loss of a limb often necessitates an ongoing process of discovery and accomplishment [13]. However, stump pain, phantom limb pain, and coping styles are important mediators of long-term adjustment with some studies identifying a tendency of newly amputated persons to deny the emotional impact of their limb loss and to adopt a 'heroic cheerfulness' in response [20]; a finding mirrored in our research.

Extending the previous research in this area, our findings emphasise the significance of undergoing a *dual transition* for military personnel injured during service. This dual transition occurs when personnel simultaneously (or near simultaneously) undergo limb amputation due to serious injury or disease while also navigating the personal and cultural transition from military to civilian life. Each of these transitions involves personal challenges resulting in various needs for support and adaptation. The transition from having a 'tough,' active and physically strong military body to being 'disabled' often entails significant personal and social reinvention of the self [21]. Likewise, the transition from military to civilian life requires a veteran to re-learn the 'rules' of

civilian life and adapt their military ways of being to civilian life and work [10]. Based on our findings, we suggest that encountering both of these life-changing events at the same time creates a need for practical and psychological support in order to foster positive adaptation and coping techniques. In particular, undergoing transition from the military under circumstances not of one's choosing (e.g., *via* medical discharge compared with 'normal' end of service) can leave a service person unprepared for civilian life and unhappy with their career ending, potentially resulting in a kind of grief reaction centred on the loss of military career, identity and community.

Given these unique challenges that military personnel face, in addition to the aforementioned challenges of adapting to amputation, it is important to consider the pathways of support available to personnel facing the dual transition of limb-loss and medical discharge. Like the U.S., the UK seems increasingly to be adopting a sports-based model of rehabilitation for wounded and injured personnel. This is evident not only with the rise of the Invictus Games as an annual international sporting fixture, but also with the adoption of sports-based rehabilitation approaches among a wide network of local and national military charities. This approach presents many advantages, as documented in previous research [6]. Indeed, it is suggested, sport and physical activity can help veterans rediscover meaning and purpose in the wake of life-changing injuries, provide fun and positive social interactions, as well as a means of "active coping"[6]. However, there may also be drawbacks. As Messinger has revealed, focusing heavily on sport potentially omits other life domains (such as work, study, and the pursuit of other new opportunities) which may be of equal – or potentially greater – value in terms of veterans' ongoing and future life trajectories [21]. Indeed, our study pointed out the significant role of work and career in veterans' post-injury lives, suggesting that bespoke services designed to support veterans who have experienced limb-loss in pursuit of new career opportunities may be particularly valuable for ongoing rehabilitation.

Attitudes among military veterans to seeking help are likely to be intensified by traits such as stoicism, psychological resilience and reserve. These traits are promoted in military culture and highly valued [22] and point to important factors that may not be consistent across the non-veteran, ageing population. The emerging themes present an array of differences related to access, use and experience of care by 'older' veterans who have suffered limb-loss.

This study has shown that maintaining independence across the life-course is a combination of physical, psychological and social functions. Veterans who are affected by limb-loss require timely access to high quality support and specialist healthcare services, starting from the time of amputation and extending throughout the life course in order to maintain independence.

Healthcare providers and policy makers must ensure that every veteran who has experienced limb-loss is able to access services when required and should aim to standardise the quality of care across services.

Health and social care providers must be aware of the increased vulnerability of veterans affected by limb-loss as they age. In order to ensure that veterans are able to maintain their health, wellbeing and independence for as long as possible, special attention must be taken to ensure that older veterans receive sufficient care and support to manage their healthcare needs.

Veterans who joined the military at a young age may be at a significant disadvantage in terms of securing employment after

leaving the military. Efforts to improve the accreditation of skills gained within the military should continue. Additionally, care should be taken to ensure that veterans who are living with limb-loss receive the support and advice they require in order to access education and training opportunities after limb-loss.

This study has limitations in that it does not fully represent female veterans who have experienced limb-loss as only two took part in this study. In addition, this study does not explore similarities or compare non-military personal or younger amputees where limb-loss has resulted from traffic accidents or injuries. Furthermore, all participants involved in this study were members of BLESMA. Therefore, the findings are potentially not transferrable to non-members.

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## **APPENDIX G**

### **PAPER 7**

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# Social isolation and loneliness of UK veterans: a Delphi study

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<b>Background</b>	Evidence increasingly acknowledges the impact of social isolation and loneliness on the lives of military veterans and the wider Armed Forces Community.
<b>Aims</b>	The study gathered expert consensus to (i) understand if veterans are considered 'unique' in their experiences of social isolation and loneliness; (ii) examine perceived factors leading to social isolation and loneliness of veterans; (iii) identify ways to tackle veterans' social isolation and loneliness.
<b>Methods</b>	This study adopted a three-phase Delphi method. Phase 1 utilized a qualitative approach and Phase 2 and Phase 3 utilized a mixed-methods approach.
<b>Results</b>	Several outcomes were identified across the three phases. Transition out of the military was viewed as a period to build emotional resilience and raise awareness of relevant services. It was also concluded that veterans would benefit from integrating into services within the wider community, and that social prescribing services could be a vehicle to link veterans to relevant services. Furthermore, access to, and the content of, programmes was also of importance.
<b>Conclusions</b>	These findings illustrate various important interventional aspects to consider when funding and implementing programmes focussed on tackling social isolation and loneliness.
<b>Key words:</b>	Delphi; loneliness; military; social isolation; veteran.

## Introduction

Social isolation and loneliness are different concepts but are often inaccurately defined and measured as one. Loneliness is a subjective social and emotional experience, characterized as the discrepancy between the social relationships we have and the one ones that we wish to have [1], whereas social isolation is an objective state in which there is minimal social interactions and can be a result of living alone and having few social network ties [2].

Despite there being no direct link between social isolation and loneliness [3], research has found that individuals can experience both social isolation and loneliness together, especially if experiencing factors such as living alone, never being married, widowhood, advanced age and poor health [4]. Whilst the vast majority of evidence has been focussed on the wider population, evidence increasingly acknowledges the impact of social isolation

and loneliness on the lives of military veterans and the wider Armed Forces Community [5,6].

The military is a distinctive institution as it demands complete social integration as part of its culture and purpose [7]. The uniqueness of social integration within military institutions has fundamental implications on social participation and social networks, and this in turn has an impact on service leavers [7]. Kuwert *et al.* [8] found that almost half of the study's 2025 US veteran sample reported feeling loneliness 'some of the time' with loneliness being linked to functional limitations, number of lifetime traumatic events, perceived stress and symptoms of depression and post-traumatic stress disorder. This was supported by a survey carried out in the UK, by the Royal British Legion, who reported that one in four (25%) military veterans 'often' or 'always' felt lonely, and almost as many felt socially isolated (24.5%) [9].

Research carried out by Hatch *et al.* [7] established that service leavers experience less social participation

## Key learning points

### What is already known about this subject:

- Social isolation and loneliness impact on the lives of military veterans and the wider Armed Forces Community.
- Veterans experience social isolation and loneliness in a unique way due to the increased number of transitions, military-related trauma, physical health and losing touch with comrades.

### What this study adds:

- Veterans would benefit from integrating into the wider community, and social prescribing services should link veterans to relevant services. Transition out of the military was viewed as a period to build emotional resilience and raise awareness of relevant services.
- Access to, and the content of, programmes was also of importance. The value of consultation with veterans themselves (or the target population) is fundamental to success.
- There is a need for further understanding of the cause and impact of social isolation and loneliness of veterans. An initial lack of consensus demonstrated the varying views of experts, some of which was significantly contrary to developed evidence.

### What impact this may have on practice or policy:

- Transition from the military is a key period to highlight the impact of social isolation and loneliness, and to increase emotional resilience. Lifelong psychosocial well-being should be recognized and promoted throughout transition.
- Veterans should be made aware of both civilian- and military-specific services available to them across the UK. Both social prescribing and transition are key to this. The Ministry of Defence, and Health and Social Care service providers must understand the severity of these issues, and their consequences, throughout the life course.
- Activities/programmes for social isolation and loneliness should consider how individuals access them. Transportation and access to activities are fundamental to their success, to ensure that those who live in rural areas or have trouble with transportation can attend.

outside of work, less engagement with military contacts and more isolation than serving personnel. Reduced social participation and support is associated with heightened post-traumatic stress disorder and common mental disorders [7,10], with reservists experiencing more difficulty during post-deployment transition [10]. There are further intrinsic and extrinsic factors related to military service, which present unique experiences of social isolation and loneliness, such as increased number of transitions, military-related trauma, physical health and losing touch with comrades [5,6,11,12].

Whilst it is possible to highlight the obvious unique military experiences that affect experiences of social isolation and loneliness, there is currently a lack of research in this area, to ascertain if the prevalence of loneliness and social isolation differs between the military and non-military population. It is acknowledged in the 2018 UK's Veteran Strategy that there is a lack of research looking at the issues of social isolation and loneliness in the Armed Forces Community [13], and therefore the research acknowledged above is primarily non-peer-reviewed evidence, and non-UK-based. Therefore, there is a necessity to examine experiences of both social isolation and loneliness in the UK veteran community. The studies that are available primarily focus on cause and impact of social isolation and loneliness. In addition, there is a lack of literature looking at 'what works' when aiming to tackle social isolation and loneliness in this

population [6]. Therefore, this study aimed to gather expert consensus relating to the cause, impacts and ways to tackle social isolation and loneliness of military veterans and aimed to:

- Understand if veterans are considered 'unique' in their experiences of social isolation and loneliness
- Examine perceived factors leading to social isolation and loneliness of veterans
- Identify ways to tackle veterans' social isolation and loneliness

## Methods

A mixed-methods approach, using the Delphi method, was utilized and aimed to achieve expert consensus [14,15]. For the purpose of the study, an expert was defined as a military veteran or an individual who works with military veterans, and has an understanding or experiences of, social isolation and loneliness. In order to minimize sample bias, we purposefully recruited 'experts' from academia, military charities, non-military charities and government officials. The research team identified 24 individuals across the UK as experts in the field, and each individual was contacted via email in each phase. Using a snowball technique, participants were asked to forward the study to anyone they knew who fit the study's criteria of 'expert' [16]. The same 'experts' were

contacted in each phase; however, due to anonymity it is unknown who responded in each phase.

There were no definitions given to the ‘experts’ on the terminology used throughout all phases of the survey (e.g. social prescribing) to ensure that the ‘experts’ gave their own opinions on what it meant to them. Prior to each survey being sent to the expert panel, it was piloted with up to five individuals using the Think Aloud technique [17] to ensure accuracy and readability.

The study was conducted online over three phases. Phase 1 adopted a qualitative approach while Phases 2 and 3 utilized a mixed-methods approach. Each round was developed separately and was live for 3 weeks, taking 10–15 min to complete.

Phase 1 aimed to identify participants’ opinions of social isolation and loneliness in the veteran population. The questions within Phase 1 were developed from previous evidence, including academic research and grey literature (see Table 1). The data from Phase 1 were analysed using thematic analysis [18] using NVivo 12 software to organize these data. As part of this thematic analysis, three members of the research team (C.L., G.McG., G.W.) separately familiarized themselves with the data, before separately generating initial codes. In an iterative cycle, codes were discussed as a team and themes were generated, presented and reviewed.

In line with the Delphi process, categories and statements used within Phase 2 were developed from data generated in Phase 1. Phases 2 and 3 utilized Likert scales (see Table 1). Each statement was based on a five-point Likert scale ranging from ‘strongly agree’ to ‘strongly disagree’. Optional open-ended questions were provided at the end of each category. Participants’ scores were averaged with a score of 1 equating to ‘strongly agree’, 2 ‘agree’, 3 ‘unsure’, 4 ‘disagree’

and 5 ‘strongly disagree’. Consensus of statements in Phase 2 was analysed using a consensus rate of 70% agreement [19], and statements reaching this consensus, based on this calculation, were re-presented in Phase 3 to identify any further consensus. Descriptive statistics were calculated in Phases 2 and 3 using IBM SPSS Statistics 25.

The study received full ethical approval from Northumbria University’s Ethical Approval System (reference: 12357).

## Results

Phase 1 posed biographical questions (see Table 2) and five open-ended questions to the expert panel (see Table 1).

Four themes were generated from participant responses: accessing programmes/activities, management and organization of programmes/activities, focus of programmes/activities and transition to civilian life.

Participants highlighted the importance of the ability to access programmes/activities aimed at tackling social isolation and loneliness. Transportation was perceived as an issue for veterans, which had the potential to hinder attendance.

Poor public transport [can lead to social isolation and/or loneliness for older veterans] (Participant 3, veteran <60 years old)

In addition, participants felt that living in a rural area would present further problems in accessing help.

Isolation due to demographics in rural life may increase the risk of isolation with lack of transport a contributing factor (Participant 12, veteran <60 years old)

**Table 1.** Participant demographics

	Phase 1 ( <i>n</i> = 27), <i>n</i> (%)	Phase 2 ( <i>n</i> = 19), <i>n</i> (%)	Phase 3 ( <i>n</i> = 10), <i>n</i> (%)
<b>Veteran status</b>			
Veteran <60 years old	15 (55)	8 (42)	3 (30)
Veteran ≥60 years old	4 (15)	3 (16)	1 (10)
Not a veteran	7 (26)	6 (31)	4 (40)
Undisclosed	1 (4)	2 (11)	2 (20)
<b>Area of work</b>			
Military charity	14 (51)	8 (42)	4 (40)
Academia	4 (15)	3 (16)	1 (10)
Ministry of Defence	2 (7)	1 (5)	1 (10)
Local Government	2 (7)	1 (5)	1 (10)
Non-military charity	1 (4)	2 (11)	0 (0)
NHS	1 (4)	0 (0)	0 (0)
Aftercare service	1 (4)	0 (0)	0 (0)
Carer	1 (4)	0 (0)	0 (0)
Covenant	0 (0)	1 (5)	0 (0)
Undisclosed	1 (4)	3 (16)	3 (30)

**Table 2.** Questions presented to the expert panel in Phase 1

## Questions

'From your experience, do you believe that older veterans (aged 60+) experience social isolation and/or loneliness in a different way to older adults in the wider population? Please explain'

'From your experience, do you believe that older veterans (aged 60+) access programmes to tackle social isolation and/or loneliness in a different way to older adults in the general population? Please explain'

'From your experience, do you believe that younger veterans and older veterans (aged 60+) experience social isolation and/or loneliness, or access programs to tackle social isolation and/or loneliness in different ways? Please explain'

'From your experience, what do you believe are the factors that lead to social isolation and/or loneliness for older veterans? Please explain'

'From your experience, how would you tackle social isolation and/or loneliness in older veterans? Please explain'

Due to the issues identified, it was suggested that increasing access and providing transportation would better enable veterans to attend activities.

Provide increased accessibility to transport options to and from social activities (Participant 12, veteran <60 years old)

There were multiple suggestions of how programmes/activities aimed at tackling social isolation and loneliness should be managed and organized, including provision of age-specific activities/programmes.

Programmes for younger veterans may also focus on areas such as employability while for older veterans it is more likely to be on areas such as independent living skills, crafts, hobbies and social activities (Participant 16, not a veteran)

It was suggested that veterans should have an integral role in the delivery of programmes/activities in terms of offering support to other veterans who may be struggling with social isolation and loneliness.

There was a particular benefit to overcoming or preventing loneliness from coming together to participate in activities with other veterans (Participant 16, not a veteran)

Participants discussed the issues veterans face in terms of social isolation and loneliness, and how these could be tackled within these programmes/activities. Bereavement was identified as one of the main factors affecting social isolation and loneliness, and this was perceived as being more prevalent for older veterans.

Younger vets will likely still have friends and family and are less likely to feel lonely compared to older vets (Participant 14, veteran <60 years old)

There was also discussion around the use of technology and some assumptions as to the potential barriers faced.

Technology advances is one way in which accessing programs will test the older veteran. Access to the World Wide Web is required and the ability to do this is not possessed by all (Participant 19, veteran <60 years old)

Transition from the military to civilian life was believed to have a significant impact on experiences of social isolation and loneliness.

[There is] no help when leaving the military (Participant 11, veteran <60 years old)

Participants suggested that problems with transitioning from military to civilian life can lead to further problems with veterans struggling to reconnect to civilian life. This was believed to extend to difficulty connecting with civilians as well as local services.

They are a very unique community and often will interact with each other but don't necessarily interact with those who are not veterans (Participant 20, not a veteran)

From the findings in Phase 1, 26 statements were created and presented to participants in Phase 2 (Table 2). Table 3 shows the mean (*M*) and standard deviation (*SD*) for each statement, with 1 being strongly agree and 5 being strongly disagree. Ten of the 26 statements achieved the consensus rate.

The participants' responses to the open-ended questions further supported the statements that achieved consensus. For example, participants agreed that technology should be supplementary within programmes/activities rather than a focus (mean 2.4).

Technology can be off-putting to some while others embrace it, so a balance is required (Phase 2, Participant 1, veteran ≥60 years old)

Participants mostly agreed that social prescribing services should link veterans to both community/civilian services (mean 1.8) and military-specific services (mean 2.0). Social prescribing enables GPs, nurses and other primary health care professionals to refer people to a range of local, non-clinical services for practical and emotional support [20].

It is important veterans can receive support from whoever is best placed to provide it, and we often signpost our members to other services and charities who can also help them (Phase 2, Participant 15, not a veteran)

The 10 statements achieving consensus in Phase 2 were re-presented to participants in Phase 3 (see

**Table 3.** The statements presented to participants ( $n = 19$ ) in Phase 2 with range, mean (SD)

Question	Range	Mean (SD)	Agreed upon cumulative %
Social prescribing services should link veterans to relevant community/civilian services	1–4	1.8 (0.5)	94.1
Building emotional resilience during transition is an important part of transitioning to civilian life	1–4	1.8 (0.8)	88.2
Veterans would benefit from integrating into the wider community	1–4	1.8 (0.8)	88.2
During transition, it is important to raise individuals' awareness of services across the UK, as well as geographically specific services	1–4	1.8 (1.0)	76.5
Awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness	1–4	1.9 (0.9)	82.4
Access and transportation should be considered when delivering programmes/activities	1–4	1.9 (1.0)	82.4
Awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness	1–4	1.9 (1.0)	82.4
Social prescribing services should link veterans to relevant military-specific services	1–4	2.0 (0.9)	76.5
Programmes/activities should solely aim to bring people together and interact with one another	1–4	2.3 (1.0)	52.9
Programmes/activities should also aim to tackle other personal issues, such as bereavement, employment, emotional resilience, etc.	1–4	2.3 (1.0)	64.7
Technology should be supplementary within programmes/activities	1–4	2.4 (0.8)	70.6
The content of regular programmes/activities should change frequently	1–4	2.4 (0.8)	70.6
Programmes/activities should be inter-generational	1–4	2.4 (1.0)	64.7
Programmes/activities should be peer-led	1–4	2.5 (1.0)	64.7
Programmes/activities should be led by third sector military-specific charities/organizations	2–4	2.6 (0.7)	47.1
The content of programmes/activities should mirror community/civilian services	1–4	2.6 (0.9)	52.9
It does not matter which third sector charity/organization leads the programme/activity	1–5	2.6 (1.3)	52.9
Separate programmes/activities should be carried out for those living in urban areas and those living in rural areas	1–4	2.7 (1.1)	41.2
Programmes/activities should involve age-specific activities	2–4	3.0 (1.0)	17.6
Programmes/activities should be based in a city/town centre	1–4	3.1 (1.0)	35.3
Technology should be the focus of programmes/activities	1–4	3.3 (0.9)	17.6
Programmes/activities should be veteran-exclusive	1–4	3.4 (1.0)	23.5
Programmes/activities should be age-specific	2–4	3.5 (0.8)	47.1
Programmes/activities should be held in one continuous geographical location	2–5	3.5 (1.1)	23.5
Programmes/activities should be skill-based	2–5	3.5 (0.8)	11.8
Programmes/activities should be based in the person's own home	2–5	3.7 (0.8)	11.8

**Table 4).** This was the method used to gain further consensus of the specific areas agreed upon by the participants in Phase 2.

All but one statement reached higher agreement than in the previous round. Once more, the statistics were supported by open-ended responses.

Awareness raising of veteran-specific services (mean 1.8) and of civilian-specific services (mean 1.9) were both viewed as being central to the success in tackling social isolation and/or loneliness.

There should be a good mix [of linking veterans to both community/civilian specific services] (Phase 3, Participant 2, not a veteran)

Participants also 'agreed' that there was a role for social prescribing services to link veterans with both relevant community/civilian services (mean 1.5) and relevant military-specific services (mean 1.8).

I believe it would help veterans transition better if they were linked to a mixture of military and civilian services awareness of services (Phase 3, Participant 2, not a veteran)

Again, the idea that the use of technology in programmes/activities aimed at tackling social isolation and loneliness should be supplementary was agreed upon (mean 2.1).

**Table 4.** Range, mean and SD participant responses ( $n = 10$ ) to the 10 statements in Phase 3

Question	Range	Mean (SD)
In Phase 2, 94.1% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant community/civilian services.	1–2	1.5 (0.5)
In Phase 2, 88.2% of participants either agreed or strongly agreed that building emotional resilience during transition is an important part of transitioning to civilian life.	1–2	1.6 (0.5)
In Phase 2, 88.2% of participants either agreed or strongly agreed that veterans would benefit from integrating into the wider community.	1–4	1.6 (1.1)
In Phase 2, 76.5% of participants either agreed or strongly agreed that during transition, it is important to raise individuals' awareness of services across the UK, as well as geographically specific services.	1–2	1.8 (0.5)
In Phase 2, 82.4% of participants either agreed or strongly agreed that awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness.	1–2	1.8 (0.5)
In Phase 2, 82.4% of participants either agreed or strongly agreed that access and transportation should be considered when delivering programmes/activities.	1–2	1.8 (0.5)
In Phase 2, 76.5% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant military-specific services.	1–3	1.8 (0.7)
In Phase 2, 82.4% of participants either agreed or strongly agreed that awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness.	1–3	1.9 (0.6)
In Phase 2, 70.6% of participants either agreed or strongly agreed that technology should be supplementary within programmes/activities.	2–3	2.1 (0.4)
In Phase 2, 70.6% of participants either agreed or strongly agreed that the content of regular programmes/activities should change frequently.	2–4	2.4 (0.7)

Where technology is available and can enhance the experience it should be available (Phase 3, Participant 10, veteran <60 years old)

Participants also agreed that transportation should be considered when delivering programmes/activities (mean 1.8), and that the content of the programmes/activities should also be changed frequently (mean 2.4).

Where a veteran is physically unable to access services he/she should be facilitated (Phase 3, Participant 1, veteran <60 years old)

Variety will keep services fresh and interesting (Phase 3, Participant 3, veteran <60 years old)

## Discussion

Our study aimed to gather expert consensus relating to the cause, impact and ways to tackle social isolation and loneliness of military veterans. 'Experts' completed three phases of the survey, resulting in consensus of 10 statements. These statements focussed on the importance of the period of transition, the role of social prescribing and the features of/access to interventions tackling social isolation and loneliness.

Transitional life events, such as parenthood, taking on a caring role, and retirement are well-recognized as periods which can increase risk of social isolation and loneliness [21]. Military transition is one transitional life event that is receiving more attention for its links to the potential risk of social isolation, as service leavers can experience reduced social participation, social

connection and heightened isolation when leaving the Armed Forces [7].

However, it is also recognized that a positive transition experience can significantly enhance the success of reintegration into civilian society and create less dependency on social support of charitable services, for both the ex-serving personnel, and their family [22]. This study highlighted the perceived importance of the transition period as being key to improve awareness of social isolation and loneliness, build emotional resilience and to signpost individuals to relevant military-specific and civilian services. This paper is in support of the Royal British Legion's recommendation to introduce a module on social resilience as part of resettlement provision, with a focus on loneliness and social isolation and preparation for transition [6]. Lifelong psychological well-being should be recognized and encouraged throughout transition, and as highlighted in this study, utilized as a time to build emotional transition, and signpost to relevant services.

Social prescribing is a holistic approach to health and well-being and recognizes that health is primarily determined by social, economic and environmental factors, and aims to support individuals to take greater control of their own health and well-being. Findings demonstrated that experts perceive social prescribing as a useful tool to allow individuals to link to relevant services and support networks. Social prescribing services have been shown to be successful in reducing social isolation and loneliness [23,24]. The renewed focus on social prescribing within the NHS long-term strategy [20] may increase the use of social prescribing as a method of signposting

individuals to services, with a focus on developing services for veterans that are designed for their particular needs, including services that are accessible and offer the 'right' care and support regardless of when people leave the Armed Forces. There is a vast number of military associations for those who want to retain a connection to the military, many of them offering various programmes and activities; however, it is equally as important to provide for those who wish to integrate into their civilian society and develop a sense of local community [13]. Therefore, it is fundamental to provide information on both military-specific and wider programmes/activities associated with reducing social isolation and loneliness.

Equity of access to programmes/activities relating to social isolation and loneliness is fundamental. The Campaign to End Loneliness and Age UK have developed a framework conceptualizing the importance of transportation as a 'gateway service' that is the 'glue' to keeping people active and engaged and allowing individuals to come together [25,26]. Within this study, assistance with transportation was perceived as an important way to remove some of the barriers to participation. Research specifically focussing on older veterans identified lack of access to services, financial constraints, physical limitations and transportation difficulties as barriers to participation [5,11,27]. These differences need to be considered when designing interventions aimed at tackling social isolation and loneliness within this subpopulation, and one way of doing so is to consider access to, and availability of, transportation [9]. Interventions aimed at tackling social isolation and loneliness need to be responsive to the needs of veterans who may struggle to access appropriate transportation.

Whilst the findings have furthered knowledge in the area, there are limitations to the study. The study was designed from non-peer-reviewed and non-UK-based research due to the lack of research in the area. Furthermore, whilst a wide range of 'experts' were contacted during the recruitment period, the majority of those who partook in the study were those that work in a military charity, and therefore may create a bias. The number of 'experts' reduced to 10 in the final phase may also present problems as conclusions may be hard to draw from a limited sample. Finally, there were no definitions given to participants for each of the concepts introduced to them (e.g. social prescribing). Whilst this was deliberate, with the intended aim of the 'experts' giving their own opinions, it could result in uncertainty in terminology.

Future research should aim to capture veterans' perspectives of the unique factors they face when it comes to social isolation and loneliness to further develop this narrative, and the evidence base. Furthermore, future research must be carried out with the wider Armed Forces Community to better understand the causes, impacts and methods to tackle social isolation and loneliness in this wider community.

In conclusion, while previous research has shown the negative consequences of social isolation and loneliness on an individual's physical and mental health and the unique factors that veterans face with it, the current study found the importance of the period of transition, the role of social prescribing and features to be considered within programmes/activities when aiming to tackle social isolation and loneliness.

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## Competing interests

None declared.

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**APPENDIX H**  
**RESEARCH REPORT 1**

Technical Report

Improving Access Report 2017 Understanding Why Veterans are Reluctant to Access Help  
for Alcohol Problems



## Improving Access Report | 2017

Understanding Why Veterans Are Reluctant To Access  
Help for Alcohol Problems



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## The Northern Hub for Veterans and Military Families Research

**The Northern Hub for Veterans and Military Families Research is a collective of academics, service providers and service users with an interest in improving the health and social wellbeing of veterans and their families across the life-span.**

The hub has evolved from the interests of Dr Mathew Kiernan Lieutenant Commander RN (Q) retired and Dr Mick Hill. It has established itself through an evolutionary process attracting and welcoming anyone with a genuine interest in its vision. We openly welcome visionary and innovative research that helps improve and understand the complexities that our veterans and their families experience across the whole life-span. A fundamental principle of the hub is collaboration in research for the benefit of others.



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Defence Imagery



### The Royal British Legion

The Royal British Legion help members of the Royal Navy, British Army, Royal Air Force, Reservists, veterans and their families all year round. They also campaign to improve their lives, organise the Poppy Appeal and remember the fallen.

The Royal British Legion provided funding for this project.

[www.britishlegion.org.uk](http://www.britishlegion.org.uk)



### Northumberland, Tyne and Wear NHS Foundation Trust

Northumberland, Tyne and Wear NHS Foundation Trust is one of the largest mental health and disability Trusts in England, working across Northumberland, Newcastle, North Tyneside, Gateshead, South Tyneside and Sunderland.

NTW helped with initial participant recruitment.

[www.ntw.nhs.uk](http://www.ntw.nhs.uk)



### Changing Lives

Changing Lives is a national charity, providing specialist support services for vulnerable people and their families. Changing lives works with veterans who are experiencing homelessness, addiction and a range of other problems, offering specialist support services and employment opportunities.

Changing Lives supported peer participant recruitment.

[www.changing-lives.org.uk](http://www.changing-lives.org.uk)



### Northern Learning Trust

Northern Learning Trust is a North East of England based charity that works with vulnerable young people and adults. They have dedicated support workers in their Veteran Support Service, working with veterans who are ex-offenders.

Northern Learning Trust aided participant recruitment for this project.

[www.northernlearningtrust.org.uk](http://www.northernlearningtrust.org.uk)



### AF&V Launchpad

AF&V Launchpad is a charity with houses in Newcastle upon Tyne and Liverpool, providing homeless veterans with accommodation, aiming to get them into employment and permanent housing.

Launchpad helped to facilitate peer participant recruitment for this project.

[www.veteranslaunchpad.org.uk](http://www.veteranslaunchpad.org.uk)

## Abbreviations

<b>A+E</b>	Accident and Emergency
<b>AUDIT</b>	Alcohol Use Disorder Identification Test
<b>BTC</b>	Barriers to Care
<b>CCG</b>	Clinical Commissioning Group
<b>ESL</b>	Early Service Leavers
<b>GP</b>	General Practitioner
<b>GW I</b>	First Gulf War
<b>GW II</b>	Second Gulf War
<b>HSCIC</b>	Health and Social Care Information Centre
<b>NHS</b>	National Health Service
<b>NTW</b>	Northumberland, Tyne and Wear
<b>Op Telic</b>	Operation Telic
<b>PTSD</b>	Post-Traumatic Stress Disorder
<b>RAF</b>	Royal Air Force
<b>RBL</b>	Royal British Legion
<b>TIL</b>	Transition, Intervention and Liaison Veterans Mental Health Services
<b>U.K.</b>	United Kingdom
<b>U.S.</b>	United States
<b>VA</b>	Veterans Affairs (Department of)
<b>VSMS</b>	Veterans Substance Misuse Service
<b>VWALS</b>	Veterans Welfare and Liaison Service

## Executive Summary

This project arose from two frequently stated perceptions of clinical practitioners working within the field of alcohol misuse services:

- *Why is it so difficult to engage ex-servicemen (and women) in treatment programmes,*
- *Once they engage, why is it so difficult to maintain that engagement?*



In an attempt to test the validity of these perceptions, a systematic literature review was undertaken followed by a four-phase research study exploring the relationship between being a UK military veteran (ex-serviceman/woman), the provision of alcohol misuse services and veterans' experiences of engaging with these services.

A review of existing literature revealed a limited amount of previous research that has *specifically* considered problems related to alcohol misuse within the UK veterans' population. Paradoxically, the prevalence of alcohol misuse problems amongst the UK veteran population, by (some) previous estimations, is higher than levels found within the general population. Given that there are an estimated 2.56 million UK military veterans<sup>1</sup>, this represents a potentially important, but as yet, largely unaddressed public health issue.

**1** The first phase of the study consisted of semi-structured interviews with the commissioners and managers of services for alcohol misuse. Initially, the intention was also to include relevant policy makers in this field. In the event, it proved difficult to identify (and therefore recruit) appropriate policy makers, and this experience in itself is perhaps indicative that improving alcohol misuse services for UK military veterans is not a current strategic priority. Service commissioners and managers expressed the view that veterans found difficulty in navigating services and there was also a widely-shared perception that this was partly due to 'institutionalisation'. Exploring this assertion became a priority in subsequent phases of the project. In the absence of any strong supporting evidence, it would appear that the 'veteran-as-institutionalised' hypothesis formed one means by which veterans could be stereotyped as (partially) the architects of their own difficulties. Most service commissioners and managers also expressed the view that 'front line' staff dealing with substance and alcohol misuse had little understanding of 'veterans' culture' and

<sup>1</sup> Ministry of Defence (2015) *Annual Population Survey: UK Armed Forces Veterans residing in Great Britain 2015*. Bristol: Ministry of Defence Statistics (Health).

the specific issues facing UK military veterans – although it was not clear on what basis they held this opinion.

2

In Phase Two in-depth semi-structured interviews were undertaken with a sample of veterans who were currently experiencing, or had experienced, problems with alcohol misuse. The focus of this phase was therefore on personal accounts of self-identified problematic alcohol use (or of having this 'identified' by others, often family members), finding help for their problems, and their opinions in relation to particular barriers that exist for military veterans. In all cases, meaningful engagement with alcohol misuse services could be considered as being 'delayed' to a significant extent. The data suggested a number of reasons for this: Primarily it appeared that many participants had a 'normalised' relationship with excessive alcohol consumption both during and after their military service. This militated against self-recognition of alcohol misuse. In turn, delayed acknowledgement of problematic alcohol use often meant that by the point at which help was sought, concomitant problems were of such complexity and proportion that they were difficult to address. If the 'normalised' relationship with excessive alcohol use is indeed a feature of UK military 'veteran culture', it appeared to be largely unrecognised by healthcare staff participating in the study. Some veteran-participants in this phase of the study also reported that it was difficult to communicate their problems to non-military healthcare staff who did not appreciate the nuances of military life and terminology. To reiterate, many of the veteran-participants presented with a very complex combination of medical, psychological and social problems. Given this complexity, it was unsurprising that participants typically reported that negotiating an (arguably fragmented) health and social care system was both difficult and frustrating.

3

In the third phase of the study, a group of UK military veterans attended a focus group in order to explore aspects of 'veterans' culture'. None of these participants had any *apparent* history of current or past alcohol misuse. One collective opinion to emerge was that alcohol misuse was (at least historically) a problem within the UK armed services. However, a strong argument was also advanced that a change in policy, the typical length of postings, and less isolation from family and friends meant that alcohol misuse was now less of a widespread problem. These participants also expressed the opinion that seeking help was contrary to 'military culture' and that this disposition tended to remain with UK military veterans after transition to civilian life. Focus group participants expressed consensus in relation to the importance of a well-planned transitional period back to civilian life and the collective perception was that that this, at present, remains under-supported. Interestingly, the group collectively expressed the opinion that accessing healthcare of any sort was complex and speculated that in the case of a veteran with an

alcohol problem it would be difficult to know where to seek help. Finally, focus group participants extolled the virtues of third sector provision, and in particular, provision by military charities. This endorsement appeared to be underpinned by a strong belief in the value of veteran-specific services.

#### 4

The final phase of this research project took the form of a symposium of UK military veterans, service commissioners, managers and providers, and representatives of third sector organisations. 'Round-table' discussions were facilitated by healthcare academics. The singular aim of the forum was to suggest how existing services could be improved within existing budgets. Those military veterans present who had experienced alcohol misuse problems unanimously described the problematic nature of negotiating services, keeping appointments etc. This was often against a backdrop of their alcohol misuse, mental/physical health problems, and social problems being at their most acute and disabling. Furthermore, these participants vividly reported that 'systems' for their care were typically patchy and (at worst) chaotic. Typically, these participants expressed the view that they were undervalued by society-at-large as well as those within its healthcare system. For their part, the third-sector workers described an overwhelming workload in dealing with individuals whose lives were made chaotic by the complexity of their problems. A near-consensus emerged that the central issue was one of coordinating the many services for example mental health, physical health, housing difficulties, relationship problems, homelessness, poverty and unemployment required by *some* military veterans. Treatment pathways were often convoluted and varied greatly across geographical and sector boundaries. One emergent idea that enjoyed much support was for a 'peer-support worker' role – a person who could act as a key case-worker for each individual presenting with alcohol misuse problems, responsible for coordinating their many needs and helping to navigate fragmented and complex health and social care provision.

Overall, the outcome of this research would appear to confirm that UK military veterans are relatively disadvantaged in both sourcing help and staying engaged with services for alcohol misuse when needed. As a result of analysis of phase 4 of the research, the report authors contend that one possible solution worthy of further exploration would be a 'hub-and-spoke' model of care. At the centre of the hub would be a military veteran peer support worker, knowledgeable of local and national services, and experienced in navigating existing pathways of care. Perhaps for operational expediency and effectiveness, this worker might usefully be located within the local Transition, Intervention and Liaison (TIL) Veterans' Mental Health Team. Any 'first-point-of-contact' agency, as a matter of course, would be able to refer any veteran with alcohol misuse problems to the 'hub' worker. The designated peer support worker would then, side by side, be able to help the veteran in need to navigate each 'spoke'

of the (arguably fragmented) health and social care system. Acting as, essentially, the key caseworker would allow the peer support worker to maintain a cogent overview of each clients' needs and progress within each agency, advocate and communicate on their behalf as-and-when necessary, avoid repetition and duplication of provision and offer motivational support in a way that is sensitive to UK military veteran culture. This potential solution perhaps offers one possibility by which UK military veterans experiencing alcohol misuse problems might engage with the full diversity of existing service provision in a considered and individually bespoke way.



Meet the Veterans Undertaking Ground-Breaking Research Improving the Lives of Fellow Servicemen. *Chronicle Live*, 21 February 2017. By Hannah Graham.

## 1. Introduction

### 1.1 Background

Since the 19<sup>th</sup> century, alcohol has been an integral part of British Military life. For many men, alcohol was seen as an escape from poverty and this was used as part of motivation to join the military, citing availability of free liquor, food, regular wage and escape from poverty as incentives to enlist. Consumption in large quantities was not necessarily discouraged and



Defence Imagery

some doctors believed that alcohol gave a degree of protection against various lethal diseases affecting those in the military (Howard, 2000). The relationship with alcohol has continued to develop in the modern day U.K. military, where it is utilised in social bonding and comradeship (Jones and Fear, 2011, Alcohol Concern, 2012).

Traditional military celebrations, such as promotion ceremonies, mess nights, command parties and Hail and Farewell gatherings typically include alcohol. Alcohol also continues to feature in military 'decompression' where combat personnel are given a short period of leave and psychological support following deployment (Hacker Hughes et al., 2008). According to the Motivational Model of alcohol use, individuals may use alcohol to regulate the quality of their emotional experience – to cope and to enhance positive emotional experience (Cooper et al., 1995). Exposure to this social environment in the military can influence and reinforce beliefs about acceptable drinking norms (Ong and Joseph, 2008). Despite the many benefits of alcohol in the social environment, issues arise when alcohol is misused. For service personnel already in a high-stress environment, the social norms that tolerate increased alcohol use for recreation and coping can often influence their behaviour around alcohol long-term (Fernandez et al., 2006, Ong and Joseph, 2008).

Alcohol misuse is generally defined as drinking more than the low risk guidelines, where men and women are advised not to regularly drink more than 14 units a week (Chief Medical Officer, 2016). Misusing alcohol and drinking in excess can have a negative impact on physical and mental health (Fear et al., 2010, Aguirre et al., 2014). The cost of alcohol related harm to the NHS has been estimated at £3.5 billion per year and is expected to increase (HSCIC, 2015). There has been some investment in alcohol services but treatment for alcohol problems is not deemed adequate to match the current demands of the population in the U.K. and is largely failing to address problem drinking (Centre for Social Justice, 2013). The British Army has also expressed concern that excessive drinking can undermine operational effectiveness,

leave soldiers unfit for duty and damage trust and respect within the team (Alcohol Concern, 2012).

Patterns of excessive drinking established during service may be difficult to change upon leaving. Iversen et al. (2009) assessed the prevalence of mental health diagnoses of 821 serving and ex-serving personnel, after identifying alcohol abuse as the most common at 18%, no statistically significant differences were ascertained in prevalence of alcohol misuse between serving and ex-serving personnel. However, there appears to have been limited research undertaken on alcohol consumption in the U.K. ex-service personnel population, despite there being a clear indication that excessive alcohol use is also a risk among veterans (Fossey, 2010). The greatest focus of media coverage and political interest has been on Post Traumatic Stress Disorder in the veteran population, particularly since the recent conflicts in Iraq and Afghanistan (MacManus et al., 2014).

The ex-service population, excluding dependents and any personnel in hidden populations (such as prisons, rehabilitation facilities, temporary accommodation or residential homes) was estimated at 2.56 million in 2015 which is 3.9% of the U.K. population (Ministry of Defence, 2016a). There are many issues with accessing this population, as the self-identity of ex-service personnel varies considerably. They are often referred to as 'veterans', however, the meaning and characteristics of this term depends upon the source and context of its deployment, whether that be by military personnel, public opinion or government policy (Cooper et al., 2016, Burdett et al., 2013, Rice, 2009). The U.K. government define a veteran as someone who has "served for at least a day in HM Armed Forces, whether as a Regular or as a Reservist" (Ministry of Defence, 2011).

Once personnel have left the Armed Forces, the National Health Service (NHS) deals with any requirement for healthcare. In addition to this, there are many U.K. third sector organisations including charities such as the Royal British Legion (RBL), Combat Stress and Help for Heroes that provide further help and support for veterans. Unfortunately, the majority of research on serving and ex-serving personnel and alcohol has been conducted in the U.S. The U.S. culture and healthcare policies are different to that in the U.K., upon leaving the Military, many personnel are supported by the U.S. Department of Veterans Affairs (VA), which takes care of all healthcare needs, and support for veterans. As a result, findings from the U.S. research are arguably not directly comparable to the U.K. military and veteran population.



## 1.2 Systematic Narrative Review of U.K. Literature

In order to identify where there may be gaps in current U.K. literature, a review of U.K. papers on alcohol covering the lifespan of military personnel was conducted. A systematic narrative review strategy was utilised. This review method was most appropriate to the study aims due to the relative paucity of research in this area, rendering it imperative to include evidence from multiple sources, including both quantitative and qualitative data (Popay et al., 2006).

### Systematic Search Method

Databases suitable to the research aim were identified and a systematic search was carried out to identify published evidence relating to the study aim (Table 1).

**Table 1.** Search strategy for first systematic search.

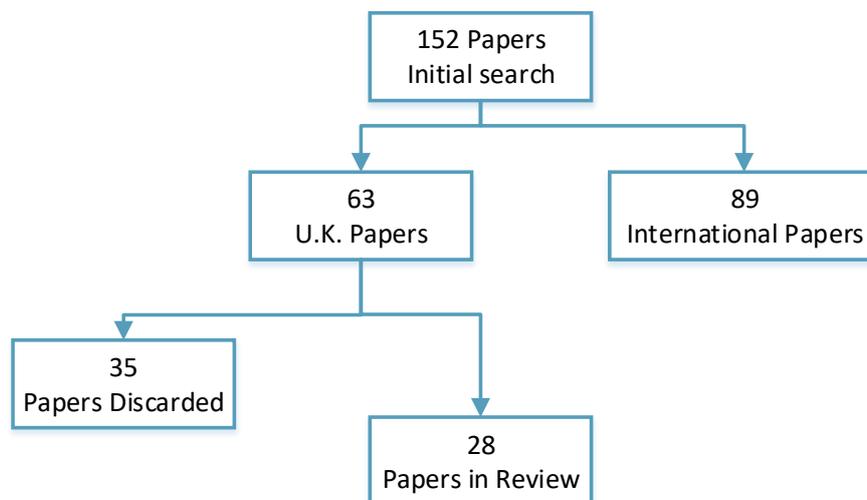
<b>Source</b>	ASSIA Google Scholar Science Direct
<b>Search Field</b>	Title, Abstract, Keywords
<b>Language</b>	English only
<b>Exclusion</b>	Non-English language No full-text available Papers that assessed/evaluated treatment for alcohol problems Papers did not consider U.K. military population
<b>Year of publication</b>	All papers published prior to February 2017

Research papers published prior to February 2017 were considered if they included a military sample in the assessment of alcohol use, including any papers referring to substance misuse. Research carried out in the U.K. was the focus of this review, however, international papers were also considered in the search in order to avoid exclusion of important findings which triangulate with significant U.K. studies. Papers were excluded if they were not written in the English language, there was no full-text available, they assessed or evaluated treatment for alcohol problems, or they did not consider the U.K. military population. Search items were developed using the PICO framework (Russell et al., 2009) (Table 2).

**Table 2.** The PICO framework to develop a search strategy used for the systematic literature search.

<b>P</b> Patient or population	Veteran* OR, 'Ex-Service*' OR, 'Soldier*' 'Military' OR, 'Armed Forces' OR, 'Army' OR, 'Royal Navy' OR, 'RN' OR, 'Royal Air Force' OR, 'RAF' OR, 'Royal Marines'
<b>I</b> Intervention	Various
<b>C</b> Comparison (if applicable)	Not applicable
<b>O</b> Outcome	'Alcohol*' OR, 'alcohol misuse' OR, 'alcohol use' OR, 'alcohol abuse', OR 'alcohol dependent' OR, 'drink*', OR 'Substance misuse' OR, 'substance abuse' OR, 'substance use' OR, 'Mental health'

Relevant truncation and wildcard search strategies were utilised, to ensure that all increased the chance of relevant hits being returned. A total of 152 papers were retrieved from the database search (Figure 1).

**Figure 1.** Papers identified during search process.

After a full-text search, all U.K. papers were isolated, leaving 63 papers. The U.K. literature was then manually assessed for the suitability to include in the review. The Critical Appraisal Skill Programme (CASP) tool (CASP, 2017) was utilised to determine the quality of papers included in this review. Thirty-five papers were rejected as per the exclusion criteria. Reference and citation searches were carried out on all remaining papers; however, no further papers were included. A total of 28 papers were accepted for use in this review.

## Review Findings

### *Paper Characteristics*

Twenty-eight papers were considered for review, all of which were peer-reviewed (see table 3 for paper characteristics). Twenty-six of the papers were quantitative and two were qualitative papers. Nine papers considered alcohol consumption as a primary focus (Aguirre et al., 2014, Browne et al., 2008, Fear et al., 2007, Henderson et al., 2009, Hooper et al., 2008, Iversen et al., 2007b, Kiernan et al., 2016, Rona et al., 2010, Thandi et al., 2015) whereas 12 papers focussed primarily upon mental health (Buckman et al., 2013, French et al., 2004, Harvey et al., 2011, Hatch et al., 2013, Hotopf et al., 2006, Iversen et al., 2005a, Iversen et al., 2009, Iversen et al., 2011, Jones et al., 2006, Jones et al., 2013, Rona et al., 2007, Woodhead et al., 2011). Additionally, two papers examined alcohol use and mental health together (Du Preez et al., 2012, Head et al., 2016). Three papers considered mental and physical health (Fear et al., 2010, Iversen et al., 2007a, Cherry et al., 2001), whereas only one paper looked at behavioural outcomes (MacManus et al., 2012). Finally, one paper considered alcohol, mental health, physical health and behavioural outcomes (Sundin et al., 2014).

Three papers concerned pre-enlistment factors (Iversen et al., 2007a, MacManus et al., 2012, Woodhead et al., 2011), sixteen papers addressed in-service factors (Aguirre et al., 2014, Browne et al., 2008, Du Preez et al., 2012, Fear et al., 2007, Fear et al., 2010, Head et al., 2016, Henderson et al., 2009, Hooper et al., 2008, Hotopf et al., 2006, Iversen et al., 2007b, Iversen et al., 2009, Jones et al., 2006, Rona et al., 2007, Rona et al., 2010, Sundin et al., 2014, Thandi et al., 2015), six papers concerned the post-service period (Woodhead et al., 2011, Iversen et al., 2005a, Hatch et al., 2013, Harvey et al., 2011, Cherry et al., 2001, Buckman et al., 2013) and four studies addressed the issue of accessing healthcare (French et al., 2004, Iversen et al., 2011, Jones et al., 2013, Kiernan et al., 2016).

### *Participant Characteristics*

Participants in 19 papers included military personnel who were in any service (Royal Navy and Royal Marines, Army, Royal Air Force) with any enlistment type (regular or reserve) (Aguirre et al., 2014, Cherry et al., 2001, Du Preez et al., 2012, Fear et al., 2010, French et al., 2004, Harvey et al., 2011, Head et al., 2016, Hooper et al., 2008, Hotopf et al., 2006, Iversen et al., 2005a, Iversen et al., 2007b, Iversen et al., 2009, Iversen et al., 2011, Jones et al., 2006, Jones et al., 2013, MacManus et al., 2012, Rona et al., 2007, Buckman et al., 2013, Woodhead et al., 2011). Six papers included regular personnel only (Browne et al., 2008, Rona et al., 2007, Hatch et al., 2013, Iversen et al., 2007a, Rona et al., 2010, Thandi et al., 2015, Sundin et al., 2014), one considered Royal Naval personnel only (Henderson et al., 2009) and one Army personnel only (Jones et al., 2013).

**Table 3.** Details of papers in review.

<b>Authors</b>	<b>Aim</b>	<b>Participants</b>	<b>Method</b>	<b>Outcome Measure</b>
<b>Aguirre et al. (2014)</b>	To assess the alcohol consumption in the U.K. Armed Forces	325 personnel at routine and discharge medicals	Self-report questionnaires	AUDIT-C
<b>Browne et al. (2008)</b>	To assess occupational factors and deployment experiences associated with heaving drinking in regular U.K. armed Forces personnel deployed to 2003 Iraq war	3578 male, Regular personnel deployed to Iraq (Op TELIC 1)	Cross-sectional postal questionnaires	AUDIT Deployment Experience Questionnaire
<b>Buckman et al. (2013)</b>	To identify characteristics of early service leavers (ESLs) and compare post-discharge mental health of ESLs with other service leavers (non-ESLs)	845 Regular service leavers 80 ESLs. Served and/or deployed during Iraq war (Op TELIC 1)	Self-report questionnaires	Questionnaire on demographics, service information, deployment experience, past and current health and childhood adversity
<b>Cherry et al. (2001)</b>	To assess the health of U.K. Gulf war veterans and to compare their health to that of similar personnel not deployed	11914 serving and ex-serving personnel Served and/or deployed during Gulf war.	Self-report questionnaires	Health questionnaire Deployment experience questionnaire
<b>Du Preez et al. (2012)</b>	To examine the association between unit cohesion and probable PTSD, common mental disorder and alcohol misuse in U.K. Armed Forces personnel deployed to Iraq	4901 male, Regular and Reserve personnel deployed to Iraq on any TELIC operation.	Self-report questionnaires	PCL, GHQ, AUDIT, Questionnaire on military and deployment factors, lifestyle factors and health outcomes
<b>Fear et al. (2007)</b>	To examine patterns of drinking in the U.K. Armed Forces, how they vary according to demographics, and to make comparisons with the general population	8686 Regular personnel (7917 men, 749 women) General population comparison group: Office of National Statistics National Psychiatric Morbidity Survey (March - Sept 2000).	Cross-sectional postal questionnaires	AUDIT
<b>Fear et al. (2010)</b>	To examine the consequences of deployment to Iraq and Afghanistan on the mental health of U.K. Armed Forces from 2003 to 2009, the effect of multiple deployments, and time since return from deployment	9990 personnel (8278 Regular, 1712 Reserve) Served and/or deployed during Iraq war	Self-report questionnaires	GHQ-12, PCL-C, AUDIT Questionnaire on sociodemographics, service history, post service experiences, recent deployment experiences

Authors	Aim	Participants	Method	Outcome Measure
<b>French et al. (2004)</b>	To identify any potential barriers to the effectiveness of a military health screening programme based on the beliefs of British service personnel	73 personnel completed questionnaire and interview. 4496 service personnel completed a validation questionnaire.	Questionnaire, semi-structured interviews	Questionnaire screening for physical and psychological illness Interview schedule to validate screening tool
<b>Harvey et al. (2011)</b>	To examine the post-deployment social functioning of Reservists and to explore the relationship between adverse post-deployment experiences and subsequent mental ill health	4991 personnel (4488 Regular, 503 Reserve) deployed to Iraq or Afghanistan	Questionnaires	GHQ, PCL-C, AUDIT demographics
<b>Hatch et al. (2013)</b>	To examine the differences in levels of social integration and association between social integration and mental health among service leavers and personnel still in service	8264 Regular personnel (6511 serving, 1753 leavers)	Self-report questionnaires	GHQ-12, PCL, Questionnaire on social integration, service history and alcohol misuse
<b>Head et al. (2016)</b>	To determine the prevalence of comorbid probable PTSD and alcohol misuse in a U.K. military cohort study and to determine the level of co-occurrence between these disorders	9984 personnel Served and/or deployed during Iraq and Afghanistan wars	Self-report questionnaires	AUDIT, PCL-C, GHQ-12
<b>Henderson et al. (2009)</b>	To compare alcohol consumption and misuse within the Royal Navy (RN) to that in the civilian population	1333 male RN personnel from operational Naval units	Self-report questionnaires	GHQ, PCL, AUDIT-C
<b>Hooper et al. (2008)</b>	To investigate the association between cigarette and alcohol use and combat exposures	1382 personnel 941 personnel followed up at 3yrs Served and/or deployed personnel	Questionnaire based	Questionnaire on cigarette and alcohol use
<b>Hotopf et al. (2006)</b>	To explore the health of U.K. military personnel who deployed to the 2004 Iraq war	10272 personnel: (8686 Regulars, 1586 Reservists) Served and/or deployed during Iraq war (Op TELIC 1)	Questionnaire based	GHQ-12, PCL-C, AUDIT
<b>Iversen et al. (2005a)</b>	To describe the frequency and associations of common mental disorders and help-seeking behaviours in a representative sample of U.K. veterans at high risk of mental health problems	315 ex-serving personnel (98% Regulars, 2% Reservists) 88% men, 12% women	Cross-sectional telephone survey	GHQ

Authors	Aim	Participants	Method	Outcome Measure
<b>Iversen et al. (2005a)</b>	To describe the frequency and associations of common mental disorders and help-seeking behaviours in a representative sample of U.K. veterans at high risk of mental health problems	315 ex-serving personnel (98% Regulars, 2% Reservists) 88% men, 12% women	Cross-sectional telephone survey	GHQ
<b>Iversen et al. (2007a)</b>	To examine the association between self-reported childhood vulnerability and later health outcomes in a large randomly selected male military cohort	7937 Regular male personnel Served and/or deployed during Iraq war	Questionnaire based	Questionnaires on demographics, service information, deployment experiences, past and current health, childhood adversity.
<b>Iversen et al. (2007b)</b>	To assess factors associated with heavy alcohol consumption in the U.K. Armed Forces	8195 male personnel served in: Gulf, Bosnia, not deployed	Health survey	PTSR, GHQ
<b>Iversen et al. (2009)</b>	To assess the prevalence and risk factors of common mental disorders and PTSD in the U.K. Military during the main fighting period of the Iraq war	821 Regular and Reserve personnel Served and/or deployed during Iraq war (Op TELIC 1)	Questionnaires, telephone survey	GHQ, PCL, PHQ, PC-PTSD
<b>Iversen et al. (2011)</b>	To assess the stigma of mental health problems and other barrier to care in the U.K. Armed Forces	821 Regular and Reserve personnel Served and/or deployed during Iraq war (Op TELIC 1)	Questionnaires, telephone survey	GHQ-12, PHQ, PC-PTSD
<b>Jones et al. (2006)</b>	To assess the prevalence of psychological symptoms during periods of relatively low deployment activity and the factors associated with each psychological health outcome	4500 service personnel (8% females) Served and/or deployed	Survey	GHQ-12, PCL, Questionnaire on alcohol use
<b>Jones et al. (2013)</b>	To explore the role of stigma/barrier to care (BTC) in mental health help-seeking among British Army personnel	484 Army personnel (98.3% Regular, 1.7% Reserves) 95.1% males, 4.9% females Served and/or deployed	Questionnaire based	AUDIT-C, GHQ-12, PC-PTSD, Stigma/BTC scale
<b>Kiernan et al. (2016)</b>	To investigate the perceived barriers to care amongst those planning, commissioning and delivering services for veterans with substance misuse problems	6 planners, commissioners and service providers from public and private sector in North East of England.	Face-to-face semi-structured interviews	Semi-structured interview schedule

Authors	Aim	Participants	Method	Outcome Measure
<b>MacManus et al. (2012)</b>	To examine the association between pre-enlistment anti-social behaviour (ASB) and later behavioural outcomes, in a large randomly selected U.K. military cohort	Regular and Reserve personnel (76.3% still serving) (89.9% males, 10.1% females) Served and/or deployed at start of Iraq war (Op TELIC 1)	Self-report questionnaire	AUDIT, questionnaires on risky driving, attendance at A&E and pre-enlistment anti-social behaviour.
<b>Rona et al. (2007)</b>	To assess changes in psychological symptoms in military women over time, to compare them with men and assess the effect of deployment	5036 participants. (3358 men and 1678 women)	Questionnaire based	GHQ-12, SF-36, PCL-C, PTSD
<b>Rona et al. (2010)</b>	To assess whether alcohol misuse was associated with functional impairment in the U.K. military	8585 Regular personnel	Questionnaire based	AUDIT, PCL-C, GHQ-12, SF-36
<b>Sundin et al. (2014)</b>	To compare the prevalence of PTSD, hazardous alcohol consumption and aggressive behaviour and multiple physical symptoms in US and U.K. personnel deployed to Iraq	1560 US personnel (Adler et al, 2011) 313 U.K. personnel (Fear et al, 2010) All male Deployed to Iraq 2007-2008	Questionnaire based	Combat Experience Scale, PCL, AUDIT-C
<b>Thandi et al. (2015)</b>	To assess alcohol misuse in the U.K. Armed Forces	5239 Regular personnel	Longitudinal Study – self-report questionnaire	AUDIT, GHQ-12, PCL-C, questionnaire on childhood adversity,
<b>Woodhead et al. (2011)</b>	To compare mental health outcomes and treatment seeking among post-national service veterans	257 veterans, 504 age and sex frequency-matched non-veterans.	Cross-sectional survey	AUDIT, TSQ, questionnaires on drug-dependence, self-harm and treatment-seeking behaviour

Note for outcome measures: AUDIT – Alcohol Use Disorder Identification Test, GHQ – General Health Questionnaire, PCL – PTSD Check List, PC-PTSD – Primary Care PTSD scale, PTSD – Post-Traumatic Stress Reaction, SF-36 – Short Form-36, TSQ – Trauma Screening Questionnaire

One paper explored perceptions of problematic drinking within the veteran population through the eyes of health and social care planners, commissioners and service providers (Kiernan et al., 2016).

#### *Outcome Measures*

Ten different standardised outcome measures were used across research papers as well as additional questions including those on demographics, service history, deployment experience, past and current health and social integration.

#### *Themes*

Four themes arose from paper findings: pre-enlistment situational factors, military experience during service, post service alcohol use, and accessing healthcare for alcohol problems.

#### Pre-enlistment Situational Factors

Three papers examined pre-enlistment situational factors associated with poor mental health and alcohol misuse outcomes (Iversen et al., 2007a, Woodhead et al., 2011, MacManus et al., 2012). Findings demonstrate the importance of both childhood adversity and anti-social behaviour as components that increase an individual's vulnerability to later develop alcohol problems (Iversen et al., 2007a, MacManus et al., 2012). Variations in outcomes associated with challenging socio-economic backgrounds was a common underlying theme throughout all three identified papers (Iversen et al., 2007a, Woodhead et al., 2011, MacManus et al., 2012).

Utilising unstandardized questionnaires exploring demographics, military experience and childhood adversity, Iversen et al. (2007a) surveyed 7937 Regular serving male personnel. A range of childhood adversity factors were taken into account including: 'challenging' family relationships, home environment, not being close to family, violence at home, and parental drug/alcohol problems. This study also considered 'externalising behaviours' such as evidence of behavioural disturbance, being expelled/suspended from school, playing truant, and being in trouble with police. Both sets of factors were found to be associated with higher levels of alcohol consumption within the population of regular serving male personnel. Whether or not these personnel had any direct operational experience did not appear to affect the results, and individuals from the lowest socio-economic groups in the country appeared to be the most at risk of problematic in-service alcohol consumption.

Woodhead et al. (2011) provide further support for the influence of childhood adversity upon later alcohol consumption. They conducted a smaller comparative study with 257 military veterans and 504 age and sex matched non-veterans. Male veterans reported more childhood adversity and also had a greater prevalence of severe alcohol misuse (7.6%) than non-

veterans (4.6%). However, this difference was not found to be significant - possibly due to limited statistical power.

Pre-enlistment anti-social behaviour also appeared to contribute to problematic in-service alcohol consumption. MacManus et al. (2012) carried out a study with 10272 serving military personnel to examine potential associations between anti-social behaviour and behavioural outcomes, including alcohol misuse (MacManus et al., 2012). Findings demonstrated that the risks of severe alcohol misuse in military personnel more than doubled for those with a history of pre-enlistment anti-social behaviour and that this association remained evident even after controlling for socio-demographic and military service characteristics. It is noteworthy that no comparison group for the general population was included in the study by MacManus et al.; consequently, it is difficult to surmise as to whether the link between pre-enlistment anti-social behaviour and later alcohol consumption is specific to military populations or socio-economic backgrounds. The prevalence of pre-enlistment anti-social behaviour among military personnel was 34%, with 30.9% of personnel exhibiting severe alcohol misuse and a history of anti-social behaviour.

#### Military Experience During Service

Sixteen of the identified papers examined alcohol use during military service. It is evident that levels of alcohol use have been identified as high, with the majority of papers suggesting that military personnel in the U.K. Armed Forces drink alcohol in excess. Hooper et al. (2008) found that 1382 personnel surveyed reported drinking 14.6 units of alcohol on average per week, this is greater than the suggested 'safe' drinking threshold (NHS, 2015). Additionally, 42.5% of personnel were classified as binge drinkers. When comparing the serving military population to the general population, Fear et al. (2007) identified 67% of male and 49% of female personnel in regular service as hazardous drinkers in comparison to 38% of men and 16% of women in the general population. Problems associated with the consequences of heavy drinking during service have also been considered. For personnel deployed during service, heavy drinking was associated with major problems at home during, and following, deployment (Browne et al., 2008). At the time of discharge, Aguirre et al. (2014) identified that 65% of service personnel engaged in higher risk drinking. Utilising a questionnaire to assess alcohol use during routine and discharge medicals, Aguirre et al. also determined that personnel with more risky drinking habits were more likely to identify as having mental health issues.

Research appears to suggest that of all the services, the British Army have higher levels of drinking than the other branches of the U.K. Armed Forces (Fear et al., 2007). Such variation across the military has been attributed to the different subcultures of drinking that have

developed within individual services. These subcultures are more likely in situations where there is a high level of teamwork resulting in peer pressure and where traditions of the organisation lead to drinking as a means of relaxing and debriefing (Fear et al., 2007, Fillmore, 1990). These latter social conditions appear to prevail within the Infantry divisions in particular. The Royal Navy similarly appears to exhibit relatively high levels of alcohol consumption. To specifically explore this, Henderson et al. (2009) researched 1333 male Royal Navy personnel from operational Naval units. The aim of the research was to determine the extent of alcohol consumption within the Royal Navy and to compare this with an age-matched civilian sample. Henderson et al. (2009) found high levels of hazardous drinking (92%), binge drinking (58%) and problem drinking (15%) within the naval population. Alcohol consumption found in the Royal Navy participants was consistently higher than age-matched civilians, further supporting the idea that those in the military have higher alcohol consumption than the general population. However, the sample may not have been particularly representative of personnel in the Royal Navy in general, as this study only considered those who were on operational ships.



The impact of service characteristics such as active deployment upon subsequent alcohol consumption has also been considered. It is noteworthy that the majority of research on alcohol consumption has concentrated on personnel who served during Gulf War II (GW II) [2003-2008], with and without deployment experience. The most common diagnosis among personnel who served during GW II was alcohol abuse (Iversen et al., 2009). Rona et al. (2007), found alcohol consumption to be greater in those who served during GW II as compared to those who served in Gulf War I (GW I) [1990-91]. It was also found that this difference was accentuated when personnel had also been actively deployed during this time. Although levels of hazardous alcohol consumption remained consistently high across both regular and reserve personnel, Hotopf et al. (2006) asserted that regular personnel were more likely than their reservist counterparts to score highly for hazardous drinking. Once again, differences in alcohol consumption were found to be associated with deployment experience (27% regulars and 18% reservists being actively deployed). Hooper et al. (2008) similarly argued that combat exposure during deployment was significantly associated with increased alcohol consumption. Personnel who feared that they might be killed, and those who experienced hostility from civilians, showed greater increases in alcohol consumption at a

three-year follow up than those who were not deployed. Experiencing hostility from civilians added an average 6.1 units per week to personnel's alcohol consumption on exiting theatre; with each year that passed this reduced by an average of 2.8 units per week. Historically, the armed forces have used alcohol as a coping device as well as a bonding tool (Jones and Fear, 2011), where heavy drinking has been allied with high levels of comradeship and low levels of leadership (Browne et al., 2008) and these factors may account for the trends reported above.

Browne et al. (2008) reported a small, but significant, association between heavy drinking and deployment in Gulf War II. Heavy drinking was also associated with being deployed with a parent unit, medium-to-high theatre unit comradeship and perceived 'poor' unit leadership (Browne et al., 2008). 'Other' factors that appear to be associated with excessive alcohol consumption in the U.K. Armed Forces include: lower rank, being a regular, younger age, male, being single, serving in the Army or Royal Navy, operational deployments (particularly GW II), poor subjective physical and mental health and being a smoker (Fear et al., 2007, Henderson et al., 2009, Jones et al., 2006, Iversen et al., 2007b, Fear et al., 2010). Conversely, perceived interest shown by senior ranks and feeling well informed about what was happening appeared to be associated with lower levels of alcohol misuse (Du Preez et al., 2012). Support and communication during deployment appear to play a role in subsequent alcohol consumption. A distinct difference in alcohol consumption between U.K. and U.S. personnel has been discussed by Sundin et al. (2014), with 52% of U.K. personnel and 17% of U.S. personnel who deployed between 2007 and 2008 in GW II, reporting drinking 10 or more drinks/units on a typical drinking day.

In line with combat exposure, there has been a suggestion that alcohol misuse is often a featured comorbidity with diagnosis of Post-Traumatic Stress Disorder (PTSD) in military personnel. Head et al. (2016) noted 13% of 9984 personnel who served between 2007 and 2009 met the criteria for alcohol misuse. Of those with alcohol misuse, 13.6% also had probable PTSD. Caution should be taken in determining how strong the comorbidity of alcohol



misuse and PTSD is, particularly as this study only found 1.8% of the sample who met the criteria for both. However, two earlier papers denote support for the association between problematic drinking and concurrent PTSD diagnosis. Jones et al. (2006) established that increased alcohol intake was associated with higher scores on probable PTSD scales.

Thandi et al. (2015) also indicated decreases in scores on the Alcohol Use Disorder Identification Test (AUDIT) were associated with remission in psychological distress and probable PTSD. The links between alcohol misuse and PTSD remain under-researched in a U.K. military context. Whilst it is clear that there is evidence of comorbidity, not everyone with alcohol misuse has probable PTSD and vice versa. It may be possible that those with PTSD may 'self-medicate' with alcohol. A Canadian study found 20% of individuals with PTSD used substances such as alcohol in an attempt to relieve their symptoms (Leeies et al., 2010). This study was conducted with a civilian sample and it is plausible to suggest that the prevalence of self-medication with alcohol might increase in a military population given the relationship that U.K. military personnel have with alcohol (as documented above).

### Post Service Alcohol Use

Six studies examined alcohol use post-service and investigated general incidence of veteran alcohol use, incidence of veteran alcohol use compared to other populations, and the influence of military service on continued veteran alcohol use. Incidence of veterans' alcohol use was generally found to be high. Iversen et al. (2005a) examined the incidence of mental health problems among veterans who were considered to be 'vulnerable', and of the mental health issues reported by 315 veterans participating in this telephone survey, 11.8% involved alcohol dependence.

The prevalence of alcohol misuse is reportedly higher for veterans when compared to both the non-military population and serving personnel. For instance, Buckman et al. (2013) found that the prevalence of alcohol misuse was higher among veterans than among the general public regardless of length of service. Hatch et al. (2013) compared the mental health of veterans to people serving in the armed services and found that, after controlling for possible confounding factors, veterans were still more likely to misuse alcohol than serving personnel. These authors also found that the risk of alcohol misuse among veterans was reduced by being in a long-term relationship and by having a social circle consisting of people who were not serving in the military (Hatch et al., 2013).

In addition to the differences between populations, several studies examined the influence of characteristics of military service upon subsequent problematic alcohol use. Cherry et al. (2001) assessed the health of Gulf War I veterans who were actively deployed, compared to those non-deployed personnel. The findings suggest that the alcohol consumption of U.K. GW I veterans was no higher than those of who had not been deployed on active service. Woodhead et al. (2011) considered the possible effects of length of service and found that early services leavers were more likely than other veterans to be heavy drinkers.

### Accessing healthcare for Alcohol Problems

Four studies specifically identified barriers in accessing healthcare for alcohol problems, and all identified (a) stigma related to the use of these services, and (b) the tendency to normalise alcohol use, or at least view patterns of consumption as being 'non-problematic'.

A key insight into the reasons for serving personnel being reluctant to access services, although now quite dated, was examined by a study of randomly selected personnel across the three armed services (French et al., 2004). The data suggested that serving personnel felt as though they could not be entirely truthful when reporting levels of alcohol consumption. Although it should be noted that this is also a well-documented phenomenon amongst civilian populations. Overall, there was a perception that healthcare within the military was of low quality and poorly resourced and a fear that medical consultations would not be kept confidential and that careers might be damaged by seeking help. The perception that the U.K. military's only interest was in meeting physical health needs to ensure combat readiness resulted in a belief that the military had no interest in (for example) problems at home. Finally, a perception appeared to pervade that seeking help was not the 'done thing', and doing so risked incurring stigma. Iversen et al. (2011) concurred with concerns about the quality of healthcare and stigma and asserted that these serve as barriers for ex-service personnel wishing to access mental health services in both the U.S. and the U.K. Their quantitative study collected data from serving personnel, reservists and veterans. The most commonly identified barriers related to stigma, with 73.2% agreeing with the statement '*members of my unit might have less confidence in me*' if they accessed mental health services, 71.3% that '*my unit bosses would treat me differently*', 47.3% that '*it would harm my career*' and 41.0% '*I would be seen as weak by those who are important to me.*' While some of these concerns are specific to serving personnel, veterans were more likely to agree with the statement that '*my bosses would blame me for my problem.*' Access to services was another issue that appeared more significant for veterans than for serving personnel; veterans were more likely to agree with the statements '*I don't know where to get help*' and '*I don't have adequate transport.*'

Jones et al. (2013) note that efforts have been made to reduce the stigma associated with accessing mental health services among the armed services of a number of countries, including the U.K. Their study analysed 484 questionnaire responses completed by garrison-based military personnel. These authors concluded that military personnel do not seek help for concerns about alcohol use as they do not view this as being as significant an issue as other mental health problems. Kiernan et al. (2016), in a study specific to alcohol misuse within the U.K. veteran population, examined barriers to care as perceived by service planners, commissioners and providers. They found that these perceptions echoed the



findings of the above studies in two areas. The first was difficulty in accessing health care on leaving the armed services; one respondent contrasted the difficulty of accessing civilian services with the position in the armed services: *'they used to go to the medical officer every morning and get it sorted out.'* The second similarity with other studies was the view that veterans did not consider heavy alcohol use to be problematic, but rather as a 'normalised' part of service life. Some respondents questioned whether services were culturally appropriate for

people who had been in the armed services, suggesting that lateness, poor organisation and late cancellation of appointments on the part of service providers were the types of factors that could lead veterans to disengage.

#### *Summary of Review Findings*

This systematic narrative literature review provides evidence of alcohol misuse both during and after military service and it is clear that the relationship between military personnel and alcohol use is complex. Several aspects of pre-enlistment situational factors have been linked to subsequent alcohol consumption, particularly high incidences of childhood adversity, a history of anti-social behaviour and low socio-economic backgrounds. Alcohol use both during, and after, military service is high when comparisons are made to the general population. Incidence levels of problematic drinking were further complicated by service length, and characteristics of service. When considering access to healthcare for alcohol problems, there appears to be a relative paucity of studies in this area, and some of the studies reported here only considered alcohol misuse coincidentally as part of a wider consideration of mental health service use. However, triangulation of the findings of a number of researchers strongly suggests that serving and ex-serving personnel tend to view their alcohol misuse as 'unproblematic', often citing this as a reason for not seeking help. Furthermore, veterans were identified as having lower rates of help seeking for alcohol misuse than for other mental health diagnoses.

#### *Limitations and Recommendations for Future Research*

There are various limitations to the research included within this review. Primarily, only a small number of papers looked *specifically* at alcohol use within military and veteran populations. The majority of papers reported here examined alcohol use only as part of a wider

consideration of mental health issues in general. Secondly, it is clear there has been an over-reliance on self-report questionnaires to assess a variety of issues within the Military population. This may be beneficial to ascertain large volumes of data, but it can result in social desirability bias and a tendency by participants to answer questions in a more socially desirable way than may be accurate (Richman et al., 1999). Papers exploring the stigma associated with seeking help for alcohol use (French et al., 2004, Iversen et al., 2011, Jones et al., 2013) should be considered with a similar degree of caution. To attempt to combat this, future research needs to include a focus upon participants' personal experiences to explore more globally why there is a seeming normalisation of excessive alcohol consumption and a reluctance to access and receive treatment for alcohol problems rather than adopting a primary focus upon the severity of their symptoms (Iversen et al., 2011, Burki, 2012, Jones et al., 2013, Venter, 2014). There is a scarcity of qualitative studies in this field and potentially, participation in an (individual) interview setting would be conducive to exploration of participants' understanding of alcohol in serving and ex-serving military personnel. Findings from the studies in this review are also somewhat outdated with most data collected between 2001 and 2009, mainly concentrating on the Gulf War II with some consideration of the impact of service in Afghanistan. Finally, it is apparent that there is a lack of research addressing help-seeking for alcohol problems amongst the U.K. veteran population.

### **1.3 Project Rationale**

U.K. military veterans do not appear to readily engage with alcohol misuse services when needed. A number of recent reports reviewing the mental health of serving and ex-serving personnel have corroborated a gap in this area of research (Burki, 2012, Iversen et al., 2011, Jones et al., 2013, Venter, 2014). Alcohol misuse is a major public health issue and there is a need to gain a more in-depth understanding of the barriers that prevent veterans from accessing and engaging with services to address alcohol misuse. Understanding the underlying reasons for this seeming lack of engagement presents a complex but important area of research. For instance, in order to successfully address these questions, research would need to focus upon veterans' personal meanings ascribed to their alcohol use, veterans' feelings about stigma and personal beliefs about barriers to accessing and receiving treatment (Iversen et al., 2011, Burki, 2012, Jones et al., 2013, Venter, 2014). It has been suggested that veterans often lose trust in mainstream NHS services because of some of their initial experiences with healthcare professionals resulting in them withdrawing from services in the belief that their needs were not understood (Combat Stress, 2011).

Furthermore, in order to comprehensively answer the 'reluctance' question, full consideration of service provision characteristics would also appear apposite and should include (a) service

availability, (b) service organisation, and (c) inter-agency working practices. De Leo et al. (2014) asserted that the availability of effective interventions in primary care for alcohol misuse by veterans remains a significant health need.

Barriers to mental health care have been researched in serving and ex-serving populations, however, research specifically looking at barriers to care for those with alcohol misuse problems has been limited. From research already conducted, it can be inferred that engaging and treating veterans in traditional models of mental health may be difficult for a range of reasons, including the stigma of mental illness and treatment and barriers to care such as navigating complex mental health systems (Macmanus and Wessely, 2013).

This project therefore aimed to explore why veterans appear reluctant to access help for alcohol problems and suggest strategies that will reduce barriers to encourage veterans with difficulties to engage with alcohol services. The project was conducted through a sequential process over four phases, with each phase informing the next. The first three phases aimed to understand why veterans' are seemingly reluctant to access care. The fourth phase, or the feedback phase, aimed to present the findings to planners, commissioners and service providers with input from veterans and service users. Phase Four of the study is the transformational phase and was aimed at evolving and adapting services within the Northumberland Tyne and Wear NHS Trust catchment area in order to provide a more responsive service for veterans. Ideally, this study will provide the basis for an evolved model of care that better supports veterans with substance misuse problems and has the potential to benefit all veterans nationally who are seeking help for substance misuse problems.

*N.B. This project will be specifically looking at alcohol misuse. Referral to substance misuse is as a result of alcohol treatment being a part of substance misuse services.*



## 2. Project Methodology

### 2.1 Aims

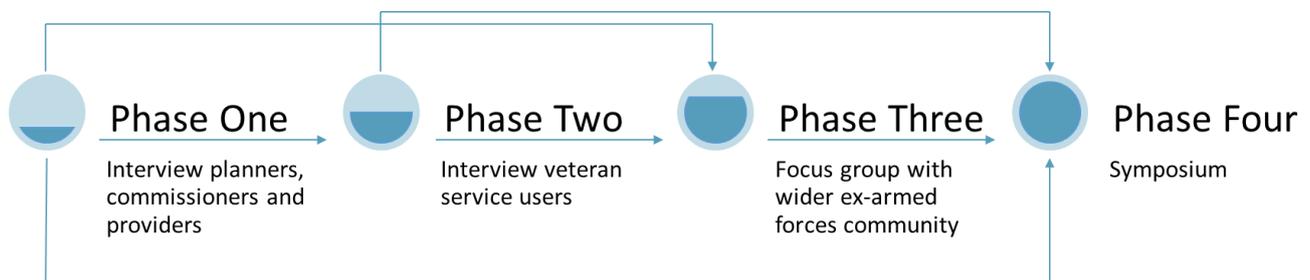
The primary aim of the project was to understand why veterans were reluctant to access help for alcohol problems or engage with alcohol treatment services. The study was conceived as a translational project, with the aim of working with health and social care planners, commissioners and providers to adapt and evolve substance misuse services so that they better fit the need of veterans. At the heart of this project were the service users themselves, who guided the research and were integral in developing the models of care.

A second aim was therefore to collaboratively explore and develop strategies that will reduce barriers and encourage veterans with alcohol problems to engage with alcohol services.

### 2.2 Design

This study used a sequential approach over four phases, with each phase informing the subsequent data collection (see Figure 1). The first three phases aimed to understand why veterans were reluctant to access care. The fourth phase, or the feedback phase, presented the findings to planners, commissioners and service providers with input from veterans and service users. Phase Four of the study was essential in ensuring the findings were presented to the relevant authorities to effect change and impact. The project used semi-structured interviews for Phase One and Phase Two: Phase Three utilised a focus group approach. The first aim of the study was to understand the current service provision followed by a focus on the experiences of veterans that accessed care. Finally, the study examined the wider veterans' community in order to explore and understand the perceived reluctance to access care.

**Figure 1.** Methodological approach.



Phase One aimed to understand the decision making process for substance misuse provision from commissioning to delivery.

Phase Two of the study aimed to understand the complexities veterans experience in accessing alcohol misuse care. An understanding of the UK military veteran culture was particularly important, as due to the social norms associated with alcohol use in the armed

forces, personnel often do not seek help for their drinking, as they typically do not view it as a concern.

Phase Three allowed exploration of the generational differences within the veteran cohort as well as the impact the different experiences of service had on their relationship with alcohol and their views on how those with problems with alcohol should be helped.

Phase Four of the study took the findings of Phase One through to Phase Three and delivered them at a translational event. This event brought veteran service-users together with other research participants so that planners, commissioners and service providers could evolve their current services to ensure that they meet the needs of veterans. A key aspect of this type of event is to examine how current services can be evolved to reduce financial impact and ensure sustainability of change.

### **2.3 Analysis**

The overarching intention of the research was to elicit as much information as possible in order to understand the barriers that apparently discourage veterans from accessing NHS alcohol services. The intention was to use the findings of this study to generate data which could be used to develop a specific veteran's alcohol misuse service model for piloting. This study adopted an applied policy research methodology using Framework Analysis to provide a transparent, trustworthy, transferable dataset, key in Phase One, Phase Two and Phase Three.

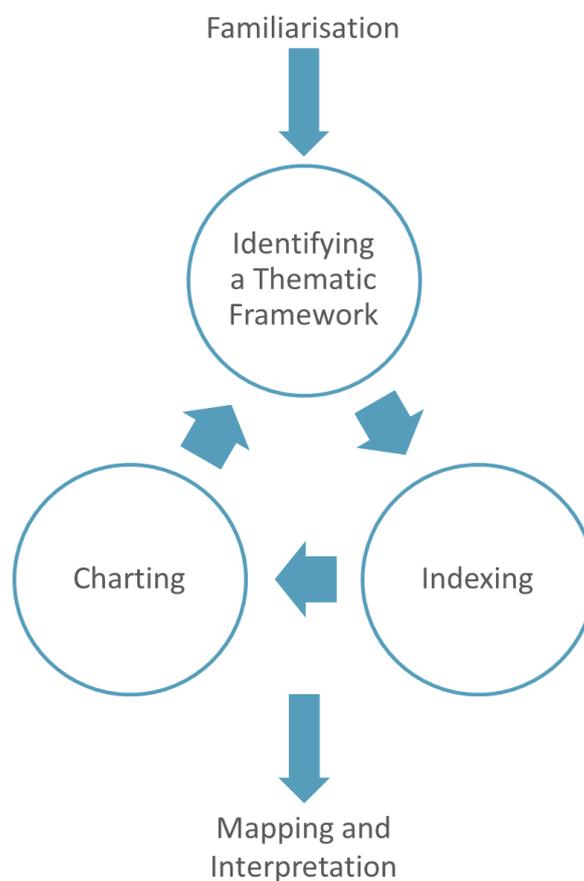
To aid in the analysis of textual data NVivo 10 Server software was used. All data were stored on University of Northumbria Newcastle CLC server within the NVivo Server software. NVivo is a qualitative data analysis (QDA) computer software package produced by QSR International. It has been designed for qualitative researchers working with very rich text-based and/or multimedia information, where deep levels of analysis on small or large volumes of data are required. NVivo helps users organise and analyse non-numerical or unstructured data. The software allows users to classify, sort and arrange information; examine relationships in the data; and combine analysis with linking, shaping, searching and modelling. The researcher or analyst can test theories, identify trends and cross-examine information in a multitude of ways using its search engine and query functions. Researchers can make observations in the software and build a body of evidence to support their case or project.

The NVivo project was password protected ensuring that only those within the research team had access to data.

### Framework Analysis (Social Applied Policy Research)

Social applied research concentrates on finding solutions to immediate practical problems (Ritchie and Spencer, 2002), and has a key role to play in providing insight, explanations and theories of social behaviour (Ritchie and Spencer, 2002). Framework Analysis of qualitative data sits at the heart of applied policy research methodology. Framework Analysis has been utilised to help achieve specified aims and outputs as well as to facilitate systematic analysis of data (Ritchie and Spencer, 2002, Ritchie et al., 2013). This method was chosen for its capacity to handle data in a rigorous, transparent and logical process of thematic analysis. The process consists of five phases (see also Figure 2):

**Figure 2.** Framework Analysis in practice.



#### *Familiarisation*

Ritchie and Spencer (Ritchie et al., 2013) identify that when undertaking research where extensive material is available, judgements have to be made as to how data for analysis is to be selected and broken down into a dataset of a manageable size. The initial stage of this method of analysis involves immersion in a pragmatic selection of the data by reading all of the data within the selection (Pope et al., 2000). To achieve this the NVivo software is used

as it is predominately based on the framework approach of thematic analysis. Transcripts are added systematically to begin to catalogue emerging themes. This allows some semblance of order to be brought to the data.

#### *Identifying a Thematic Framework*

The next stage of the process involves taking the familiarised data and identifying the key issues, concepts and themes by which the data can be referenced. This is achieved by returning to the aims and objectives of the study and reflecting on the prior issues as well as the recurring themes in the data (Pope et al., 2000). By the end of this stage the initial data will have been grouped into manageable chunks and a thematic framework established. With the framework established, an index is then added to the data in preparation for passing all data through the indexing process.

#### *Indexing*

'Indexing' refers to the process whereby the thematic framework or index is systematically applied to all the data; it is not a routine exercise as it involves numerous judgments as to the meaning and significance of the data (Ritchie and Spencer, 2002). Qualitative data interpretation is by intention, very subjective. However, by applying a thematic framework or index to all the data the judgements and assumptions of what the data means to the researcher is made transparent for all to see (Ritchie and Spencer, 2002). It is this level of transparent and, potentially, replicable indexing and labelling of all data that adds robustness to this method of data analysis.

#### *Charting and Mapping*

By this stage of the process, the data had been sifted and sorted into its core themes in preparation for summary, interpretation and mapping. Pope et al. (2000) describes the charting stage as re-arranging the data into the appropriate parts of the thematic framework. In reality this was not a distinct process in isolation from any other. As the data was processed the charts appeared to spontaneously grow with the data naturally gravitating into its own charting area. Clear initial chart titles were evident but what was most interesting is that very quickly both sub and supra themes emerged from the initial charts. Summaries are displayed in sets of matrices producing well labelled or indexed data which is sorted in preparation for interpretation. The transparency of the data matrices is a key factor in the rigor and trustworthiness of this method of qualitative data analysis.

#### *Abstraction and Interpretation*

At this stage the researcher draws the main findings from the verbatim material which has been indexed and sorted. These will produce the findings of the study which can be traced back through the index to the verbatim text of a particular respondent or group of respondents.

## **2.4 Ethics & Consent**

This study has full ethical consent from Northumbria University Ethics Committee as well as the NHS. For each phase, participants were given a study information sheet and asked to sign a consent form prior to agreeing to take part in the study.

### 3. Phase One

#### 3.1 Study Aims

The specific aim of this research phase was to investigate the perceived barriers to care amongst those planning, commissioning and delivering services for veterans with substance misuse problems.

#### 3.2 Study Participants

The study population consisted of six respondents - service planners, service commissioners and service providers - who were involved in the provision of substance misuse services and services for veterans in the North East of England. The study included both public and independent sector service providers commissioned to provide substance misuse services.

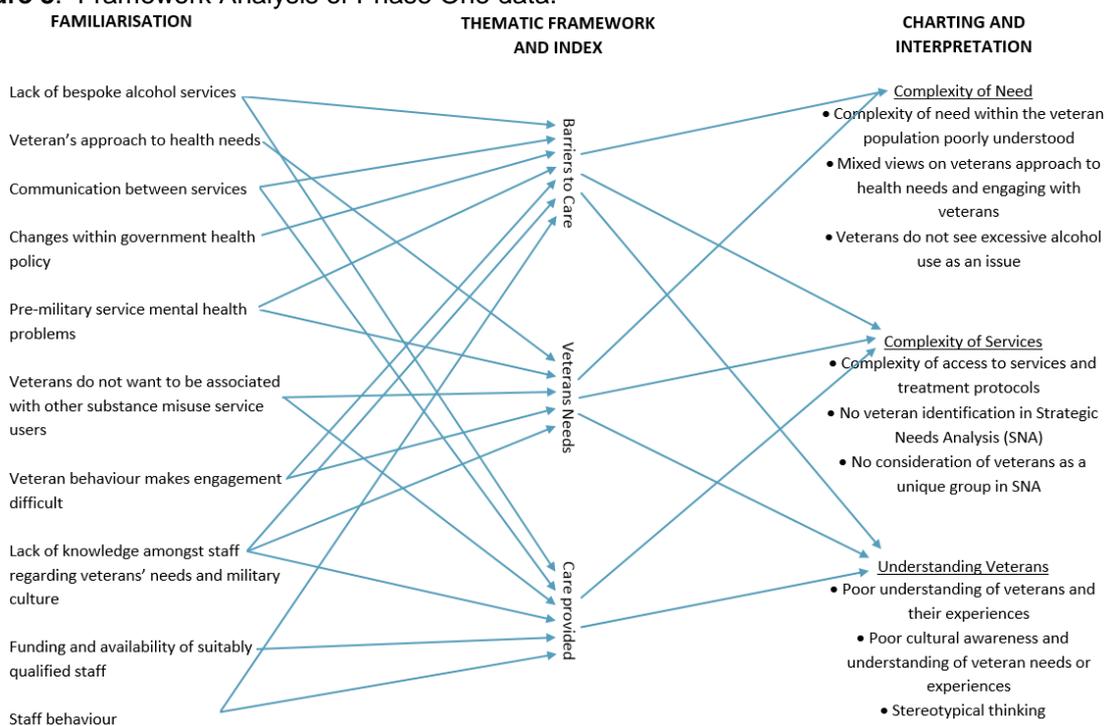
#### 3.3 Data Collection

In-depth semi-structured interviews were conducted to understand the decision making process for substance misuse provision from commissioning to delivery. The specific focus was on the participants' knowledge, beliefs and understanding of the veteran client group (see Appendix A for interview schedule). All of the interviews were recorded, transcribed and then imported into NVivo for Framework Analysis.

#### 3.4 Findings

Following Framework Analysis of the data, researchers identified the following three superordinate themes: Complexity of Needs, Complexity of Services and Understanding Veterans (see Figure 3).

**Figure 3.** Framework Analysis of Phase One data.



### Complexity of Need

The data suggest division over whether veterans are, or should be, identified as a vulnerable group when presenting with substance misuse problems. Planners within the local authority and public sector providers believed that veterans *should* be considered a vulnerable group and have created veteran specific services accordingly. However, public health planners and independent sector providers expressed the opinion that *individual need* should drive care and not *individual status*.

**“.....the treatment agencies work together now to provide one initial screening assessment. So no matter where a person comes and refers to, they're treated in the same way, with the same paperwork, they're asked the same questions. We use a shared diary system and a shared database, so that we can collate all of the new presentations for drug and alcohol referrals ..... it means that there's no wrong door now for people.”**

Respondent 5 Independent Sector Provider

It became apparent that there was a clear division within the data between the public and independent sectors, with the public sector providing veteran-specific services, and the independent sector providing none. What is ambiguous and difficult to determine is whether planners guide or commission any of the service providers to deliver veteran specific services. The data suggest that within the public sector provision the service provided is a local arrangement to meet a specific need, and how that was funded and commissioned remains unclear. What was noteworthy within the public sector provision was that the lead clinician in that service had no input into service commissioning or planning, but provided the most veteran focused service.

What is consistent across the data is the belief that although not all respondents consider veterans a vulnerable group, there is a consensus that they do have complex needs that are a result from military service. The clear observation is that veterans present with a wide range of social, physical and psychological needs caused by or contributing to their substance misuse problems,

**“.....they would be complex. Just really from the experiences that they probably encountered prior to coming in to treatment. And I think from, you know, what I know around veterans that a lot of veterans will have high levels of anxiety or depression or post-traumatic stress disorder, possibly. And, you know, from coming out of a very structured environment when they leave the forces, we know that it can be difficult.”**

Respondent 5 Independent Sector Provider

Public sector respondents felt that one of the key barriers to care was the belief that the veteran does not know how to navigate health systems outside the military.

**“...they don't understand how to access services because they used to go to the medical officer every morning and get it sorted out. And they didn't have to do anything. They didn't have to negotiate services.....in the military you just go and present to your medical officer and... And he says what... Are they fit or not fit ...”**

Respondent 2 Public Sector Provider

This is an interesting and important viewpoint as it implies that forces personnel are conditioned or institutionalised and not only find it difficult to identify their own needs, but also struggle with seeking out help and navigating care pathways. The belief that veterans find it hard to identify their own needs is a clear concern across all respondents, with a general belief that many veterans do not see their excessive alcohol use as an issue, but on the contrary, view excessive alcohol consumption as part of their service life.

**“...they associate their heavy drinking beginning in the army. That it was very much seen as a way of life, and perhaps, kind of, more acceptable..... they've had that culture of heavy drinking....which they associate with being in the army.”**

Respondent 1 Independent Sector Provider

**“....veterans just keep on going and not see themselves as having a problem because that's what they did in the military. So why can't...? Why is it a problem now? You know, but when you look at in the military there were controls and there were gaps in their drinking patterns.”**

Respondent 2 Public Sector Provider

This is a very important observation with regard to understanding why veterans potentially disengage from services. It would appear that veterans that don't believe their excessive drinking is a problem and don't want to be involved in services where they are associated with other substance misuse service users, especially those that use illegal drugs. It would seem that they see themselves as a very different group,

**“...if you've got drug and alcohol services together they might not come because they see who's hanging around outside. And it's a different client group to the group that they are. You know, and these sort of no hopers who haven't done a day's work, and have no respect and no dignity. And they talk like this...”**

Respondent 2 Public Sector Provider

**“.....there's a moral code. An addictive moral code for each substance..... steroid users wouldn't come through the door at the same day as heroin users, because they're not druggies. And that's the perception. And that perception can be taken in to anything, really, can't it?”**

Respondent 6 Independent Sector Provider

### Complexity of Services

The data suggests that recent changes within health and social care delivery have compounded the complexities in navigating service by placing substance misuse services under the auspices of social care rather than within the health sector. Respondents report that there has been a reduction in funding and loss of personnel in substance misuse service planning,

**“We used to actually have a workforce development officer for addictions, only. But we didn't continue that and we...Now that that person is gone, we realise that what we're missing.”**

Respondent 4 Public Sector Planner

It would appear that commissioning cycles and the recent changes have caused a degree of uncertainty and competition between providers, making services even more complex to navigate and competing services reluctant to work together,

**“Every two years you recommission it. And what does that do to the workforce in terms of their stability and what does it do in terms of the general population and knowing what's available. Because it's different provider, different place, ..... in terms of commissioning, it was having a real impact on veterans being able to access the service.....for whatever reasons, providers were going, “Well, we're not going to work with them anymore”.”**

Respondent 1 Independent Sector Provider

**“I think the difficulty comes from the fact that the majority of services, the majority of live services, in any city – [City X] for example – are commissioned services.....the commissioned services can be very protective about their clients, because they need those clients to have a success rate. And they need that success rate to be commissioned again and to pull in more funding and to keep their staff. And that's quite sad. It's the way of the world at the moment.”**

Respondent 6 Independent Sector Provider

This is a significant finding with regard to holistic care provision for veterans. Data suggested identified that veterans typically have difficulties in acknowledging that they have a substance misuse problem, are very poor at seeking help and have difficulties in navigating health and social care services outside of the military. There is a risk that these issues will be compounded if service providers focus on retaining contracts rather than concentrating on implementing a 'shared care' method.

### Understanding Veterans

Although respondents differ on the opinion of whether veterans are a vulnerable group, there is general consensus that they are a client group with unique needs. Respondents from the

public sector were very clear on the need to identify veterans or encourage veterans to let service providers know that they are Armed Forces veterans,

**“I still don’t think people pick out the veterans. They don’t understand what a veteran is, so they don’t know what to pick out. And they’re scared of asking the questions, because they don’t know what to do with the answers.”**

Respondent 2 Public Sector Provider

Respondent 4 not only identifies that services are poor at identifying veterans, but also raises the important conundrum of what staff do when they discover that their client is a veteran. What appears to be clear across the public and independent provision is that frontline staff do not really understand veterans' or the culture of the armed forces that they have come from. The armed forces culture is as alien to care providers as civilian health systems typically are to some veterans. Respondent 2, who was from a veteran specific service, felt that understanding the veteran and armed forces culture was imperative in encouraging veteran engagement in order to maintain contact with services. In particular, they identified that the way staff conduct themselves and approach their work is as important as the care delivered, as veterans find poor punctuality, poor organisation and last minute cancellations of appointments very difficult and potentially a key reason for disengagement from services,

**“We don’t always turn up in time for appointments. You know, appointments get cancelled. You have to be assessed all the time. All those processes, you know. And then they don’t... You know, like we’re saying, you know, shine your shoes, the way you’re dressed and the way you approach them. All those things. The respect—all that. They don’t think we, sort of, respect them in the same way as they feel...All those things can be barriers to them as you come in again. Even if they get into services. So...And then, you know, I mean, I’ve got patients that will come down the night before and check out the building.”**

Respondent 2 Public Sector Provider

Service planners feel that there is a huge amount of work to be undertaken in up-skilling care providers in understanding the armed forces culture and veteran needs as well as having a degree of knowledge of what veteran specific services are available for veterans within the state and third sector,

**“How we address the culture is to make sure we have good information, advice and guidance for people at the very basic level to make sure people understand, one, what services are available in relation to need and not just what services are available. Because I think, if I’m truly honest, I think a lot of frontline professionals don’t know where to refer people to either.....and I think there’s a huge amount of work to do around skilling up the population, both in mental health services and**

.....those more generic universal providers that need to understand more about those conditions and where somebody is at in order to refer appropriately.”

Respondent 4 Public Sector Planner

What was evident within the independent sector was that their services were very needs-focused and until they were contacted by this study they had not really considered how their services met, or whether they needed to meet the needs of veterans,

“Before you came I must admit I was thinking “What can I try and have a look at?” I wasn’t aware of this, but apparently there’s a South Tyneside Armed Forces Forum.....I didn’t realise that there was an armed forces community outreach worker in South Tyneside homes.....I’m not personally really aware of very many... I would have to research it.”

Respondent 6 Independent Sector Provider

### 3.5 Discussion

Complexity of need, complexity of service / care and a lack of understanding of veterans culture were identified as factors that made accessing substance misuse care difficult for veterans. Health and social services can struggle to truly understand the unique needs and experiences of the veteran community.

Veteran’s complex needs were cited as a result of military service, where they present with a wide range of relatively specific social, physical and psychological needs caused by or contributing to their alcohol misuse problem. Previous literature has acknowledged that substance misuse problems are often concurrent to mental and physical health problems and homelessness (e.g. Head et al., 2016, Jones et al., 2014). However, the application of this insight in a healthcare setting has not been previously explored to any notable extent.

Participants argued that a key barrier to care was the belief that veteran’s do not know how to navigate health systems outside the military, suggesting personnel are institutionalised. The ‘veteran as institutionalised’ hypothesis pre-supposes that military veterans fail to engage with services as a consequence of being institutionalised, thus having reduced agency and wherewithal by which to negotiate complex health care systems. Goffman (1961) first delineated the disabling nature of institutional practices within the ‘total’ institution: regulated block treatment, regimentation, and depersonalisation, strictly enforced hierarchical difference and loss of individual identity in favour of the collective. Indeed, it is not difficult to reconcile many, if not all, of these features with military service. The consequences of life confined within such social contexts are, typically, a diminution of agency to the extent that individuals, once ‘de-carcerated’ rather than ‘deinstitutionalised’, can no longer effectively negotiate the contingencies of life. There are, however, other (contradictory) possibilities at play within the ‘veteran as institutionalised’ claim.

A subtle (yet more pernicious) possibility is that the ‘veteran-as institutionalised’ hypothesis provides a convenient shorthand mechanism by which to blame ex-service personnel for their own inability to access effective services (Crawford, 1978). Our data recurrently points to the complexity of mixed economy service provision for military veterans. It is entirely possible that ex-service personnel find services difficult to negotiate precisely because they are. Furthermore, the ‘veteran-as-institutionalised’ construct may comprise a form of self-fulfilling prophecy: the health care professional expects poor engagement and compliance, selectively attends to any evidence of such, and thus confirms their original stereotype. Any actions that ex-servicemen (or women) might subsequently take are subject to exclusive interpretation through an a priori lens of assumption—that they really are ‘institutionalised’. In totality, this mind-set has the potential to effectively divert attention from the poor resourcing and organisation of services themselves.

There was a consensus that frontline healthcare staff do not have an understanding of veterans or of the culture of the armed forces. This lack of understanding was acknowledged as another barrier to care and a reason for veterans’ disengagement from services. Healthcare professionals, and indeed the population at large, might be accused of a lacking adequate knowledge and insights into veterans’ health needs. One possibility is that the roots of such lack of awareness arise from widespread misconception of the demands and experiences of contemporary military service. Castles et al. (2013) coined the term ‘new wars’ in order to characterise recent asymmetrical conflict situations. When the U.K. Government deploys Armed Forces, they inevitably put military personnel in ‘harm’s way’. In terms of new wars, the nature of such ‘harms’ include bearing witness to a variety of attendant atrocities e.g. child soldiers, civilian population expulsion, exemplary violence, torture, and sexual assault. We would contend that the potential for psychological sequelae for military personnel is clear and present. Whilst much has been (rightly) claimed concerning ‘signature’ physical



injuries associated with recent conflicts, it is at least possible that ‘signature’ psychological consequences also exist. What our data reveals is that those commissioning (or in charge of delivering) services rarely raised these matters as topically relevant during the course of the interviews. Even those nominally identified as ‘veterans champions’ on occasions exhibited, in our view, a naivety in relation to the contemporary military experience. This raises the possibility of a substantial gap between the discursive rhetoric of the ‘champion’ role and the realities of service provision.

Military culture is comprised of values, traditions, norms and perceptions that govern how members of the armed forces think, communicate and interact with one another and with civilians. The way in which healthcare professionals present themselves to veterans can be just as important as the care that they provide. For example, poor punctuality, poor organisation and last minute cancellations of appointments, factors identified in Phase One, can put veterans off accessing care. It is unclear as to whether any U.K. literature has also found this, however, a study on the Dutch military ascertained that military personnel were self-confident, punctual and did not like to show their vulnerability or dependence on others (Scheltinga et al., 2005). In order to engage and develop therapeutic relationships with this client group, it is essential for healthcare professionals to understand the 'military mind set' (Coll et al., 2011). Unfortunately, it was clear from the data that healthcare professional, particularly from the independent sector had not considered as to what extent their services met the needs of veterans prior to this study. Furthermore, Algire and Martyn (2013) argue that in order to provide clinically appropriate care for veterans, healthcare providers need to understand the characteristics of today's veteran population and have an awareness of the cultural sensitivities associated with having been a member of the Armed Forces.

### Limitations

It is acknowledged that this was a small scale qualitative study of health service planners, commissioners and providers in the North East of England. Although the sample, in this instance, was purposively selected, the location of all respondents within a single region may give rise to limitations similar to those that are characteristic of snowball sampling techniques, namely an inherent selection bias towards the inclusion of respondents from within the same professional networks and having pre-existing inter-relationships (Atkinson and Flint, 2001).

### Conclusions

Looking at planners, commissioners and service providers' views on why veterans are (seemingly) reluctant to access help for alcohol problems laid the groundwork for this project. Understanding how veterans are viewed and how services are ran from a planning and commissioning perspective aided the understanding of veterans' personal experiences and opinions regarding accessing and engaging in healthcare services for alcohol problems. These findings from Phase One informed Phase Two of the study, helping to identify areas of greatest interest for the semi-structured interviews with service users. It was important to gauge whether or not the experiences planners, commissioners and service providers have of veterans accessing healthcare for alcohol problems corroborated with the actual experience of the veterans.

*N.B. The research undertaken during Phase One of the study has provided the basis for a published peer reviewed paper (Kiernan et al., 2016).*

## 4. Phase Two

### 4.1 Aims

The overarching aim of this phase of the study was to understand why U.K. veterans may be different to other substance misuse service users by (1) exploring veterans' relationship with alcohol; (2) exploring why veterans are reluctant to access help for alcohol problems; and (3) understand the complexities veterans may experience when accessing and receiving treatment.

### 4.2 Participants

In partnership with Northumberland, Tyne and Wear NHS Foundation Trust (NTW), Changing Lives, Northern Learning Trust and Armed Forces and Veterans (Launchpad), 22 ex-forces personnel who were accessing/engaging in alcohol and substance misuse services (or had a history of alcohol/substance misuse) were recruited and interviewed. There were no restrictions on participants' level of engagement with substance misuse services. However, assessments were made as to their suitability to participate in the study due to the sensitive nature of the questions.

#### Recruitment

To ensure a maximum variance sample, the sampling strategy incrementally developed over the participant recruitment period. Initial recruitment from Northumberland, Tyne and Wear NHS Foundation Trust (NTW) resulted in five participants who were accessing local NHS alcohol services. Recruitment of those early on in their treatment meant that many participants preferred telephone interviews over face-to-face, resulting in a two poor quality recordings. As a result, the sampling strategy changed, 12 participants were then recruited through Changing Lives, a third sector charity primarily dealing with homelessness and substance misuse. Participants were often further through their treatment programs and were able to reflect on their experiences in face-to-face interviews with researchers.

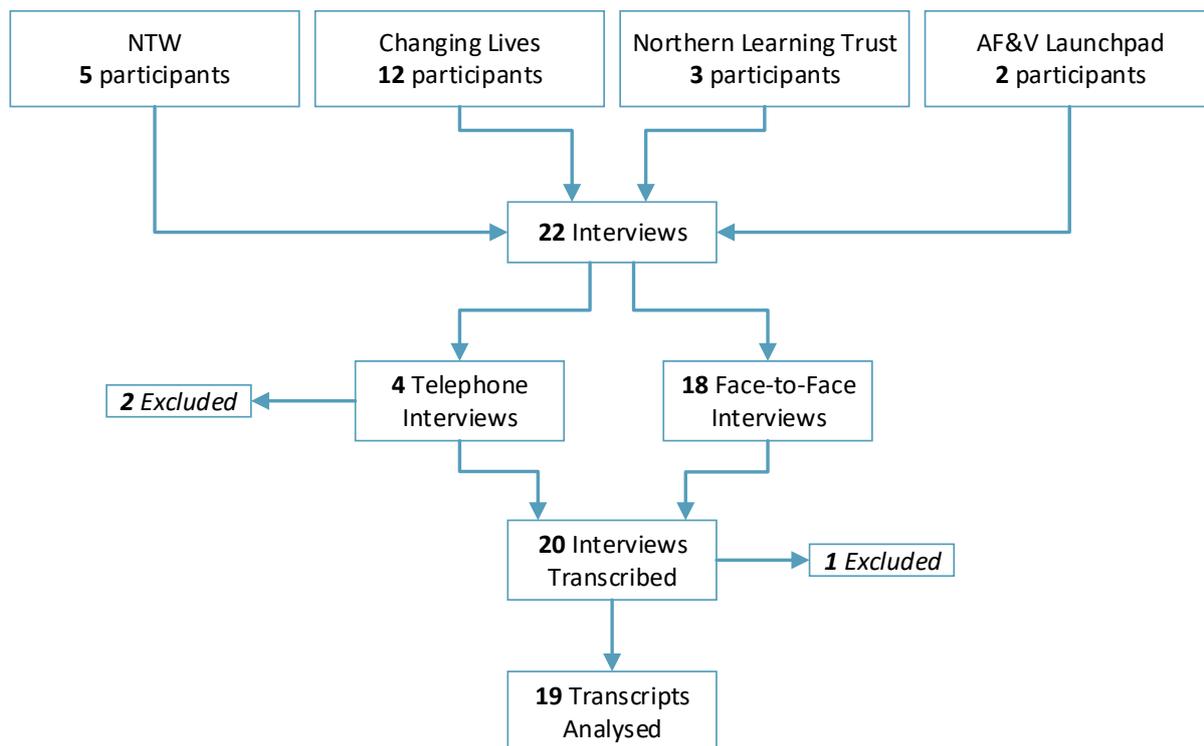
Problems arose in finding younger veterans (i.e. under the age of 40), and as a result, researchers recruited three participants through Northern Learning Trust, another third sector charity primarily dealing with individuals who have been through the Criminal Justice System. These participants were marginally younger in age. Finally a further partnership with Armed Forces and Veterans Launchpad, a veteran's homeless charity was made. Two participants were recruited, and again, were marginally younger than the initial recruited participants.

### 4.3 Data Collection

In-depth semi-structured interviews were conducted to assess why veterans are reluctant to access help for alcohol problems (see Appendix B for interview schedule). This included both

telephone and face-to-face interviews. For participants who were not comfortable/able to attend a face-to-face interview, telephone interviews were arranged to ensure their stories were captured. However, two telephone interviews were excluded due to the poor quality of recordings obtained. Consequently, twenty interviews were transcribed with a further interview being excluded from analysis due to poor quality of data (see Figure 4 for recruitment). Transcripts were imported into NVivo for Framework Analysis. Data collection was completed during February 2017.

**Figure 4.** Participant recruitment.



## 4.4 Findings

### Demographic Characteristics of Participants

Participant characteristics were identified for the service users whose transcripts were included in the analysis (see Table 1). Participants served in the U.K. Armed Forces between 1967 and 2015 and predominantly had served in the Army. Almost all identified as having severe alcohol misuse.

The sample included those who had been on operational deployments during their time in the military as well as those who had not. Participants with a long military service ( $\geq 15$  years) and/or served post 2000 had typically been operationally deployed on multiple occasions.

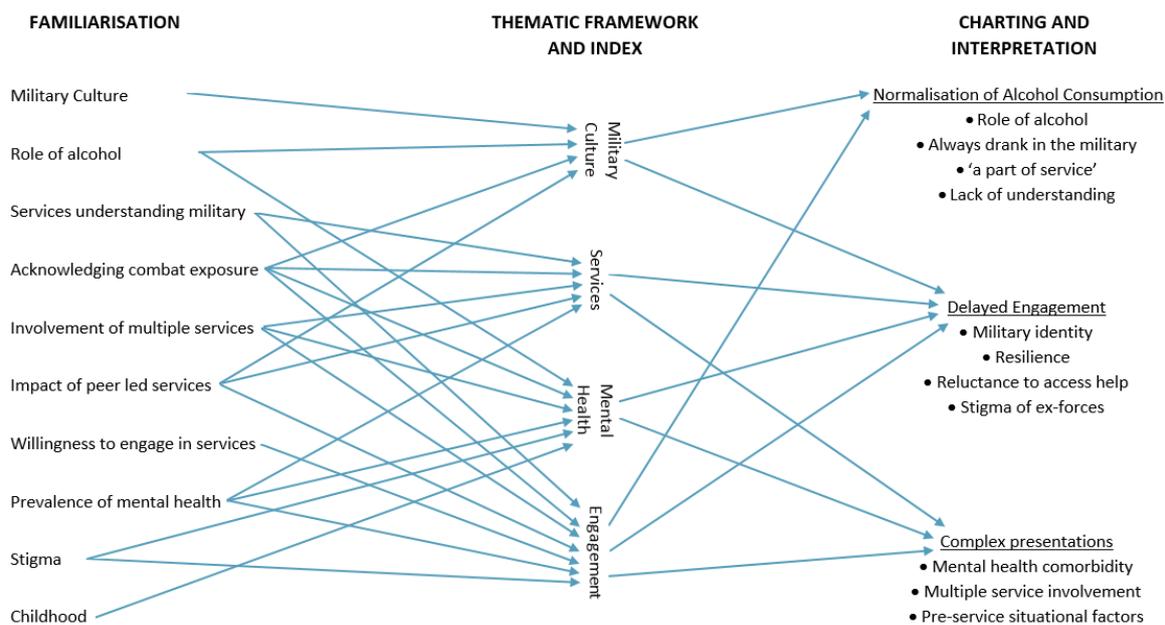
Eight participants had no operational deployments (including one with 24 years' service). Of the 19 participants who were included in the analysis, 18 participants had a history of alcohol misuse and five mentioned drug misuse. All the respondents had multiple failed engagements with health and social care services over a period of time, and the mean length of time for them engaging with a service that was successful in providing effective treatment was 17.37 years from the end of military service.

**Table 1.** Participant characteristics (N=19).

<i>Age at interview (years)</i>	
Mean (SD)	45.05 (7.230)
Range	35-64
<i>Gender</i>	
Male	18
Female	1
<i>Service</i>	
Royal Navy	2
Royal Marines	1
Army	14
Royal Air Force	0
Reserve Forces	2
<i>Age on Enlistment (years)</i>	
Mean (SD)	17.58 (2.364)
Range	15-22
<i>Length of Service (years)</i>	
Mean (SD)	9.30 (7.113)
Range	5 months – 24
Early Leavers ( $\leq 4$ years)	6
<i>Operational Deployments</i>	
Deployed	11
No deployments	8
<i>Years post service to engage in help (years)</i>	
Mean (SD)	17.37 (8.726)
Range	1-30

After applying the Framework Analysis method, 10 themes were identified within the data, which were further conceptualised into 3 superordinate themes: Normalisation of Alcohol Consumption, Delayed Meaningful Engagement and Complex Presentations (see figure 5).

**Figure 5.** Framework Analysis of Phase Two data.



Normalisation of Alcohol Consumption

Alcohol was identified as playing a big part of the military culture that the participants experienced; it was often used as a bonding tool to build trust and camaraderie and featured heavily in the socialisation of personnel. The participants explained how bonding was essential in developing trust between personnel and as a result drinking was encouraged and not often viewed as an ‘issue’.

**“it gets you together and it’s social..... it’s another way of getting us to bond together and to get to trust of each other.”**

Participant 05

**“For alcohol. A lot of the squaddies think it’s normal. Actually I thought it was normal the way I was drinking for a long time. It was normal for the army.”**

Participant 02

Alcohol use in the military was very much accepted and normalised and the behaviour associated with the use of alcohol for socialisation and coping during service often continued after leaving the military. Most participants did not acknowledge that these drinking patterns developed in the military exemplified binge drinking or alcohol misuse. In many cases, even after treatment, service users still did not see their drinking habits in the military as problematic, just a part of their service.

Participants often drew comparisons with civilian counterparts, noting that it was typical behaviour at that age. There appeared to be a difficulty in understanding/accepting that they had an issue with alcohol – or at least a historic problem – due to the normalisation of alcohol consumption within the military. It is this cultural acceptance and normalisation of excessive

alcohol consumption which suggests that the participants' relationship with excessive alcohol intake has been normalised, and contributes significantly to their inability to identify that their alcohol consumption is problematic. Consequently, this may be a contributing reason for difficulties in service engagement as the participants in this study reported their belief that there was nothing abnormal about the amount of alcohol they consumed, or the regularity in which they consumed it.

**“It’s all work hard, play hard. It’s all around that. You hear it all the time and it’s... its norm to you because it’s pumped into you. And it’s not just like oh well we might go down the bar, it was like everybody will be in the bar and you just stay there.”**

Participant 10

What was most significant was that when considering the episode of care which was successful in treating their alcohol use, their primary presentation was not for alcohol problems, but other psychological, social and physical reasons.

#### Delayed Meaningful Engagement with Alcohol Services

The data suggested a number of reasons for delayed engagement with alcohol services. Primarily, it is suggested that the participant's normalised relationship with alcohol prevented the individual from identifying that alcohol was causing the difficulties. Subsequently, they would rarely or never report or discuss their drinking patterns with health or social care services.

Health and social care service providers' lack of understanding of military culture was cited as a key reason for not engaging with care for their alcohol problems, with many of the participants citing their military service as a contributing factor to their alcohol misuse.

**“But that was again I was talking to somebody who had no idea what it was like being in the military so there was no way I was going to talk to them.”**

Participant 02

This lack of understanding was emphasised when the participants reported that when being assessed and discussing their military service, they found themselves having to explain terminology. Health and social care workers not understanding 'military' terminology was a relatively common reason for service users disengaging with services. More importantly, participants seemed to engage well with care workers who were peers, or had a good understanding of their background. One participant in particular, who was receiving care from a third sector provider noted:

**“He was great because he talked... we talked the same language.”**

Participant 19

A lack of understanding of terminology was a barrier to engagement in services as service providers **“just don’t get it”**.

As with many health problems, service users have to be willing to engage in services in order for treatment to be beneficial. The data suggests that accepting that their alcohol consumption was a problem potentially challenged their ‘military identity’. Participants often referred to being trained to be resilient, where needing help was seen as a sign of weakness.

**“It is about being trained not to be weak. You are trained not to go sick.”**

Participant 10

Upon leaving the military, participants continued to ascribe to this identity, suggesting that they remained reluctant to access help for fear of being seen as weak. There was a suggestion in the data that this stigma was not just anticipated, some participants reported prejudice from family members, members of the community and people they knew from military service. The content of this stigma appeared to be concentrated around being ex-forces.

**“Stereotyped the veterans? - Yeah (umm) I see ‘You’ve shot...’ I’ve been shot at, but I’ve never shot at anybody, which I have been shot at in [PLACE].”**

Participant 14

Despite accessing help being seen as a sign of weakness in the Military, if help was needed participants were able to engage with individuals who had shared experience (i.e. military experience).

**“The military would provide all these services...”**

Participant 12

**“The army was supportive then... my unit itself was supportive. Yeah. Because they were... as soon as I got diagnosed”**

Participant 18

Additionally, participants had the support of their colleagues, participant 18 noted support from the Army and their unit after diagnosis. However, without the same support networks and structures participants had within the military, many personnel struggled with the adjustment.

**“After the military because you haven’t got a support network. You’re on your own. You’ve got no structure, you’ve got no support network, you haven’t got people that have been through everything the same as you have.”**

Participant 02

When participants accessed services, they did not always feel they received the care they needed, consequently disengaging. This prior experience with health and social care services impacted on participants' willingness to engage in services in the future.

**“The GPs waste of space. I mean you go in a lot of surgeries now they just basically file you on a piece of paper...’ like may need sleeping tablets ‘because we won’t provide them, blah, blah, blah’. Alright I’ll just hit the bottle. That’s my sleeping tablet.”**

Participant 12

Meaningful engagement in alcohol services were attributed to acceptance of needing help and accessing peer supported services where the service provider understood the participants personal experiences (see ‘Complex Presentations’ below). Almost all participants were referred for alcohol treatment through other services for other problems such as social housing, unemployment and mental health, thus further delaying access to alcohol services and subsequent engagement.

### Complex Presentations

The data suggests that as a consequence of the participants' normalised relationship with alcohol, which contributes to a delayed presentation, the participants invariably presented with complex, multiple morbidity and not just an alcohol problem in isolation.

**“When I got out (umm) when I got out of the military (umm) obviously I had to get my own GP and I was still suffering from (umm) anxiety, depression, paranoia, this, that and the other.”**

Participant 03

Many participants were experiencing other mental illness, physical illness, social housing problems and unemployment. Often it was not until crisis point that the participants engaged with meaningful services which addressed their problems. As previously reported, what was most significant was that help was rarely achieved through the veteran actively seeking help for their alcohol problem. It was quite often through other services, such as mental health, homelessness etc. that the participants gained access to treatment for their alcohol problems.

The data suggests that participants' typically presented as more challenging to service providers, often resulting in the engagement of multiple services. For some, the involvement of multiple services was beneficial, but the majority referred to confusion for both themselves and the service providers. Involvement of service charities was largely seen as the most beneficial, and were cited as the organisations providing the greatest support. There was a suggestion that service charities provided the most consistent support and helped in the communication with multiple services across sectors, ensuring participants received the right care.

**“No there isn’t and it never did seem connected. It was a lot more connected this time. (umm) But I think that was primarily down to [CHARITY] pushing rather than the NHS side of it.”**

Participant 02

There was a suggestion of a heavy reliance on service charities to provide support and care where, arguably, front-line services should have been providing it.

The data suggested that participants who had meaningful engagement were often accessing peer-led services. Peer-led services were those where the provider was linked to or had experience of the military. For some, it was suggested that more involvement from ex-service personnel (or peer-led services) in service provider roles would be highly beneficial, making the services more accessible and easier for the veteran to engage with. The knowledge that services employ someone with knowledge and insight into military life appeared to increase rapport with the service user and helped ‘breakdown barriers’, and the use of peers also ensured sensitivity to military culture and terminology. When this was not the case, the participants reported being reluctant to explain or report their service experiences and often decided they couldn’t be helped, as the provider ‘did not understand’. It is possible that just having someone who has been through similar experiences providing care could be beneficial, as a veteran who has previously had an alcohol issue may relate better to the experiences of a veteran currently experiencing difficulties:

**“I can’t open up the same to a civilian.... my support worker is a veteran. And this [CHARITY] is run by veterans..... for me I can relate to them and they can relate to me. And you have an instant bond and there’s a trust because you’ve all been through the same thing. Not necessarily the same trauma, but because you’ve been soldiers or you’ve been whatever... whatever service you’ve been in. So you have this... have this common bond so it’s easier to open up and trust and listen than it is with a civilian. Which is something maybe the civilians don’t understand.”**

Participant 05

In addition to citing military service as underlying their alcohol consumption, many participants also noted exposure to alcohol from a young age. Parents with established alcohol problems were fairly common amongst this sample. (It is important to note that this was not the case for all participants).

**“I started drinking very young, very young... I was arrested for drunk and disorderly at thirteen. So I grew up around alcohol and my parents were alcoholics ... alcohol was very prevalent in my life from an early age”**

Participant 06

“It was always around the house and stuff with my parents and stuff like that, they always drank predominantly on a weekend. I knew my mother drank as well slyly during the day, you know there used to be a joke about it within the family group. So I'd always had alcohol around,”

Participant 11

“I would say about... maybe seven year old. I would say a seven year old really, yeah, my mum was a drinker, she was an alcoholic”

Participant 13

This exposure to alcohol appeared to contribute to the normalisation of alcohol, making it more difficult to acknowledge their own excessive alcohol consumption and subsequently accept help. Joining the military was viewed as an opportunity and in some cases (again not all) an escape route.

“Well I joined the infantry when I like was leaving school because like at the time there was no job prospects in [area they lived]”

“I joined the army, new beginning, new everything”

Participant 12

There was a suggestion in the data that pre-enlistment factors such as alcohol exposure at a young age and using the military to escape environments, made it more difficult to engage the participants in meaningful treatment due to the complexity of their normalisation of alcohol consumption. Despite using the military as a means to escape, on discharge participants frequently returned to the same locations, often where earlier problems still existed (e.g. unemployment). These situations appeared to exacerbate the prevalence of complex presentations upon meaningful engagement.

#### **4.5 Discussion**

Phase Two has identified three main findings that, in turn, presents a conceptual understanding of why veterans with alcohol problems are potentially different to substance misuse service users from the wider population. A normalised relationship with alcohol, which stems from the culture of military service, appears to delay meaningful engagement with alcohol/substance misuse services. The lack of insight to the role alcohol plays in their lives, and the delay in engagement, results in multiple morbidity and complex presentation. The data suggests that the participants' alcohol misuse has an impact on all aspects of their life and their families' lives (including physical, psychological, social and financial aspects). As a result, when a veteran does access health provisions for alcohol problems, they have a complex presentation which spans both health and social care.

From the data, it is clear that the participants' relationship with excessive alcohol consumption is normalised, to the extent of possibly forming part of their identity. In the military, alcohol

has been used as a social bonding tool and encouraged as a way of coping (Jones and Fear, 2011). It is therefore argued that the military culture experienced by this study's participants conditioned them to be resilient, avoid help seeking behaviour, view injury and illness as a weakness and encouraged alcohol use as a coping mechanism. When we reflect upon these beliefs, it is easy to see why the participants from this study not only viewed their alcohol consumption as acceptable and 'normal', but were also, potentially, very proud of the extent to which they could drink. The pride around the capacity to drink appeared to be formed on the belief that as long as they were fit for exercise and work the next morning, their drinking was clearly not an issue. A term used by many of the participants was 'we worked hard, and we played hard'. The effect that this appeared to have was, that any suggestion that their alcohol consumption was hazardous, harmful or problematic challenged their perception of their own identity. More importantly, accepting that their alcohol consumption was an issue which they needed to address, was potentially a sign of weakness in their own eyes and went against everything that they believed. Most notable from the data was that when all the participants eventually accessed definitive care that actually addressed their problems, their primary presentation to access care was not for alcohol use. In most cases it was for mental health issues and/or social problems such as homelessness.

Similar results were obtained by Jones et al. (2013) where only a quarter of military personnel who were deemed harmful drinkers actually sought help. It was surmised that participants did not see their alcohol consumption as concerning. This normalisation of alcohol consumption is problematic for accessing help. From a therapeutic standpoint, in the Cycle of Change (Prochaska and DiClemente, 1986), veteran participants often appeared to be at the pre-contemplation stage. At this stage, veterans tended to be unaware that a problem exists, meaning there is no intention to change their behaviour or to access help for their alcohol misuse. This stage may be exacerbated by the normalisation of alcohol in the military. Veterans were unable to progress through the cycle to engage in help until there is an acceptance of an alcohol problem. Unfortunately, it is suggested that in comparison to those further along in the cycle, they will process less information about alcohol, spend less time evaluating their drinking and experience fewer emotional reactions to the negative aspects of drinking (i.e. family problems, physical health, mental health, social issues etc.), further delaying any engagement in substance misuse services. An initial acknowledgment of an alcohol problem is



necessary and as this delay in engagement progresses, other aspects of the veteran's life become affected, for example finance, unemployment, homelessness and isolation.

A delay in meaningful engagement with substance misuse services was common among the service users interviewed. Meaningful engagement in healthcare services was on average 17.37 years post military service. A belief that civilian healthcare professionals did not understand veterans or have the ability to help was prominent. Participants noted a lack of understanding of military culture and the role alcohol plays in military service, they found themselves having to explain terminology. In many cases this lack of understanding of terminology was associated with the service providers' inability to help, increasing the participants' reluctance to engage in services meaningfully. There was a break of trust and respect with alcohol misuse services, becoming an unsuitable environment for the participants to come to terms with their alcohol problem. Previous bad experiences with alcohol misuse services meant participants were more reluctant engage in the future. Combat Stress (2011) also suggested that veterans often lose trust in mainstream NHS services because of initial experiences with healthcare professionals, resulting in them withdrawing from services in the belief that their needs were not understood.

Participants have to be willing to engage in alcohol misuse services and this willingness was thought to increase when interacting with service providers who were peers and/or had a good understanding of what it meant to be a part of the military. However, accepting an alcohol problem challenged participants' military identity as it was seen as a sign of weakness. For some participants, it was not just anticipated stigma that caused a delay - some reported enacted prejudice around being ex-forces - with one participant recalling being asked if he had ever shot anyone. Previous research on serving personnel also found a fear of anticipated stigma as a barrier to care (French et al., 2004, Iversen et al., 2011). Iversen et al. (2011), when studying mental health stigma in the British Armed Forces, noted the perceived stigma which serving personnel believed, with 73% believing that "*my bosses would treat me differently*" and 46.5% concerned "*I would be seen as weak by those who are important to me*". Data from this study has identified these same beliefs in the participants and suggests that stigma is a contributing factor to a delay in meaningful engagement in substance misuse services.

A delay in engagement impacted on many other aspects of the participants' lives and not acknowledging an alcohol problem meant that the route to alcohol misuse services was varied for across the study participants. There is a consensus that veterans presented with a wide range of social, physical and sociological needs caused by or contributing to their alcohol problems (Kiernan et al., 2016, Fear et al., 2010, Aguirre et al., 2014). Almost all participants

in this study were experiencing mental health problems, physical illness, social housing problems and unemployment. Most of the participants were accessing third sector charities, primarily dealing with homelessness, unemployment and ex-offenders. Typically, it was not until they accessed these organisations that their alcohol problems were identified and addressed.

Unfortunately, the complex presentations do not appear to be matched by the U.K.'s current organisation or level of healthcare provision. Substance misuse services now sit within public health and social care, with a budget (which is not ring-fenced) being managed by local government. In reality, the data from this study would suggest that substance misuse care runs in parallel and separate to any other health provision, making integrated health and social care for this group of service users very difficult. In the U.K., substance misuse services, appear to prioritise people using illicit drugs, specifically those using crack cocaine and/or heroin, and are not currently set up for alcohol misuse, certainly not to the extent seen in veterans (Roberts and Bell, 2013). As a result, there appears to be a greater reliance on the third sector for providing support and services for veterans with alcohol misuse. Findings in the current study suggest that charity involvement is welcome, particularly when these are affiliated with military organisations, to bridge the gap in support for alcohol problems in primary and secondary care. However, this often means multiple agencies are involved, creating confusion and lack of continuity when veterans do engage in services. Further, this also appears to then encourage the creation of more expensive parallel services, which often rely on short term funding and are hard to sustain. These services are in addition to the statutory health and social care provision and are generally run at a local level. The multitude of seemingly uncoordinated service provision appears to add to the confusion that the participants experienced when accessing care.

### Limitations

An early limitation was identified in participant recruitment, in that within commissioned statutory provision and the NHS we were only finding older veterans. To achieve the maximum variance sample target for this study the sampling strategy was changed and the remaining participants were recruited through partnerships with third sector charities. It is noteworthy that all respondents interviewed in this phase of the study were ex-servicemen. UK women military veterans have recently become more vocal in asserting that women veterans should be acknowledged alongside their male counterparts (Dodds, 2016). Whilst it is claimed that men appear to have greater levels of alcohol consumption than women (Rona et al. 2007), the absence of female military veterans from this study and other research in this area remains a significant limitation.

### Conclusions

The findings of Phase Two clearly identify that veterans with substance misuse problems (alcohol) do have unique difficulties that set them apart from other substance misuse service users within the general population. They have a normalised relationship with alcohol which contributes to a delayed engagement with care. The delayed engagement in accessing care leads to complex presentations where all aspects of the veteran's lives (physical, psychological and social) are impacted. The main barriers to care appear to be a lack of understanding of this unique group of service users, and the confused, duplicated plethora of services available. Complex care pathways and the lack of integrated health and social care would appear to contribute to veterans disengaging with care. What is very notable is that greater success in engaging veterans with substance misuse services was achieved when the service providers had veteran peer support workers as part of their service provision.

## 5. Phase Three

### 5.1 Aims

To further understand the findings from Phase One and Phase Two, Phase Three aimed to: (1) explore why U.K. veterans may view themselves as different to substance misuse service users within the general population; (2) understand why veterans would be reluctant to access help for alcohol problems; (3) understand how attitudes to alcohol may have changed over generations; and (4) potentially explore how those with alcohol problems should be helped.

### 5.2 Participants

Nine ex-forces personnel from the wider veteran community volunteered to participate in a focus group. Only veterans who were not current substance misuse service users or did not have a history of alcohol/substance misuse were recruited to participate. The inclusion criteria were very broad and included a wide-range of experience and rank across the U.K. Armed Forces (Royal Navy, Army and Royal Air Force).

### 5.3 Data Collection

A semi-structured focus group was conducted to meet the aims of this phase (see Appendix C for schedule). The focus group was held at the premises of a Third Sector organisation during February 2017. The session was audio-recorded, transcribed and imported into NVivo for Framework Analysis.

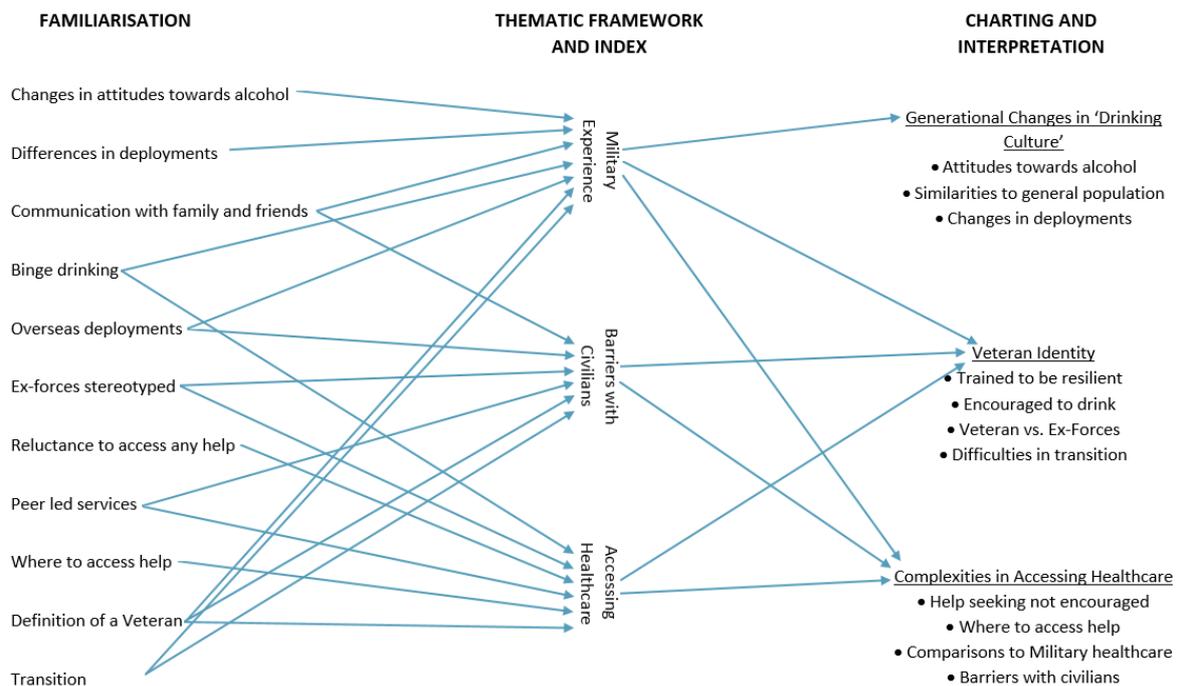
### 5.4 Findings

#### Characteristics of Participants

All participants had served in the U.K. Armed forces for between 8 and 42 years (mean = 26.11, SD = 11.900). All services in the U.K. Armed Forces were represented, where 1 participant served in the Royal Navy, 5 participants served in the Army, 2 served in the Royal Air Force and 1 participant was a reservist. All participants were male with ranks on discharge ranging from Private to Lieutenant Colonel. Participants with a non-commissioned rank on discharge will be referred to as 'Other Rank' and those with a commissioned rank as 'Officer'.

Framework Analysis was conducted on the data from the focus group, 11 themes were identified and further developed into three superordinate themes: Generational Changes in 'Drinking Culture', Veteran Identity and Complexities in Accessing Healthcare (see Figure 6).

**Figure 6.** Framework Analysis of Phase Three data.



**Generational Changes in 'Drinking Culture'**

Excessive alcohol consumption in military personnel was suggested to be a problem of the past. Participants indicated that those who served in the 1970s to early 2000s had greater problems with alcohol due to longer postings, isolation from family and friends and a normalisation of alcohol consumption. In this earlier period, data showed lengthy postings, far away from home often meaning personnel did not see their families and civilian friends for long periods of time. As a result, military personnel spent most of their time together, often confined to barracks with multiple personnel in one room. Socialisation around alcohol was encouraged and due to isolation from family, one participant noted:

**“If you’ve got nothing to look forward to, the easy way is just to drown your sorrows”**

Former Army Officer

For participants, long, overseas postings were much more common than they are observed to be now. Postings to Germany and Cyprus were the most discussed in the focus group. In these overseas locations, alcohol was not only cheap, but the focus for many personnel;

**“Paid today, hated it so much tried to get rid of it all! Had to drink as much as the others did. Fine, but yeah that was it and the postings.... It was so cheap, you know it was rude not to”**

Former Army Other Rank

Postings are now perceived to be shorter, and often closer to home, meaning weekends are spent at home with civilian families. It was suggested that the current generation of service

personnel will not drink through the week in order to save money, meaning when they return home on the weekend they can go out with their civilian friends. A potential increase in binge-drinking was discussed. However, it was determined that this type of alcohol consumption was not restricted to military populations and in fact may reflect the social demographic from which service personnel may be drawn from.

**“You’ve now got units based in areas where soldiers can get home at the weekend. You know it’s only a train journey away. It’s not a two, three hundred, four hundred miles away. So they’ve got lots of friends now where they go home to every weekend.... in the eighties and nineties you did everything together because you were always together”**

Former Army Officer

**“The actual patterns of drinking that we’re seeing in the military is more or less reflecting what we’re seeing outside of the military”**

Former Army Officer

A clear consensus across the veteran cohort, regardless of rank, was that alcohol played a major role in the lives of military personnel serving in the 1970s to early 2000s. A perceived change in attitudes to alcohol for those currently serving in the U.K. armed forces was clear, with suggestions that the military are now working towards a zero-tolerance alcohol policy and are actively advocating alcohol awareness.

**“Trying to get that zero tolerance. And when we read the policy in regards to alcohol, we’re going down the same route”**

Former Army Officer

### Veteran Identity

The participants felt very strongly that help seeking was not encouraged in the military, and that any form of illness or injury was perceived as weakness or malingering. Participants reported being looked down on by peers if they were ill and would be seen as a malingerer. This belief around help seeking appears to have remained with most of the participants, even after leaving the services:

**“If you went sick in the army and it was for a minor thing you were classed as a malingerer and that just went through the whole of the British Army, you could turn up ‘My legs fell off’ ‘You’re going sick because your legs fell off?’ So when you transition out of the army, if you’ve got a... say problems with an alcohol problem, you won’t go anywhere near a medical centre because they’d just turn around and it’s engrained in that... you just... perceptions changing now, but certainly for me if I was going to go... I wouldn’t go and see a doctor, I’d just head off to get painkillers”**

Former Army Other Rank

**“If you’re self-sufficient you don’t ask for help because you’ve got to be self-sufficient, you don’t want to be a burden”**

Former Naval Officer

The participants reported that personnel are trained to be resilient and transcripts identified that talking about issues, whether that be physical or mental goes against this training.

There was a suggestion that an encouragement to drink in the military was not just as a result of peer pressure. For some, drinking alcohol was almost a part of their training, alcohol became a part of being in the military. Across ranks, veterans acknowledged this:

**“I was seventeen and my first station I went to when I was trained; the first thing they did was went out and got me drunk. That was the first thing they did and it carried on from there”**

Former RAF Other Rank

**“You know you just... peer pressure is there, you know that one person turns round to another who turns round to another... yeah and suddenly you know you’re knocking on each other’s doors saying ‘Right ten minutes, come on we’re going!’ you know and you’re off”**

Former Army Officer

**“The sergeants and officers messes, you go to... once a month you’re expected to turn up and you have gin and tonic to start off with, then you go and have white wine and you have red wine, then you have port and you have liquors and then the drinking starts afterwards. You know when you go to the bar. So that does not encourage matters at all, it’s just binge drinking on a regular basis. So I think from that point of view, the forces almost encourage binge drinking among it’s certainly its senior member”**

Former Army Other Rank

Participants discussed their difficult transition period, and the impact that this had on the development of their post-service life. It was clear that for these participants that their relationship with alcohol did not change when they entered civilian life. Excessive consumption at social gatherings was still thought of as normal, and there was very little evidence of what would be perceived as an alcohol problem, or an ability to recognise if someone was drinking too much. As identified in Phase Two, there appeared to be the suggestion of a normalised relationship with alcohol across the military. As a result, having the identity of a hard drinker, who could drink large amounts, was seen as a positive identity amongst peers. It was suggested that this relationship with alcohol, and being identified as a hard drinker, often remained upon discharge, as personnel developed a veteran identity which incorporates their former service identity. At the centre of this identity appears to be the comradeship and the

social life that they have always enjoyed. Therefore, most veteran organisations gather around social events, where (usually) large quantities of alcohol are consumed. Participants acknowledged that this transition period to civilian life can be challenging and for many, very difficult. Using alcohol to cope during this period may not be uncommon. But, it is the normalisation of this behaviour that can be problematic as this may exacerbate the time in which it takes for the veteran to determine they are drinking excessively.

**“I found it quite difficult when I came out... because I volunteered to come out so it was my own fault and I must admit for the six months I wondered what the hell I’d done”**

Former RAF Officer

**“Yes some find it a lot easier to transit from army life or forces life to civilian life, some of us don’t. I found it a bit of a struggle”**

Former Army Other Rank

**“if you have a hard time one way of getting rid of it is to go and have a few beers. It’s the same probably with these veterans, they’ve fallen on hard times, what do they have? They can drown their sorrows... one shouldn’t underestimate what the transition is like though. Everybody here has left and been moderately successful or very successful. But the fact is it’s an extremely difficult time”**

Former Army Officer

In further exploring why veterans may be reluctant to access help, there was a consensus that they did not identify with the term ‘veteran’ and did not want to be called this. Consequently, participants discussed how they would define a veteran, associating it with longevity of service and a particular conflict. Ex-forces/ex-services/service leaver were noted as preferred terms to describe their own identity.

**“I don’t think I should be called veteran. You know I’d rather be ex-servicemen. That’s what I’d like to be”**

Former Army Officer

**“I certainly used to look at the old and bald as the veterans! The guys what go walking down the cenotaph for... and that’s what I saw as a veteran. I wouldn’t have classed myself”**

Former RAF Other Rank

**“If people don’t see themselves as veterans then they don’t engage because it’s the terms used”**

Former Navy Officer

There was a consensus that if professionals used the term veteran, they would be even more reluctant to access help. Many participants noted that they would not disclose their status if

they were asked if they were a veteran in a healthcare setting. At the same time veterans appear to struggle in the adjustment to being a civilian. This can be a barrier to them accessing healthcare as the military characteristics such as self-reliance, seeing illness as a weakness and resilience remain.

**“If they continue, even ten, fifteen years beyond their service, to continue not to see themselves as civilians it is a huge barrier to them advancing and moving on and moving from one place to perhaps a better place. It’s... and I think we see it reasonably commonly amongst our veterans”**

Former RAF Other Rank

The importance of identifying what is classed as a service leaver was also identified, as some thought that one-day service did not constitute enough experience of being in the military. However, it was acknowledged that there is a responsibility to look after these individuals as early service leavers can be the most vulnerable.

**“If you were in Civvy Street and you were in a company you know training to be a mechanic and after three days you left. You wouldn’t be called a mechanic, would you?... So why should you be called a soldier?”**

Former Army Officer

**“People who join you know on January the 1st and you know after a year’s training yeah don’t make it out of training, yeah. They haven’t... for me they haven’t experienced what operational life is all about”**

Former Army Officer

### Complexities in Accessing Healthcare

A reluctance to access help was not restricted to just alcohol problems and participants agreed that they would be reluctant to access help for any problems. Nevertheless, when the time arose where participants needed to access help, there was agreement that no one was clear on where to go for this, especially for an alcohol problem. Furthermore one participant, a former RAF officer who worked as a practice manager in the NHS after leaving the military, did not know where to go if they had a problem with alcohol:

**“Where to go for help apart from my GP.... if I went to my GP am I going to the right place? I don’t really know and I worked for the NHS”**

Former RAF Officer

When veterans do access/engage with healthcare, it appears they make constant comparisons to military healthcare. If there was a requirement for healthcare in the military, it was noted as quick and effective. Once they have left the military, the way in which they access care and the type of care they receive changes dramatically;

**“The biggest issue is actually accessing your GP, you know actually getting an appointment. Yeah you know whereas in the military, yeah, as everyone said, yeah you go sick at seven o’clock in the morning, yeah you go there and you get your appointment and see your MO, yeah you come out with a diagnosis or whatever. Yeah. I have to ring my GP and I’ll be lucky if I get an appointment to see a GP within two to three weeks”**

Former RAF Other Rank

**“The bottom line is that the quality of service you get in the National Health Service is poor in relation to what you got when you were in the military..... the fact is that you are looked after for your health in the military whereas it’s questionable whether you are as a civilian”**

Former Army Officer

It was suggested that the NHS **“treat you like just another number”** and like everyone else and do not provides a bespoke service or give individual attention. This is a vast change from the care they are used to in the military and using the NHS for the first time may result in a bad experience.

Treatment provided by third sector charities associated with the armed forces appeared to be welcomed by many veterans accessing healthcare. Meaningful engagement in such services was suggested to work because the veterans feel valued, time is more flexible, they can build relationships with staff and the focus is on their recovery. Initially, there was a suggestion that veterans may only engage in services where there are other veterans providing them, however, a former Army officer who currently works in the third sector noted:

**“None of our psych and wellbeing team have had a military background at all, but is it the fact that they are sitting within an established model like [CHARITY FACILITY]? Perhaps under a trusted brand like [FORCES CHARITY] is actually... is the difference, not whether you have served or not, whether you are dealing with veterans”**

Former Army Officer

It was evident that, whether the treatment provider has a military background or experience may not matter. When accessing healthcare, participants’ willingness to engage appears to be affected by the civilian status of the provider. A civilian working in an organisation that is affiliated with the military appears to have the same effect as a worker who has a military background. A reluctance to engage increases when the civilian is a part of a civilian organisation with no connections to or awareness of the military. Therefore, a provider with a purpose to support ex-military, a statutory service that has ex-military personnel, or a provider

that is familiar with the needs of veterans is potentially sufficient to get initial engagement (e.g. service related charities).

Barriers between civilians and the participants were clear and may help explain a reluctance to engage in civilian healthcare. Among participants, there was a consensus that **'Civvies don't understand us'**, often making it difficult to transition to civilian life and access help if needed. There was a belief that this stigma worked both ways and a stigma attached to being ex-forces was identified. One participant's experience of this was not being promoted in his civilian job because he was ex-forces.

**"For some reason I wasn't getting the promotion I was seeking and I was told a few years later that it was because from a governors' conference, an ex-governor told me this in confidence that because I was ex-forces they couldn't bend me and shape me into their business model, what they wanted me to do. I was too set in my ways, I wasn't... I was just very proactive, give 100% and I think a lot of the managers were threatened by that"**

Former Army Other Rank

## 5.5 Discussion

Phase Three identified three main findings that present a theoretical understanding of why veterans may be different to the general population when accessing healthcare for alcohol problems. Upon leaving the military, there appears to be a development of a veteran identity, very similar to the identity developed whilst serving. Resilience and normalisation of alcohol remain a part of this identity, consequently, when a veteran experiences a difficult time, such as during transition, it was suggested that they may use alcohol as a way to cope. The veteran identity appeared to be a major barrier and created great complexity in accessing healthcare. It was suggested that the reluctance to access help was not just for issues with alcohol; this was a more generic problem in engaging in healthcare. Getting veterans to meaningfully engage in services is challenging, where comparisons to care received in the military are often made. Participants would also be unwilling to disclose their status/service history if the term veteran was used. There are potentially barriers between civilians and military personnel and this can impact of a veteran's likelihood of meaningful engagement. In healthcare, it appears this barrier can be mediated by a connection with the military, such as ex-military personnel on the staff, a veteran bespoke service or even the staff having a good understanding of veterans' needs. It is important to note that participants proposed a generational change, where currently serving personnel are not exposed to alcohol in the same way and are now more like their civilian counterparts. It is the older generations, those who served 1970s-2000s that encounter problems in accessing and engaging in service for alcohol problems.

Like Phase Two, the participants in Phase Three also suggested that excessive alcohol consumption was normal, because alcohol was used as a social bonding tool and a way to cope (see also: Jones and Fear, 2011). Consequently, veterans often do not recognise they have an alcohol problem seeing it as a part of their military service. Participants were also trained to be resilient, where asking for help was seen as a sign of weakness. On discharge and during the adjustment to civilian life, their identity transitioned incorporating a new veteran identity, where a lot of the service identity characteristics remained. According to the principle of self-efficacy, individuals will strive to maintain an identity structure that is dominated by competence and control, failing to do this results in feelings of futility and helplessness (Breakwell, 1993). The development of a veteran identity as a cause for a reluctance to seek help is not a new finding. Litz (2007) found service leavers have reportedly voiced concerns over appearing weak or sick to their peers in fear that there will be negative consequences on finding subsequent employment. It has also been ascertained that 40-60% of personnel who may benefit from professional treatment do not access help or services (Sharp et al., 2015).

When a need to access healthcare arises, participants were cognisant that healthcare professionals refer to them as veterans. The U.K. government define a veteran as someone who has “served for at least a day in HM Armed Forces, whether as a Regular or as a Reservist” (Ministry of Defence, 2011). There was a consensus in the focus group that they did not wish to be identified as a veteran and would prefer ex-forces or ex-services. Many confirmed that if asked ‘are you a veteran?’ by healthcare staff they would not disclose their identity, suggesting this can be a major barrier to identifying and engaging veterans in services for alcohol problems. Burdett et al. (2013) asked 200 personnel who had recently left the military whether they considered themselves to be a veteran. Only 52% of the sample considered themselves to be a veteran and definitions used by U.K. ex-service personnel did not align with the official U.K. government definition. The official definition does not appear to be well used or endorsed by the veteran population or the public. Only 37% of a representative sample of the general population identified all ex-service personnel as veterans (Dandeker et al., 2006). Those who served during World War One and Two were more likely to be seen as a veteran (57%). There is an importance of having a definition that encompasses the veterans own preference. For many participants, their veteran identity is what they believe would make them different to other substance misuse service users. They suggested that a reluctance to access help was unlikely to be restricted to alcohol use.

When accessing healthcare, participants made constant comparisons to military healthcare where they felt they were treated as an individuals and able to develop trusting relationships with staff. NHS services are not bespoke and many felt they were treated as a number rather than a person. Consequently, third sector organisations were preferred, bridging the gap

between military and NHS services. Participants felt they were more valued and more time was spent with them in the third sector organisations. Additionally, in many cases these organisations are affiliated with the military and/or have peer workers. One of the biggest barriers to care was dealing with civilians whom participants thought did not understand the military. As a result, it was suggested that they were more likely to engage with a civilian working in an organisation affiliated with the military than if they were working in the NHS. There was an acknowledgement that many veterans struggle to see themselves as a civilian and consequently will shy away from civilian healthcare. The reported success of civilian staff working in treatment centres for veterans was an unanticipated finding. Much research points towards a need for individuals with prior military experience or knowledge in the treatment services, however it was suggested that civilians providing care under a military associated organisation may be enough to keep veterans engaged.

Barriers between veterans and civilians was a common theme throughout the focus group and was prominent during transition to civilian life. Although rarely discussed, this was not a surprising finding. Relations between those who have served in the U.K. Armed Forces and the general public have been greatly affected by recent conflicts and the way in which these conflicts were reported in the media, consequently the general public's view of military personnel both serving and ex-serving may not be very accurate. Ashcroft (2012) found that 91% of the British public thought that it was common for former members of the U.K. Armed Forces to have some kind of physical, emotional or mental health problems as a result of their service. Literature indicates that although some do struggle in the transition to civilian life as a result of their service, the majority of military personnel do transition well. The participants acknowledged this, noting that transition is a difficult time regardless of the outcome. There are great complexities for veterans accessing healthcare. In addition to alcohol problems (and excessive alcohol use), literature on transition recognises further areas of difficulty as employment, mental health problems, homelessness, and crime (Bergman et al., 2014, Fossey, 2010, Iversen et al., 2005b). Pre-conceived ideas of who ex-military personnel are can cause major issues when seeking employment and accessing healthcare. Identifying an acceptable definition of a veteran/ex-service personnel was viewed as important for these participants.

Resettlement programmes are designed to prepare service leavers for civilian life, however it has been suggested that these programmes only appear to be



aimed at a basic vocational level, ignoring many issues associated with retirement from military life that have the potential to either facilitate or hinder future employment (Higate, 2001). Veterans who took part in the focus group claimed that the resettlement package had not been improved or changed since it was first introduced. Vocational re-adjustment has been highlighted as a prominent issue faced by veterans, particularly transferring military skills to a more peaceful occupation (Rogers, 1944). Early service leavers are not entitled to a full resettlement package and are consequently at a greater disadvantage to other service leavers. Early service leavers are those who are discharged from the military having served less than their contracted four year term (Ministry of Defence, 2016b). The focus group saw early service leavers as the most vulnerable group on discharge and felt that there was a great responsibility for the welfare of these veterans. Literature is unclear as to whether leaving the armed services early increases the risk of alcohol misuse. However, Woodhead et al. (2011) found that early services leavers were more likely than other veterans to be heavy drinkers, to have suicidal thoughts and to self-harm. Although Buckman et al. (2013) found that early service leavers were more likely to suffer from a range of health problems than other veterans, the differences in relation to alcohol misuse ceased to be significant when controlling for age.

Generational changes were discussed and it was proposed that those who served in the 1970s-2000s are those who have the greatest normalisation of alcohol consumption and prejudice towards civilians. Due to shorter postings closer to home, new generations of military personnel are more integrated into society and as a result are more like their civilian counterparts than generations before. Those who are currently serving in the U.K. armed forces are thought to share the same level of alcohol consumption as the general population. Unfortunately, there has been no research that has explored this view. Fear et al. (2007) identified 67% of male and 49% of female personnel in regular service as hazardous drinkers compared to 38% of men and 16% of women in the general population. A later study by Thandi et al. (2015) reports that hazardous alcohol consumption remains high in the British Military and would not support the observations of the focus group. But it should be noted that Thandi's paper appears to report on a study conducted between 2007 and 2009, consequently, the argument can be made that this data is now out of date. It is argued that that participants in the Fear et al and Thandi et al study may be representative of the veteran cohort recruited in Phase Two and Phase Three of this project, rather than those who are still serving and therefore further investigation is needed to determine the changing trends of substance use within the British Armed Forces. It was also worth noting that the military's attitude towards drinking has changed, with real progress being reported towards a zero tolerance alcohol policy.

### Limitations

Phase Three was a small scale qualitative study of veterans from the wider community. Only one focus group was held to further understanding as to why veterans are reluctant to access help for alcohol problems. Multiple focus groups would have allowed for greater in-depth discussions about the role transition may play in excessive alcohol consumption and identifying with being a veteran. As in phase two of this study, it is noteworthy that all participants were male – and thus the limitations identified *above* also apply to the findings of phase three.



### Conclusions

The findings that have emerged from Phase Three of this study provided a triangulated validation of the insights provided by the service-users interviewed during Phase Two. In particular, these respondents – who themselves did not have significant problems with alcohol misuse – reinforced the concept of a normalised relationship with heavy drinking during military service. There was some acknowledgement within the group of changes within drinking culture within the U.K. military and a suggestion that younger servicemen and women spend relatively more time socialising with their civilian friends than previous generations. Respondents also reported awareness of a concerted effort from within the military to ‘tackle’ drinking culture.

In addition, these participants provided insight into the difficulties associated with transition to civilian life, and even if, to all outward appearances a ‘successful’ transition had been achieved, these difficulties remained salient. Focus group participants suggested that transition experiences provided a further warrant for alcohol consumption and continuation of alcohol-based coping mechanisms established during military service. Phase Three of this study yielded further important insights that perhaps illuminate ‘reluctance’ to seek help. One particular aspect of transition that was referenced concerned the nature of the NHS in general, with participants identifying their own experiences as relatively impersonal. NHS staff were implicated as being particularly ill-informed in relation to military life and culture. NHS and social care services were reported as difficult to negotiate because of their inherent complexity, but it should be noted that this claim may equally apply to the population at large. Focus Group participants expressed a certain degree of antipathy towards civilian life – and civilian culture. Finally, Phase Three findings illuminated the importance of asking the ‘right’ question when determining if an individual is ex-forces (e.g. ‘Have you ever served in the U.K. Armed Forces?’ rather than ‘Are you a veteran?’).

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## 6. Phase Four

### 6.1 Aims

The aim of Phase Four was to facilitate the design of an integrated model of care which would enable alcohol misuse services to adapt and evolve so that they better fit the needs of veterans. This was achieved by staging a one-day planning symposium which involved all those from the north-east region who delivered services to veterans (see Table 2). Most significant was that this day was not about the research team providing answers, but more about facilitating the service planners, commissioners and providers with the correct information and data so that they might develop a more nuanced and effective model of care delivery. The delegates were given two clear constraints for the day:

1. There was no additional funding available, so any model of care had to be delivered within the current budgets
2. No development of parallel services, bespoke to veterans were allowed. The aim of the day was to design a pragmatic solution which integrated veteran service users into existing care delivery. It was argued that parallel services are expensive and difficult to sustain, and an implicit purpose of this day was to design a sustainable service.

### 6.2 Participants

148 Health and social care planners, commissioners and providers for the North East of England who were involved in alcohol and substance misuse services, were contacted via telephone and email (see Table 2 for responses).

Engaging certain sectors in the symposium was challenging. As a result, 43 out of the 148 delegates contacted attended, with 73 not responding at all. Service users and veterans from the wider community were also invited, with a final total of 50 attendees on the day.

There were four area tables, where possible, participants were on the table for their area of work. These tables included representation from Northumberland, North Tyneside, Newcastle, Gateshead, South Tyneside and Sunderland. On all tables, there was at least one veteran who worked in the sector. In addition, there was a table for service users and veterans from the wider community for the area tables to call upon to gain an insight into their experience. An 'expert' table was also present with individuals who had expert knowledge in areas of NHS, Criminal Justice, Public Health and Third Sector. There were 8-10 participants per table and these were each supported by a facilitator and when needed, service users and members from an expert table.

**Table 2.** Invitation responses for symposium (%).

	Contacted	No Response	Responded but did not attend	Attended
CCG	22	15 (68.2%)	3 (13.6%)	4 (18.2%)
Public Health (inc. Consultants)	25	14 (56.0%)	7 (28.0%)	4 (16.0%)
Local Authority	27	12 (44.4%)	12 (44.4%)	3 (11.1%)
NHS	32	21 (65.6%)	3 (9.4%)	8 (25.0%)
Treatment Providers	11	6 (54.4%)	1 (9.1%)	4 (36.4%)
3 <sup>rd</sup> Sector	19	2 (10.5%)	2 (10.5%)	15 (79.0%)
Criminal Justice System	4	1 (25.0%)	0 (0%)	3 (75.0%)
Armed Forces Reps	8	2 (25.0%)	4 (50.0%)	2 (25.0%)
<b>Total</b>	<b>148</b>	<b>73 (49.3%)</b>	<b>32 (21.6%)</b>	<b>43 (29.1%)</b>

### 6.3 Data Collection

The symposium was held at the Northern Design Centre in Gateshead during March 2017.

Participants took part in three workshop exercises during the symposium (see Appendix D for agenda). The aim of these workshops was:

1. *Existing Landscape: Current Commissioning and Provision of Services for Veterans:* To map the current substance misuse care pathways for veterans within their area.
2. *Improving Care and Care Pathways within Existing Infrastructure and Resources:* To explore how care delivery could be improved within current provision.
3. *Forward View Plans – From Intent to Reality:* Design a model of care delivery for veterans with substance misuse within their areas.

Facilitators transcribed the information given by the delegates from the workshops on to flipcharts and a diagram from each workshop was created in Microsoft Visio, representing all area groups.

## 6.4 Findings

On collection of the flipcharts from the workshops, data was collated to create overall diagrams for each workshop to best display current provisions and how to move forward. Three diagrams were created:

- Existing Landscape: Current Commissioning of Services for Veterans (figure 7)
- Veteran's Experience of Accessing Services (figure 8)
- Improving Care and Care Pathways: Forward View Plans (figure 9)

### Existing Landscape: Current Commissioning of Services for Veterans

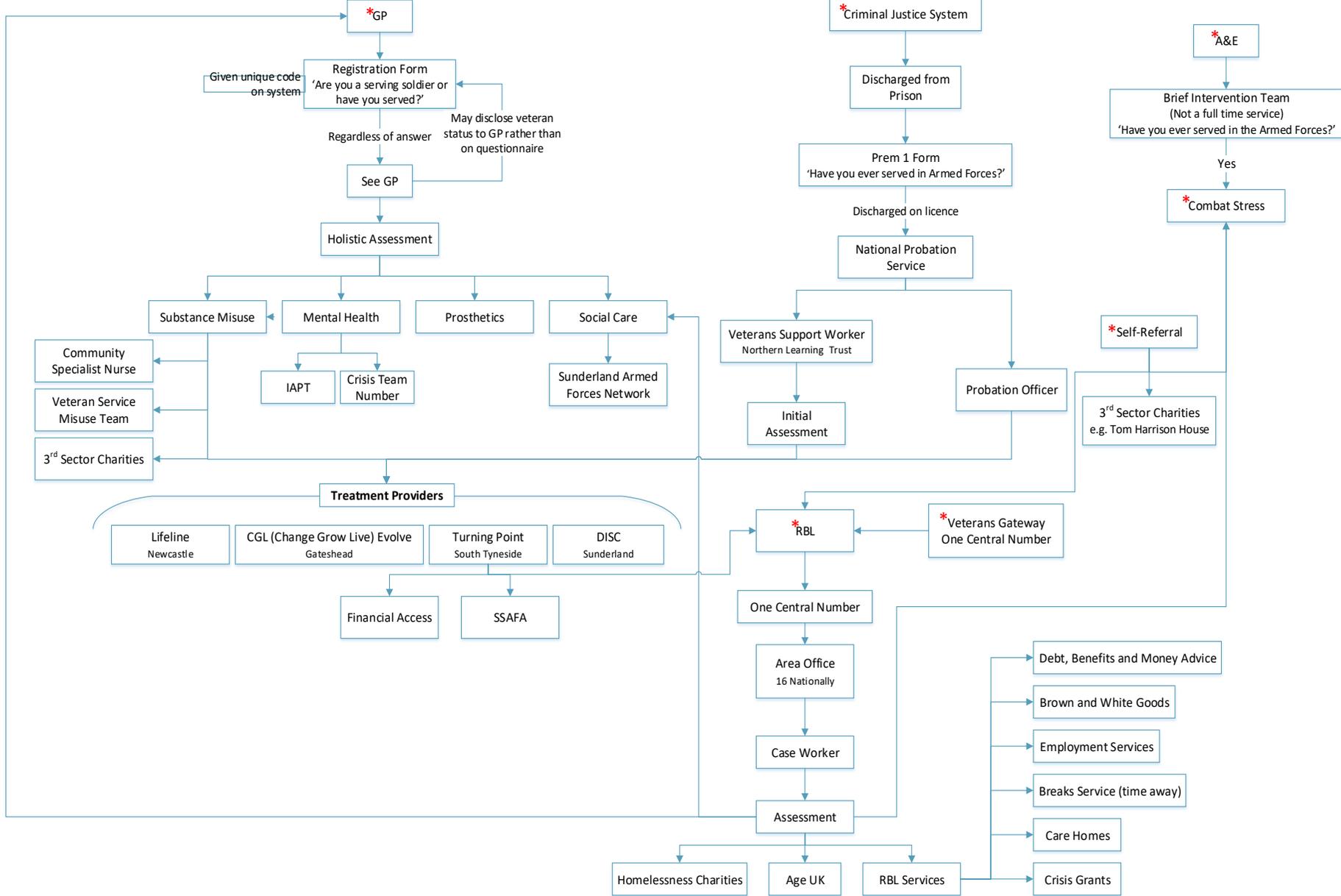
Figure 7 represents an example of current healthcare pathways for veterans with alcohol problems as identified by planners, commissioners and service providers in the North East of England. Initial diagrams from each table presented a very simple pathway for veterans accessing healthcare for alcohol problems. However, on collation of the diagrams, existing pathways were shown to be both more extensive and convoluted. It was clear that service commissioners, planners and providers held a limited and over-simplified view of the current provision.

Data suggested there are currently multiple entry points to accessing help. What appears key is the repeated referral to the GP and NHS treatment providers from other organisations. For example, if a veteran is identified as having an alcohol problem through the Criminal Justice System or third sector charities such as the Royal British Legion, they are then referred to GP and treatment providers only after initial assessment.

Furthermore, once engaged with treatment providers veterans are often referred to/back to third sector charities for further support. This may be for a number of reasons: the veteran may need other support not exclusive to alcohol problems or they may find veteran-specific third sector charities more sensitive to their needs.

The main 'take away' message from this diagram is that pathways in which veterans are expected to navigate to access appropriate help for their alcohol problems are convoluted and non-uniform. There are multiple points in the process in which veterans may 'fall through the gaps' having been referred to multiple different agencies. What is unclear from this diagram is whether communications between agencies exist, and if so, how effective are these communications?

**Figure 7.** Collated diagram for 'Existing Landscape: Current Commissioning of Services for Veterans'.



### Veteran's Experience of Accessing Services for Veterans

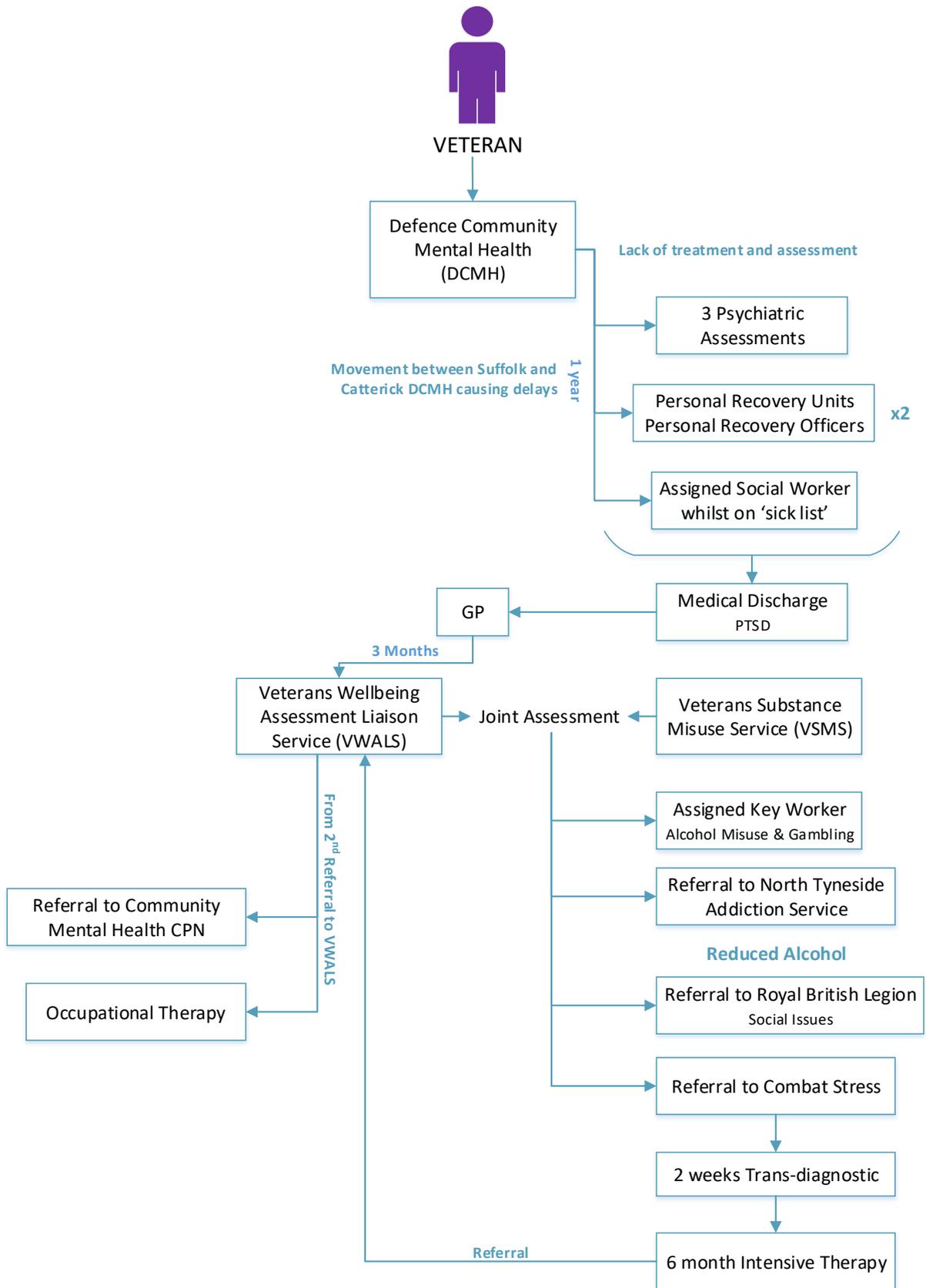
During table discussions of existing provision, service users were invited to give their experience of accessing help for alcohol problems as a veteran. Figure 8 demonstrates one veteran's experience. This veteran was first identified whilst still serving in the U.K. Armed Forces and consequently, his experience of services was more comprehensive than others in the study. However, it is also important to note that each service users' experience was vastly different. Those who accessed help independently had the least comprehensive pathways, often with multiple re-referrals, fewer agencies involved, or little to no contact.

On identification whilst in the Military, the veteran represented in Figure 8 received support from the Defence Community Mental Health teams; however, there were three separate psychiatric assessments by multiple Personal Recovery Units and Officers. It took a full year before he was medically discharged with a diagnosis of PTSD. On discharge the veteran was referred to the GP. From this point, the diagram approximates the complex and convoluted realities represented in Figure 8.

On joint assessment with Veterans Welfare and Liaison Service (VWALS) and Veterans Substance Misuse Service (VSMS), the veteran was referred to multiple secondary care and third sector organisations before a re-referral to VWALS. This course of events produced evident confusion for the veteran himself as a consequence of multiple agency involvement. An explanation for why he experienced multiple referrals was never provided. For many present at the symposium, this veteran's experience of services was a surprise as it contrasted greatly with their over-simplified view of existing provision.

As identified in the 'Existing Landscape' diagram (figure 7), there were multiple points in the process at which the veteran could have 'fallen through the gaps'. Communication between agencies post-referral was unclear, although a re-referral to VWALS suggested there was a lack of communication. It is worth remembering that this veteran had a complex presentation including a diagnosis of PTSD. This case serves as a vivid example of how a veteran with multiple presentations is faced with the difficulties of navigating complex health and social care pathways such as typically exist within existing provision.

Figure 8. Collated diagram for 'Veterans Experience of Accessing Services'.



### Improving Care and Care Pathways: Forward View Plans

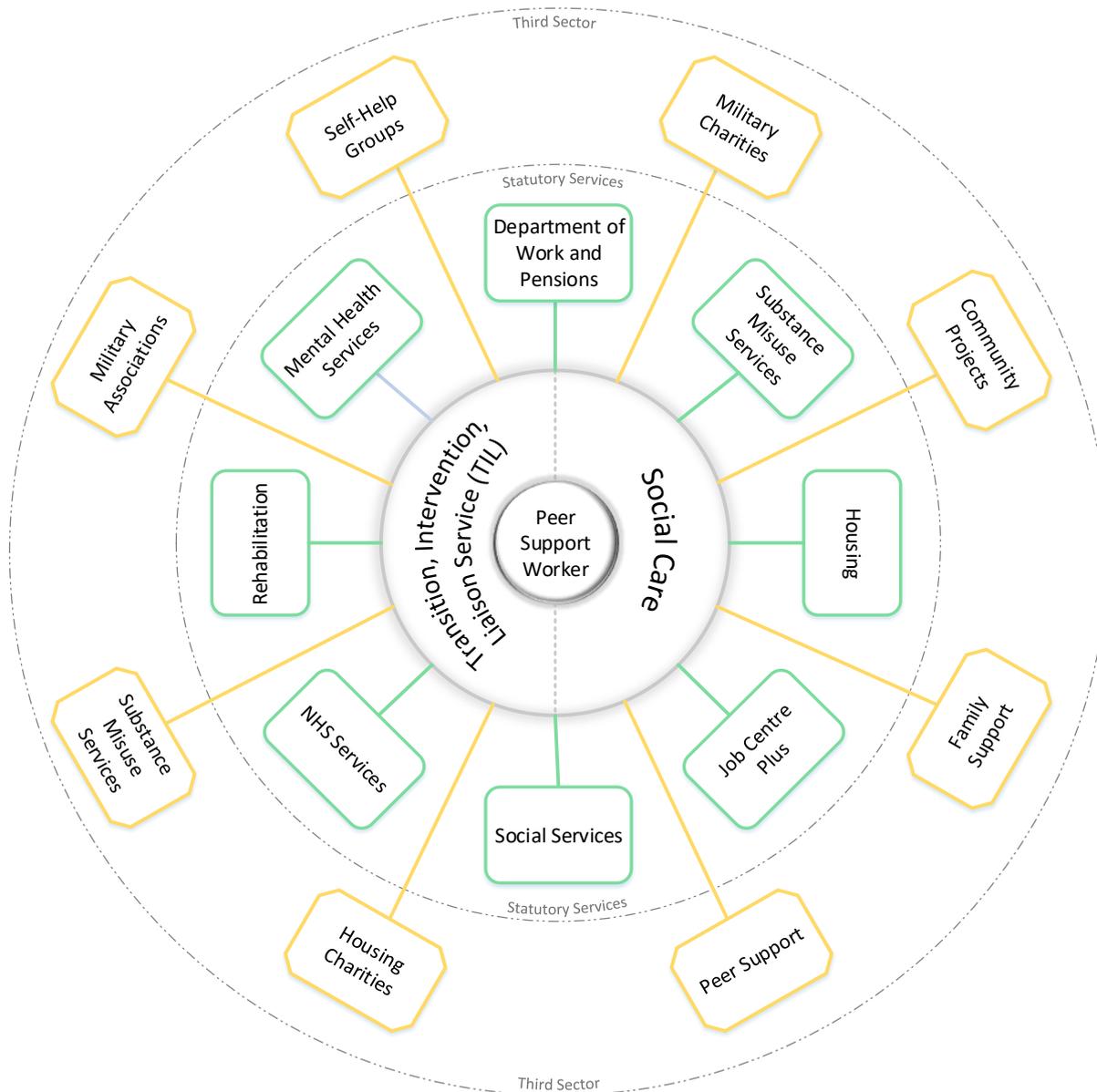
As an outcome of the symposium activities, the delegates designed and recommended a 'hub and spoke' model of care delivery. There was a conscious move away from a linear pathway of care, as the evidence from Phase One and Phase Two suggested that this creates 'cracks in the pavement' for veterans to fall into. The delegates felt that a hub and spoke model would be the most effective way of integrating health and social care delivery for optimal future healthcare services. A key consideration was that this could be achieved easily without integrating health and social care budgets. Many delegates felt that any model that relied on integration of budgets would make the process too complicated to succeed. A 'veterans' hub' (see Figure 9) was placed at the centre of this model, where veteran peer support workers might be integrated with the Transition, Intervention and Liaison (TIL) Veterans' Mental Health Services team.

The delegates anticipated the model working in the following way: Once a service user has been identified as a veteran requiring mental health or substance misuse services, they would be referred to a 'veterans' hub'. This hub would be physically located within local Transition, Intervention and Liaison (TIL) Veterans' Mental Health Services. Here, each veteran would then be assigned a multi-agency peer support worker to maintain contact with the veteran for the full duration of their engagement in services. In particular, the hub would have specialist substance misuse peer support workers (funded from social care), working alongside the TIL team. The role of the support workers would not be to deliver care, but rather to facilitate access to the most appropriate current provision, advocate on the veterans behalf in finding them the most appropriate alcohol misuse care and support the veteran throughout their recovery journey. At the centre of this model of care is the TIL and alcohol misuse peer support workers working together as a team. They will be able to negotiate the most appropriate care on behalf of the veteran, navigate the services and referral processes for them, but most importantly, be there as a constant support to reduce the risk of service disengagement. Even if a veteran did disengage from treatment, they would not disengage from the hub, and the role of the support worker would then focus on re-engagement. It is believed that this model would prevent veterans becoming lost in the system as described in Phase Two of this study, or being moved around services as outlined in Figure 9. This model of care would allow support to remain under the responsibility of one organisation, whilst at the same time supporting other aspects of the veteran life that are known to also be affected by alcohol problems such as physical health, finance and housing. Potentially, this arrangement would allow for effective integrated health and social care without the complications of integrated budgets. Budgets would remain in their respective 'silos' but provide personnel to the integrated veteran's hub. This arrangement would also allow for

negotiation of barriers between sectors with support and treatment being provided by the most appropriate service for the veteran, whether that be statutory services and/or third sector services.

**Figure 9.** Hub and spoke model for ‘Improving Care and Care Pathways: Forward View Plans’.

Note: Transition, Intervention and Liaison Service is the Veterans’ Mental Health Service.



### 6.5 Discussion

As an outcome of the symposium, it might be concluded that current pathways for veterans accessing help for alcohol problems appear to be variable at best, occasionally ineffective, and potentially damaging at worst. Figures 7 and 8 depict the rather haphazard arrangement of current provision, and one veteran’s chaotic experiences of accessing effective help. There are multiple entry points and multiple points in the process at which veterans may fall through

the gaps. Taken at face value, these diagrams outline a current provision that is very complicated and largely uncoordinated. It was also evident from the symposium that service commissioners, planners and providers did not have this overview as their initial diagrams tended to over-simplify existing provision. Many were surprised on hearing first hand experiences of service users that accessing and navigating through care pathways was not an easy business. Veterans typically experienced confusion, delays and multiple assessments and referrals, each one increasing the likelihood of disengagement from services.

It is important to acknowledge that the veteran must be motivated to engage with healthcare services as a first step towards accessing meaningful help. Any unwillingness to engage may increase the likelihood of re-referrals. Multiple re-referrals to primary and secondary healthcare as well as third sector organisations are likely to cost far more (in both financial and human terms) than a single successful referral. It is important to ascertain why veterans may be reluctant to engage in the first place before changes to current provision can take place. Phases one to three of this project attempted to explore why veterans are typically reluctant to access healthcare provision. In summary, it appeared that complexity of services, a normalisation of alcohol consumption, complex case-presentations and a lack of understanding of veterans (on the part of providers) served as the principal reasons for a lack of effective engagement. These findings were presented at the symposium to service commissioners, planners and providers with further support from service users' first-hand experiences of accessing help. In an attempt to combat the confusion and lack of continuity experienced by service users, a 'hub and spoke' approach to health and social care for veterans was proposed.

Results from Phase Three supported the importance of asking the 'right' questions when attempting to identify veterans. It was suggested that at entry to healthcare service, individuals should be asked, 'have you ever served in the U.K. Armed Forces?' This was deemed the best, most inclusive question for identification. In contrast, it was acknowledged that on some healthcare questionnaires, 'are you a veteran?' is a standard question. In Phase Three there was a consensus that participants would not disclose their identity to an individual who used the term 'veteran' as they did not identify with this term. Burdett et al. (2013) asked 200 ex-forces personnel if they would describe themselves as a veteran. Only 52% said they would, despite being classed as a veteran according to the U.K. government. The wording of questions can be a major barrier to identifying and engaging veterans in healthcare services.

In the proposed 'hub and spoke' model, upon identification of a veteran, a multi-agency support worker would be assigned to the veteran to see them through accessing and engaging

in the relevant services. An initial assessment should be taken, asking four simple questions that cover the veteran's physical health, mental health, social situation and alcohol / substance use. With this holistic view, recognising the greatest areas of need will aid in signposting veterans to the relevant services. Complex presentations were common amongst service users participating in Phase Two. Findings from Phase One and in other research (e.g. Aguirre et al., 2014, Fear et al., 2007) concur that this is a typical presentation pattern. Unfortunately, England's current health provision runs substance misuse services in public health, parallel to other health services, despite alcohol misuse rarely occurring in isolation. We contend that the use of peer support workers offers one possible solution to ensuring consistency throughout the veterans' engagement in services and effective communication across the sectors.

Symposium participants suggested that the 'hub and spoke' model would be cost effective in the long run, potentially reducing the number of veterans 'falling through the gaps' or disengaging from services due to difficulties presented by navigating complex systems. Many organisations already employ a veteran's support worker, and these workers could potentially become multi-agency workers in order to ensure effective communication between and across services and that veterans receive the right care for their needs. The hub itself would be overseen by all those involved, from primary and secondary care to third sector organisations, moving towards an integrated model of health and social care.

### Limitations

One definite limitation of the symposium was a lack of top-level representation from statutory health and social care agencies. The research team had difficulty engaging certain elements of the statutory health and social care sector, with Clinical Commissioning Groups appearing particularly reluctant to engage. In contrast, third sector agencies were the most responsive and had the greatest level of representation at the symposium event. This is perhaps reflective of the general trend in which third sector organisations in the U.K. have taken on a growing share of services previously delivered through statutory agencies (Milbourne and Cushman, 2013). In England alone in 2010, over a quarter of charities and social enterprises were active in health and wellbeing, with just under a fifth stating this as their primary focus (Baggott and Jones, 2014).

### Conclusions

Phase Four brought together findings from the first three phases in order to develop a proposed model from which to evolve current services. A 'hub and spoke' approach was identified as potentially the most cost effective and beneficial means of engaging veterans in healthcare services. The research team aim to trial the 'hub and spoke' model within one local

authority area in the North East of England in order to ascertain the practicality and sustainability of this approach to health and social care for veterans.

Attempting to tackle issues around initially identifying people seeking help as veterans, and then keeping that population engaged in services could potentially help to alleviate missed opportunities to provide meaningful, effective assistance. However, in the context of the current configuration of health and social care services, getting veterans to access services initially, remains difficult. Further research is needed to determine how this can be resolved.



## 7. Project Conclusions

The aim of this project was to explore why veterans are reluctant to access help for alcohol problems and the extent to which they may be different from other substance misuse service users within the general population. Research was conducted through a sequential process over four phases. The initial three phases consisted of interviews and focus groups with service planners, commissioners, providers, substance misuse service users and veterans from the wider community. The fourth phase was a planned symposium where findings from the first three phases were presented to substance misuse service planners, commissioners and service providers with input from veterans and service users.

Findings from this project suggest that veterans with alcohol problems have unique difficulties that set them apart from other substance misuse service users within the general population. From both Phase Two and Phase Three, it was clear that there is a normalisation of excessive alcohol consumption during military service that often remains on discharge. Veterans in Phase Three provided further insight into the difficulties experienced on discharge through the transition to civilian life. It was noted that looking in from the outside, a successful transition appeared the norm, however the focus group participants suggested that transition experiences provided a further warrant for alcohol consumption and continuation of alcohol-based coping mechanisms established during military service.

This normalisation of alcohol consumption was found to contribute to a delay in engagement with substance misuse service. A delayed engagement in accessing care lead to complex presentations where all aspects of the veterans' lives (physical, psychological and social) were impacted. Consequently, when veterans did engage in substance misuse services, they were often referred for alcohol treatment through other services such as social housing, unemployment and mental health.

Service providers' lack of understanding of the unique needs and experiences of veterans, was consistently identified as a main barrier to care in the first three phases. Focus Group participants expressed a certain degree of antipathy towards civilian life and civilian culture, further reinforcing this barrier. Complex care pathways and the lack of integrated health and social care was cited as contributing to a disengagement with care. Support for this was found in Phase Four where a diagram showed that the current care pathway for veterans with alcohol misuse was extensive and convoluted. This was in contrast to service commissioners, planners and providers limited and over-simplified view of the current provision. Successful engagement in care was associated with service providers who had veteran workers within their provision.

Phase Four facilitated the development of a model from which to evolve current services. Utilising findings from the first three phases, it was proposed that a 'hub and spoke' approach would be potentially the most cost effective and beneficial means of engaging veterans in healthcare services. Veterans will be assigned a multi-agency worker who will assist in accessing and engaging in relevant services. An initial assessment will ascertain the veteran's status on physical health, mental health, social situation and substance misuse. Essentially, the hub and spoke model has the potential to reduce the number of veterans who disengage/disappear from services due to difficulties in navigating complex services.

#### Limitations

The main limitation of this project was that it did not address female veteran drinking habits, only one female took part in Phase Two of the project. Females have remained fairly unrepresented throughout the literature partly due to females being a smaller group within the Armed Forces and the nature of sampling.

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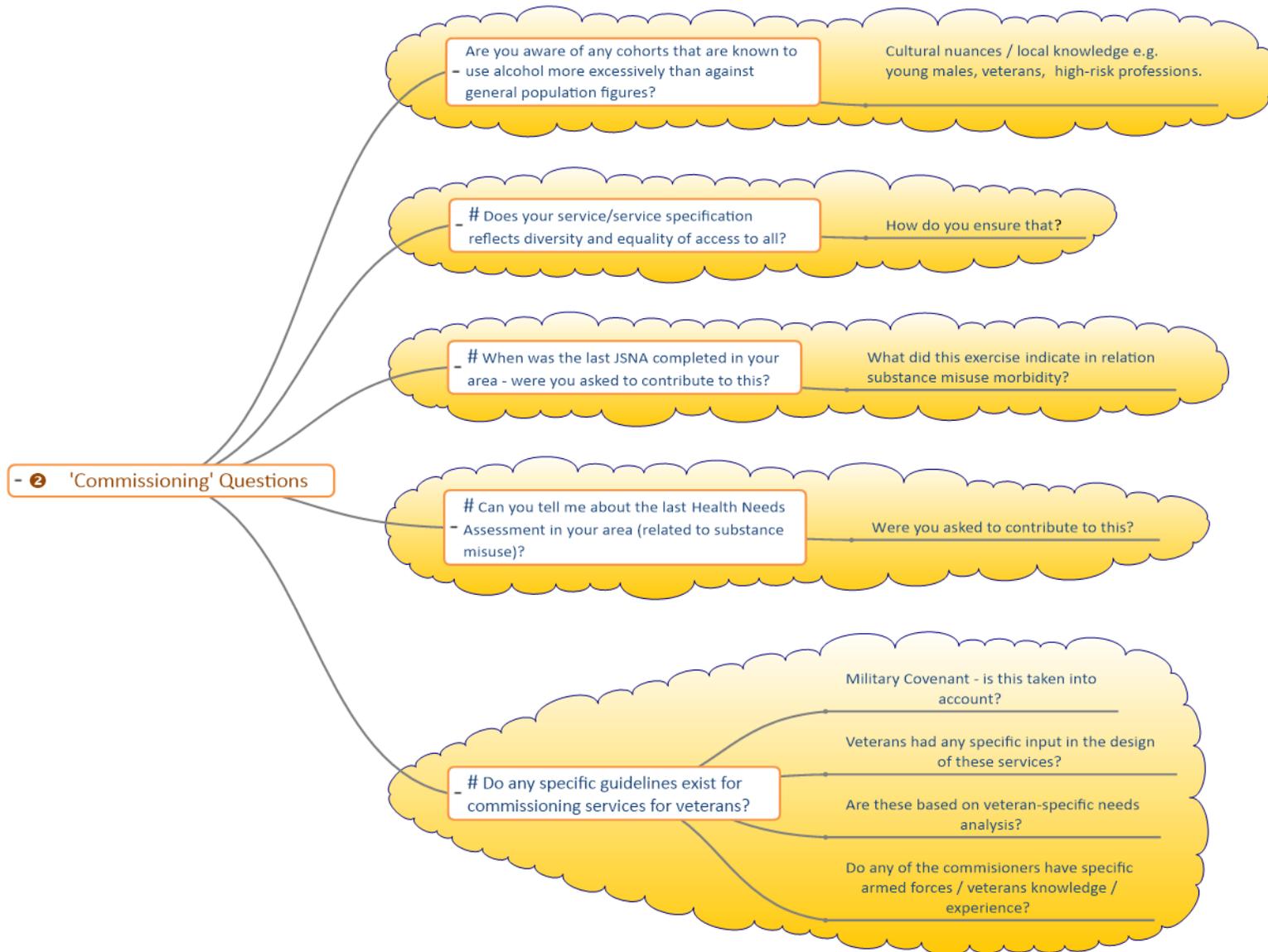
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## Appendices

Phase One Interview Schedule	Appendix A
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## Phase One Interview Schedule



### *Phase Two Interview Schedule*

The following topics will be considered during the course of the semi-structured interview.

1. What we want to achieve initially is a comprehensive narrative of the participants' relationship with alcohol pre, during and post service
  - The respondent's relationship with alcohol / 'street drugs' prior the joining the armed forces.
  - The respondents experiences of 'drinking culture' within the military context.
  - Patterns of alcohol or substance misuse post armed service.
2. Then we want to explore insight and how they have sought help
  - Realisation of patterns of substance use as problematic: Self-realisation vs. significant others perceptions of 'problematic' use.
  - Time frame of the above biographical 'events'.
  - The decision to act – incentives and disincentives.
  - Expectation of services including service visibility / mode of referral / waiting times / accessibility etc.
3. Next we want to explore their experiences of engaging with services
  - Practicalities of service engagement e.g. competing commitments.
  - Substance misuse service experiences – positives and negatives.
  - Personal expectations of the service. Desired 'end point' – for service-user and for service-users significant others.
  - Personal expectations of 'recovery' – what does success look like for service user? Significant others?
  - Service provider expectations vs. service user expectations of outcomes?
4. Finally we want to explore and reflect on the findings of phase 1
  - Do they believe that veterans with substance misuse are different from other substance misuse service user and can they explain why (multiple forms of stigma)
  - Do they feel that clinical staff or professionals understand veterans Exploring stereotypical beliefs by health workers:
    - Their life and experiences within service
    - The nature of the conflicts they may have been involved in
    - The culture within the military
    - How does the health system within the military differ from the health system they now find themselves in
    - Is seeking help for problems different, if so has it been difficult and if so why

### Phase Three Focus Group Schedule

Focus Group to explore and understand the perceived reluctance to access care

From the first 2 phases of the study, it is evident that alcohol is seen as part of the culture of the military. What may be seen as alcohol misuse is not always recognised and drinking behaviour is attributed to service, used for socialisation and coping.

Would you agree/disagree with this? What are your experiences of alcohol in the military?

Why is it an integral part of the culture? Is it encouraged?

How does it affect social cohesion?

How does this transition to civilian life?

*"...they associate their heavy drinking beginning in the army. That it was very much seen as a way of life, and perhaps, kind of, more acceptable..... they've had that culture of heavy drinking.... which they associate with being in the army."*

INDEPENDENT SECTOR PROVIDER

*"...veterans just keep on going and not see themselves as having a problem because that's what they did in the military. So why can't...? Why is it a problem now? You know, but when you look at in the military there were controls and there were gaps in their drinking patterns."*

PUBLIC SECTOR PROVIDER

*"it's all work hard, play hard. It's all around that. You hear it all the time and it's... its norm to you because it's pumped into you. And it's not just like oh well we might go down the bar, it was like everybody will be in the bar and you just stay there."*

SERVICE USER

*"What do you think behind all of that then encouraging all that alcohol?  
I think it's just another bonding thing as well. Because it gets you together and it's social... it's social, yeah. Instead of you imagine if you were training all the time and you didn't socialise together, then you'd just become these robots and these machines. So it's another way... it's another way of getting us to bond together and to get to trust of each other. You know what I mean? It's just another way of..."*

SERVICE USER

What makes ex-serving personnel different to civilians?

Personal experience of transition - how does it compare to those who have an alcohol problem?

Impact of service - how and why problems can develop during and after service

Are their alcohol problems different?

*"No. No it was never as a veteran. They always just spoke about my childhood and saying that the loss of parent and the homelessness, it was never really looked into that I was a veteran. And I'd never even seen myself as a veteran to be honest. You always think of someone old and it's only recently that I've started saying veteran because I... you just don't see yourself as that. You just say that you had a job and unless you are in for twenty-four years, that you're not a veteran. But you are."*

SERVICE USER

Some service users described not identifying with being a 'veteran', just ex-service. [What would you define a veteran as?](#)

Research suggests that veterans are reluctant to access healthcare for alcohol problems. **Why do you think this may be the case?** Findings from phase 1 of the study talking to planners, commissioners and service providers, identified some barriers to care, such as complexity of services, stigma, institutionalisation, a lack of understanding of the experiences of modern warfare and its potential consequences and understanding veterans.

Findings from phase 2 talking to service users, further support the lack of understanding of the military and its cultures as a barrier to accessing and engaging in services.

*"Maybe not acknowledging what it's like being a veteran, not necessarily because you're a veteran. Does that make sense? You... acknowledge the fact that you have seen combat, you have seen this, that and the other. You have been through that and this and whatever. Whereas a normal person that is going through the same thing hasn't. So there's other triggers that's going to cause your drinking. There's other triggers that's going to do this, that and the other. So acknowledging that side..."*

SERVICE USER

*"I still don't think people pick out the veterans. They don't understand what a veteran is, so they don't know what to pick out. And they're scared of asking the questions, because they don't know what to do with the answers."*

PUBLIC SECTOR PROVIDER

*"But that was again I was talking to somebody who had no idea what it was like being in the military so there was no way I was going to talk to them. "*

SERVICE USER

*"Well they should know how veterans talk to start with. That would help. You know we've got our weird and wonderful language with things. "*

SERVICE USER

**Why do you think service leavers are reluctant to access healthcare for alcohol problems?**

**If you required help for alcohol issues, do you know how to access this?**

**What would stop you from engaging in treatment?**

Military identity developed during service is still present during and often after transition to civilian life. Phase 1 findings suggest that veterans are viewed as 'institutionalised' and that they fail to engage with services as a consequence of being institutionalised. **What is your view on being 'institutionalised'?** Is this being used as an excuse to pass blame for inadequate access to services?

*"...they don't understand how to access services because they used to go to the medical officer every morning and get it sorted out. And they didn't have to do anything. They didn't have to negotiate services...in the military you just go and present to your medical officer and... And he says what... Are they fit or not fit ..."*

PUBLIC SECTOR PROVIDER

*"But you didn't know anybody, you don't know anything when you leave the army. You don't know how to go get the dentist and get the doctors and sort the housing out. And you've got to figure it out as you go."*

SERVICE USER

Service users further identified a stigma attached to help seeking. They were reluctant to access help for fear of being seen as weak as this goes against their (military) identity and

some noted experiences of stigma towards them as a veteran. [Do you think there is a reluctance to access healthcare due to stigma?](#)

*“you’ve been conditioned to you know to think that you are the best and that you are the finest fighting force in the... to admit that you’re suffering with something is quite a difficult thing to do. Because I think there’s a lot of ego around it, there’s a lot of (umm) I suppose so-called honour and this macho view on... on life and how you conduct your life. I think that’s a big... a big reason why people don’t (umm) ask for help. Because asking for help is seen to be weakness, I should know that, I should do this, I shouldn’t feel this way. That’s a silly thing to feel. None of them works”*

SERVICE USER

*“I don’t know about the rest of the forces, but when you’re in the army it doesn’t get spoken about. You’d be thought of as weak if that was the case so (umm) feelings never got spoken about. And then when you’re only young, you can’t really speak to anybody, you haven’t got anybody to talk about it to, you know it just kicked.”*

SERVICE USER

*“Stereotyped the veterans?*

*Yeah (umm) I see ‘You’ve shot...’ I’ve been shot at, but I’ve never shot at anybody, which I have been shot at in [Northern Ireland] “*

SERVICE USER

It is often found that personnel hit ‘rock bottom’ before accessing help for alcohol problems, and in many cases this happens accidentally through other avenues such housing. [Why do you think veterans don’t access services until it is the last resort?](#)

Impact of service

Type of individual – personality, mentality?

Interviews with veteran service users acknowledged multiple service and agency involvement in care, where there is a reliance on civilian and military charities as well as the NHS to provide care. Within this, many service users appeared to engage more in peer led services, [how would the type of provider influence your engagement in services?](#)

*“Now to me I can’t open up the same to a civilian that I could... whereas I found through Help for Heroes (umm) my... my support worker (umm) is a veteran. And this Veterans at Ease is run by veterans and it will only employ veterans, which obviously because... for me I can relate to them and they can relate to me. And you have an instant bond and there’s a trust because you’ve all been through the same thing. Not necessarily the same trauma, but because you’ve been soldiers or you’ve been whatever... whatever service you’ve been in. So you have this... have this common bond so it’s easier to open up and trust and listen than it is with a civilian. Which is something maybe the civilians don’t understand. Because... because... even though... I left the army in 1991, but I’m still a soldier. I’m a veteran. I’ll never be a civilian. That never... leaves you, you know what I mean. Because I still... I still walk the streets like I’m in [Northern Ireland].”*

SERVICE USER

[What kind of support might be needed to help veterans access services?](#)

[What type of services may be best to support veterans with alcohol problems?](#)

Phase Four Symposium Agenda



<b>Closing the Gap</b> <b>Collaborative Commissioning of Substance Misuse Services to Improve Access for Veterans</b>		
<b>09.00 to 09.30</b>	<b>Registration and Refreshments</b>	
09.30 to 09.40	Opening the Symposium	Marcus Hawthorn Royal British Legion Area Manager (Northern)
09.40 to 10.00	Introduction: Research Design and Findings	Dr Matthew Kiernan Associate Professor in Mental Health & Veteran Studies Lieutenant Commander RN(Retd) Co-Founder The Northern Hub for Veteran and Military Families Research  Dr Michael Hill Principal Lecturer and Director of Postgraduate Research Co-Founder The Northern Hub for Veteran and Military Families Research
10.00 to 10.15	Purpose of the Day	Jane Greaves Senior Lecturer Member of The Northern Hub for Veteran and Military Families Research
10.15 to 11.00	Interactive Roundtable Session <i>Working Together: Setting the Scene and Task Discussion</i>	
<b>11.00 to 11.30</b>	<b>Refreshment Break</b>	
11.30 to 12.30	Facilitated Workshop 1 <i>Existing Landscape: Current Commissioning and Provision of Services for Veterans</i>	
<b>12.30 to 13.00</b>	<b>Lunch</b>	
13.00 to 14.00	Facilitated Workshop 2 <i>Improving Care and Care Pathways within Existing Infrastructure and Resources</i>	
14.00 to 15.00	Facilitated Workshop 3 <i>Forward View Plans – From Intent to Reality</i>	
<b>15.00 to 15.15</b>	<b>Refreshment Break</b>	
15.00 to 15.45	Collective Workshop Feedback	
15.45 to 16.00	Closing Remarks and Next Steps	





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**APPENDIX I**  
**RESEARCH REPORT 2**

Technical Report: Maintaining Independence: A Study into the Health and Social Wellbeing  
of Older Limbless Veterans 2018



## **Maintaining Independence:**

A Study into the Health and Social Wellbeing  
of Older Limbless Veterans

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## Foreword



Professor Jamie Hacker Hughes FAcSS FBPsS FRSM

Visiting Professor of Psychology at Northumbria University

As a result of the many conflicts that the British Armed Forces have been involved in during and since World War II, many veterans have sustained traumatic limb-loss, either during combat or through other aspects of their military service. As a former head of healthcare psychology services for the Ministry of Defence for five years, I was greatly privileged to meet and work with many of this very impressive group of people at various stages on their road to recovery, which begins upon their return to the UK from theatre, first in Selly Oak Hospital or the Queen Elizabeth II hospital in Birmingham, then on to the Defence Medical Rehabilitation Centre at Headley Court, Surrey, before re-entering into the community. I was able to see most clearly that the impact of limb-loss clearly does not stop there, either for the service woman or man involved or for their partner or family.

The study that this research group from the Northern Hub for Military Veterans and Families Research at Northumbria University in collaboration with the Veterans and Families Institute at Anglia Ruskin University, have carried out is of fundamental importance. Beginning with a critical review of 21 studies which have looked at limb-loss in military veterans, it is clear that limb-loss is a progressive, degenerative, often very painful injury which can impact upon future physical and psychological well-being and quality of life and that how veterans cope with their injuries, as well as the social and political context in which injury and recovery occurs each have a substantial effect upon long term adjustment. The cost of healthcare provision for limbless veterans is, in addition, necessarily higher as this group may need additional support to their peers.

It is this aspect of the way in which physical, psychological and social well-being changes across the lifespan that this research group has examined, the results of their research being reported here. The group concentrated on older veterans (between the ages of 40 and nearly 100) who, between them, have served in all major conflicts including and since World War II. All had unilateral or bilateral amputations of upper or lower limbs. The research was based on the life histories of 32 veterans, collected over an eight-month period in 2016 and 2017, amassing a total of 10 hours of data for each participant, which were then thoroughly analysed using the latest innovative techniques and methods.

What makes this research study really special is that it has been carried out in conjunction with Blesma, The Limbless Veterans Charity, the country's leading charity for limbless veterans, whose members acted as researchers within the research team, contributing to design of the research proposal, the development of the research tools and coordinating recruitment into the study.

Unsurprisingly, this report makes numerous recommendations for local authorities, health and social care services, the Armed Forces and the government alike. It is hoped that the fruits of this study, contained in this report, and its recommendations will bring about a positive influence on the physical, psychological and social care of the United Kingdom's limbless veterans well into the future.





## **The Northern Hub for Veterans and Military Families Research**

**The Northern Hub for Veterans and Military Families Research at Northumbria University is a collective of academics, service providers and service users with an interest in improving the health and social wellbeing of veterans and their families across the lifespan.**

The Hub has evolved from the interests of Dr Mathew Kiernan Lieutenant Commander RN (Q) retired and Dr Mick Hill. It has established itself through an evolutionary process attracting and welcoming anyone with a genuine interest in its vision. We openly welcome visionary and innovative research that helps improve and understand the complexities that our veterans and their families experience across the whole lifespan. A fundamental principle of The Hub is collaboration in research for the benefit of others.



Anglia Ruskin  
University

**Veterans & Families Institute**

## **Veterans and Families Institute**

**The Veterans and Families Institute at Anglia Ruskin University carry out research, policy development and consultation on the impact of military service on veterans and their families.**

The Institute's academics work across disciplines including sociology, psychology, social policy, education, social work, nursing and ethics. Visiting Fellows provide additional expertise in psychiatry, clinical psychology and criminal justice. Since our inception, we have published reports and academic papers relating to both commissioned research and to areas of specific research interest.

## The Research Team



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Most importantly we would like to thank all those who participated in the study. This project could not have been completed without the support of all the participants, who not only gave us their time, but most importantly, told us their stories.

We would like to extend our appreciation and thanks to the peer-researchers and Blesma, The Limbless Veterans Charity. This project could not have been completed without the participant recruitment from Blesma and the support of Helen and Bob.

Thank you to all those who participated in this project and especially Dr Barbara Harrington who worked with us for the first year and members of our steering group, Professor Jamie Hacker Hughes, Heather Nicholson (Blesma) and Bryan Elliot. Finally, thank you to Christine Scally-Morris for transcription of all data.

### **ARMED FORCES COVENANT FUND TRUST**



#### The Armed Forces Covenant Fund Trust

This project is funded by The Armed Forces Covenant Fund Trust. The trust makes grants to support members of the Armed Forces Community. Launched in 2015, the Covenant Fund work with organisations across the UK to support delivery of the Armed Forces Covenant locally.

#### The Royal British Legion

The Royal British Legion help members of the Royal Navy, British Army, Royal Air Force, Reservists, veterans and their families all year round. They also campaign to improve their lives, organise the Poppy Appeal and remember the fallen.

#### Blesma, The Limbless Veterans

Blesma, The Limbless Veterans, is dedicated to assisting serving and ex-Service men and women who have suffered life-changing limb-loss or the use of a limb, an eye or loss of sight in the honourable service of our country.



## Abbreviations

<b>ADL</b>	Activities of daily living
<b>AK</b>	Above-knee
<b>ASSIA</b>	Applied Social Sciences Index and Abstracts
<b>BK</b>	Below-knee
<b>CINAHL</b>	Cumulative Index to Nursing and Allied Health Literature
<b>CTD</b>	Cumulative trauma disorder; overuse injuries resulting from reliance upon the intact limb
<b>DoD</b>	The US Department of Defence
<b>DVLA</b>	Driver & Vehicle Licensing Agency
<b>EMDR</b>	Eye movement desensitization and reprocessing
<b>GP</b>	General Practitioner
<b>HRQoL</b>	Health related quality of life
<b>JRRD</b>	Journal of Rehabilitation Research & Development
<b>MOD</b>	UK Ministry of Defence
<b>N</b>	Number
<b>NHS</b>	UK National Health Service
<b>OA</b>	Osteoarthritis
<b>OEF</b>	Operation Enduring Freedom (Afghanistan)
<b>OIF</b>	Operating Iraqi Freedom (Iraq)
<b>ORD</b>	Organization of Disabled Revolutionaries
<b>OT</b>	Occupational Therapist
<b>PTSD</b>	Post-traumatic stress disorder
<b>QoL</b>	Quality of life
<b>SSAFA</b>	Soldiers, Sailors, Airmen and Families Association
<b>SD</b>	Standard deviation
<b>USD</b>	US Dollars
<b>VA</b>	The US Department of Veteran Affairs
<b>WIS</b>	Wounded injured and sick

## Executive Summary

The impact of losing a limb extends well beyond initial recovery and rehabilitation, with long-term consequences and challenges requiring healthcare commitments across the life-course. A renewed interest in the long-term impact of limb-loss has been sparked by the social and political imperative to care for military veterans injured during the Iraq and Afghanistan conflicts. The starting point for this study was a sense that there are, perhaps, important lessons to be learned from older generations of veteran-amputees, and how their lives have played-out following the loss of a limb.

A review of existing literature emphasised that, whilst limbless veterans are generally able to achieve a good quality of life, limb-loss is still a progressive and degenerative injury, involving enduring experiences of pain, comorbidities, and sometimes mental health problems, which undermine veterans' health, well-being and quality of life. Veterans' approaches to coping and the way in which society views them, impacts upon their long-term adjustment to limb-loss. The literature highlights the substantial cost of caring for limbless veterans throughout the life-course and the financial commitments required to safeguard their long-term health and care needs.

Very few UK studies have considered the impact of limb-loss for military veterans across the life-course: fewer still have employed approaches where limbless veterans were given the opportunity to report how it was for them. Consequently, the main aims of this study were:

- 1) To explore the physical, psychological and social wellbeing of older, limbless veterans across the life-course
- 2) To ascertain the factors that contribute to the ability of limbless veterans to maintain their independence at various stages in their lives.

### Methodology

A multiple method convergent design was adopted for the study, encompassing Narrative Inquiry and Applied Policy Research. This enabled dual attention to 1) the narratives that shape how veterans reconstruct their lives and identities after limb-loss; and 2) policy and practice implications drawn from observations that some veterans may be more able to adjust and maintain independence than others.

*Narrative Inquiry:* This study adopts a dialogical narrative approach to explore the types of stories told by limbless veterans and how well served they are by these stories as they endeavour to age well and maintain their independence.

*Applied Policy Research:* Applied policy research concentrates on finding solutions to immediate practical problems. This approach played a key role in providing insight, explanations and theories of social behaviour for future policy recommendations.

*Convergence:* Finally, findings of narrative inquiry and applied policy research were integrated to provide greater understanding and insight into maintaining independence in older limbless veterans.

Peer-researchers purposefully sampled 32 participants to take part in this study (30 males, 2 females). Participants' ages ranged from 43 to 95 years (mean = 69.4, SD = 14.56) with representation from tri-services in the UK Armed Forces. The mechanism of participants' limb-loss (in-service attributable/non-attributable and post-service attributable/non-attributable) were varied in addition to the nature of limb-loss (single/bilateral, upper/lower limb). Some participants were also joined by family members/significant others.

Participants were involved in semi-structured life history interviews, conducted face-to-face at a location of the participants' choosing (usually their own home). With participants' permission, interviews were audio-recorded. Up to three interviews per participant were carried out, each lasting between 1.5-3 hours, in order to allow sufficient time for participants to share their full life story. One participant was interviewed via email on request. Full ethical approval was received from Northumbria University Ethics Committee.

All interviews were transcribed and then analysed using NVivo 11. Following the design of the study, narrative analysis (for narrative inquiry) and framework analysis (for applied policy research) were carried out before the final convergence analysis. The primary aim of analytical convergence was to identify the ways in which common themes contributed towards the construction of each narrative type.

## Results

*Narrative Analysis:* The analysis identified four different 'narrative types' which informed the stories of the participants. Narrative types are the broad 'story structures' – including themes and plot – which the participants used to put together their individual stories of ageing and limb-loss. Each narrative type may be thought of as the core thread common to the stories told by the participants. The four narrative types are 'struggling against decline', 'minimisation', 'victimhood', and 'life-as-normal'.

### Struggling Against Decline

Maintaining independence in old age was, generally speaking, a struggle for participants. The majority of the stories we heard centred on a struggle to maintain independence and to resist 'decline' in old age. Decline was expressed in terms of physical deterioration,

inactivity, and becoming increasingly dependent upon others. Unsurprisingly, participants were highly motivated to avoid slipping into such a state of decline. In other words, their stories emphasised their struggles to resist decline.

#### Minimisation

Some participants placed little emphasis on limb-loss in their stories. These participants spent more time in their interviews talking in detail about their careers and other achievements. It was clear that limb-loss occupied a much smaller place in their life-stories. In other words, limb-loss and its impact were 'minimised'.

#### Victimhood

The 'victimhood' narrative type was primarily characterised by expressions of suffering, anger and bitterness. Within stories of 'victimhood' the suffering manifested in physical, psychological, social, and occupational forms. Importantly, suffering was causally attributed to the actions or inactions of others, which compounded the anger and bitterness felt by the participant.

#### Life-as-Normal

Similar to 'minimisation', 'life-as-normal' narratives place a strong emphasis on being 'normal'. This narrative differs from minimisation, however, to the extent that ongoing grief and anguish related to limb-loss remain 'bottled up' inside the veteran. Limb-loss and its after-effects are not necessarily denied in the 'life-as-normal' narrative, but they remain somewhat hidden.

Studying participants' narrative biographies helps to place their struggles to resist decline and to maintain independence into context. It shows that the way in which participants respond to limb-loss has a lot to do with their experience of military life and allows us to identify factors which promote or inhibit independence in old age. The analysis reveals that maintaining independence in old age is a combination of physical, psychological, social, and narrative functions.

*Framework Analysis:* The analysis identified three superordinate themes within the participants' life narratives: 'Barriers to Transition', 'Disparity of Care', and 'The Enduring Challenge of Limb-loss'. These superordinate themes identify the significant challenges veterans face across the life-course from the point of limb-loss.

#### Barriers to Transition

The 'barriers to transition' theme highlighted the dissonance experienced by the participants, and the impact that limb-loss has had, not only at the point of loss, but the ongoing challenges to transition long after service. The data suggests that many

participants struggle with the loss of their military identity well into old age, and rarely view themselves as having a disability. This, however, would appear to change when aging impacts upon their mobility, which subsequently appears to lead to ever increasing social isolation. Employment and adequate compensation were crucial factors in helping veterans to maintain their independence post limb-loss, not only in the early years following loss, but also into old age. The greater the resource available would appear to support greater mobility and independence, even in much later life.

### Disparity of Care

The 'disparity of care' theme highlighted the perceived injustices in both accessing and entitlements to care. What was most significant was that geographical location appeared to determine both the availability, and standard of care received. The participants spoke of a postcode lottery and a two-tier system which discriminated between those who a) lost limbs during active service and b) lost limbs in service due to accidents, and those that lost limbs post service.

### The Enduring Challenge of Limb-Loss

The 'enduring challenge of limb-loss' theme, identified the everyday complications of ageing with of limb-loss. Although it would be very difficult to identify issues that were unique to the veteran's population in relation to aging with limb-loss, what was significant was the military mind-set, which remained very evident within the participant's accounts. Strong military identity remained, and this clearly shaped their personal opinions and preferences with regards the type of support they preferred to receive, most notable, support which had a strong connection to the military and veteran's communities.

*Convergence Analysis:* In order to gain a deeper understanding of the ways in which each prominent narrative style was constructed, convergence between narrative analysis and framework analysis was conducted.

### Struggling Against Decline

Analysis of the key themes which contribute towards the construction of the 'struggle against decline' narrative type, provides insight into the challenges faced by older limbless veterans throughout the course of their lives. As such, many of the findings, provide an understanding of the potential challenges faced by younger generations of limbless veterans as they age.

### Victimhood and Life-as-Normal

In many ways, the 'victimhood' narrative type and the 'life-as-normal' narrative type are highly opposing constructs. However, both narratives are characterised by unabating

psychological distress following limb-loss. Exploration of the key themes which contribute towards the construction of the 'victimhood' narrative type and the 'life-as-normal' narrative type revealed a number of factors which may contribute towards the development and maintenance of unbaiting psychological distress amongst veterans affected by limb-loss.

### Minimisation

While 'minimisation' narratives may be less newsworthy than the 'dramatic overcoming' narrative which is popularised within the current social milieu, the minimisation narrative type powerfully demonstrates that limb-loss is not necessarily associated with significant long-term impacts upon health, wellbeing and quality of life. Exploration of the key themes which contribute towards the construction of the 'minimisation' narrative type provides insights into factors which may 'minimisation' the negative outcomes associated with limb-loss amongst veterans.

As a result of the convergence analysis, summary tables were created of the key findings and actionable recommendations related to physical health, social wellbeing, psychological wellbeing, physical isolation, employment and education and financial and social support (see page 106 ).

### **Discussion**

Following on from the convergence analysis, subject matter experts within the research team identified underlying points for discussion. These discussion points are integral to understanding the health and social wellbeing of older limbless veterans. Points for deeper discussion include 'limb-loss and pain', 'education and post limb-loss employment', 'limb-loss and social isolation' and 'limb-loss, independence and activities of daily living'.

*Limb-Loss and Pain:* The maintenance of independence was considered to be a fundamental aspect of successful ageing throughout the life-course. Pain management and treatment, particularly for older veterans with limb-loss, is a complex process. Results from this study have shown that some of the complexities relate to stoicism, reluctance to report pain and fear of the side effects of medications. Given these complexities and the potential impact upon limbless veterans' and their families' wellbeing, attention needs to be given to effective management of pain throughout the life-course for those affected by stump and phantom pain. Access to healthcare is a pre-requisite to obtaining quality of care and the issue of social unmet needs as a result of lack of mobility, needs further exploration. These issues have wider policy implications in relation to the integration of health and social care.

*Education and Post Limb-Loss Employment:* The ability to maintain a fulfilling career forms a key factor in the ability of veterans to maintain their independence and sense of self-worth

following limb-loss. Pre-military education and socio-economic position have been shown to be important risk indicators of the capacity of veterans to recover successfully following limb-loss. Findings point to the experience of cumulative inequality, whereby early disadvantage can become entrenched and perpetuated through subsequent life experiences and patterns of service provision. Support with re-gaining employment is highly important, particularly in cases where participants have limited education or training.

*Limb-Loss and Social Isolation:* Older adults and veterans are both societal groups that are vulnerable to perceived loneliness and social isolation, and it is evident that limb-loss also accentuates this. Both social isolation and loneliness were issues for participants. This was due to factors including mobility issues, concerns about self-image, and feeling as though they do not relate to others.

*Limb-Loss, Independence and Activities of Daily Living (ADLs):* This study illustrates that veterans who are affected by limb-loss require timely access to high quality support and specialist healthcare services, starting from the time of amputation and extending throughout the life-course in order to maintain ADL independence. A holistic, multifaceted approach to care and support which integrates a wide range of services and resources is essential in order to ensure that veterans affected by limb-loss receive the care and support they require in order to maintain ADL independence. Special attention must be paid to older veterans who suffered limb-loss prior to contemporary medical advances in prosthetic devices and prosthetic care. The present study demonstrates that such individuals may experience a number of barriers to ADL independence, due to the long-term use of poor quality prosthetic devices and limitations in early rehabilitation and prosthetic care. Age-related physical decline and medical comorbidities may further impair older veterans' capacity to achieve ADL independence as they progress throughout later-life. The capacity to engage in ADLs independently was a highly influential factor in the development veteran's personal life-stories, which determined their perceived wellbeing and quality of life and their confidence in their ability to successfully adapt to the challenges associated with limb-loss. As such, promoting ADL independence should be a key priority for organisations wishing to support veterans affected by limb-loss.



## Introduction and Existing Evidence



## Background

Limb-loss, as a consequence of military service has been thrust into the public consciousness and onto political agendas as a result of recent conflicts in Iraq and Afghanistan<sup>1</sup>. Between April 2006 and December 2011, (at least) 20 British military personnel suffered traumatic limb amputations in Iraq, and 237 in Afghanistan. UK traumatic limb amputation casualties in Afghanistan significantly increased from 2009 onwards with 55 sustained in 2009, 79 in 2010, and 53 in 2011. The number of multiple amputee casualties were reported to be 32 in 2009 - 2010 and 36 in 2010 – 2011.<sup>2</sup>The signature injuries produced by these conflicts have created a legacy that veterans and the societies they are part of, will need to deal with for many years to come<sup>3,4</sup>.

The lifelong impact of traumatic limb-loss is also particularly relevant for older (e.g. World War Two, Korean War, and Falklands War) veterans, whose health issues may be exacerbated by age-related changes and comorbidities, including the long-term psychological consequences of war<sup>3,5</sup>. Prior to the disseminating the primary research conducted by the research team, this report presents a critical review of the literature on ageing and limb-loss in military. The purpose of this was to a) comment on the current state of knowledge, b) explore avenues for developing research in this area, and c) highlight health and social care implications for older limbless veterans.

## Literature Review Methods

### Inclusion and Exclusion Criteria

**Participants:** the inclusion criteria for studies covered within this review included a sample population of older limbless military veterans. Excluded were studies of younger veterans from conflicts such as Iraq and Afghanistan. There were no restrictions on the type or cause of limb-loss, other than meeting the definition of 'major' limb-loss<sup>6</sup> and that the injury was sustained during the service person's military career.

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<sup>1</sup> Caddick, N., and Smith, B. (2014). The impact of sport and physical activity on the well-being of combat veterans: A systematic review. *Psychology of Sport and Exercise*, 15(1), 9-18.

<sup>2</sup> Wallace, D. (2012) Trends in traumatic limb amputation in Allied Forces in Iraq and Afghanistan, *Journal of Military and Veterans' Health*, 20 (2), 31-35.

<sup>3</sup> Geiling, J., Rosen, J., and Edwards, R. (2012). Medical Costs of War in 2035: Long-term care challenges for veterans of Iraq and Afghanistan. *Military Medicine*, 177(11), 1235-1244.

<sup>4</sup> Edwards, D., Phillip, R., Bosanquet, N., Bull, A., and Clasper, J. (2015). What is the magnitude and long-term economic cost of care of the British military Afghanistan amputee cohort? *Clinical Orthopaedics and Related Research*, 473(9), 2848-2855.

<sup>5</sup> Hunt, N., and Robbins, I. (2001). The long-term consequences of war: The experience of World War II. *Ageing and Mental Health*, 5(2), 183-190.

<sup>6</sup> Major limb-loss refers to any limb-loss which is above the level of the ankle or the wrist.

**Comparators:** where available, studies were included which drew explicit comparisons between ‘older’ (e.g., Korea/Vietnam-era) and ‘younger’ (e.g., Iraq/Afghanistan-era) veterans.

**Outcomes:** studies with outcome measures of the long-term impact of limb-loss, healthcare needs, and age-related complications or comorbidities associated with limb-loss were included within this review. Excluded were studies which focused solely on short-term rehabilitation.

**Study Design:** empirically-based studies of any study design were included within this review. Excluded were commentaries, reviews (*etc.*).

## Search Strategy

Guidelines for systematically searching and selecting papers for review were followed<sup>7</sup>. Key databases were searched, including: ASSIA, CINAHL, Cochrane Library, Medline, Web of Science, PsycArticles/PsychInfo, ProQuest Psychology and ProQuest Sociology Journals, and SPORTDiscus. The search terms included were as follows:

- "aging" OR "ageing" OR "older" OR "elder\*" OR "later life"
- "veteran" OR "veterans" OR "ex-military" OR "ex-service" OR "ex-force\*" OR "army"
- "limbloss" OR "limb loss" OR "limb-loss" OR "limbless" OR "amput\*" OR "prosth\*" OR "artificial limb"

Given the large range of potential outcomes of interest, outcomes were not included in the search strategy. Rather, the above three search strings were used to capture *all* potentially relevant papers on older limbless veterans, with key outcomes highlighted during the initial phase of searching. Citation scanning was conducted for all papers included at the final stage. A special issue in the *Journal of Rehabilitation Research and Development (JRRD)* – in which one of the searched-for articles was published – was searched, and the authors also searched their personal collections of articles.

## Selection of Studies, Data Extraction, Quality Assessment and Synthesis of Results

For screening, article titles and abstracts were scanned for relevance by one reviewer and checked against the inclusion criteria by five members of the review team. Any discrepancies were resolved by discussion. All relevant articles were subsequently read by three reviewers and a standardized data extraction form was used to record key findings from each study. This form was also used to capture details on the type of study, location, and sample characteristics

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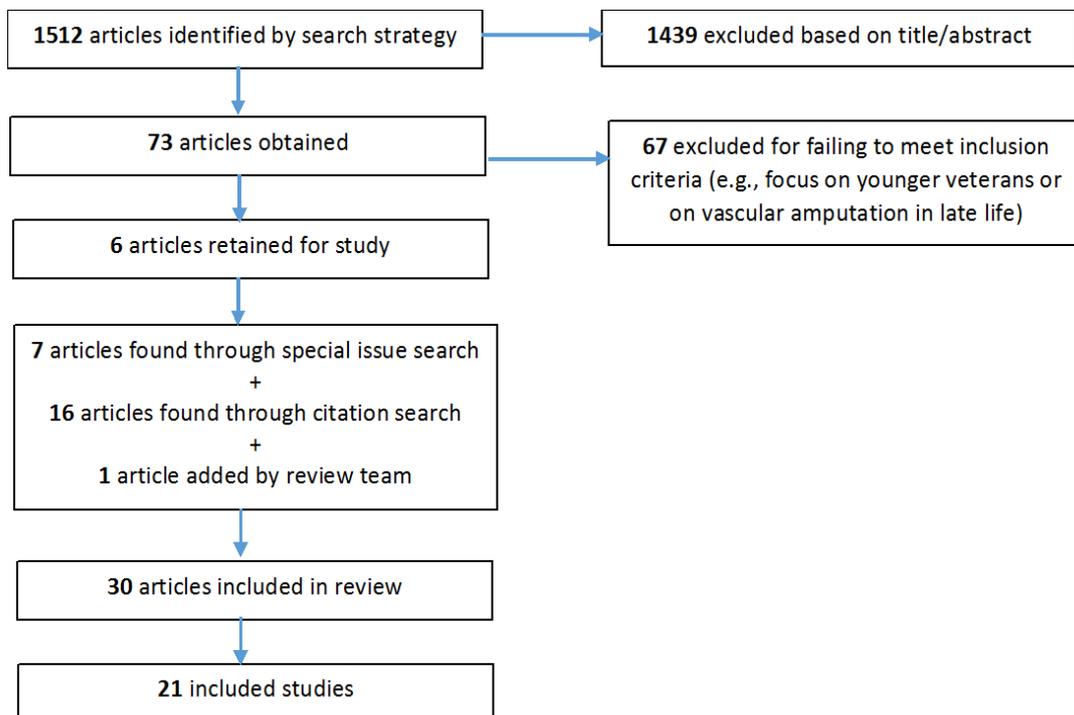
<sup>7</sup> Centre for Reviews and Dissemination (2009). *Systematic reviews: CRD's guidance for undertaking reviews in healthcare*. York: University of York.

including age, gender, type/cause of amputation, and (where relevant) conflict in which limb trauma originated.

## Literature Review Results

The search process yielded an initial 1,512 hits, which after screening resulted in a total of six articles relevant for inclusion (see Figure 1). Citation scanning resulted in an additional 16 articles. Given that many papers that were deemed relevant reported the age and ‘time since amputation’ of their samples, but did not refer to ‘ageing’, ‘older’, or ‘elderly’ veterans, a larger number of papers were identified through citation scanning than through the initial keyword search. Hand searching a special issue of *JRRD* led to the discovery of an additional seven articles.

Figure 1. Flow diagram of identification of eligible studies.



A total of 21 studies were identified, with one study – the Veterans Administration’s (2010) *Survey for Prosthetic Use*<sup>8</sup> – reported in ten separate articles (of which eight were published in a *JRRD* special issue). Nine out of the 21 studies were conducted in the U.S., with most of these (5/9) taking place within the VA healthcare system. Four studies were conducted in Iran,

<sup>8</sup> Reiber, G., McFarland, L., Hubbard, S., Maynard, C., Blough, D., Gambel, J., and Smith, D. (2010). Service members and veterans with major traumatic limb loss from Vietnam war and OIF/OEF conflicts: Survey methods, participants, and summary findings. *Journal of Rehabilitation Research and Development*, 47(4), 299-316.

one in Nicaragua and seven in the UK. Most studies (15/21) were surveys of various long-term physical and psychological outcomes, three used qualitative or mixed methods<sup>9,10,11</sup>, and three<sup>4,12,13</sup> used a form of economic modelling to estimate the long-term costs of caring for limbless veterans. The characteristics of all the studies are summarized in [Tables 1a](#) and [1b](#).

The literature was grouped into five topic areas covering: 'long-term health outcomes, prosthetics and quality of life', 'psycho-social adaptation and coping in older veterans', 'disability and identity', and 'estimating the long-term cost of prosthetic provision for limbless veterans'. Each will be discussed with a final discussion considering the quality of the literature on ageing and limb-loss in veterans.



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<sup>9</sup> Foote, C., Kinnon, J., Robbins, C., Pessagno, R., and Portner, M. (2015). Long-term health and quality of life experiences of Vietnam veterans with combat-related limb loss. *Quality of Life Research*, 24(12), 2853-2861.

<sup>10</sup> Machin, P., and Williams, A. (1998). Stiff upper lip: Coping strategies of World War II veterans with phantom limb pain. *The Clinical Journal of Pain*, 14(4), 290-294.

<sup>11</sup> Meyers, S. (2014). The social model of disability under the shadow of the revolution: Ex-combatants negotiating identity in Nicaragua. *Qualitative Sociology*, 37(4), 403-424.

<sup>12</sup> Blough, D., Hubbard, S., McFarland, L., Smith, D., Gambel, J., and Reiber, G. (2010). Prosthetic cost projections for service members with major limb loss from Vietnam and OIF/OEF. *Journal of Rehabilitation Research and Development*, 47(4), 387-402.

<sup>13</sup> Stewart, C., and Jain, A. (1999). An epidemiological study of war amputees and the cost to society. *Prosthetics and Orthotics International*, 23(2), 102-106.

**Table 1a.** Summary of papers from the VA (2010) survey of prosthetic use study.

Author(s)	Focus of article	Participants: age ( $M_{(age)}$ ), sex, aetiology of limb-loss and time since limb-loss ( $M_{(time)}$ )	Key findings
<b>1(i) Berke et al.</b>	Satisfaction with prosthetic care (sub-sample from VA cohort)	1. $N = 230$ Vietnam veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 61$ yrs, $M_{(time)} = 39$ yrs)/ 2. $N = 251$ OIF/OEF veterans with combat-related traumatic limb-loss (97% male, $M_{(age)} = 29$ yrs, $M_{(time)} = 3$ yrs)	Vietnam veterans reported lower care satisfaction and pain-free prosthetic use compared with OIF/OEF veterans. Prosthetic-fit issues common across both groups.
<b>1(ii) Blough et al.</b>	Economic modelling and long-term projection of prosthetic device costs.	1. $N = 298$ Vietnam veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 61$ yrs, $M_{(time)} = 39$ yrs). 2. $N = 283$ OIF/OEF veterans with combat-related traumatic limb-loss (97% male, $M_{(age)} = 29$ yrs, $M_{(time)} = 3$ yrs)	Average lifetime costs of prosthetic provision estimated up to 6.2-fold higher for OIF/OEF veterans compared to their older Vietnam counterparts.
<b>1(iii) Dougherty et al.</b>	Health outcomes and prosthetic use in multiple limb amputees (sub-sample)	1. $N = 73$ Vietnam veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 61$ yrs, $M_{(time)} = 39$ yrs) 2. $N = 61$ OIF/OEF veterans with combat-related traumatic limb-loss (95% male, $M_{(age)} = 28$ yrs, $M_{(time)} = 3$ yrs)	Significantly more age-related comorbidities in Vietnam compared to OIF/OEF group.
<b>1(iv) Epstein et al</b>	Factors associated with QoL	1. $N = 298$ Vietnam veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 61$ yrs, $M_{(time)} = 39$ yrs). 2. $N = 283$ OIF/OEF veterans with combat-related traumatic limb-loss (97% male, $M_{(age)} = 29$ yrs, $M_{(time)} = 3$ yrs)	Vietnam cohort reported worse overall QoL compared with OIF/OEF cohort. Higher number of comorbidities associated with worse QoL in both groups.
<b>1(v) Gailey et al</b>	Prosthetic use and functional outcomes in unilateral lower-limb amputees (sub-sample)	1. $N = 178$ Vietnam veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 61$ yrs, $M_{(time)} = 39$ yrs). 2. $N = 172$ OIF/OEF veterans with combat-related traumatic limb-loss (98% male, $M_{(age)} = 29$ yrs, $M_{(time)} = 3$ yrs)	Compared with OIF/OEF veterans, Vietnam veterans had lower self-reported health, functional ability and QoL, used fewer prosthetics, and had a higher prevalence of arthritis and CTD.
<b>1(vi) Laferrier et al</b>	Factors influencing mobility and use of assistive technology (sub-sample)	1. $N = 245$ Vietnam veterans with combat-related traumatic lower limb-loss (100% male, $M_{(age)} = 61$ yrs, $M_{(time)} = 39$ yrs). 2. $N = 226$ OIF/OEF veterans with combat-related traumatic lower limb-loss (98% male, $M_{(age)} = 29$ yrs, $M_{(time)} = 3$ yrs)	Sole or supplementary use of wheelchair for mobility common in both groups, with more Vietnam veterans abandoning use of all prosthetics.
<b>1(vii) McFarland et al</b>	Satisfaction and prosthetic use in unilateral upper-limb amputees (sub-sample)	1. $N = 47$ Vietnam veterans with combat-related traumatic lower limb-loss (100% male, $M_{(age)} = 60$ yrs, $M_{(time)} = 39$ yrs). 2. $N = 50$ OIF/OEF veterans with combat-related traumatic lower limb-loss (98% male, $M_{(age)} = 30$ yrs, $M_{(time)} = 3$ yrs)	Higher prevalence of arthritis and CTD among Vietnam veterans compared with OIF/OEF veterans. Presence of comorbidities associated with reduced upper-limb activity in Vietnam veterans.

Key: AK = above-knee; BK = below-knee; CTD = Cumulative trauma disorder; OIF = Operating Iraqi Freedom (Iraq); OEF = Operation Enduring Freedom (Afghanistan); QoL = Quality of life.

Table 1a. Continued.

Author(s)	Focus of article	Participants: age ( $M_{(age)}$ ), sex, aetiology of limb-loss and time since limb-loss ( $M_{(time)}$ )	Key findings
<b>1(ix)</b> <b>Dougherty et al (2012)</b>	Health outcomes, <u>QoL</u> and prosthetic use in bilateral AK amputees (sub-sample)	1. $N = 23$ Vietnam veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 60.4$ yrs, $M_{(time)} = 39$ yrs). 2. $N = 10$ OIF/OEF veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 27.2$ yrs, $M_{(time)} = 3$ yrs)	Self-reported health lower in Vietnam veterans compared to OIF/OEF veterans. <u>QoL</u> reportedly comparable between groups. Prosthetic use problematic, particularly in older veterans.
<b>1(x)</b> <b>Dougherty et al (2014)</b>	Health outcomes, <u>QoL</u> and prosthetic use in bilateral lower limb amputees (sub-sample; one AK and one BK).	1. $N = 13$ Vietnam veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 61$ yrs, $M_{(time)} = 39$ yrs) 2. $N = 11$ OIF/OEF veterans with combat-related traumatic limb-loss (95% male, $M_{(age)} = 28$ yrs, $M_{(time)} = 3$ yrs)	Vietnam veterans reported lower functioning and use of prosthetics. Both groups reported similar <u>QoL</u> and a moderate-to-strong impact of dual AK/BK amputation on their lives.

Key: AK = above-knee; BK = below-knee; CTD = Cumulative trauma disorder; OIF = Operating Iraqi Freedom (Iraq); OEF = Operation Enduring Freedom (Afghanistan); QoL = Quality of life.

**Table 1b.** Summary of remaining studies included in the systematic review.

Author, year and location of study	Design and focus of study	Participants: age ( $M_{(age)}$ ), sex, aetiology of limb-loss and time since limb-loss ( $M_{(time)}$ )	Key findings
<b>2 Desmond and MacLachlan (2006) UK</b>	Cross-sectional. Coping strategies and long-term psycho-social adaptation to lower limb-loss.	$N = 796$ members of Blesma with lower limb-loss (96% male, $M_{(age)} = 74$ yrs, $M_{(time)} = 42.6$ yrs). 82.8% of amputations reported as traumatic aetiology.	Problem solving, seeking social support, and increasing time since amputation were positively associated with positive adjustment to amputation.
<b>3 Desmond (2007) UK</b>	Cross-sectional. Coping strategies and long-term psycho-social adaptation to upper limb-loss.	$N = 138$ members of Blesma with combat-related traumatic upper limb-loss (100% male, $M_{(age)} = 75$ yrs, $M_{(time)} = 50$ yrs).	Avoidant coping strategies were associated with psychological distress and poorer adjustment.
<b>4 Dougherty (1999) USA</b>	Survey. Long-term outcomes for bilateral AK amputees from Vietnam War.	1. $N = 23$ Vietnam veterans with combat-related traumatic bilateral AK amputations (100% male, $M_{(age)} = 48$ yrs, $M_{(time)} = 28$ yrs). 2. $N = 145$ age and sex-matched controls	Comparatively decreased physical functioning noted among Vietnam amputees. The majority had been employed since injury, yet few were current prosthetic users.
<b>5 Dougherty (2001) USA</b>	Survey. Long-term outcomes for unilateral BK amputees from Vietnam War.	1. $N = 28$ Vietnam veterans with combat-related unilateral BK amputations 2. $N = 44$ Vietnam veterans with combat-related unilateral BK amputation plus $\geq 1$ other major injury (1 and 2; 100% male, $M_{(age)} = 48$ yrs, $M_{(time)} = 28$ yrs) 3. $N = 141$ age and sex-matched controls	Veterans with additional (secondary) injuries exhibited worse health outcomes and made greater use of psychological support services.
<b>6 Dougherty (2003) USA</b>	Survey. Long-term outcomes for unilateral AK amputees from Vietnam War.	1. $N = 18$ Vietnam veterans with combat-related unilateral AK amputations 2. $N = 28$ Vietnam veterans with combat-related unilateral AK amputation plus $\geq 1$ other major injury (1 and 2; 100% male, $M_{(age)} = 48$ yrs, $M_{(time)} = 28$ yrs) 3. $N = 141$ age and sex-matched controls	Both veteran groups had worse health outcomes than controls. Majority of veterans were currently employed and used prosthetics for on average 13.5h/day.
<b>7 Ebrahimzadeh and Fattahi (2009) Iran</b>	Survey. Long-term clinical outcomes in unilateral AK amputees.	$N = 31$ veterans of Iran-Iraq War with combat-related unilateral AK amputation (100% male, $M_{(age)} = 43$ yrs, $M_{(time)} = 17$ yrs)	High prevalence of pain and psychological symptoms including PTSD noted.
<b>8 Ebrahimzadeh and Hariri (2009) Iran</b>	Survey. Long-term clinical outcomes in unilateral BK amputees.	$N = 96$ veterans of Iran-Iraq War with combat-related unilateral BK amputation (100% male, $M_{(age)} = 43$ yrs, $M_{(time)} = 17$ yrs)	High prevalence of pain and psychological symptoms including PTSD noted.

Key: <sup>1</sup>Study took place at USA Veterans Administration (VA). AK = above-knee; BK = below-knee; Blesma = Blesma, The Limbless Veterans Charity; CTD = Cumulative trauma disorder; OA = Osteoarthritis; OIF = Operating Iraqi Freedom (Iraq); OEF = Operation Enduring Freedom (Afghanistan); PTSD = Post-traumatic stress disorder; QoL = Quality of life (Health-related = HRQoL)

Table 1b. Continued.

Author, year and location of study	Design and focus of study	Participants: age ( $M_{(age)}$ ), sex, aetiology of limb-loss and time since limb-loss ( $M_{(time)}$ )	Key findings
<b>9 Ebrahimzadeh et al. (2013) Iran</b>	Survey. Long-term clinical outcomes in veterans with hip disarticulation.	$N = 76$ veterans of Iran-Iraq war with combat-related hip disarticulation (96.1% male, $M_{(age)} = 44$ yrs, $M_{(time)} = 26.6$ yrs)	High prevalence of back pain, phantom pains and stump spasms noted. Lower QoL scores for pain and physical function compared to population norms. Sports participation associated with higher QoL.
<b>10 Edwards et al (2015) UK</b>	Economic modelling. Long-term cost of care for British veterans of Afghanistan.	$N = 265$ veterans of war in Afghanistan with combat-related traumatic limb-loss. Ages and time-since-injury not reported.	Long-term (40-year) cost of prosthetic provision for lower-limb amputee cohort estimated at £288 million (USD 444 million) in today's currency.
<b>11 Foote et al (2015) USA</b>	Survey and qualitative interviews. Long-term health and QoL among Vietnam veterans.	$N = 257$ Vietnam veterans with combat-related traumatic limb-loss. Age, sex, and time since amputation not reported. (Sub-sample of $n = 20$ for qualitative interviews)	High prevalence of pain and co-morbid arthritis. Interviews revealed that – even 40 years post-injury – mental health problems and ageing/pain-related comorbidities had a strong negative influence on QoL.
<b>12 Hoaglund et al (1983) USA<sup>1</sup></b>	Survey. Prosthetic problems and needs in veterans with lower-limb amputations.	1. $N = 133$ veterans with service-connected traumatic limb-loss (100% male, $M_{(age)} = 47$ yrs, $M_{(time)} = 21$ yrs). 2. $N = 42$ veterans with dysvascular disease-related limb-loss. (100% male, $M_{(age)} = 60$ yrs, $M_{(time)} = 2$ yrs).	High prevalence of 'moderate to severe intensity' residual limb pain, along with high prevalence of back pain, phantom pain, and prosthetic problems.
<b>13 Kulkarni et al (1998) UK</b>	Medical examination. Prevalence of osteoarthritis and osteopenia.	1. $N = 44$ World War Two veterans with combat-related unilateral lower limb-loss (100% male, $M_{(age)} = 73$ yrs, $M_{(time)} = 47$ yrs).	High prevalence of hip OA on both amputated and non-amputated sides. AK amputees had significantly more OA (and of greater severity) than BK amputees.
<b>14 Machin and Williams (1998) UK</b>	Survey and semi-structured interviews. Phantom pain and coping strategies.	1. $N = 26$ World War Two veterans and members of Blesma (100% male, $M_{(age)} = 76.8$ yrs, $M_{(time)} = \text{not reported}$ ). All injuries described as traumatic and either combat or service-related.	A dominant 'stiff upper lip' approach to coping with phantom pain was identified, with little recourse to social support or medical assistance.

Key: <sup>1</sup>Study took place at USA Veterans Administration (VA). AK = above-knee; BK = below-knee; Blesma = Blesma, The Limbless Veterans Charity; CTD = Cumulative trauma disorder; OA = Osteoarthritis; OIF = Operating Iraqi Freedom (Iraq); OEF = Operation Enduring Freedom (Afghanistan); PTSD = Post-traumatic stress disorder; QoL = Quality of life (Health-related = HRQoL).

Table 1b. Continued.

Author, year and location of study	Design and focus of study	Participants: age ( $M_{(age)}$ ), sex, aetiology of limb-loss and time since limb-loss ( $M_{(time)}$ )	Key findings
<b>15 Meyers (2014) Nicaragua</b>	Qualitative ethnographic. Disability and identity among veterans with limb-loss.	Participant numbers unstated. Participants described as male middle-aged veterans of Nicaraguan Civil War of 1980s with either combat-related amputations or loss of limb function.	Depending on social and political context, limbless veterans may identify as 'disabled' or as 'war wounded', and may distance themselves from, or alternatively align themselves with, 'other' disabled groups.
<b>16 Norvell et al (2005) USA<sup>1</sup></b>	Survey and retrospective cohort design. Prevalence of knee pain and osteoarthritis.	1. $N = 62$ veterans with traumatic lower limb-loss (100% male, $M_{(age)} = 63$ yrs, $M_{(time)} = 31$ yrs). 2. $N = 94$ veterans without amputation (100% male, $M_{(age)} = 65$ yrs).	Higher prevalence of knee pain and knee OA in amputees compared with non-amputees. Prevalence of knee pain also higher in AK amputees than BK amputees, linked to gait abnormalities.
<b>17 Sherman and Sherman (1983) USA<sup>1</sup></b>	Survey. Prevalence of phantom pain.	$N = 764$ veterans with combat or service-related amputations (100% male, $M_{(age)} = 51$ yrs, $M_{(time)} = 27$ yrs).	Persistence of phantom pain severe enough to cause at least occasional debilitation is the norm rather than exception for combat amputees. Veterans reported not being listened to when seeking treatment for phantom pains, and self-medicating with alcohol.
<b>18 Sherman et al (1984) USA<sup>1</sup></b>	Survey. Prevalence of phantom pain.	$N = 2694$ veterans with combat or service-related amputations (100% male, $M_{(age)} = 53$ yrs, $M_{(time)} = 28$ yrs).	Very high prevalence of moderately intense phantom pain. Many have given up on treatments and have had poor experiences with clinicians.
<b>19 Stewart and Jain (1999) UK</b>	Epidemiological survey. Analysis of prosthetic costs over 50 year period.	$N = 98$ veterans with combat-related traumatic limb-loss (100% male, $M_{(age)} = 74$ yrs, $M_{(time)} = 48$ yrs)	50-year costs of prosthetic limb provision estimated at £69 million.
<b>20 Taghipour et al (2009) Iran</b>	Survey. Long-term QoL outcomes in lower-limb amputees	$N = 141$ veterans of Iran-Iraq war with combat-related traumatic lower limb-loss (100% male, $M_{(age)} = 45.2$ yrs, $M_{(time)} = 21.6$ yrs)	Poorer mental and physical HRQoL among amputees compared to population norms. Low back pain most important contributor to poorer HRQoL.
<b>21 Wartan et al (1997) UK</b>	Survey. Prevalence of phantom and stump pain.	$N = 590$ members of Blesma with traumatic limb-loss (100% male, $M_{(age)} = 73$ yrs, $M_{(time)} = 50$ yrs)	High prevalence of phantom limb pain and stump pain. Intensity of phantom sensations a significant predictor for time-course duration of phantom pain.

Key: <sup>1</sup>Study took place at USA Veterans Administration (VA). AK = above-knee; BK = below-knee; Blesma = Blesma, The Limbless Veterans Charity; CTD = Cumulative trauma disorder; OA = Osteoarthritis; OIF = Operating Iraqi Freedom (Iraq); OEF = Operation Enduring Freedom (Afghanistan); PTSD = Post-traumatic stress disorder; QoL = Quality of life (Health-related = HRQoL).

### *Long-Term Health Outcomes, Prosthetics Use, and Quality of Life*

The largest collection of studies identified for review (16/21) focused broadly on assessing the long-term physical health outcomes (including pain and comorbidities) associated with limb-loss, levels of prosthetic use by older limbless veterans, and the impact of health outcomes and prosthetic use on quality of life. The largest of these studies was the VA's (2010) *Survey for Prosthetic Use*<sup>8</sup>. This was a national survey comparing health outcomes, quality of life, and prosthetics usage among 298 Vietnam veterans with combat-related traumatic limb-loss (mean age and time since amputation = 61 years and 39 years) and 283 of their younger Operation Iraqi Freedom/Operation Enduring Freedom (OIF/OEF) counterparts (mean age and time since amputation = 29 years and 3 years). It was noted that using prosthetic devices can improve functional ability, enhance mobility and safety, facilitate higher levels of activity, and can also reduce the risk of secondary comorbidities and problems resulting from overuse of intact limbs among limbless veterans<sup>8,14</sup>. The survey aimed to document differences in health status and device use between older and younger veterans, and to forecast changes in prosthetic usage over time. It used a combination of validated and bespoke measurement tools, as well as analysis of medical records data.

Overall, findings from the survey revealed that health status (as measured on the SF-36 health questionnaire) was reported as 'good', 'very good', or 'excellent' among 70.7% of Vietnam veterans and 85.5% of OIF/OEF veterans<sup>8</sup>. Compared with OIF/OEF veterans, fewer of the older Vietnam veterans (90.5% vs. 78.2%, respectively) were current prosthetic users<sup>8</sup>. Findings on prosthetic use were further described with regard to the different types of amputation. Among lower-limb amputees, sole use of a wheelchair for mobility was more common in the Vietnam cohort compared with the OIF/OEF cohort, at 18% and 4%, respectively<sup>15</sup>. Seventeen percent of the Vietnam lower-limb amputees reported abandoning use of all prosthetic devices, rising to 33% among bilateral lower-limb amputees, and 30% among upper-limb amputees<sup>15,16</sup>. Vietnam veterans reported more problems with their

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<sup>14</sup> Gailey, R., McFarland, L., Cooper, R., Czerniecki, J., Gambel, J., Hubbard, S., Maynard, C., Smith, D., Raya, M., and Reiber, G. (2010). Unilateral lower-limb loss: Prosthetic device use and functional outcomes in servicemembers from Vietnam war and OIF/OEF conflicts. *Journal of Rehabilitation Research and Development*, 47(4), 317-332.

<sup>15</sup> Laferrier, J., McFarland, L., Boninger, M., Cooper, R., and Reiber, G. (2010). Wheeled mobility: Factors influencing mobility and assistive technology in veterans and servicemembers with major traumatic limb loss from Vietnam war and OIF/OEF conflicts. *Journal of Rehabilitation Research and Development*, 47(4), 349-360.

<sup>16</sup> McFarland, L., Hubbard-Winkler, S., Heinemann, A., and Jones, M. (2010). Unilateral upper-limb loss: Satisfaction and prosthetic-device use in veterans and servicemembers from Vietnam and OIF/OEF conflicts. *Journal of Rehabilitation Research and Development*, 47(4), 299-316.

prosthetics and more pain when using them compared to OIF/OEF veterans<sup>17</sup>. Other studies included in this review also revealed that prosthetic usage varied by type of amputation. For instance, a series of long-term follow-up studies of Vietnam veterans conducted by Dougherty<sup>18,19,20</sup> revealed that 87.5% of unilateral above-knee amputees were current prosthetic users (average of 13.5 h/day) compared with just 22% of bilateral above-knee amputees (average of 7.7 h/day), thereby highlighting the significant additional impact of multiple compared to single limb-loss.

A high prevalence of comorbidities and pain were identified across the studies in this review. Most studies which assessed arthritis revealed prevalence rates of between 54% and 71% among older limbless veterans<sup>8,9,14,21,22</sup>, with one study of unilateral lower-limb amputees reporting a lower prevalence of 16.1%<sup>23</sup>. This compared with around 15% of OIF/OEF veterans reporting arthritis<sup>24</sup>. Three papers<sup>14,17,24</sup>, reported a higher incidence of cumulative trauma disorder (CTD; overuse injuries resulting from reliance upon the intact limb) among Vietnam veterans, which compromised their ability to use prosthetics and reduced their prosthetic satisfaction levels relative to younger veterans. Coincident with the ageing process and the occurrence of comorbidities, some Vietnam veterans' prosthetics therefore became too heavy, uncomfortable and painful to use, resulting in greater levels of device abandonment.

Pain was reported to be so prevalent among limbless veterans that it was often under-evaluated<sup>17</sup>. The prevalence rates of numerous types of pain are described below in [Table 2](#). There was considerable variation in prevalence rates across the studies. It was suggested by

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<sup>17</sup> Berke, G., Ferguson, J., Milani, J., Hattings, J., McDowell, M., Nguyen, V., Reiber, G. (2010). Comparison of satisfaction with current prosthetic care in veterans and servicemembers from Vietnam and OIF/OEF conflicts with major traumatic limb loss. *Journal of Rehabilitation Research and Development*, 47(4), 361-372.

<sup>18</sup> Dougherty, P. (1999). Long-term follow-up study of bilateral above-the-knee amputees from the Vietnam War. *Journal of Bone and Joint Surgery*, 81(10), 1384-1390.

<sup>19</sup> Dougherty, P. (2001). Transtibial amputees from the Vietnam war: Twenty-eight-year follow-up. *Journal of Bone and Joint Surgery*, 83 (3), 383-389.

<sup>20</sup> Dougherty, P. (2003). Long-term follow-up of unilateral transfemoral amputees from the Vietnam war. *Journal of Trauma*, 54 (4,) 718-723.

<sup>21</sup> Dougherty, P., McFarland, L., Smith, D., and Reiber, G. (2014). Bilateral transfemoral/transtibial amputations due to battle injuries. *Clinical Orthopaedics and Related Research*, 472(10), 3010-3016.

<sup>22</sup> Kulkarni, J., Adams, J., Thomas, E., and Silman, A. (1998). Association between amputation, arthritis and osteopenia in British male war veterans with major lower limb amputations. *Clinical Rehabilitation*, 12(4), 348-352.

<sup>23</sup> Norvell, D., Czerniecki, J., Reiber, G., Maynard, C., Pecoraro, J., and Weiss, N. (2005). The prevalence of knee pain and symptomatic knee osteoarthritis among veteran traumatic amputees and nonamputees. *Archives of Physical and Medical Rehabilitation*, 86(3), 487-93.

<sup>24</sup> Dougherty, P., McFarland, L., Smith, D., Esquenazi, A., Blake, D., and Reiber, G. (2010). Multiple traumatic limb loss: A comparison of Vietnam veterans to OIF/OEF servicemembers. *Journal of Rehabilitation Research and Development*, 47(4), 333-348.

one study that phantom limb pain was often a persistent condition that stayed with the amputee for the remainder of their life<sup>25</sup>. Another study described back pain and pain in contra-lateral (non-amputated) limbs as “disabling and progressive problems of long-term surviving amputees” and argued that such problems were as great as phantom pains but were often overlooked<sup>26</sup>. Eight papers reported the prevalence of mental health comorbidities among older limbless veterans<sup>8,9,14,16,21,24,26,27</sup>. These studies reported rates of depression between 9.7% and 28% and PTSD between 15% and 46%.

**Table 2.** Prevalence of pain among older limbless veterans.

Type of pain	Average % pain prevalence identified in reviewed studies	Number of papers reporting prevalence statistics
Phantom limb pain	17 – 90.8	14
Residual limb pain	32 – 92.2	10
Chronic back pain	8 – 76.6	9
Pain in contra-lateral (non-amputated) knee (lower-limb amputees)	38 – 79.4	4
Prosthetic-related pain	33 – 51	3
Hip pain on ipsilateral (amputated) side in lower-limb amputees	14.8	1
Knee pain on ipsilateral (amputated) side in BK amputees	13	1

Despite the high prevalence of pain and comorbidities, Quality of life was reported as ‘good’, ‘very good’, or ‘excellent’ in 72.8% - 79.7% of older limbless veterans<sup>28,9</sup>. One reason for this may be that veterans tended to deal with pain via silent acceptance or a ‘stiff upper lip’ approach to coping<sup>10</sup>. One study<sup>29</sup> reported significantly poorer quality of life among limbless veterans in comparison with population norms. Among the factors related to poor quality of life, Epstein, Heinemann, and McFarland<sup>28</sup> revealed that poorer self-reported quality of life was significantly associated (in both Vietnam and OIF/OEF veterans) with the need for assistance with activities of daily living. Such assistance was required by one third of upper limb amputees

<sup>25</sup> Warton, S., Hamann, W., Wedley, J., and McColl, I. (1997). Phantom pain and sensation among British veteran amputees. *British Journal of Anaesthesia*, 78(6), 652-659.

<sup>26</sup> Ebrahimzadeh, M., and Fattahi, A. (2009). Long-term clinical outcomes of Iranian veterans with unilateral transfemoral amputation. *Disability and Rehabilitation*, 31 (22), 1873–1877.

<sup>27</sup> Ebrahimzadeh, M., and Hariri, S. (2009). Long-term outcomes of unilateral transtibial amputations. *Military Medicine*, 174(6), 593-597.

<sup>28</sup> Epstein, R., Heinemann, A., and McFarland, L. (2010). Quality of life for veterans and servicemembers with major traumatic limb loss from Vietnam and OIF/OEF conflicts. *Journal of Rehabilitation Research and Development*, 47(4), 373-386.

<sup>29</sup> Taghipour, H., Moharamzad, Y., Mafi, A. R., Amini, A., Naghizadeh, M. M., Soroush, M. R., & Namavari, A. (2009). Quality of life among veterans with war-related unilateral lower extremity amputation: a long-term survey in a prosthesis center in Iran. *Journal of orthopaedic trauma*, 23(7), 525-530.

in both older and younger veterans<sup>16</sup>. Among bilateral lower-limb amputees, Dougherty *et al.*<sup>24</sup> noted that 33% of Vietnam veterans (compared with just 6% of OIF/OEF veterans) could no longer walk. In addition, fewer Vietnam veterans were participating in ‘high impact’ activities such as skiing and basketball, compared with the younger cohort (see also, Reiber *et al.*<sup>8</sup>). In the only study to include qualitative analysis of older veterans’ quality of life experiences, Foote *et al.*<sup>9</sup> provided vivid descriptions of the effects of impairment and restrictions on activities caused by amputation and by not being able to walk long distances due to pain. Declining mobility with age was strongly linked to poorer quality of life in the narrative account of one veteran from Foote *et al.*’s<sup>9</sup> study.

Other factors related to poorer quality of life included a higher number of comorbidities, higher levels of pain, and mental health problems<sup>8,9,21,24,28,30</sup>. Several papers noted that the impact of age-related changes, pain and declining mobility on veterans’ quality of life<sup>9,19,24,26</sup> with mental health problems such as depression and PTSD – endured for many decades in some cases – described as among the primary reasons for poor quality of life among older limbless veterans<sup>9,26,28</sup>.

Finally, several papers considered the long-term impact of limb-loss on employment and personal relationships<sup>8,9,18,19,20,21,24</sup>. In a long-term follow-up of bilateral above-knee amputees from Vietnam, Dougherty<sup>18</sup> found that 70% of veterans were or had been employed outside of the home since their injury. Reiber *et al.*<sup>8</sup> similarly reported a 78.7% current employment rate among Vietnam veterans. The vast majority of veterans were also married and had children<sup>18,19,20,26,31</sup>. Accordingly, Dougherty<sup>18</sup> argued that Vietnam veterans had lived ‘relatively normal lives’ within the context of their physical limitations and that, contrary to media narratives, did not on the whole experience insurmountable emotional and physical scars. Indeed, Foote *et al.*<sup>9</sup> suggested that older Vietnam veterans with limb-loss had continued to make major life transitions and experienced positive quality of life, but that problems with pain, physical ailments exacerbated by ageing, and mental health problems could also adversely affect quality of life, thus underscoring the importance of ongoing care and rehabilitation.

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<sup>30</sup> Hoaglund, F., Jergesen, H., Wilson, L., Lamoreux, L., and Roberts, R. (1983). Evaluation of problems and needs of veteran lower-limb amputees in the San Francisco Bay Area during the period 1977-1980. *Journal of Rehabilitation Research and Development*, 20(1), 57-71.

<sup>31</sup> Ebrahimzadeh, M., Kachooei, A., Soroush, M., Hasankhani, E., Razi, S., and Birjandinejad, A. (2013). Long-term clinical outcomes of war-related hip disarticulation and transpelvic amputation. *Journal of Bone and Joint Surgery*, 95, e114, 1-6.

### *Psycho-Social Adaptation and Coping in Older Limbless Veterans*

Three studies<sup>10,32,33</sup> discussed coping and psycho-social adaptation among older limbless veterans. Desmond and MacLachlan<sup>33</sup> surveyed coping strategies and psycho-social adaptation with a sample of elderly lower-limb amputees (mean age = 74 years) who were members of Blesma, The Limbless Veterans Charity (Blesma). The term 'psycho-social adaptation' was not defined in this paper but was described in relation to an individual's ability to adapt to a range of challenges, including impairments in physical functioning, prosthesis use, pain, changes in occupation, and alterations in body image and self-concept. The authors reported that problem solving and seeking social support were coping strategies associated with fewer depressive symptoms and greater psycho-social adaptation among older veteran-amputees. Avoidant coping strategies (e.g., denial, alcohol use) were associated with poorer psycho-social adjustment, echoing wider findings about the maladaptive use of avoidant coping strategies in adaptation to disability. Greater time since amputation was also positively related to adjustment, with the average length of time being 42.6 years among the Blesma veterans.

In a later study, Desmond<sup>32</sup> went on to explore coping and adjustment among upper limb amputees from the Blesma cohort. In this study, psycho-social adjustment was conceptualized as "the absence of clinically elevated symptoms of anxiety and depression and evidence of positive adjustment to amputation and prosthesis use" (p. 17). Findings broadly mirrored those of the earlier study, although the associations between seeking social support and adjustment were not evident. As Desmond argued, the findings of this and the previous study hold relevance for the care of older veterans, in particular the importance of promoting adaptive, problem-orientated coping strategies designed to enhance long-term adjustment and quality of life.

Machin and Williams<sup>10</sup> also explored coping strategies in relation to phantom pains. They reported that veterans generally made little use of strategies such as problem solving or emotional support, preferring a 'stiff upper lip' approach to coping and a silent acceptance of pain. Many had also given up on medical assistance, making comments such as "I have had no success with treatments so far, so there is no point in even trying" (page 293).

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<sup>32</sup> Desmond, D. (2007). Coping, affective distress, and psychosocial adjustment among people with traumatic upper limb amputations. *Journal of Psychosomatic Research*, 62 (1), 15– 21.

<sup>33</sup> Desmond, D., and MacLachlan, M. (2006). Coping strategies as predictors of psychosocial adaptation in a sample of elderly veterans with acquired lower limb amputations. *Social Science and Medicine*, 62(1), 208-216.

### *Disability and Identity*

One study by Meyers<sup>11</sup> focused on the identity politics of disability and amputation amongst middle-aged veterans of Nicaragua's civil war of the 1980's. Meyers'<sup>11</sup> qualitative study drew upon interviews and participant observations conducted with opposing sides of the conflict in order to understand how each side positioned themselves with regard to the broader category of 'disability'. For the ex-Contra rebels (politically marginalized following their defeat by the Sandinista regime), adopting the social identity of 'disabled' became a means of arguing for equal rights and the protection of disability benefits. On the other hand, the Sandinistas under the 'Organization of Disabled Revolutionaries' (ORD) sought to distance themselves from 'other' disabled people, preferring to emphasise their privileged status as 'war heroes'. Their amputations were symbols of valor setting them apart from other disabled groups and protecting them from 'stigmatized' disabled identities. Sandinista veterans thereby adopted an ambiguous relationship with other disabled people: choosing to set themselves apart yet occasionally being compelled to identify with wider disability movements in order to gain access to benefits and resources.

Meyers'<sup>11</sup> findings showed that the political and military context in which veterans were injured was an important feature of their long-term adjustment to 'disability' and negotiations around personal and social identity. By highlighting matters of social identity, Meyers also situated the study of older veteran-amputees within the wider literature on critical disability studies (e.g., Meekosha & Shuttleworth, 2009<sup>34</sup>), which the literature on older veterans has otherwise yet to engage with. Indeed, one insight from Meyers' paper – mirroring the perspective of disability scholars more broadly<sup>34</sup> – was that disabled and amputee veterans were not a homogenous group in terms of their social identities and experiences of disability, and that various 'intersecting' identities (particularly in relation to age, gender, race, and combat-era) were important in understanding their lives.

### *Estimating the Long-Term Cost of Prosthetic Provision for Limbless Veterans*

In line with the aims of this systematic review to evaluate the long-term impact of limb-loss, three papers considered the long-term financial burden of prosthetic device provision required in order to meet veterans' mobility needs<sup>4,12,13</sup>. Using Markov model analysis, Blough *et al.*<sup>12</sup> projected the cost of prosthetic device provision for US veterans over 5 year, 10 year, 20 year and lifetime periods. Using the *Survey for Prosthetic Use* sample (see above), the authors contrasted the estimated lifetime cost of provision for Vietnam veterans compared with

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<sup>34</sup> Meekosha, H., and Shuttleworth, R. 2009. What's so 'critical' about critical disability studies? *Australian Journal of Human Rights*, 15(1) 47-76.

OIF/OEF veterans. Given the greater number – and greater technological advancement – of prosthetics used by OIF/OEF veterans, the cost of provision for the younger cohort was significantly higher than the Vietnam cohort. Costs were also compared by type of amputation, with unilateral upper, unilateral lower, bilateral upper, and multiple limb-loss forming separate categories for analysis. Given that lower-limb prostheses were typically more expensive and complex than upper-limbs, costs were also highest in the ‘multiple limb-loss’ category, such that the lifetime projected costs of provision for a single Vietnam and OIF/OEF multiple limb amputee were 750k and 3.4m US Dollars, respectively. This compared with lifetime costs for a unilateral upper limb amputee at 300k for Vietnam and 1.1m for OIF/OEF. Blough *et al.*<sup>12</sup> asserted that future costs of prosthetic provision could be manageable for the VA and for the Department of Defense (DoD), but that their estimates were ‘conservative’ because of potential outliers and the cost of future emerging technologies.

In a similar study with UK veterans, Edwards, Phillip, Bosanquet, Bull, and Clasper<sup>4</sup> argued for the imperative of long-term planning to meet the prosthetic and rehabilitative needs of Iraq and Afghanistan veterans. Using a simplified version of Blough *et al.*'s<sup>12</sup> Markov model, Edwards *et al.*<sup>4</sup> estimated that the long-term (40 year) cost of rehabilitation and prosthetic provision for the entire UK veteran cohort of Iraq and Afghanistan was £288 million (USD 444 million) in 2015 currency. Prior to the conflicts in Iraq and Afghanistan, Stewart and Jain<sup>13</sup> conducted a retrospective cohort study based on 98 British veteran-amputees from previous conflicts in order to produce an estimate of lifetime costs. Extrapolating from their sample to the rest of the UK population of war amputees, the figure they produced was £69 million, which did not account for any related, hidden, or future costs and, according to the authors, was likely to be a significant under-calculation.

None of the cost-estimate studies were, however, able to account for variations in the cost of care provision through chronic disease, age-related changes (e.g., in mobility), and comorbidities such as mental health problems that limbless veterans are likely to encounter ‘downstream’<sup>3</sup>. As Geiling Rosen and Edwards<sup>3</sup>, put it in their commentary on the ‘medical costs of war in 2035’, there was a need to consider the “secondary and tertiary consequences in middle age [which] might include decreased mobility, weight gain, coronary artery disease, and diabetes mellitus” (p. 1237). Accordingly, Geiling *et al.*<sup>3</sup> emphasised the need for early interventions – including prevention and treatment measures – to help mitigate the likely additional costs to society. Indeed, as Edwards *et al.*<sup>4</sup> also cautioned, their estimates should be considered merely as “the start of a challenge to develop sustained rehabilitation and recovery funding and provision” (p. 2854), and that ongoing assessment of injured soldiers and their care would be required as the population ages.

### *Quality of the Literature on Ageing and Limb-Loss In Veterans*

The literature as a whole is over-reliant upon the self-report survey method (17/21 studies). Whilst many of these were large, well designed surveys which included comparison groups, there are limitations associated with this dependence upon survey methodology. For instance, 11 studies discussed the potential representativeness of their samples, including questions over the presence of selection bias and differences between respondents and non-respondents. In particular, evidence that some veterans self-medicated with alcohol to deal with phantom pain<sup>35</sup> and avoided contact with clinicians when treatments were deemed ineffective<sup>10</sup> could indicate that non-respondents had potentially more severe problems with mental health or alcohol use. It could also be argued that the use of a single 5-point scale to assess quality of life within the VA survey for prosthetic use<sup>8</sup> was an overly simplistic measure for a complex, multi-faceted construct. While 11 studies used validated measurement instruments (12 also incorporated bespoke measurement tools), only one study<sup>22</sup> used medical assessments to determine the presence of comorbidities. There was also an absence of longitudinal follow-up studies which would have been able to determine the impact of limb-loss over time or throughout the life-course<sup>36</sup>.

Of the studies based in full or part on qualitative methods<sup>9,10,11</sup>, only one<sup>11</sup> provided sufficient information on data collection and analysis procedures for methodological rigor to be assessed. This study was classified as strong, based on the quality and extent of data collection, the well-documented relationship between researcher and participants, the clearly articulated findings and implications, and good grounding in theory. With the exception of this paper, however, the literature on older limbless veterans lacked theoretical depth and engagement with critical social issues such as ageing and disability, identity, and independence (e.g., Schwanen & Ziegler<sup>37</sup>). Overall, the quality of the literature on ageing and limb-loss in veterans may be categorized as weak-to-moderate. Despite an over-reliance on the self-report survey method, issues identified appear to be consistent across the literature (albeit with differing estimates of prevalence) (see [Tables 1a and 1b](#)), and the measures used possessed some face validity. Accordingly, the literature reviewed can be considered useful for drawing some conclusions regarding the long-term impact of limb-loss on veterans, whilst

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<sup>35</sup> Sherman, R. and Sherman, C. (1983). Prevalence and characteristics of chronic phantom limb pain among American veterans. *American Journal of Physical Medicine*, 62(5), 227-238.

<sup>36</sup> Murrison, A. 2011. *A better deal for military amputees*. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/215338/dh\\_130827.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/215338/dh_130827.pdf) [Accessed 02/03/17].

<sup>37</sup> Schwanen, T., and Ziegler, F. (2011). Wellbeing, independence and mobility: an introduction. *Ageing and Society*, 31(5), 719-733.

also recognizing the need for further well-designed research studies (both quantitative and qualitative), and prospective, longitudinal studies.

## Summary

The findings of this systematic review emphasise that, whilst limbless veterans are generally able to achieve a good quality of life, limb-loss is still a progressive and degenerative injury involving enduring experiences of pain, comorbidities, and sometimes mental health problems, which undermine veterans' health, well-being and quality of life. Furthermore, it is evident that approaches to coping, as well social and political context, exert an important influence on veterans' long-term adjustment and identity in relation to limb-loss. Finally, the literature highlights the substantial cost of caring for limbless veterans throughout the life-course and the financial commitments required to safeguard their long-term health and care needs.

The literature review identified older limbless veterans and the impact of ageing on maintaining independence as an area that needs further investigation. The aim of this study was therefore to capture the life-stories of limbless veterans over the age of 40. Understanding the experiences of older limbless veterans across their life-course will aid in the development of future policy with cross-generational benefits. A focus on the health and social wellbeing of the participants will also help to inform future policy makers of maintaining independence in limbless veterans as they age.



# Methodology



## Aims

By examining the multiple domains of wellbeing across the life-span, as portrayed through the individual biographies of older limbless veterans, this research sought to understand the holistic and life-long impact of limb-loss. The main aims of this study were:

- 1) To explore the physical, psychological and social wellbeing of older, limbless veterans across the life-course;
- 2) To ascertain the factors that contribute to the ability of limbless veterans to maintain their independence at various stages in their lives.

We also explored the significance of stories for how participants attached meaning to their experiences and their lives post limb-loss. This included the potential role of stories for participants, for example, in bolstering self-esteem, celebrating success or demonstrating resilience in the face of adversity. The study draws on the experiences of veterans from military operations prior to those in Iraq and Afghanistan to contribute data on patterns of recovery. This includes levels of mobility and the impact of limb-loss on independence that will likely affect current and future generations of limbless veterans. Ultimately, the research aims to produce recommendations for health and social care policy around the requirements of an ageing veteran population, inform future service design, and shape the interface between NHS and third sector charities with responsibility to care for limbless veterans.

## Design

A multiple method convergent design (Figure 2) was adopted for the study, encompassing Narrative Inquiry<sup>38</sup> and Applied Policy Research<sup>39</sup>. This enabled dual attention to 1) the narratives that shape how veterans reconstruct their lives and identities after limb-loss; and 2) policy and practice implications drawn from observations that some veterans may be more able to adjust and maintain independence than others.

In common with Naylor et al.<sup>40</sup>, a commitment to the active participation of veterans themselves was embedded throughout all stages of the research. This helped to ensure that the research reflected the experiences and priorities of service users and carers. Veterans worked with the research team to contribute to the design of the research proposal, the

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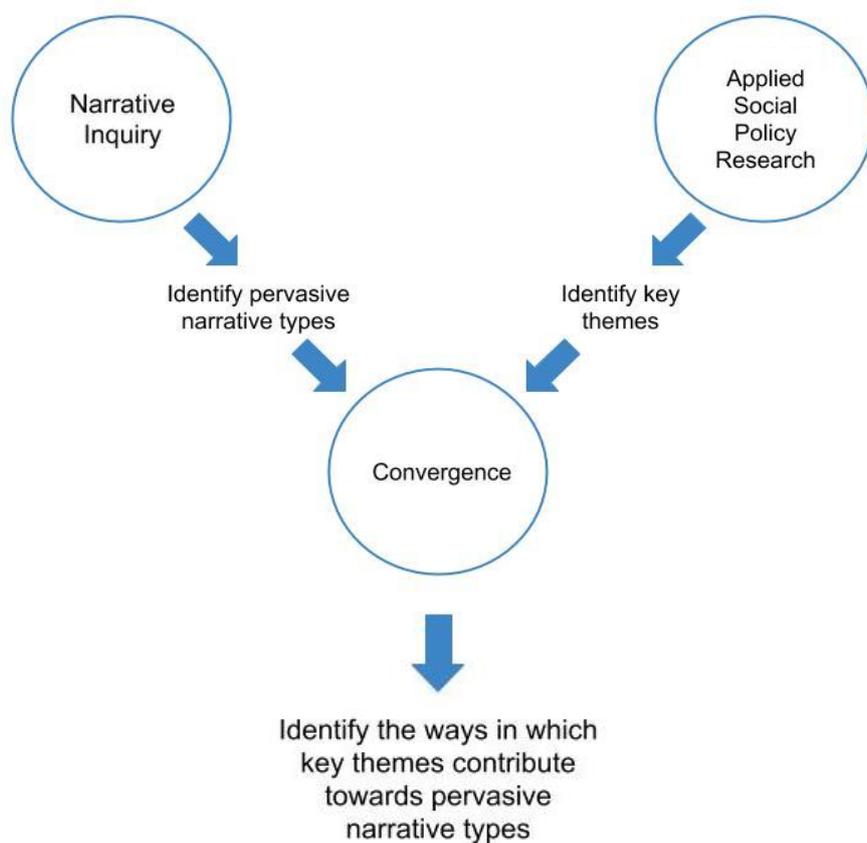
<sup>38</sup> Frank, A. (2012). Practicing dialogical narrative analysis. In J. A. Holstein & J. F. Gubrium (eds.), *Varieties of narrative analysis* (pp. 33-52). Thousand Oaks, CA: Sage.

<sup>39</sup> Ritchie J & Spencer L (2002) Qualitative data analysis for applied policy research. *The qualitative researcher's companion*, 573(2002), 305-29.

<sup>40</sup> Naylor, C., Wallcraft, J., Samele, C., & Greatley, A. (2007). Research priorities for service user and carer-centred mental health services: Consultation report. *NCCSDO, London*.

development of the research tools and participant information resources. They also played a key role in the recruitment process.

**Figure 2.** Convergent design in practice



### *Narrative Inquiry*

Narrative inquiry is a term used to refer to diverse approaches, which share a concern with the ways which stories are used as a vehicle for organising and giving meaning to experiences<sup>41</sup>. The present study employed a form of narrative inquiry referred to as dialogical narrative analysis<sup>38,43</sup>. A dialogical approach does not treat stories as simply reflecting the actual state of affairs, or recounting how events actually happened, but understands stories themselves as active in affecting audiences and tellers. This includes a consideration of the role that these stories play in supporting people's concept of self-identity. The stories we tell are taken to be an important influence on how we think about and live out our lives, and the possibilities we see as open or closed to us<sup>42,44</sup>. The approach is termed 'dialogical' in

<sup>41</sup> Smith, B., & Sparkes, A. C. (2008). Contrasting perspectives on narrating selves and identities: an invitation to dialogue. *Qualitative Research*, 8(1), 5-35.

<sup>43</sup> Frank, A. (2010). *Letting stories breathe: A socio-narratology*. Chicago: University of Chicago Press.

<sup>44</sup> Phoenix, C., & Smith, B. (2011). Telling a (good?) counterstory of aging: Natural bodybuilding meets the narrative of decline. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 66(5), 628-639.

recognition that stories are not produced in isolation, but piece together scraps of stories previously heard and told and incorporate the voices of others<sup>38</sup>. Thus, this report therefore distinguish between ‘narratives’, which refer to the forms of narrative broadly available in society, and ‘stories’ which refer to the ways that participants draw on these available narratives to produce specific accounts of their own experiences. With regard to this study, a dialogical approach was used to explore the types of stories told by limbless veterans and how well served they are by these stories as they endeavour to age well and maintain their independence.

### *Applied Policy Research*

Applied policy research concentrates on finding solutions to immediate practical problems, and has a key role to play in providing insight, explanations and theories of social behaviour<sup>39</sup>. Framework analysis is an approach to qualitative analysis developed for the purpose of applied policy research. It has particular strengths in the systematic management of data, and in enhancing transparency and accountability with regards to the way in which recommendations are derived from the data<sup>45</sup>. In addition to its emphasis on responding to public and policy problems, framework analysis was favoured for the study due to its suitability for handling large data sets and the ability to balance consideration of individual circumstances with the production of overarching recommendations<sup>46,47</sup>.

### *Convergence*

The final stage of analysis employed a convergent parallel design, involving the integration of findings previously identified throughout the process of narrative inquiry and framework analysis. This mixed-method approach to research is referred to as analytical pluralism. Analytical pluralism is a growing practice within qualitative research. Scholars argue that in light of the multiplicity and complexity of social phenomena, the application of integrated

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<sup>45</sup> Ritchie, J., Lewis, J., McNaughton-Nicholls, C. and Ormston, R. (2013), *Qualitative Research Practice: A Guide for Social Science Students and Researchers, 2nd ed.*, SAGE Publications, Thousand Oaks, CA.

<sup>46</sup> Parkinson A, Eatough V, Holmes J, Stapley E, Midgley N. (2016) Framework analysis: a worked example of a study exploring young people’s experiences of depression. *Qualitative Research in Psychology*, 13 (2): 109-129.

<sup>47</sup> Gale NK, Heath G, Cameron E, Rashid S, Redwood S. (2013) Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Med Res Methodol* 13: 117.

multiple methodologies have the potential to provide more comprehensive and meaningful insights into the subject of interest<sup>48,49,50,51,52</sup>.

## Participants

### *Recruitment*

Two peer-researchers co-ordinated the enrolment of participants to the study. These peer-researchers were veterans and members of Blesma, The Limbless Veterans Charity. Consequently, 33 participants were recruited from across the UK. A UK wide approach allowed for sufficient variation in the sample. Only data from 32 participants were included in the analysis. Please note, participant numbers were assigned at recruitment stage and therefore go up to 33.

### *Gender and Age*

The majority of participants were male (n = 30), there were two females. Ages ranged from 43 to 95 years old (mean = 69.4, SD = 14.56). It was acknowledged that there may be differences in experience depending on age. Only limbless veterans over the age of 40 were included in this study as it was expected that they would have significant limb-loss life experience. This would allow for the exploration of any continuing difficulties with mobility and/or services and the challenges that emerge over the life-course.

### *Military Service*

Participants served across all three services in the UK Armed Forces: Royal Navy/Royal Marines (n = 7), British Army (n = 19) and Royal Air Force (n = 5). Additionally, one participant was a Cadet. Recruiting participants across all three services of the UK Armed Forces, allowed for potential difference across services in terms of health and social care provision to be explored.

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<sup>48</sup> Creswell, J. (2003). *Research design: Qualitative, quantitative and mixed methods approaches (2nd ed.)*. Thousand Oaks, CA: SAGE Publications.

<sup>49</sup> Creswell, J., & Plano Clark, V. (2007). *Designing and Conducting Mixed Methods Research*. Thousand Oaks, CA: Sage.

<sup>50</sup> Kincheloe, J. (2001). Describing the bricolage: Conceptualizing a new rigor in qualitative research. *Qualitative Inquiry*, 7(6), 679-692.

<sup>51</sup> Kincheloe, J. (2005). On to the next level: Continuing the conceptualization of the bricolage. *Qualitative Inquiry*, 11(3), 323-350.

<sup>52</sup> Kincheloe J. & Berry, K. (2004). *Rigor and complexity in educational research: Conceptualizing the bricolage*. London: Open University Press.

Officers (Commissioned and Warrant) and other ranks were included in acknowledgement of potential differences this may give rise to in terms of economic constraints and employment opportunities post limb-loss.

Of 32 participants in the study, 59.4% (n = 19) had been deployed on operational duties during the course of their service, while 40.6% (n = 13) were never deployed. Reflecting the diversity of military service, participants who were deployed served in a range of conflicts: World War 2, Suez Crisis, Northern Ireland, Falklands and the Gulf War.

### *Limb-loss*

Whether limb-loss occurred during or outside military service was to be deemed important as this may have influenced the forms of support available to participants. Variation in the nature of limb-loss was recorded in order to illuminate potential differences in the challenges of adapting to limb-loss.

Consequently, 34.4% (n = 11) of participants had in-service attributable limb-loss, 6.2% (n = 2) had in-service non-attributable limb-loss and 3.1% (n = 1) had in-service limb-loss where the attributable cause was unclear. Of those that lost limbs post service, 28.2% (n=9) were due to accidents, 21.9% (n = 7) due to illness and 6.2% (n = 2) due to previous service and their limb-loss was reported as attributable. The nature of limb-loss (e.g. single/bilateral amputation; upper/lower limb) also varied across participants (see [Table 3](#)).

**Table 3.** Participant characteristics (N = 32).

<b>Age at interview (years)</b>	
<b>Mean (SD)</b>	<b>69.4 (14.56)</b>
<b>Range</b>	<b>43-95</b>
<b>Gender</b>	
<b>Male (%)</b>	30 (93.8)
<b>Female (%)</b>	2 (6.2)
<b>Service</b>	
Royal Navy/Royal Marines (%)	7 (21.9)
Army (%)	19 (59.4)
Royal Air Force (%)	5 (15.6)
Cadet (%)	1 (3.1)
<b>Operational service</b>	
Deployed (%)	19 (59.4)
No deployments (%)	13 (40.6)
<b>Mechanism of limb-loss</b>	
In-service attributable (%)	11 (34.4)
In-service non-attributable (%)	2 (6.2)
In-service unclear (%)	1 (3.1)
Post-service accident (%)	9 (28.2)
Post-service attributable (%)	2 (6.2)
Post-service illness (%)	7 (21.9)
<b>Nature of limb-loss</b>	
Above-knee (%)	14 (43.8)
Below-knee (%)	10 (31.3)
Through-knee (%)	1 (3.1)
Arm (%)	1 (3.1)
Double amputee (%)	4 (12.5)
Quadriplegic (%)	1 (3.1)
Monoplegic (%)	1 (3.1)

## Families

Participants were asked if they would like to include their immediate families/significant others (over 18 years and up to two people per primary interviewee). The aim of this was to aid in the holistic exploration of impact of limb-loss on families and to address gaps in the current understanding of the health and social care needs of families of older limbless veterans. The research team appreciated that the inclusion of family members/significant others may have potentially influenced the dynamics of the research interview insofar as;

- Participants may have tailored their narratives to the audience of listeners; and,
- Participants may have applied a greater degree of self-editing, perhaps limiting the candour of the interview;

However,

- The presence of a family member/significant other served as a means of obtaining multiple perspectives of the holistic significance of limb-loss; and,
- Family members/ significant others served as a means of on-the-spot member checking or validation of claims made.

In some circumstances, it was clear that the involvement of a family member/significant other served as a catalyst for conversations that had hitherto remained unsaid or suppressed for the duration of the post-limb-loss experience.

Overall, in line with recommendations for purposive sampling for qualitative studies<sup>53,54,55</sup>, the approach taken balanced a concern for accessing the range of responses according to above characteristics, with the ability to ascertain high quality, in-depth information.

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<sup>53</sup> Bryman, A. (2008). *Social research methods* (3rd ed. ed.). Oxford, New York: Oxford University Press.

<sup>54</sup> Barbour, R. S. (2014). *Introducing qualitative research: a student's guide* (Second edition. ed.). Los Angeles: SAGE.

<sup>55</sup> Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA.: Sage.

## Data Collection

Life histories were collected over a period of eight months from September 2016 to July 2017. Each of the participants were involved in semi-structured life history interviews, conducted face-to-face at a location of the participants' choosing (usually their own home). With participants' permission, interviews were audio-recorded. Up to three interviews per participant were carried out, each lasting between 1.5-3 hours, in order to allow sufficient time for participants to share their full life story. Consequently, there was close to 100 hours of rich, in-depth life narrative data collected. One participant was interviewed via email on request due to hearing difficulties.

## Data Analysis

Participant interviews were transcribed verbatim. To aid the analysis of textual data, Nvivo 11 server software was used across all three strands of the project. NVivo is a qualitative data analysis computer software package produced by QSR International. It has been designed for qualitative researchers working with rich text-based and/or multimedia information, where deep levels of analysis on small or large volumes of data are required. NVivo helps users organise and analyse non-numerical or unstructured data. The software allows users to classify, sort and arrange information; examine relationships in the data; and combine analysis with linking, shaping, searching and modelling. The researcher or analyst can test theories, identify trends and cross-examine information in a multitude of ways using its search engine and query functions. Researchers can make observations in the software and build a body of evidence to support their case or project.

### *Narrative Analysis*

In line with the narrative inquiry design, narrative analysis began with researchers immersing themselves in the data by reading the interview transcripts and field notes, as is common across approaches to qualitative analysis. This familiarisation process was also aided by the coding of participant interviews in NVivo according to significant issues and experiences that affected individual participants at different stages of their lives. This supported later stages of the analysis by facilitating the retrieval of data for participants. In accordance with a dialogical approach to narrative analysis, the researchers asked a series of questions of the data and participant's stories<sup>42</sup>. These included the following:

- How does the story shape people's sense of what is possible, what is permitted, and what is responsible or irresponsible?
- What kind of response does the story call for or seek to provoke from different listeners?

- What particular ideas about ageing limbless veterans do the stories seek to communicate?

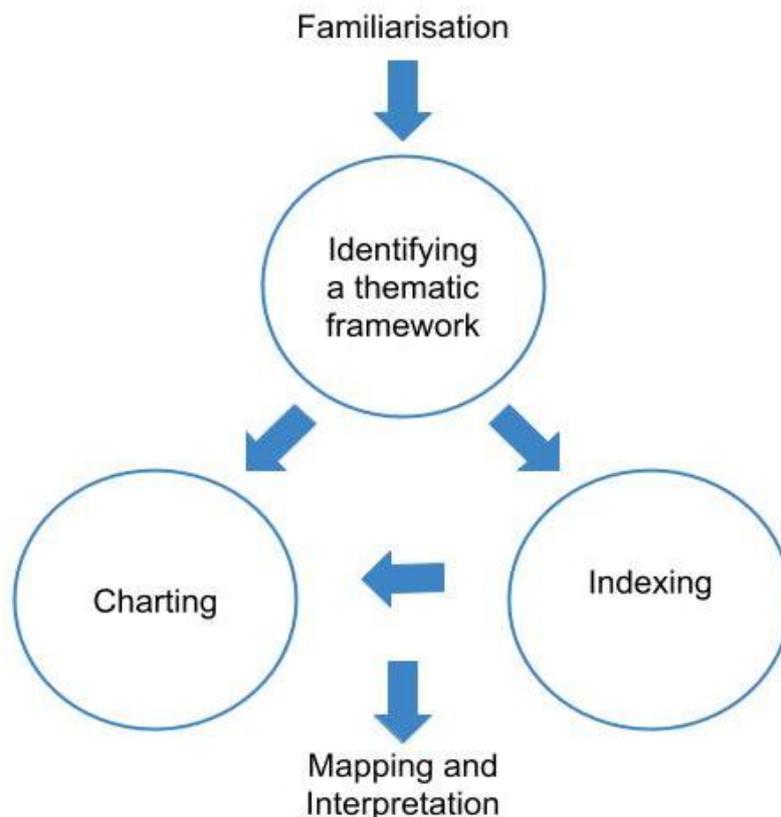
For each participant, a narrative summary was produced providing a synopsis of participant's life history, and the type of story(ies) or plot(s) they used to frame their experiences. Individual narrative summaries were then compared and contrasted with one another, in order to identify patterns in the forms of stories participants used when narrating their limb-loss.

### *Framework Analysis*

Applied policy research focuses on providing insights, explanations and theories of social behaviour and producing solutions for policy issues or questions<sup>39</sup>. Framework analysis of qualitative data sits at the heart of applied policy research methodology. Framework Analysis has been used to help achieve specified aims and outputs as well as to facilitate systematic thematic analysis of data<sup>39,45</sup>. This method was chosen for its capacity to handle data through a rigorous, transparent and logical process of thematic analysis.

The process consists of five phases (see also [Figure 3](#)):

**Figure 3.** Framework analysis in practice.



- 1) *Familiarisation*: The process of familiarisation involved immersion in a subset of the participant transcripts in order to begin to structure and make sense of the raw data.
- 2) *Identifying a thematic framework*: The next stage of analysis involved developing categories (or thematic framework) for the organisation of the data. This process was informed by the aims and objectives of the study, data driven themes, and interpretations developed during the familiarisation process<sup>56</sup>. The categories developed were then applied to, and refined using a selection of the data.
- 3) *Indexing*: Indexing refers to the process of systematically applying the thematic framework to the whole data set (Ritchie and Spencer 2002). In this study, the use of NVivo's automatic coding function was used in order to ensure that this stage was undertaken in a consistent manner. After automatic coding was undertaken, the data in each theme was reviewed by researchers manually in order to ensure that all material in each theme was relevant, remove any unrelated data and develop new themes where required.
- 4) *Charting*: Once all of the data was assigned to categories, the next phase involved grouping and re-organising categories in order to identify patterns in the data. Crucially, this technique enabled an interrogation of data according to research questions and objectives. Categories of data pertaining to each superordinate theme or hypothesis were arranged into matrices (using NVivo) to examine the extent to which interpretations were supported by the data, and to enable comparison between participants according to their particular attributes or circumstances. This method enabled a balance to be achieved between reducing and summarising data and remaining attuned to individual cases. Insights from matrices in turn enabled refinement of hypotheses and superordinate themes through a cyclical process. The ability to trace interpretations back to supporting data is a key strength of framework analysis, providing a clear audit trail of how conclusions were derived from the data.
- 5) *Mapping and interpretation*: This phase refers to the presentation of an overall picture of the data. It involved representing the key features of the data, mapping out how different aspects of data fit together, and drawing out explanations for patterns that have emerged<sup>45</sup>.

### *Convergence Analysis*

Due to the anticipated diversity of the target population of limbless veterans, it was expected that narrative analysis would yield a range of varied narrative typologies. The narrative

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<sup>56</sup> Pope C, Ziebland S, Mays N (2000) Qualitative research in health care. Analysing qualitative data. *British Medical Journal*, 320, 7227, 114-116

typologies identified stark contrasts with regards to veterans' health, wellbeing and independence following limb-loss. There is a clear challenge in demonstrating the diversity of the needs of limbless veterans, whilst ensuring that any resultant policy advice recognises the variety of complexities which exist within this community. By exploring the ways in which key themes contribute towards the construction of each narrative type, the research team aimed to provide more accurate conclusions about the needs and experiences of this diverse group.

1) *Dual-Phase Deductive Coding*: In order to converge the findings previously identified through narrative analysis and framework analysis, the data was subject to a dual-phase deductive coding process. The pervasive narrative types identified within the data-set during narrative inquiry provided the foundation for phase one of the convergent coding process. Based upon the narrative summaries composed during the narrative analysis, the distinctive characteristics of each narrative type were clearly defined. The data-set was then analysed in order to code data extracts according to a corresponding narrative type. This process was completed manually by members of the research team and involved re-reading the interview transcripts, identifying data extracts which conform to key characteristic features of an identified narrative type and utilising NVivo software to compile data extracts according to narrative type. [Figure 4a](#) provides a visual example of phase one of the coding process.

The pervasive subordinate themes which emerged within the data-set throughout the process of the framework analysis provided a scaffolding for phase two of the coding process. Using the previously identified themes, deductive coding was applied to the data extracts which were selected during phase one of the convergent coding process. In order to complete this process members of the research team first used the NVivo Query Wizard tool to identify instances of key subordinate themes within the selected data extracts, before scrutinising and interpreting the function of each theme within the context of the specific narrative type. [Figure 4b](#) provides a visual example of the phase two coding process.

2) *Interpretation and Critical Analysis*: The final stage of the convergence analysis involved the interpretation and critical analysis of the findings. To complete this process, the research team reviewed the findings in order to discuss the ways in which key themes contribute to the construction of each narrative type. Finally, members of the research team considered the findings of the convergence analysis as they relate to existing knowledge and previous research

Figure 4a. Visual representation of phase one of coding process using NVivo 11.

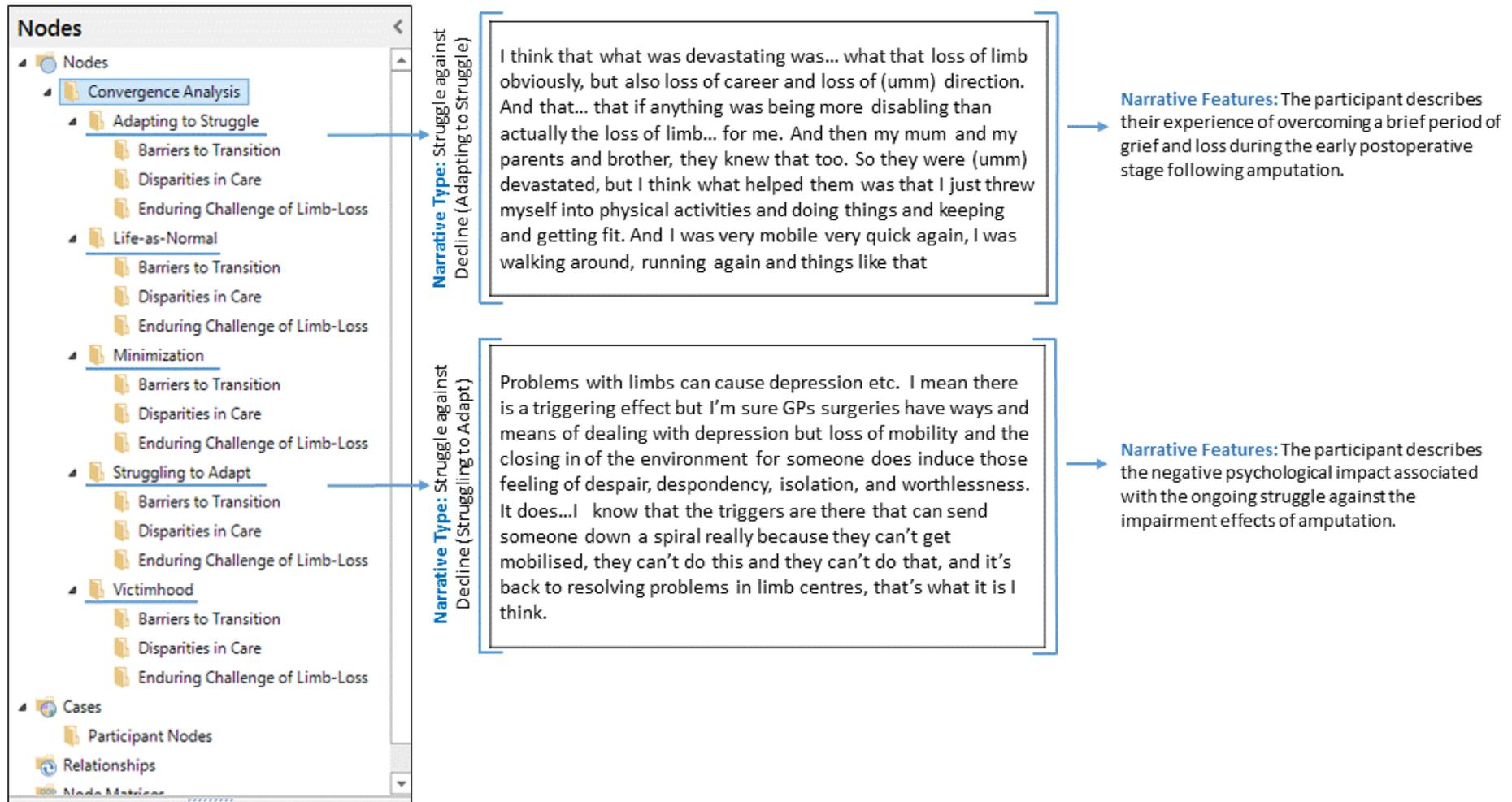
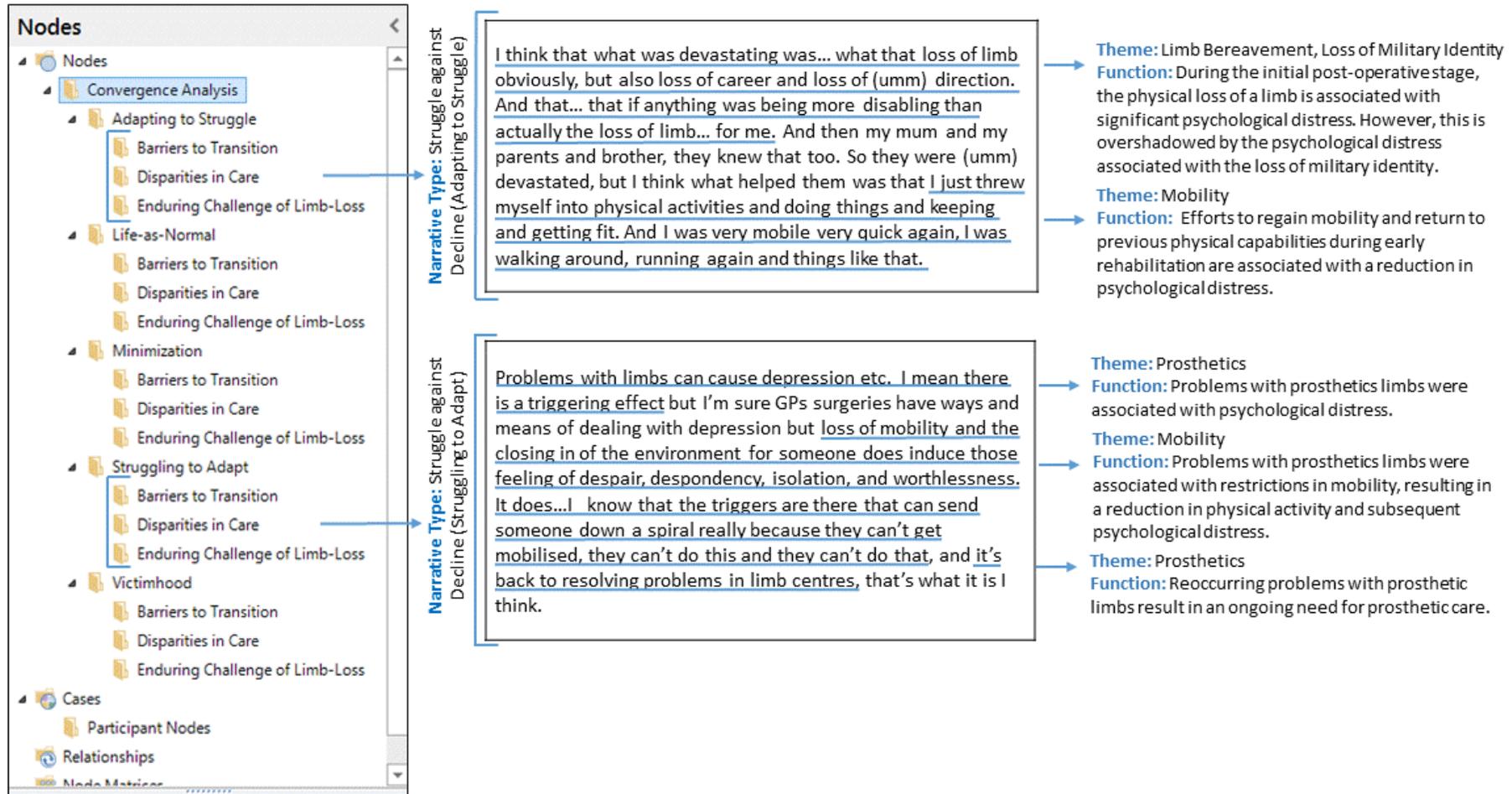


Figure 4b. Visual representation of phase two of coding process using NVivo 11.



## Ethics and Consent

All potential participants were issued with a study information sheet, which provided them with an overview of the research aims and procedures. Potential participants were informed that direct quotations from participants would be included within the publications which result from this research, however personal information which may compromise participants confidentiality, security or anonymity would be fully anonymised prior to inclusion. The information sheet also informed potential participants of their right to withdraw their participation at any time, without explanation and to have their data removed from the study. All potential participants were provided with an opportunity to ask questions about the research. Individuals who chose to participate in this research were required to sign a consent form, confirming that they understood the information provided to them and voluntarily chose to participate in the study.

Due to the sensitivity of limb-loss as a subject matter and the personal nature of narrative style interviews, it was important to minimise the potential psychological risks to the participants. All participants were known to Blesma and received a full risk assessment prior to taking part in the study. All interviews were conducted by highly experienced and skilled interviewers. At times during the interview process when participants became distressed, the interviewers provided support and reassurance and reminded the participant of their right to end the interview at any time. Participants received a full briefing and debriefing at the beginning and end of the interview process and were provided with a list of contacts from Blesma who they were able to contact if they required emotional or psychological support.

All data was stored in compliance with the Data Protection Act<sup>57</sup> and Northumbria University guidelines<sup>58</sup>. Interviews were digitally recorded, and transcribed. Both the audio recordings and the transcriptions were stored within a password-protected file, which was only accessible to the research team. All data will be stored for a period of five years prior to being destroyed.

Full ethical approval was received the from Northumbria University Ethics Committee.

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<sup>57</sup> Great Britain (1998) *Data Protection Act*. London: Stationery Office.

<sup>58</sup> *Northumbria University's research ethics and governance*: <https://www.northumbria.ac.uk/research/ethics-and-governance>.



## Results: Narrative Analysis



Narrative analysis identified four different 'narrative types' which informed the stories of the participants. Narrative types are the broad 'story structures' – including themes and plot – which the veterans used to put together their individual stories of ageing and limb-loss. Each narrative type may be thought of as the core thread common to the stories told by the veterans who participated in this research. The four narrative types are 'struggling against decline', 'minimisation', 'victimhood', and 'life-as-normal'.

## Narrative Type 1: Struggling Against Decline

Maintaining independence in old age was, generally speaking, a struggle for participants. The majority of the stories told centred on a struggle to maintain independence and resist 'decline' in old age. Decline was expressed in terms of physical deterioration, inactivity, and becoming increasingly dependent upon others. Unsurprisingly, participants were highly motivated to avoid slipping into such a state of decline. In other words, their stories emphasised their struggles to *resist* decline.

Specific things which participants struggled with included restricted mobility (particularly walking), pain (including stump pain, pain in 'good' limbs, back pain, and phantom limb pains), and endeavouring to keep themselves active and 'engaged'. These struggles were often exaggerated by the ageing process:

*It's natural that you get weaker, your bones get worn out! And everybody does this, but as an amputee, it's emphasised, it's exaggerated more because you've got a difficult life, and it's made more difficult by ageing or trouble.* (Participant 5)

Whilst resisting decline and maintaining independence were described as a struggle, in most cases, this was a 'spirited' one rather than a gloomy or oppressive 'battle'. The following comments illustrate the typical manner in which participants described the struggle to maintain independence:

*Independence is everything. 100%. If I haven't got that independence I'm frustrated, I get niggly, bad tempered. [Spouse] nodding [their] head now! But I know it, but I just can't help myself. You know, if I try to do something and I can't do it, after a load of expletives I sort of say '[spouse], for God's sake, can you give me a hand?' Well, shoelaces! Shoelaces are the bane of your life really because I've only got one hand, trying to do up shoelaces is virtually bloody impossible! Zips! Zips ok, I can fumble and fumble and do it eventually. But if I go out, say I go for a meal, and I'm in a restaurant I can't stand in a restaurant*

*and fiddle about. So I've got to ask somebody to do it for me. Which is embarrassing for me.* (Participant 13)

*And you mention before about getting lazy. I was wondering what is the problem or the danger there if you start to get lazy and, you know, rely on other people?* (Interviewer)

*Oh the danger of being lazy is that you get stagnant and you just don't use your mind. You sit here watching that bloody thing, you know daytime television, God almighty! That's enough to drive anybody to bloody drink! No, laziness is a state of mind really. I don't like it, but it just creeps up on you. My biggest fear is if I sat here and got lazy I think I would deteriorate very, very quickly. Very quickly. I've got to have something to do.* (Participant 13)

The strong drive to maintain independence was typically a product of long-held personal values which were cultivated either before or during military service. As participant 13 continued to explain:

*You need to be strong because every time you have a posting, everybody on that ship is brand new to you. So if you show weakness, you don't know who's going to take advantage of that. So you don't show it at all. You know, you've got to be as hard as you can be. Otherwise you just get treated – well you get bullied, you get treated badly, you get all the rubbish and it's just a way that it manifests really. You learn that at a very, very early stage in your career. So you had to have your independence and I think that sort of – you know, I came out of the mob when I was forty and you still had to have your independence when you started work. So up to the age of fifty I – that's fifty years for independence to be installed in you. I think that's where it comes from.*  
(Participant 13)

Reflecting these and other comments, the first factor which emerged as helpful to maintaining independence was a resilient 'get on with it' attitude towards staying engaged and productive in life. This was an attitude towards life and limb-loss that was grounded in the participants' identities as ex-servicemen and women. It conveys an upbeat sense of resilience and resolve that had remained with these veterans throughout their careers and during their post-injury lives. Further brief examples include:

*I just get on with it, no use bellyaching.* (Participant 20)

*You look around and you think 'Oh, it ain't too bad really', and you get on with it.* (Participant 12)

Practically speaking, this meant that the participants sought enthusiastically to engage themselves in activities that helped to promote and protect their independence, for example walking, driving, doing the shopping, adapted physical activity, and fixing things around the home. Performing such tasks by themselves was important to participants' sense of themselves as 'independent'. This meant that they would often strive to carry out these tasks despite physical pain and discomfort caused by prosthetics and impaired mobility. Even so, engaging in productive activity seemed to be *self-reinforcing* for the participants' independence, i.e., these activities both provided evidence of continuing independence and helped to further sustain it.

#### *Factors promoting independence (#1)*

*A resilient 'get-on-with-it' attitude grounded in a strong military identity.*

Despite the mostly positive 'get-on-with-it' attitude toward struggling against decline, a distinction emerged between those who were 'adapting to struggle', and those who were 'struggling to adapt'. The difference was mainly observed in the participants' satisfaction with their quality of life, which was revealed in their narrative descriptions. In addition, the tone and structure of the stories differed, and accounts were less relentlessly positive among those who were 'struggling to adapt'.

'Adapting to struggle' meant that participants were relatively satisfied with their ability to overcome the limitations of pain and immobility, and that they felt engaged, active, and reasonably independent (i.e., they could perform the majority of tasks themselves and were satisfied with having some tasks carried out by significant others).

In contrast, 'struggling to adapt' meant that participants continually struggled to overcome the impairment effects<sup>61</sup> of their amputations. Impairment effects refer specifically to those restrictions upon bodily activity caused by the injuries participants had sustained earlier in their lives. For participants who were struggling to adapt in their old age, these impairment effects hampered their efforts to maintain independence and often led to feelings of vulnerability, frustration, and in some cases, isolation and loneliness. The following quotes/brief interview exchanges give a sense of participants 'struggling to adapt':

*So that's the pretty dull life that we have . . . I can't really see the situation changing a lot. I mean as long as the marbles are still working, we could just go on and on, you know, getting weaker and weaker!* (Participant 26)

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<sup>61</sup> Thomas, C. (2007). *Sociologies of disability and illness: Contested ideas of disability studies and medical sociology*. Basingstoke: Palgrave.

*Yeah, I mean [they have not] got a lot of go in [them] these days, but [they] used to have. When we were first married [they would] have a go at pretty well anything. If [they] could have a go at it, [they would] do it. Whereas today [they are] not really . . . (Spouse of Participant 33)*

*Last two or three years I've lost the 'go' in me . . . I get annoyed when I'm trying to do things and I can't do what I want to do. So frustration takes over.*  
(Participant 33)

In light of these findings, one factor which emerged as crucial for ensuring that participants would 'adapt to struggle', rather than 'struggle to adapt', was support for overcoming impairment effects. This support came in many forms, such as the daily assistance provided by a partner or significant other, support from a competent prosthetist and limb-fitting service, or provision of social activities (including Blesma meetings and organised events) which helped to keep older participants active and engaged.

#### *Factors promoting independence (#2)*

*Support in overcoming the effects of amputation-related impairment.*

Even among participants whose stories suggested that they were 'struggling to adapt', the 'get-on-with-it' approach to coping with limb-loss was still prevalent. Despite their struggling, and despite feeling lonely and being socially isolated, some participants admitted that they were "*a bit too independent*" to ask for help or seek support.

#### *Factors inhibiting independence (#1)*

*Rigidly adhering to 'get-on-with-it' attitude in spite of mounting physical, psychological, and social difficulties.*

This was not the case with all of the participants. For example, several described attending Blesma meetings as a way of maintaining social connections. One participant also described becoming a 'befriender' for the military charity SSAFA, partly in response to their own feelings of loneliness. However, it became evident that the same strong-willed approach to coping which helped some participants to adapt could also become a burden that prevented them from seeking help from which they may have benefitted.

## **Narrative Type 2: Minimisation**

Some participants placed little emphasis on limb-loss in their stories. These participants spent more time in their interviews talking in detail about their careers and other achievements. It

was clear that limb-loss occupied a much smaller place in their life-stories. In other words, limb-loss and its impact were ‘*minimised*’.

*Well to be honest with you I don't really think it [limb-loss] had any impact! You know, it never bothered me. Obviously it must have; but I mean probably wouldn't have bothered what I was going to do. But I can't honestly remember it being a big problem. I don't really know how to describe it . . . I've never felt all 'Why did this happen to me?' But I'd of felt the same way about anything that occurs. If it's you know something you wouldn't have wished, well you get on with and work around it. And that has been my way of accepting this and that I've lost my leg and I've got to get on with it and you've got no choice! And that that's my, well I suppose my attitude to life to be honest with you . . . To be quite frank, I don't even think about the fact I've got an amputation . . . as far as I'm concerned, it's been a nothing you know.* (Participant 4)

In most cases (though by no means all), participants who minimised the place of limb-loss in their stories had experienced less severe injuries (e.g., below-knee rather than above-knee amputation) than did others who struggled in their old age. It is possible, therefore, that lower-level amputations lend themselves to minimisation stories because veterans experience fewer restrictions on their capabilities as a result of their injuries.

*I've never shied away though from being an injured person in the sense of I don't go around wearing a badge, but some will say I do because I often wear shorts especially at this time of year. I don't wear a cosmetic on my leg; I don't need to. It is a false leg. I'm not going to hide the fact. But I just get on as normal. I mean I almost know no different now. And I've been like that from day one.* (Participant 29)

### Factors promoting independence (#3)

Lower level amputations with fewer associated ‘impairment effects’.

Participants who told minimisation stories often strongly emphasised their lives and bodies as simply ‘normal’, or no different to anybody else. Indeed, it was important to them to show that they were just as ‘able’ and capable of productive activity as their fully able-bodied peers. There was a strong sense in which *work* – whether continuing in military service or civilian work – helped participants to ‘normalise’ their amputations and to minimise the impact of limb-loss. Therefore, another factor that appeared crucially important in promoting independence was the ability to sustain a meaningful post-injury career:

*I'm lucky I've been able to move on in time and build a new career and have a nice family life, so that's why I'm so lucky really.* (Participant 29)

*I don't remember it [limb-loss] as being particularly difficult because you know, I wasn't out of work for a long time or anything like that.* (Participant 24)

#### Factors promoting independence (#4)

Maintaining a productive and fulfilling post-injury career.

Amongst participants who minimised limb-loss in their stories, well-fitting and functioning prosthetics were an important part of helping to live normal lives. These participants differed, however, in the extent to which prosthetics helped them to maintain a *social image* of normality. For example, participant 29 (quoted above) felt no self-consciousness about having their prosthetic limb “*on display*”. In contrast, much older participants tended not to want to “*advertise*” their prosthetic limbs, and therefore it was important for their prosthetics to appear unobtrusive and inconspicuous. Accordingly, there seemed to be a generational difference with World War II and post-war veterans preferring to keep their prosthetics hidden, and comparatively younger veterans feeling no discomfort with visible prosthetics. In both cases, prosthetics were important to the participants’ image of normality, but the perception of ‘normality’ with respect to prosthetics was different.

#### Factors promoting independence (#5)

Well-fitting and functioning prosthetic limbs.

Finally, ‘minimisation’ might also be considered as opposite to current narratives of ‘dramatic overcoming’, for example where limb-loss is dramatically and heroically overcome through sporting activity or other achievement such as in the Invictus Games. Narratives of ‘dramatic overcoming’ have become a dominant theme of recovery stories for injured veterans in recent years, with examples of veterans climbing Mount Everest, rowing across the Atlantic Ocean, and taking part in the Dakar Rally motor race. Yet whereas limb-loss is very much at the centre of these stories (i.e., as the source of adversity which is dramatically overcome through super-human effort and perseverance), ‘minimisation’ pushes limb-loss out of focus, declaring it as practically a non-issue. The ‘dramatic overcoming’ narrative was notably absent from the current findings. Instead of extreme ‘headline-grabbing’ physical challenges as a way of promoting ongoing recovery and independence, the participants described less intense forms of physical activity (e.g., going on a photography course, meeting up with other Blesma

members) as important in keeping them active, engaged, and mentally, physically and socially healthy.

Factors promoting independence (#6)

The availability of cultural narratives which allow for mundane 'hero narratives'.

Factors inhibiting independence (#2)

The pervasiveness of cultural narratives of 'dramatic overcoming', to which the majority of those affected by limb-loss cannot rise.

### Narrative Type 3: Victimhood

One participant interviewed told a story of 'victimhood' through which they expressed a great deal of anger and bitterness. This anger was directed towards numerous organisations, each perceived to have failed this participant in one way or another. These included surgeons who had repeatedly "*botched*" knee operations, the military for mishandling the participants discharge from service, a healthcare system which was unable to provide continuity of care, and the general public for a perceived sense of apathy or indifference towards personnel injured through non-combat means. As such, this story portrayed the participant as a victim of a) others' incompetence, b) an uncaring system, and c) a '*hierarchy of wounding*' which places combat injuries above injuries sustained in the course of 'regular duties'. Two extracts from participant two's interview illustrate the anger which they felt towards these various sources:

*I look into stuff, I try to find stuff out, I try to see is it just a set of situations that is just unique to me or is there a common theme to this and I ain't coming away with this as a common theme. I would like to know why are we being treated as second class military veterans to those that have actually been affected by conflict?* (Participant 2)

*I know from bitter experience of how the systems fall over and fail. I've seen it, it's happened to me numerous times in different establishments and it fails and it fails massively. I believe that we should have a system that gives continuity in care.* (Participant 2)

This participant described themselves as 'abandoned' and 'unwanted' by the military in the aftermath of their injury. This participants story suggests a lack of recognition, both for their service career and for the injuries they sustained as a result of service. The participant complained of being denied access to support through various charitable organisations who

reserved their resources for combat injured veterans, or veterans of particular conflicts. They also felt “discarded” as a result of media and public attention focusing on ‘combat heroes’ whilst those – like this participants – who lost limbs as a result of service but not during combat were forgotten about.

Other participants in this study deliberately distanced themselves from stories of victimhood, for example by rejecting others’ sympathy as a response to their amputations. This is perhaps because of the social stigma which can often be attached to people perceived as ‘victims’. Indeed, prior research (e.g., McGarry & Walklate<sup>62</sup>) suggests that veterans are generally uncomfortable being seen as ‘victims’ because victimhood is often associated with images of weakness and vulnerability which sit uneasily with the images of toughness and masculinity inherent to military identity.

Despite victimhood being stigmatised, however, it also enables people to express deeply held grievances. For one participant, adopting a story of victimhood may provide the advantage of legitimizing their anger and strengthening their case for extra support and recognition (see also McCartney<sup>63</sup>). Telling a story of victimhood could therefore act as a double-edged sword for older limbless veterans. On the one hand, this story legitimizes anger yet on the other hand, it traps the veteran in a ‘stigmatised’ identity.

### *Factors inhibiting independence (#3)*

*Adoption of a ‘victimhood’ narrative which traps the veteran in a stigmatised identity.*

One core aspect of the ‘victimhood’ narrative is the various forms of suffering endured by the participant. In participant two’s story, this suffering is manifested in physical, psychological, social, and occupational forms. Problems of pain and immobility also place particular limits on their independence. Importantly, each of these sufferings is causally attributed to the actions or inactions of others, which compounds the anger felt by the participant. In the participant’s own words, this situation is associated with a poor and demoralising quality of life:

*At the moment, how would you describe your quality of life?* (Interviewer)

*Poor to mediocre. Being left with in the situation that I am now at with not having a job is extremely demoralising. Being left with a leg that doesn’t work properly and does not give me the quality of life that I was told it would give me is*

<sup>62</sup> McGarry, R., & Walklate, S. (2011). The soldier as victim: Peering through the looking glass. *British Journal of Criminology*, 51(6), 900–917.

<sup>63</sup> McCartney, H. (2011). Hero, victim or Villain? The public image of the British soldier and its implications for defense policy. *Defense & Security Analysis*, 27(1), 43-54.

*extremely demoralising. I have my girlfriend, we have our two dogs and if it hadn't been for my girlfriend and my two dogs I don't think I would be alive now. Because to me there is nothing worth living for personally from my own point of view. As I say no job, no quality of life, no health, being abandoned, it's extremely grim.* (Participant 2)

## Narrative Type 4: Life-as-Normal

Similar to 'minimisation', 'life-as-normal' narratives place a strong emphasis on being 'normal'<sup>64</sup>. This narrative differs from minimisation, however, to the extent that ongoing grief and anguish related to limb-loss remain 'bottled up' inside the veteran. Limb-loss and its after-effects are not necessarily denied in the 'life-as-normal' narrative, but they remain somewhat hidden.

One participant's story seemed to conform to the 'life-as-normal' narrative, whilst another described this as a 'past' story having later 'moved on' and begun telling a career-focused 'minimisation' story. For both of these participants, the initial grieving process following traumatic limb-loss seemed superficial at best:

*I grieved during that very short time of taking the bandages off [in hospital], see what I've got damaged and then moved on. It was a closing thing down, but the military training, military all the Northern Ireland stuff that I'd seen and done made everything easier. If I was a civilian I don't know if I would have coped. Being military, it was let's just move on and carry on.* (Participant 5, emphasis added)

Later in their interview, however, participant 5 revealed that they were still – over two decades post-amputation – suppressing anger and sadness about their injuries, the circumstances in which these injuries were caused, and the ongoing impact of multiple limb-loss on their life. These tensions would be released, "*like a blowhole*", only very infrequently:

*It's part and parcel of just being a victim of terrorism; me being you know, a sad story, most of the time, 99% of the time you know it doesn't come across, it doesn't worry at all. It's nearly the norm. I feel normal in a way.* (Participant 5)

One of the costs associated with telling a story of 'life-as-normal' therefore seemed to be the psychological burden of keeping one's struggles 'bottled up'. Further complications of a 'life-

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<sup>64</sup> Frank, A. W. (2013). *The wounded storyteller: Body, illness, and ethics*. University of Chicago Press.

as-normal' story are revealed in participant 5's comments about an unmet desire to pursue new romantic relationships:

*I don't want to feel desperate and I don't want to go on an internet site and the first thing I've got to put is that I'm in a wheelchair. But I don't want to be false so— it's like you know people say 'Go on the internet, you can find a girlfriend on the internet'. So you put a picture of your face and then you rely on somebody saying 'Oh [they] look cute!' But actually if I put a picture of my body in there, me sat on a chair without legs or in my wheelchair, then I just don't want to do that. I don't want to declare myself as a technically a severely disabled person. Because in your head you don't want to be that person, in your head you want to be normal.* (Participant 5)

Striving to appear – and to be – 'normal' in the aftermath of traumatic injuries can be an important way for amputees to cope and to move on in life<sup>65</sup>. Yet as these comments reveal, this can also mask a great deal of personal anguish that does not abate over time.

'Life-as-normal' can also be a story told for others' benefit, as the following comments demonstrate:

*They [family] were devastated, but I think what helped them was that I just threw myself into physical activities and doing things and keeping and getting fit. And I was very mobile very quick again, I was walking around, running again and things like that. So outwardly physically I was ok. I came to a lot of my troubles, my sadness about the whole thing, I kept it very internal for a long time. And because I didn't want to show it to them, I didn't, because I could see they were devastated for me anyway, they didn't need any more grief. So that was my way of protecting them. So that's how it was really for five years or so really and then I had a bit of a crash for that year. And then I got back on my feet again and carried on.* (Participant 29)

#### Factors inhibiting independence (#4)

*Narrating one's life "as normal" whilst holding back trauma and suffering internally.*

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<sup>65</sup> Jefferies, P., Gallagher, P., & Philbin, M. (2017). Being "just normal": a grounded theory of prosthesis use. *Disability & Rehabilitation*, 40(15), 1754-1763.

Attempting to live a 'life as normal' can be a way of protecting family members from the impact of traumatic limb-loss<sup>66</sup>. However, as described above, this comes at the cost of shouldering the burden of injury alone and not being honest (with oneself and others) about the true costs of traumatic limb-loss. For participant 29, telling a 'life-as-normal' story post-injury eventually led to a “*crash*”, brought about by the realisation that “*I was in a bit of a turmoil because I was so lost with what I was going to do for the rest of my life.*” This participant was later able to ‘confront’ and ‘work through’ the personal consequences of amputation – particularly the loss of their military career – and find productive new ways to live as a civilian. This eventually resulted in this participant telling a story about ‘being normal’ much more akin to ‘minimisation’ than maintaining the pretence of ‘life-as-normal’. This is best summed up in the participant’s own words: “*I’m an amputee; I don’t go around wearing the label, I just get on with it.*”

## Summary

Studying participants’ narrative biographies helps to place their struggles to resist decline and to maintain independence into context. It shows that the way in which participants respond to limb-loss has a lot to do with their experience of military life and allows us to identify factors which promote or inhibit independence in old age. The analysis reveals that maintaining independence in old age is a combination of physical, psychological, social, and *narrative* functions. Accordingly, the focus of this chapter is on the multiple ways in which the *type of story* a veteran tells about coping with limb-loss and its many after-effects influences their experiences in both positive and potentially negative ways.

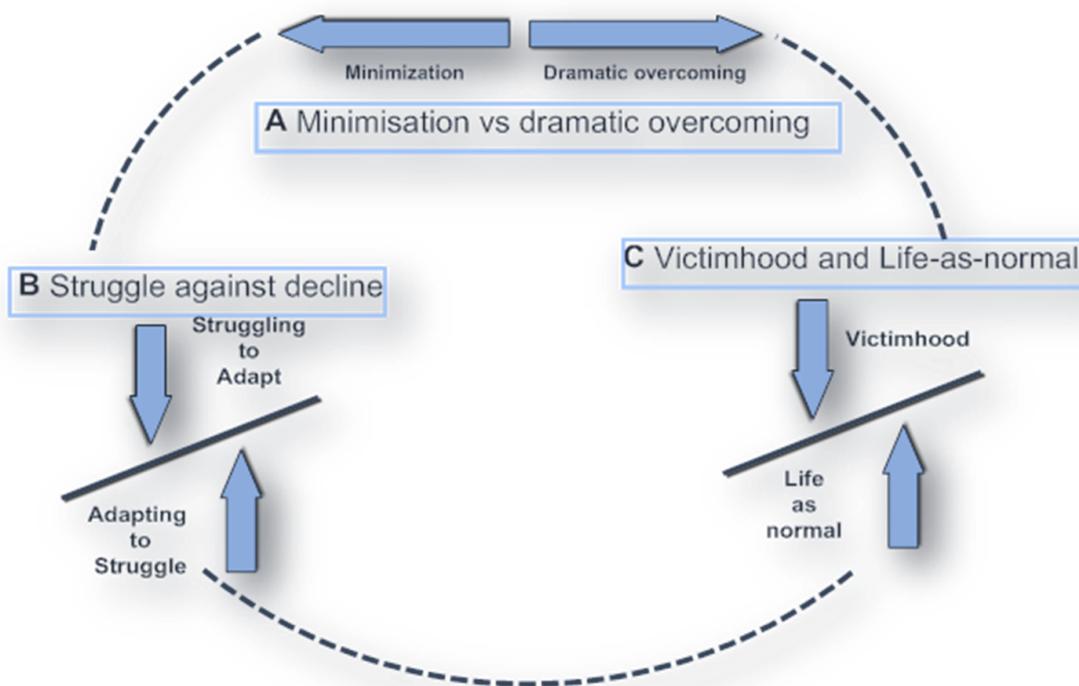
**Table 4.** Summary of factors promoting and inhibiting independence.

Factors promoting independence	Factors inhibiting independence
A resilient ‘get-on-with-it’ attitude grounded in a strong military identity	Rigidly adhering to ‘get-on-with-it’ attitude in spite of mounting physical, psychological, and social difficulties
Support in overcoming the effects of amputation-related impairment	Adoption of a ‘victimhood’ narrative which traps the veteran in a stigmatised identity
Lower level amputations with fewer associated ‘impairment effects’	Narrating one’s life ‘as normal’ whilst holding back trauma and distress internally
Maintaining a productive and fulfilling post-injury career	The pervasiveness of cultural narratives of ‘dramatic overcoming’, to which the majority of those affected by limb-loss cannot rise.
Well-fitting and functioning prosthetic limbs	
The availability of cultural narratives which allow for mundane ‘hero narratives’	

<sup>66</sup> See forthcoming report from the Veterans and Families Institute on the impact of traumatic limb-loss on Blesma family members

The following conceptual model illustrates how each of the narrative types identified in this research are inter-related (each aspect of the conceptual model is discussed in further detail below):

**Figure 5.** Conceptual model of limbless veterans' ageing narratives.



**A Minimisation vs Dramatic Overcoming:** These are portrayed as opposing narrative types. Whilst the 'dramatic overcoming' narrative was not in evidence in the data collected here, this narrative is strongly present in the social milieu through events such as the Invictus Games. Whereas 'minimisation' narratives seek to avoid a focus on limb-loss and to downplay its relevance and impact upon the participant's life, 'dramatic overcoming' narratives make limb-loss the focal point of the narrative – as the event which is heroically overcome, 'beaten' and battled back from via achievement and success.

**B The Struggle Against Decline:** The tone of the 'struggle against decline' narrative shifts according to the participant's satisfaction with his or her ability to cope with pain and to overcome mobility restrictions. Quality of life appeared markedly better among those 'adapting to struggle'. In contrast, those 'struggling to adapt' appeared closer to the 'narrative of decline' which traditionally portrays the ageing process<sup>67</sup>. Importantly, 'adapting to struggle' may shift

<sup>67</sup> Gullette, M. (2015). Aged by culture. In *Routledge handbook of cultural gerontology* (pp. 43-50). Routledge.

towards 'struggling to adapt' according to bodily deterioration, changes in health and mobility status, and the emergence of social isolation.

**C** *Victimhood and Life-As-Normal*: The dynamic relationship between 'victimhood' narratives and 'life-as-normal' narratives illustrate that 'life-as-normal' is one way of avoiding an oppressive and stigmatising 'victimhood' narrative. Elements of victimhood and suffering may remain in the 'life-as-normal' narrative, but these are covered up with the image of normality, which is sustained (and, perhaps, genuinely *felt*) as much as possible – for as long as possible.

Overall, this study of narrative biographies shows that positive stories of ageing with limb-loss are possible – likely, even. However, significant problems can also be experienced when veterans encounter increasing limitations on their mobility or capabilities, with decline and 'victimhood' unwelcome possibilities if difficulties are not addressed and overcome with appropriate and timely support.



## Results: Framework Analysis



In line with the framework analysis process, interview transcripts from four participants were analysed (see [Table 5a](#)). This generated an in-depth thematic framework which was then applied across the dataset using the auto-coding function of NVivo. This initial thematic framework was highly grounded in the specific details of participant accounts and provided a comprehensive index of themes, which then provided a foundation for further stages of analysis.

The next stage of analysis focused on interpreting and explaining the meaning and broader significance of sub-themes. Practically, this stage involved a reorganisation of sub-themes around the overarching themes developed, with decisions around the consolidation, amalgamation and reduction of themes driven by the extent to which these were supported across participant accounts. The result of this stage of the analysis is presented below in [Table 5b](#).

**Table 5a. Initial thematic framework.**

1.0 Physical	3.0 Social	4.0 Support
1.1 Ageing with limb-loss, co-morbidity	3.1 Access to services	4.1 Support from Blesma
1.2 Managing medication and pain	3.2 Awareness of support entitlements	4.2 Support from other military charities
1.3 Phantom pain	3.3 Care arrangements, responsibilities	4.3 Civilian vs. military rehabilitation/care
1.4 Physical fitness, mobility, daily activity	3.4 Education, training needs	4.4 Continuity of care
1.5 Prosthetics	3.5 Employment, career	4.5 Counselling, therapy
1.6 Rehabilitation	3.6 Family support and relationships	4.6 GP responses
1.7 Secondary complications	3.7 Financial circumstances	4.7 Job centre, welfare support
1.8 Socket pain	3.8 Friendship networks, social life	4.8 Legal support, processes
	3.9 Housing needs	4.9 Need to challenge healthcare staff
	3.10 Independence	4.10 Views of NHS
	3.11 Isolation	4.11 Peer support
	3.12 Press attention, media	4.12 Recognising non-conflict disability
	3.13 Quality of life	4.13 Recognising veteran-specific needs
	3.14 Social care	4.14 Self-funded or private care
	3.15 Spouse, relationships	4.15 Specialist care for limb-loss
	3.16 Transition into civilian life	4.16 Support from the military
		4.17 Veteran identity
2.0 Psychological		
2.1 Carrying on		
2.2 'Disabled' identity, stigma		
2.3 Mental health		
2.4 Motivation, self-belief, self-worth		

**Table 5b. Focussed thematic framework.**

1.0 Physical needs	3.0 Disparity of care	4.0 Stoicism		
<ul style="list-style-type: none"> <li>1.1 Ageing with limb-loss, co-morbidities</li> <li>1.2 Managing medication and pain</li> <li>1.3 Phantom pain</li> <li>1.4 Physical fitness, mobility, daily activity</li> <li>1.5 Prosthetics</li> <li>1.6 Secondary complications</li> <li>1.7 Socket pain</li> </ul>	<ul style="list-style-type: none"> <li>3.1 Access to services</li> <li>3.2 Awareness of support/entitlement</li> <li>3.3 Continuity of care/falling through the cracks</li> <li>3.4 Counselling/Therapy</li> <li>3.5 GP responses</li> <li>3.6 Lack of support (also 4.1; 4.2; 4.3; 4.5; 4.10)</li> <li>3.7 Need to challenge healthcare staff</li> <li>3.8 Views of NHS/lack of specialist care (also 4.15)</li> <li>3.9 Recognising non-conflict disability</li> <li>3.10 Recognising veteran-specific needs</li> <li>3.11 Military vs. civilian rehabilitation</li> <li>3.12 Self-funded vs. private care</li> <li>3.13 Specialist care for limb-loss</li> <li>3.14 Transitioning to civilian life</li> </ul>	<ul style="list-style-type: none"> <li>4.1 'Disabled' identity and stigma</li> <li>4.2 Limb-bereavement (also 2.2; 4.5)</li> <li>4.3 Veteran identity</li> </ul>		
<th>2.0 Social isolation</th> <td></td> <td> <th>5.0 Social care and welfare</th> </td>	2.0 Social isolation		<th>5.0 Social care and welfare</th>	5.0 Social care and welfare
<ul style="list-style-type: none"> <li>2.1 Family support and relationships</li> <li>2.2 Friendships and social networks</li> <li>2.3 Isolation</li> <li>2.4 Peer support</li> <li>2.5 Support from Blesma</li> <li>2.6 Support from other military charities</li> </ul>		<ul style="list-style-type: none"> <li>5.1 Care arrangements and responsibilities</li> <li>5.2 Education and training needs</li> <li>5.3 Employment/career</li> <li>5.4 Financial circumstances</li> <li>5.5 Housing needs</li> <li>5.6 Jobcentre and welfare support</li> <li>5.7 Legal support and processes</li> <li>5.8 Social care</li> <li>5.9 Support from the military</li> </ul>		

The final stage of analysis involved a process of further conceptualisation of themes. This was undertaken with a particular focus on the aims and objectives of the study, whilst considering the implications of the findings for policy provision. [Table 5c](#) shows the final thematic framework and associated subordinate themes. The numbers in brackets relate to the subordinate themes incorporated from the above table. Some of these were incorporated (and split) into more than one subordinate theme in the final table (therefore some numbers are shown twice). All subordinate themes in [Table 5b](#) were included in [Table 5c](#) (i.e. none were discarded between the second and third iterations of the thematic framework). This approach to analysis enabled us to work in an incremental process from themes grounded in the data, through to the more abstract interpretations of the wider significance and meaning of these themes.

**Table 5c. Final Thematic framework**

1. Barriers to transition	2. Disparity of care	
Employment (3.14, 5.2, 5.3, 5.6) Legal support, processes & disparity of compensation (5.4, 5.7, 5.9) Stigma (4.1) Loss of military identity (3.9, 4.3, 5.3)	Continuity of care (3.1; 3.2; 3.3; 3.4; 3.5; 3.12; 4.2) Military vs civilian care (3.6, 3.7, 3.8, 3.9, 3.10, 3.11) Prosthetics (1.5; 1.6; 3.13)	
<th style="background-color: #4F81BD; color: white;">3. The enduring challenge of limb-loss</th>		3. The enduring challenge of limb-loss
Dealing with pain (1.2; 1.3; 1.7) Mobility (1.1; 1.4) Physical isolation (2.3) Social networks (2.1; 2.2; 2.3; 2.5; 2.6) Stoicism (4.1; 4.2; 4.3)		

As shown in [Table 5c](#), this stage of analysis culminated in the generation of three superordinate themes which are discussed below in turn. These include: 1) the barriers participants experienced on transitioning out of military service and into civilian society; 2) the disparities in care experienced; and 3) the enduring challenges experienced by participants as they age with limb-loss.

## Barriers to transition

The data demonstrates that the loss of a limb represents a major disruption in participants' intended life-course, the extent to which social roles and relationships can be upheld, to self-identity, and to the ways one is viewed and treated by others. This theme reports on the far-reaching impact of limb-loss that participants reported.

### *Stigma*

The stigma attached to having lost a limb, or being 'disabled' had a significant effect on how the participants adjusted to their injury and transitioned back to civilian life. Participants described their difficulty in coming to terms with changes to their identity following limb-loss, suggesting that they struggled to accept being labelled as 'disabled', and stressed their efforts to project an image of 'normality' in everyday life:

*I don't want to declare myself as a technically (umm) a severely disabled person. Because in your head you don't want to be that person, in your head you want to be normal.* (Participant 5)

Participants suggested that they felt a sense of shame or embarrassment over their limb-loss when in public and many disguised their limb-loss by avoiding wearing shorts, opting for cosmetic prostheses, and practicing walking with a regular gait. A generational shift in attitudes to displaying prostheses was apparent however, with the participants in this study observing that the new generation of veterans with limb-loss appear more comfortable with displaying their prosthetic limbs than older veterans:

*I wanted to be (umm) you know accepted as normal. Actually I'm not really very (umm) much in favour of the way that the modern amputees look on their prosthesis because you know they don't care about the bits of leg sticking out.*  
(Participant 4)

The internalised stigma felt by participants was often reinforced by the attitudes and treatment of others encountered in daily life. Participants described a difficulty conversing with people without a disability, and expressed their frustration at being subjected to voyeuristic questions. Some reported patronising or derogatory remarks by both members of the public and professionals, which reinforced the perceived stigma:

*I was in a wheelchair for a while and there was a tendency to be talked down to. (umm) You know '[Do they] take sugar?' that sort of thing.* (Participant 6)

*I still didn't find it easy to talk to... normal... non-disabled people...I mean I thought well there's no empathy with you, I mean you're just... you're just asking me all these questions because you're nosey!...And you're prying.*  
(Participant 14)

The participants observed that there has been a marked change in attitudes towards veteran limb-loss over recent years and attributed this to the work of charitable organisations who have increased public awareness, as well as events such as the Invictus Games and the Paralympics.

*So yeah I think purely because of media exposure, people's attitudes have changed... there's more of an acceptance... I think it's purely based on the number of people being injured, people probably met many more injured ex... you know servicemen and women, (umm) there's... sporting... sporting events on (umm) Paralympics on TV, you know the London Paralympics. A lot of my friends were absolutely glued to it. (umm) There is a general acceptance of*

*disability and level of education to be brought is such that there's much greater acceptance.* (Participant 6)

### *Loss of Military Identity*

Participants described a sense of grief over the loss of their military career, networks and identity, which compounded feelings of social dislocation. Motivations for joining the military were often connected with participants' assessment of their educational ability and the life choices open to them. For those who did not see formal study as a career option, the military offered opportunities for learning and development, which participants had sometimes prepared for from an early age and anticipated to be life-long. While some participants were able to continue to serve in the military post limb-loss, most were not. Participants who described their early ambitions to join the military and envisioned serving for a full career, reported that they had devoted little consideration to what they might do if or when they had to leave service:

*I hadn't really give a lot of thought to well what will I do if I leave the army? What will I do if I got injured? You didn't think about that necessarily. (umm) Maybe one or two would, but I hadn't. I was so career-driven you know and faced on the army. I hadn't really thought about what if. So that was a big shock.*  
(Participant 29)

Participants in this position often reported that they found themselves particularly unprepared for transitioning back into civilian life, and described how, as a result, their shock on leaving the military was significant:

*I saw my career destroyed, I saw my... quality of life destroyed. I saw my physical fitness destroyed.* (Participant 2)  
*And it was the realisation it's the end! It's now a new life. Army over, military over, you're now a civvy. (umm) Scary!* (Participant 29)

However, even where it was possible to continue service, participants expressed their frustration that they would be unable to advance their careers as planned. Greater experience of civilian life prior to joining the military appeared to facilitate better adjustment during this transitional period. The following participant drew comparisons between their experience, and those who joined the military at a young age:

*I mean I knew a bit of it before I went in so I was basically more prepared to come out on Civvy Street than someone who got in when they were young, did*

*their service and then come out... oh!! I can't imagine it. You know it must have been really hard for some of them. That's why... a lot of them end up on the streets because they can't cope. It's all done for you.* (Participant 12)

Indeed, many participants described having satisfied ambitions by developing a career outside of the military, or in the military charitable sector. Nevertheless, findings point to the increased vulnerabilities of those who joined the military at a young age and who anticipate a life-long military career when transitioning back to civilian life.

### *Employment*

Finding alternative employment was crucial for participants in terms of re-forging a sense of purpose and maintaining independence when transitioning back to civilian life. The shock felt upon leaving the military, was exacerbated when participants had limited opportunities open to them for retraining and alternative employment. Education, skills and training developed through the military were not necessarily transferable to the civilian sector, with limitations imposed due to limb-loss further restricting options for a change in career:

*They'd advise you 'Well really looking at what you did in the army, I mean really your skillsets [name] are you know well maybe you can do bricklaying? Oh no you're an amputee now, you might struggle on sites and well really your bricklaying days are over! Can't do that, yeah. You were a diver in the army, mmm you can't do diving anymore, no one's going to insure you. You can't do that. Don't jump out of planes as a civvy, you can't do that. Mmm! Well we need to tap into your leadership skills and your (umm) blah, blah, blah'.* (Participant 29)

Limitations in personal financial resources, and a lack of grants available to support education, constrained opportunities for participants to undergo training or to attend university. Pressure to earn an income acted as a further barrier to engagement in education for some, although again, support in this area was described as having improved for current generations of limbless veterans:

*I think it's a good thing for the (umm) the latest... the latest veterans if you like or the injured (umm) the WIS community - wounded injured sick community. For them that they've benefited massively. (umm) I think if I had that sort of support (umm) in my early injured years than I would possibly be in a different place now in a sense of employment wise, I don't know. I probably would have gone to university. I could have myself, I could have gone, I could have applied, an access course and gone. But I just felt I had... I just felt I needed to get a job, I needed money. (umm) How was I going to sustain myself going to*

*university? You know who was going to pay the fees? I couldn't afford to pay it.* (Participant 29)

Many participants reported difficulties in obtaining employment after limb-loss. This was not only attributed to the impact of limb-loss upon physical capabilities and the limited availability of jobs, but also a perception that they were deemed to be unattractive to potential employers as a result of their disability. Where possible, many participants therefore preferred not to disclose their limb-loss to potential and actual employers in order to counter the risk that they be may discriminated against:

*I didn't want people to know I had one leg basically. You know they might have seen that limp and wondered what it was. (umm) So when I applied for a job I would never tell them I had a disability...I mean even now I will tell... apply for jobs I wouldn't tell people I have a disability, they need to find it out if they want to know.* (Participant 6)

The majority of participants articulated a preference to continue working after injury and the difficulty finding employment following limb-loss was described as highly detrimental to participants' self-worth and self-esteem:

*Being left with in the situation that I am now at with not having a job is extremely demoralising.* (Participant 2)

*So when I had a job I think that's... as soon as I got a job, you know my self-esteem was raised rather than just being some dribbly underdog.* (Participant 6)

The harmful effects of unemployment were connected with a reluctance to rely upon welfare support, which provided an additional layer of stigma for participants. This sometimes led participants to a decision not to apply for their benefit entitlements:

*I don't want to be seen as a charity. I want to know that I can go out there, earn the money in my own right and be able to pay for people to do this and not have to get it... get moneys from third parties to help me... That's why I won't apply for all the disability benefits because I don't want them. I don't want to be... I don't want the label to... for the country to label me as a scrounger and as a dole-dosser and that. I'm not a dole-dosser, I'm not a scrounger. I want a job.* (Participant 2)

*I mean they frighten the life out of you headlines on papers!.. You know the disabled are (umm) taking all this money and (umm) you know (umm) that we*

*haven't the rights to all of this, that and the other and I... I think I got a bit frightened.* (Participant 17)

While finding employment was extremely important to the majority of participants, the more pressing issue was the perceived lack of support around re-training and employment advice and assistance. Many participants suggested that they would have appreciated receiving greater support in this area. Participants were specifically critical of the military for a lack of advice and assistance around gaining post-service employment or re-training:

*I really cannot remember any specific employment support or any support from the military at all... I think it was pretty much non-existent, you're out of the military now.* (Participant 6)

However, some participants suggested that support from the military with regards employment and resettlement has since improved.

#### *Legal Support, Processes and Disparity of Compensation*

The data suggests that access to compensation and pension entitlements were a significant factor in the maintenance of independence among participants. Receipt of these financial entitlements was hugely important in signifying recognition of military contribution, providing a form of recompense in light of reduced earning power, and reducing reliance upon charitable support. There was variation in the level of compensation received by participants. Some described experiences of financial difficulty due to the amount of compensation that had been allocated to them, while others suggested that this had provided them with financial security:

*Yeah we haven't got a bad quality of life compared with a lot of older people. (umm) I've got a part-army pension, [name]'s got her private little pension. It stops us getting a lot of... help, money-wise...* (Participant 12)

Compensation was dependent upon factors such as whether limb-loss was sustained during or after service, or whether it was 'attributable'<sup>68</sup> or 'non-attributable'<sup>69</sup>. The participants highlighted a perceived inequality regarding the entitlements of those who lost a limb during service, and those injured during peacetime or outside of the military:

*So those that... that would be in my situation, but through conflict they get the best of the best. Those that have served Queen and Country by being injured through peacetime, they get nothing. Big discrepancy.* (Participant 2)

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<sup>68</sup> Attributable injuries are those sustained on operational duty, e.g. Korea, Northern Ireland, Falklands etc.

<sup>69</sup> Non-attributable injuries are those sustained whilst still serving, but usually from sporting accidents, road traffic collisions etc.

*I only got (umm) a lump sum compensation which was three years pay. That was it, no pension, nothing else. I don't get a disability pension in this country because I wasn't a member of Her Majesty's forces at the time.* (Participant 24)

One participant was particularly dissatisfied with their treatment, feeling that they had been unjustly dismissed from service rather than medically discharged so that the military could avoid the provision of compensation and a service pension. In addition, participant 5 felt that the veteran identity was being devalued by the volume of people applying for compensation, questioning their legitimacy to do so:

*I don't want to be part of it because in my personal view some people are jumping on the bandwagon and being an injured veteran is nearly becoming the norm now. It's a case of 'Oh I remember when we had trouble in [Northern Ireland] or (umm) you know I wonder if we could get some money out of this or whatever'. I've had my time and I'm very grateful to compensation schemes and war pension.* (Participant 5)

The process of applying for compensation for participants of this study was considered to be lengthy, impersonal and remote. Participants felt uninvolved in the compensation and war pensioning process and they felt unable to question the outcome:

*But then a blooming... an accountant person sits there on a machine and reduces your claim by 30%. And we have to accept it. We have to accept what the barristers and the lawyers and people say.* (Participant 5)

Some participants pointed to the inadequate legal representation received (through the military or otherwise), and difficulties affording legal advice. Indeed, many participants reported a lack of awareness of their financial rights, and received limited advice in this area. Given the difficulties navigating the compensation processes, and the potential for disempowerment when navigating these systems, participants relayed the importance of advocacy provided by veteran charities in enabling them to access their entitlements:

*And they [military] provided no advice on war pensions.* (Participant 6)

*Even through the process of applying for war disability pension, (umm) it has been a nightmare. Without the help and the support of the Veterans Agency, I doubt if I would have got anything now.* (Participant 2)

In summary, this theme identified a cluster of factors which may represent a barrier for limbless veterans in terms of their successful transition back into civilian life. The capacity to secure fulfilling post-injury employment was fundamental to participants' perception of successful

transition. However, analysis revealed a number of factors which may inhibit limbless veterans' capacity to secure employment. Participants who joined the military at a young age typically possessed limited pre-military education or civilian work experience. Not only did these participants report significant psychological difficulties in adjusting to the loss of their military career, but they also experienced challenges in securing post-injury employment as their skills were often deemed to be non-transferable to civilian roles of employment. The inability to engage in re-training or further education following limb-loss due to financial and practical constraints inhibited participants' capacity to improve the employment opportunities available to them.

Participants also highlighted a barrier to transition posed by perceived social stigma towards disabled individuals and the unwanted attention of others in public. This was associated with feelings of shame and embarrassment and a reluctance to disclose their disability. Finally, participants described financial barriers to successful transition. Compensation is dependent upon a range of factors related to the severity and context of the injury. As a result, some participants received compensation which provided them with financial security, while others experienced financial hardship. Participants felt that inadequate compensation hindered their capacity to transition successfully into civilian life. Participants felt alienated from the decision making process around their compensation entitlements and also felt unable to challenge the outcome of this decision making process due to the costs of legal representation.

## Disparity of care

Throughout the interviews, participants identified a number of dimensions of inequality with regards to the care they received following limb-loss. Some inequalities experienced were connected to being a veteran, namely the variation between military and NHS treatment, while others stemmed from more generic geographical or service related factors such as a lack of continuity in care, and the models of prosthetics available.

### *Continuity of Care*

Individuals reported a lack of continuity in their care, which had a detrimental impact upon their ability to recover from, and manage their limb-loss. Participants described variation in the quality of care between different centres, sometimes describing a '*postcode lottery*' with respect to access to care. As a result, some participants resorted to paying for private care, while others reported the need to travel long distances in order to access required services:

*The physio it was a... a fifty mile round trip, three times a week.* (Participant 8)

*There aren't any facilities that in [city] at all, (umm) so I have to go to [another city] every time.* (Participant 26)

Participants also discussed the impact of poor continuity of care between named healthcare professionals, with this increasing the time taken to receive prosthetics and resulting in conflicting advice being received:

*A mishmash of specialists intervening and giving you conflicting information.*  
(Participant 2)

The failure of health services to take responsibility for the provision of care, and a lack of co-ordination of treatment, was another aspect to a perceived poor experience of care, resulting in a feeling of not knowing where to turn to for support:

*The GP can do nothing. District nurse says it's not their business and (umm) OTs no, physios no. You need... what you need is somebody... who is looking after everything that you have that overarches all of these things and you go to them and they said 'Leave it with me and I will phone the appropriate body.*  
(Participant 25)

While the majority of the data highlighted participants' difficulties in the area of healthcare, there were also some issues identified around social support:

*So they... when I first came out of hospital they put me on full care, higher rate. Now two years later for some unexplained reason, they've put me back on the lower care because I was managing. 'Oh you're managing alright, you can...*  
(Participant 8)

### *Military vs Civilian Care*

Much of the discussion around care centred on the differences between military care, and care provided by the NHS, including the transition between the two healthcare services. Connected with the sense of loss over a military identity articulated above, participants typically favoured care provided by the military:

*I mean I enjoyed it, I enjoyed it at Headley Court.* (Participant 14)

Some preferred military-based care as they felt that the care provided by the NHS was substandard. This was sometimes suggested to be the result of a lack of available care, an unsatisfactory environment or extensive waiting times. In addition, many participants drew attention to a lack of specialist treatments available within the NHS in terms of both mental health, and particularly around the ability to fit and manage prosthetics:

*You've to wait a lot longer [in NHS hospitals].* (Participant 15)

*For many years of NHS. [PTSD] wasn't recognised.* (Participant 1)

*The NHS there is a massive lack of qualified prosthetists who can actually deal with the robotic legs.* (Participant 2)

However, military-based care was not only preferable due to the perceived inadequacies of the NHS. Participants also described the importance of the military environment in itself. In the context of feeling bereft of one's military identity and surroundings, military-based rehabilitation offered participants the opportunity to receive care within familiar surroundings, alongside those with whom they possess shared experiences (military service). Participants commented that the rigorous structure and intense forms of exercise and rehabilitation which are central to military approaches to rehabilitation, are reminiscent of military training. Rehabilitation within military systems was also valued for fostering peer relationships and providing a competitive yet supportive environment:

*Headley Court was great for the military mind. You were called by your rank and you call other people by your rank, so it got you back into the swing of things.* (Participant 5)

*The peers in... in the rehab centre, they're just people just like being in the unit. So it's not a matter of support, it's... you know having fun, getting on, making friends.* (Participant 6)

Despite the general preference of military care, to that of the NHS, some participants reported that the military did not provide them with sufficient follow-up care for their needs, and discussed their disappointment with the lack of support they received post-injury. As a result, a number of participants had resorted to funding their own care privately:

*I've had to go and get (umm) EMDR therapy off my own back. I've had to go and get psychiatric help off my own back. I've had to get counselling off my own back. I've had to pay for some of this. There's nothing through the military, there's no help and support. (umm) So yeah I'm a damaged person that is trying to rebuild himself and it's painful. It's painful, its... it hurts and it's also... leaves an extremely bitter taste in my mouth.* (Participant 2)

*There was no support [from the military]! [laughter] I got home and it was... I was like that... and it wasn't until somebody visited me (umm) a through care life officer.* (Participant 27)

Indeed, one participant recalled a change in the level of support they received after leaving the military, with this once again highlighting the risk that veterans may be left without support during the significant transitional period of early adjustment to limb-loss:

*While you're still in the military it's available, once you leave the military [switch noise] no Headley Court. Nothing.* (Participant 5)

Given the perceived lack of support provided by the military post-service, participants highlighted the importance of support provided by Blesma and other charitable organisations:

*Blesma really were very instrumental in my recovery, totally. More so than the army. (umm) The army's recovery was about physically recovering at Headley Court so getting a prosthetic limb, getting up a bit mobile. (umm) That was fine, that's probably as good as it could have been.* (Participant 19)

### *Prosthetics*

The participants highlighted an inequality in care in relation to the quality of prosthetics and fittings which veterans are able to access. Participants reflected in particular, on disparities experienced in relation to the provision of limbs, the process of rehabilitation, and experiences of unsatisfactory care. It is imperative to consider differences in the nature of limb-loss between the sample, as some participants' limb-loss was attributable to their service (either during or after service), whereas others lost their limb due to post-service accidents or illness. This fundamental difference impacts upon policy and services provision, as those with attributable limb-loss are eligible for MOD care, whereas others will have always been under the care of the NHS. Those with limb-loss in service, and/or attributable to service, gave examples of the multiple limbs they had received since amputation. Rather than preferring technically advanced limbs, fit and comfort were of paramount importance. In particular, individuals described the importance of socket fit and suggested that ill-fitting sockets were a major issue among amputees:

*Forget the fancy knee joints and technology below it, but the fit is the main thing.* (Participant 6)

*Most amputees in there are having trouble with the sockets.* (Participant 33)

That said, individuals with limb-loss in service, and/or attributable to service were also conscious of the cost of the limb itself, and once under NHS care, acknowledged how the affordability of limbs affected their care:

*The NHS have said full stop they can't afford to do it.* (Participant 2)

*A couple of us we managed to get the.... or get the government that's right to pay for them to make us a couple of legs and see how they went. And they were the best legs I've ever had.* (Participant 28)

Some participants highlighted the different regulations of acquiring limbs for younger amputees, and the higher quality prosthetics available to those injured during compared to outside of service as a further illustration of disparity in care:

*I mean look at them now, they get £50,000 legs and aftercare and everything. But before it was just a case of get on with it, you're a wimp.* (Participant 27)

*So basically if they wanted seventy grand all singing, all dancing knee (umm) foot, they can get it. So theirs were quite smart where mine looked like it'd been knocked up in my garden shed, my first one.* (Participant 30)

Interestingly, participant 27's limb-loss was attributable to service and they made a direct comparison to younger service personnel receiving the same care. In contrast, participant 30's amputation was a result of a post-service accident and care was provided through the NHS.

Rehabilitation was pivotal in the care process post-amputation, with participants highlighting the need to learn *"a new way to walk"* with their prostheses. However, while imperative in enabling participants to get on with their lives, participants highlighted the interruption of rehabilitation over everyday life, which therefore hindered their return to normality:

*Amputation I thought would... would end the hospital visits and also hopefully I could get back to normal life really. (umm) I didn't know anybody that... had a false leg.* (Participant 15)

Due to this continued and *"life-long"* rehabilitation, one participant referred to the prosthetist as the *"most important person in your life, next to your family"*. However, not all individuals experienced this level of rehabilitation, with some individuals (both those with limb-loss attributable to service and those with non-attributable limb-loss) describing non-existent services, or long waiting processes post-amputation:

*It were a month or so before I could get my first prosthetic limb [through the NHS] because obviously you're all angry, your stumps all angry and sore and sorting yourself out.* (Participant 30)

*[The NHS have] given you the leg, we've told you how to walk, off you go and you just get on with your life.* (Participant 2)

*I had no rehabilitation [from the MOD].* (Participant 14)

This theme demonstrates several facets to inequality in the care experienced by participants. Disparities highlighted here mark important aspects of experience which help to explain variation in the subsequent trajectories of participants' personal stories as they adapt to and re-build their lives following limb-loss.

## The enduring challenge of limb-loss

This theme deals with the everyday and enduring challenges associated with ageing as a limbless veteran which were identified by participants, and the ways in which they sought to deal with them. This includes: a consideration of pain management; the process of grieving over the lost limb; issues around mobility, physical isolation; social networks; and a stoic attitude to dealing with limb-loss.

### *Stoicism*

Participant attitudes to living with limb-loss were, for the most part, characterised by stoic acceptance, the majority of whom self-ascribed to a philosophy of 'getting on with it' or 'carrying on' in relation to managing and adapting to their limb-loss:

*you've got to have the right attitude to these things I think. But personally I'm the sort of bloke who says I don't care, it don't matter or it don't matter, I'll get over it. That's my attitude. And whatever happens in your life if... you've got to adapt to something different, you either adapt or you go under as far as I'm concerned* (Participant 12)

*so it was just carry on as normal really wasn't it* (Participant 15)

*you've got to get on with it, it's not going to change* (Participant 19)

In addition to displaying an attitude for 'getting on with it', many participants described their staunch independence and expressed a reluctance to rely upon others or to ask for help or assistance. While this potentially created a barrier to accessing formal and informal sources of support, this was not always the case, and participant 5 described an increased willingness to accept help as they aged:

*As long as you're not too proud to not ask for assistance. And I think there is something in that... I am so independent, it is difficult to actually go to them and actually say (umm) ' I need help' And what is more vital? Practical help, financial help, welfare assistance, you've got to just (umm) accept...* (Participant 5)

*you're on the street and you're struggling a bit with a bag or something and somebody comes up to help you, I get... I used to get a bit prickly about them because I... my thing was independence. Even if I was in absolute agony and somebody... my stump bleeding and all sorts of things, I would pretend I'm fine. I don't need any help. Thank you very much! I'm more inclined to accept help now. I mean now I'm a bit... no I don't get prickly, but (umm).* (Participant 6)

This attitude of carrying on despite adversity was attributed to a military mind-set and approach to coping with loss:

*If I was a civilian I don't know if I would have coped. Being a military, it was let's just move on and carry on.* (Participant 5)

*Because the army don't give you time to grieve, you just carry on and get on with it...it's time to get drinking and pissed up and then just forgetting about it.* (Participant 27)

### *Dealing with Pain*

Participants described enduring significant amounts of both generalised stump pain and phantom limb pain throughout their everyday lives. A considerable amount of pain was attributed to ill-fitting limb sockets. Participants reported pain levels which were largely uncontrolled, and described pain impacting upon sleep, their mood, and their mobility (either directly or by preventing them from using their prosthetics):

*I've got constant pain twenty-four hours a day, all the time.* (Participant 8)

*Phantom pain is also a bore. About once a month it comes on in my right stump which jumps around and prevents me walking or sleeping.* (Participant 7)

*I'm trying to work out what's phantom pain and what's proper pain and all this. If you know there is a difference* (Participant 33)

Furthermore, many participants suggested that clinicians struggled to manage their pain levels effectively and therefore resorted to prescribing high doses of strong painkillers. Participants described their difficulty functioning while taking such medications and expressed a concern that they were becoming medication-dependent:

*And that was part of the negligence, overdosing morphine.* (Participant 8)

*I've been in pain I've been to the pain clinic and they've tried every blinking thing on me, to no avail.* (Participant 11)

*they give you a carrier bagful of medication, Tramadol, Oramorp... and I obviously did... I got addicted to morphine.* (Participant 23)

In addition, data illustrated that prescribing high quantities of medication could constitute a risk to the safety of veterans with comorbid mental health issues:

*I'd stacked all the morphine and all the other tablets I had and I sat there with a pint glass and I emptied a blister of tablets into my mouth.* (Participant 2)

### *Mobility*

As a result of pain or ill-fitting limbs, many participants described mobility issues which impacted upon their ability to undertake everyday activities and which impinged upon their quality of life, their self-esteem, and their ability to maintain independence:

*It's crucial. Mobility is absolutely crucial. It would mean that I have a better quality of life, I'd have independence.* (Participant 2)

While some participants were able to stay active and maintain their engagement in fitness and leisure pursuits, others described their struggle to undertake more basic activities of daily living. Data suggests that changes in physical capability sometimes required psychological, as well as physical adjustment, potentially resulting in frustration, or where appropriate support was received, the capability to retain the ability to fulfil usual activities and social roles:

*I was always (umm) a very practical person. I've done everything in houses, I've built extensions (umm) and (umm) maintained cars and all that sort of thing throughout really. And of course you can't do these things now, not well enough to be satisfied with it.* (Participant 26)

*I picked [name] up on my shoulders and I walked there and I didn't feel like [they] were going to come tumbling down from six foot you know in the air. (umm) And they were... you know I could have filled up, I were filling up walking down the road with my daughter on my shoulders like any other parent! You know? Another big thing!* (Participant 30)

The ability to continue driving after amputation was extremely important for participants with regards to maintaining their quality of life:

*Once I got a prosthetic limb I was able to drive my car you see. I had to then have an automatic.* (Participant 11)

*the first thing I thought about was 'How am I going to drive my car?' And I thought well I can get an automatic, get it altered.* (Participant 12)

The age at which limb-loss occurred also affected the regaining of mobility, with younger veterans described as more able to become accustomed to walking with prosthetics. Likewise, participants described the complications that limb-loss posed to the usual ageing process due to the stress that walking with prosthetics imposed on the body, and the coexistence of limb-loss with other long-term conditions. Risk of falling when walking with prosthetics was also a common issue experienced by participants, with this also noted as more difficult to endure with age, and as potentially inhibiting mobility. In this respect, trips outside of the home or to unknown places were noted as particularly difficult by participants:

*And the deterioration side of things because of the accumulation of injuries and then the compounding effect of each against the other, means that maintaining mobility, independence is much more difficult than it was.* (Participant 9)

*I think the younger... the guys, the twenties and the thirties and what not that you know have a lot of years to go and were fitter and what not and could resist... make the falls without breaking things and what not. (umm) They were able to master this thing.* (Participant 26)

*Because I... I can't actually stand up. Yes it's... I've got to be very careful not to put any weight on that leg otherwise I'll go straight over (umm) and maybe break it and my hip as well.* (Participant 17)

Some participants pointed to differences in their ability to continue everyday activities depending upon the nature of limb-loss; this was typically described as being more difficult for those affected by upper limb or double limb amputation:

*this incident has completely changed your physical (umm) presence really. It's loss of legs, two legs, is completely different* (Participant 5)

*Never stopped us doing much to be truthful. I mean I say if it'd have been above-knee, it would have been a bit more... a bit more of a handicap I imagine. Can't bear thinking about it.* (Participant 15)

*Yeah independence is important. (umm) To be able to do things, you know lift, carry, paint, drive, pick up the kids, (umm) you know mow the lawn, all those sort of things where maybe above-knee guy or worse would maybe struggle with that.* (Participant 29)

Given their difficulties in keeping up with everyday activities, participants valued the financial assistance provided by Blesma or other charitable organisations to cover home adaptations and support with gardening.

### *Physical Isolation*

Connected with mobility issues and difficulty in forming social relationships, many participants described a sense of physical and social isolation following limb-loss. Some described how a difficulty getting out of the house had resulted in them feeling like a “prisoner” or “trapped” within their own home:

*Because it's amazing how many people around the... around the country, not just around here, who are in the same position as me and they're in their house and they feel trapped. (Participant 27)*

*I can't relax. So I don't go out socially anymore... So... so you do feel isolated. (Participant 8)*

*loss of mobility and the closing in of the environment for someone does induce those feeling of despair, despondency, isolation, and worthlessness. (Participant 10)*

This physical isolation resulted in feelings of loneliness among some participants. One participant described a particular vulnerability to loneliness at certain transition points in life, for instance, the death of their partner and when their children left home. Another described how the loneliness worsened during specific times of the year:

*I think personally it's the (umm) leaving the nest syndrome has hit me quite hard. (Participant 5)*

*It doesn't mean I don't get lonely. I do and I sometimes feel it badly. Times like Christmas are appalling for me. (Participant 9)*

Others pointed to more general trends such as the dissolution of social connections within local communities, as well as the shrinking of social circles with age, as factors further contributing to the experience of isolation and loneliness:

*There is very little interconnection between everybody in this street I would say. And (umm) so that ain't going to get any better. (Participant 26)*

*So you know these social acquaintances are getting smaller and smaller inevitably. (Participant 14)*

One participant suggested that there is a paucity of acknowledgement and support around issues of physical or social isolation and loneliness in comparison to that which is devoted to physical needs. The social activities provided by Blesma were therefore highly valued for combating isolation. However, geographical distance from where activities were commonly offered, as well as caring responsibilities for others, sometimes prevented participation.

Offering a greater number of social events within Blesma was therefore suggested as a potentially beneficial recommendation:

*We all talk about the... the physical problems with phantom pains and (umm) socket fittings as a physical painful side to limb-loss. But mentally, its... you know a terrible thing to be lonely and (umm) I think social events needs to be increased and the importance of social events in Blesma.* (Participant 5)

*I do feel a bit isolated up here because 95% of all the events that Blesma organise are [south of the border] and mainly [south of Birmingham].* (Participant 14)

### *Social Networks*

Some participants described how limb-loss had altered their ability to form and maintain relationships due to concerns around self-image, an inability to engage in similar activities to others, or other people's assumptions that limbless veterans and their families would become reliant upon them:

*It's very hard to make friends because you're not on the same level socially as people. You can't do the same things as couples.* (Participant 25)

As such, opportunities provided by third sector organisations were extremely important in helping participants to stay socially connected, facilitating connections among 'likeminded' people who shared the 'military mentality' and 'squaddies humour' and providing a sense of comradery:

*Like-minded people with limbs missing or the loss of use of limb. It's great banter, it's military, it's (umm) social and (umm) I you know I don't think I could do without it.* (Participant 5)

*you've got this comradery where you know where... it doesn't matter what unit you're in, whether your army, navy or air force, you just get together, you've been through similar things, you just get there and chat.* (Participant 27)

In addition, activities and events provided by third sector charities worked to inspire confidence and hope by instilling a sense of accomplishment and by demonstrating that it is possible to adapt to limb-loss and continue to live a fulfilling life. Participants described a reduced ability to engage with physical challenges offered as they aged, instead opting to engage in less intense activities such as photography.

*There are a lot of people out there who are much older and you tend to find that a lot of photographers are older (umm) who spend a lot of time at home on*

*their own. I think the photography thing has really opened up a world for people. Socially and culturally (umm) and has helped people develop including myself in fact because I love photography.* (Participant 6)

*Someone will look at you doing something and they'll say 'You can't do that' 'Watch me!' As soon as they say you can't do it, it's a challenge!* (Participant 1)

*It gives reassurance that they're at... at the end of all of this, there is light at the end of the tunnel. And that it can turn around.* (Participant 2)

Participants also noted the importance of social networks which are not military specific. User groups and peer support forums for those who have experienced amputation more generally were highly valued. These groups provided a forum for the sharing of practical tips for coping with limb-loss, using prosthetics and facilitating mobility. Those with access to user groups suggested that this had been integral to their ability to adjust, whereas those who had not received this form of support felt that this would have benefited them greatly, particularly during the period of early adjustment to limb-loss.

*That would have been a big help. People who've been in the same position as I... even if they've lost one leg or one arm, it's still... had that feedback from them, but I had nothing.* (Participant 10)

*They didn't give any guidance at all on this and we became aware later on that certain (umm) parts of the country had (umm) user, prosthetic user groups that met and discussed obviously you know things. That doesn't apply to this area at all. So you had to work it out for yourself... most of the information that I have has been gained from going to the clinic and meeting a lot of people that were there on the same day you know. And (umm) seeing what they've got fitted.* (Participant 26)

Another function of peer groups was to provide an opportunity for social comparisons amongst individuals experiencing limb-loss. Participants often suggested that reflecting upon the situations of those worse off than themselves helped them to accept their own injuries:

*Seeing somebody worse off than yourself is a big psychological lift really... amputees look at other people, fellow amputees, and gauge where they are. So I thought I'm better off than [name] and you know I'll get on with life.* (Participant 5)

Participant's not only benefited from receiving support from others within these forums, but readily provided advice and assistance to others in a similar position to themselves, with this also appearing to bolster their own self-esteem:

*Yeah because I think if you're helping other people ... moving onto them, they're helping you as well.* (Participant 33)

## Summary

The framework analysis identified three superordinate themes within the participant's life-stories. These three superordinate themes, *Barriers to Transition*, *Disparity of Care*, and *The Enduring Challenge of Limb-loss*, identify the significant challenges participants face across the life-course from the point of limb-loss. The findings within the *Barriers to Transition* theme highlighted the dissonance experienced by the participant, and the impact that limb-loss had, not only at the point of loss, but the ongoing challenges to transition long after service. The data suggests that many participants struggled with the loss of their military identity well into old age, and rarely viewed themselves as having a disability. This, however, appeared to change when ageing impacted their mobility, which subsequently lead to ever increasing social isolation. Employment and adequate compensation were crucial factors in helping participants to maintain their independence post limb-loss, not only in the early years following loss, but also into old age. Greater resources in this area would appear to support greater mobility and independence, even in much later life.

*Disparity of care* highlighted the perceived injustices in both accessing and entitlements to care. What was most significant was that geographical location appeared to determine both the availability, and standard of care received. The participants spoke of a postcode lottery and a two-tier system which discriminated between those who a) lost limbs during active service and b) lost limbs in service due to accidents, and those that lost limbs post service.

The third superordinate theme, *Enduring challenge of limb-loss*, identified the everyday complications of ageing with limb-loss. Although it would be very difficult to identify issues that were unique to the veteran's population in relation to ageing with limb-loss, what was significant was the military mind-set, which remained evident within the participants' accounts. Strong military identity remained, and this clearly shaped their personal opinions and preferences with regards the type of support they preferred to receive, most notably, support which had a strong connection to the military and veteran's communities.



**Results: Convergent Analysis – Combining the Results**

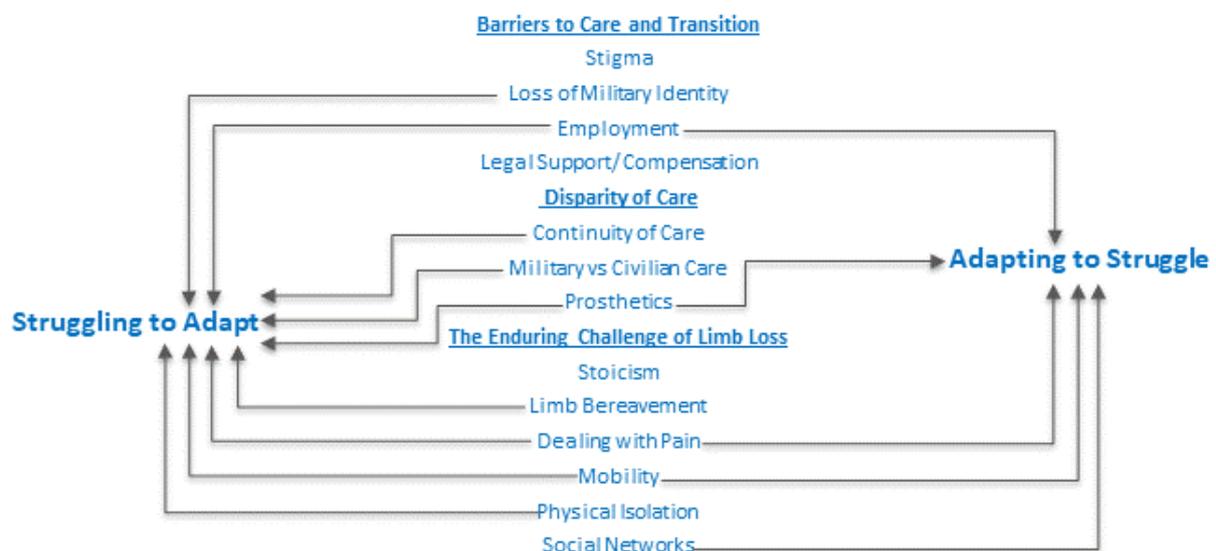


This chapter presents the results of the final stage of analysis within the project. In order to gain a deeper understanding of the ways in which each prominent narrative style was constructed, convergence between narrative analysis and framework analysis was conducted. The primary aim of analytical convergence was to identify the ways in which common themes contribute towards the construction of each narrative type.

## Struggling Against Decline

Analysis of the key themes which contribute towards the construction of the ‘struggle against decline’ narrative type, provides insight into the challenges faced by older limbless veterans throughout the course of their lives (see [Table 6a](#)). As such, many of the findings, provide an understanding of the potential challenges faced by younger generations of limbless veterans as they age. Encompassed within the ‘struggle against decline’ narrative type, is a clear distinction between participants who told stories of ‘struggling to adapt’, and participants who told stories of ‘adapting to struggle’. In order to explore the factors which promote or inhibit health, wellbeing and independence amongst veterans affected by limb-loss, the convergent findings compare and contrast key themes which contribute towards the construction of stories of ‘struggling to adapt’ and stories of ‘adapting to struggle’. [Figure 6](#) provides a visual representation of the key themes, which contribute towards the construction of this narrative type. Arrows are indicative of the subordinate themes which emerged as recurrent or salient subject matter within data extracts which correspond to stories of ‘struggling to adapt’ and ‘stories of adapting to struggle’.

**Figure 6.** Visual representation of key the themes which contribute towards the ‘struggle against decline’ narrative type.



### *Early Barriers to Health, Wellbeing and Independence*

Analysis of stories of 'struggling to adapt' illustrates that early post-operative adjustment to limb-loss may be fraught with significant physical and psychological struggle. Participants described an early sense of hopelessness and despair associated with the loss of their limb and the subsequent loss of physical capabilities. This response is referred to as limb-bereavement, as research has long since identified a comparative psychological response to the loss of a limb and the loss of a loved one. Parkes<sup>70</sup> suggests that both limb-loss and the loss of a loved one are associated with a period of preoccupation and longing for the subject of loss. The grief associated with the loss of a loved one often abates with time, so too does the intensity of initial limb-bereavement. However, research also suggests that precautionary steps may reduce the negative psychological impact of limb-loss. For example, individuals who receive pre-surgery counselling demonstrate significantly lower levels of psychological distress following a range of surgical mutilations in comparison with individuals who do not receive pre-surgery counselling<sup>71,72</sup>.

Previous research suggests that grief and distress may intensify during early rehabilitation following limb-loss as the reality of limb-loss is fully realised<sup>73,74</sup>. However, the data in this study revealed a marked shift in participants' stories from the negative trajectory of 'struggling to adapt', to the positive trajectory of 'adapting to struggle' during this early rehabilitation stage. For many participants, adapting to the use of prosthetic limbs was a catalytic experience, which appeared to facilitate the development of stories of 'adapting to struggle'. The present study provides compelling evidence to suggest that the timely provision of prosthetic limbs during early recovery is essential in order to promote early psychological adjustment and reduce physical barriers to independence.

An additional challenge which may impair veterans' quality of life beyond the initial hospitalisation stage is the inability to ambulate independently within the home and to gain access to the local community. Analysis of 'struggling to adapt' type stories illustrates that living within a home with inadequate adaptations may significantly impair veterans' quality of life following limb-loss, impacting upon safety and independence and resulting in physical

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<sup>70</sup> Parkes, C.M. (1975). Psycho-social Transitions: Comparison between Reactions to Loss of Limb and Loss of a Spouse. *British Journal of Psychiatry*, 127, 204-210.

<sup>71</sup> Butler, D.J., Turkal, N.W., & Seidl, J.J. (1992). Amputation: preoperative psychological preparation. *The Journal of the American Board of Family Practice*, 5(1), 69-73.

<sup>72</sup> Maguire, P., Tait, A., Brooke, M., Thomas, C., & Sellwood, R. (1980). Effect of counselling on the psychiatric morbidity associated with mastectomy. *British Medical Journal*, 281(6253), 1454-1456.

<sup>73</sup> Randall, G. C., Ewalt, J. R., & Blair, H. (1945). *Psychiatric reaction to amputation*. *Journal of the American Medical Association*, 128(9), 645-652.

<sup>74</sup> MacBride, A., Rogers, J., Whyllie, B., & Freeman, S. J. (1980). Psychosocial factors in the rehabilitation of elderly amputees. *Psychosomatics*, 21(3), 258-265.

isolation within the home. For many participants receiving support from local authority housing organisations and third sector organisations in order to secure appropriate housing or to fund required home adaptations facilitated a shift in the trajectory of their stories from ‘struggling to adapt’, to ‘adapting to struggle’. The present analysis illustrates that suitable housing and appropriate home adaptations are essential in order to promote independence and maintain a good quality of life amongst veterans affected by limb-loss.

The present analysis provides compelling evidence to support the argument that education is a strong indicator of the ease with which a veteran-amputee is likely to secure employment and reintegrate into civilian life. Participants who join the military at a young age described their uncertainty, anxiety and apprehension regarding their prospects within civilian society, due to their limited pre-military education, training and work experience. For those participants, psychological adjustment following limb-loss was difficult in the civilian context –invariably perceived to be highly unfamiliar and lacking in structure, direction and discipline in comparison to military contexts.

**Table 6a.** Early barriers to health, wellbeing and independence.

Early Barriers to Health, Wellbeing and Independence	
<b>Limb-Bereavement</b>	Veterans affected by limb-loss may experience an initial period of intense loss, grief and despair during early recovery from amputation as they mourn the loss of their limb and the subsequent loss of physical capabilities and military career.
<b>Delays in Prosthetic Provision</b>	Delays in the initial provision of prosthetic limbs may result in a prolonged period of immobility and limited physical activity, ultimately resulting in physical isolation and a heavy reliance upon others to meet basic needs.
<b>Poorly Adapted Living</b>	The experience of transition from the hospital setting, back into the home during early recovery from amputation, may be a significant challenge for veterans affected by limb-loss. Appropriate home adaptations are essential in order to allow limbless veterans to access their local community, ambulate around the home and maintain care needs independently.
<b>Difficulty in Transitioning</b>	Veterans affected by limb-loss may experience significant challenges in transitioning from military life, back into civilian society. Civilian society may be perceived to be highly unfamiliar and lacking in structure, direction and discipline in comparison with military life.

### *Persistent Barriers to Health, Wellbeing and Independence*

For many participants, stump pain, phantom limb pain and prosthetic related skin irritation were recurrent issues throughout the life-course (see Table 6b). However, participants reported that physical deterioration and additional comorbidities exacerbated pain during later life. The findings of this study suggest that pain which is poorly managed may result in

immobility, reduced independence and physical isolation due to restrictions in physical activity and the inability to utilise prosthetic limbs comfortably. Furthermore, pain which is poorly managed with high doses of analgesic medication, may be associated with further impairments in quality of life due to unpleasant medication side effects.

Prosthetic limbs were a primary source of pain and discomfort throughout both ‘adapting to struggle’ type stories and ‘struggling to adapt’ type stories. Issues primarily centred around poor socket fit, which resulted in stump pain, skin irritation and skin abrasions.

Growing evidence suggests that amputees are also at an elevated risk of social and physical isolation<sup>75,76</sup>. As such, the risk of physical and social isolation amongst older limbless veterans is an important concern. Participants stories of ‘struggling to adapt’ demonstrate that an accumulation of physical deterioration, worsening pain and subsequent limitations in mobility may result in physical and social isolation during later life amongst veterans affected by limb-loss.

**Table 6b. Persistent barriers to health, wellbeing and independence.**

Persistent Barriers to Health, Wellbeing and Independence	
<b>Pain and Discomfort</b>	Persistent pain and discomfort are common experiences for many veterans affected by limb-loss. Pain which is poorly managed may result in the inability to engage in physical activity or to utilise prosthetics comfortably. Pain may result in immobility, physical isolation within the home and a heavy reliance upon others to meet basic needs.
<b>Prosthetic Maintenance</b>	Ongoing issues with the fit and function of prosthetic limbs are likely to affect limbless veterans throughout the life-course. Issues such as poor socket fit may result in recurrent periods of heightened pain, reduced mobility and limited independence.
<b>Isolation</b>	An accumulation of physical deterioration, progressively worsening physical pain and increasing limitations in mobility during later life may result in physical and social isolation for older veterans affected by limb-loss.

### *Mediating Factors in the Long-Term Outcomes associated with Limb-Loss*

Analysis of the key themes which contribute towards the construction of the ‘struggle against decline’ narrative type suggests that veterans affected by limb-loss commonly experience significant ongoing challenges throughout the life-course (see [Table 6c](#)). However, analysis

<sup>75</sup> Demet, K., Martinet, N., Guillemin, F., Paysant, J., & Andre, J. M. (2003). Health related quality of life and related factors in 539 persons with amputation of upper and lower limb. *Disability and Rehabilitation*, 25(9), 480-486.

<sup>76</sup> Pell JP, Donnan PT, Fowkes FGR, Ruckley CV. Quality of life following lower limb amputation for peripheral arterial disease. *European Journal of Vascular Surgery* 1993;7:448–451.

also revealed a number of key mediating factors which may influence the extent to which such challenges impact upon veterans' health, wellbeing and quality of life.

Taking into account the many enduring physical challenges associated with limb-loss, it is unsurprising that participants commonly expressed the need for ongoing healthcare, specifically tailored to amputees, throughout the life-course. The data suggests that ongoing high-quality care is essential in order to promote the positive trajectory of 'adapting to struggle' amongst veterans affected by limb-loss. The inability to gain timely access to effective care and support was associated with extended periods of increased pain, reduced physical activity and limitations in mobility. The repair, replacement and adjustment of prosthetic limbs emerged as the primary care need affecting participants throughout the life-course. The speed and quality of prosthetic care was a key factor in determining the trajectory of participants' stories. Participants who were unable to gain timely access to specialist prosthetic services, reported significantly greater challenges, which endured throughout the life-course. As such, the data suggests that continuity of care throughout the life-course is essential in order to promote health, wellbeing and independence amongst veterans affected by limb-loss.

The findings of this study suggest that social support from comrades within veteran associations may be associated with significant psychological benefits for veterans affected by limb-loss. Engaging with veteran associations such as Blesma and interacting with other veterans affected by limb-loss was an instrumental experience for many participants, which marked a transition within their story from 'struggling to adapt' to 'adapting to struggle'. Observing fellow amputees demonstrate confidence and engage in physically challenging activities was associated with dramatic improvements in psychological adjustment, characterised by enhanced self-esteem, body-image and perceived self-efficacy. As such, the data suggests that the opportunity to develop a social network of fellow veterans is highly influential in terms of veterans' perceived quality of life following limb-loss.

The capacity to secure fulfilling post-injury employment also emerged as a key mediating factor in determining the long-term impact of limb-loss on veteran's perceived quality of life. Participants who told stories of 'adapting to struggle' emphasised the importance of employment in terms of promoting self-esteem, perceived self-efficacy and independence. However, participants who joined the army at a young age frequently told stories of 'struggling to adapt', which featured significant challenges in securing post-injury employment. The inability to secure post-injury employment was often associated with poor pre-military education and limitations in pre-military training and work experience, resulting in a paucity of skills which are transferable to roles within civilian society. The Veterans' Transition Review<sup>77</sup>

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<sup>77</sup> Ashcroft, M. (2014). *The veterans' transition review*. Biteback Publishing.

asserted that the MOD has made efforts to maximise the accreditation of skills gained within the military. However, the review also claimed that the skills and qualifications gained throughout the course of a military career are often poorly understood by civilian employers and may not be directly transferable to civilian roles of employment. As a result, veterans may experience challenges in securing employment within civilian society. The present analysis illustrates that the inability to secure post-injury employment may have a significant long-term impact upon the quality of life of limbless veterans.

**Table 6c. Mediating factors in the long-term outcomes associated with limb-loss.**

<b>Mediating Factors in the Long-Term Outcomes Associated with Limb-Loss</b>	
<b>Continuity of Care</b>	Poor continuity of care is a significant challenge for veterans affected by limb-loss. Participants described the negative physical impact of inconsistencies between services, ineffective inter-service communications, excessive waiting times between healthcare appointments and a paucity of long-term specialist support. Poor continuity of care was associated with increased pain and discomfort over time, resulting in limited mobility and reduced independence.
<b>Social Networks</b>	Building social networks within veteran associations may be a highly influential experience for veterans affected by limb-loss. Observing fellow veterans display self-confidence, engage in challenging physical activities and achieve personal goals may be associated with significant improvements in perceived self-efficacy, body image and independence.
<b>Employment</b>	Fulfilling post-injury employment may be associated with significant improvements in self-esteem, independence and quality of life amongst veterans affected by limb-loss. However, the data suggests that veterans who possess limited pre-military education, training and work experience may experience significant challenges in securing post-injury employment.

## Victimhood and Life-as-Normal

In many ways, the ‘victimhood’ narrative type and the ‘life-as-normal’ narrative type are highly opposing constructs. However, both narratives are characterised by unabating psychological distress following limb-loss. Participants who told stories which aligned closely with the ‘victimhood’ narrative type, openly discussed personal challenges and frequently expressed negative emotions such as anger and bitterness. Conversely, participants who told stories which aligned with the ‘life-as-normal’ narrative type, outwardly minimised personal challenges and denied any lasting psychological distress associated with limb-loss. [Figure 7](#) provides a visual representation of the key themes, which contribute towards the construction of both narrative types. Arrows are indicative of the subordinate themes which emerged as recurrent

or salient subject matter within data extracts which correspond to the 'life-as-normal' narrative type and the 'victimhood' narrative type'.

**Figure 7.** Visual representation of the key themes which contribute towards the 'life-as-normal' and 'victimhood' narrative types.



*Potential Sources of Enduring Psychological Distress*

Exploration of the key themes which contribute towards the construction of the 'victimhood' narrative type and the 'life-as-normal' narrative type, revealed a number of key experiences which may result in unabating psychological distress amongst veterans affected by limb-loss (see Table 7a)

Despite participants' determination to suppress and deny signs of ongoing psychological challenges associated with limb-loss, those who told stories which conformed to the 'life-as-normal' narrative type, were commonly overwhelmed by rare moments of profound psychological distress. Distress amongst participants who told stories which conformed to this narrative type was primarily associated with limb-bereavement and the subsequent loss of military identity. This study reveals that limb-bereavement may persist throughout the life-course, acting as a significant source of prolonged psychological distress amongst veterans affected by limb-loss.

The 'victimhood' narrative type is characterised by forthcoming discussions of personal challenges and the free outward expression of negative emotions. As such, analysis of this narrative type provided many rich insights into potential sources of prolonged psychological distress amongst veterans affected by limb-loss. While participants who told stories which

conformed to the 'victimhood' narrative type expressed some psychological distress associated with limb-bereavement, it was events which followed on from limb-loss that were the primary source of psychological distress. Participants expressed a deep dissatisfaction with the level of compensation and the service pension they have received in accordance with their injury. Disparities in the levels of compensation and service pension received by combat-injured veterans and non-combat injured veterans provoked deeply negative emotions such as anger, bitterness and resentment. The inability to challenge the decisions regarding compensation due to high legal costs and limited legal support also provoked similar expressions of psychological distress. As such, this study suggests that dissatisfaction with compensation and negative experiences of legal processes related to compensation, may result in prolonged psychological distress amongst veterans affected by limb-loss.

Dissatisfaction with the quality of care which was received following limb-loss was an additional source of psychological distress within the context of the 'victimhood' narrative type. Participants who told stories which aligned with this narrative type, expressed the view that discontinuous care and failures on behalf of healthcare professionals, often resulted in unnecessary pain and discomfort through their life-course, This lead to significant impairments in mobility, independence and overall quality of life. Participants expressed deeply seated anger, bitterness and resentment towards the military and the NHS for providing unsatisfactory care.

The inability to secure post-injury employment emerged as a key source of psychological distress amongst participants who told stories of 'victimhood'. Participants expressed the view that limb-loss has made them unattractive to potential employers and associated their inability to secure post-injury employment with disability discrimination. The findings of this study suggest that the inability to secure post-injury employment may impair psychological adjustment amongst veterans affected by limb-loss, resulting in prolonged psychological distress.

**Table 7a.** Potential sources of enduring psychological distress.

Potential Sources of Enduring Psychological Distress	
<b>Limb-bereavement</b>	Psychological distress associated with the physical loss of a limb and the subsequent loss of military identity, may persist throughout the life-course.
<b>Unsatisfactory Compensation</b>	Dissatisfaction with the level of compensation received in accordance with injury may result in unabating psychological distress, characterised by anger, bitterness and resentment towards the military.
<b>Unsatisfactory Care</b>	Dissatisfaction with the quality of care which has been provided since sustaining limb-loss may provoke anger, bitterness and resentment towards health and social care systems.
<b>Unemployment</b>	The inability to secure post-injury employment may have a negative long-term impact upon veterans' quality of life, resulting in the belief that a) the amputee is unattractive to potential employers and b) the amputee is likely to be subject to ongoing disability discrimination.

### *Factors Maintaining Psychological Distress*

Analysis of the key themes which contribute towards the construction of the 'victimhood' narrative type and the 'life-as-normal' narrative type also revealed a number of factors which may maintain psychological distress amongst veterans affected by limb-loss (see Table 7b). A pervasive pattern of maladaptive coping emerged throughout themes which contributed towards the 'victimhood' narrative type. Participants typically demonstrated a defensive external locus of control<sup>78</sup> when describing negative experiences, undesirable circumstances and personal challenges. Negative life experiences were attributed to external failures within the military, within health and social care services and within society at large. The defensive external locus of control demonstrated within the context of the victimhood narrative type, may contribute towards participants' enduring psychological distress, by discouraging active problem solving and promoting a sense of helplessness<sup>79</sup>.

A strong tendency for rumination amongst participants who told stories of 'victimhood' also emerged throughout the analysis. Rumination refers to the repetitive contemplation and mental rehearsal of negative thoughts, emotions or events<sup>80</sup>. Participants who told stories which conformed with the victimhood narrative type devoted significant time to the process of

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<sup>78</sup> Locus of control is a concept first introduced by Rotter in 1954 which refers to an individual's beliefs regarding their own control and influence within their life. While individuals who possess a strong internal locus of control perceive their successes and failures to be the result of their own actions or inactions, those who possess a strong external locus of control attribute their successes and failures to external forces which are outside of their control.

<sup>79</sup> Lefcourt, H. M. (2014). *Locus of control: Current trends in theory and research (2nd ed.)*. New York: Psychology Press

<sup>80</sup> Alderman, B. L., Olson, R. L., Bates, M. E., Selby, E. A., Buckman, J. F., Brush, C. J., Panza, E. A., Kranzler, A., Eddie, D., & Shors, T. J. (2015). Rumination in major depressive disorder is associated with impaired neural activation during conflict monitoring. *Frontiers in human neuroscience*, 9, 269.

rumination throughout the course of the interviews. Participants discussed negative past experiences and emotions in great detail. Rumination is widely considered to be a maladaptive coping mechanism which maintains psychological distress by inhibiting effective problem solving. Furthermore, rumination is a common feature across both anxiety disorders and major depressive disorder<sup>80,81,82</sup>. This study illustrates the potential negative impact of rumination, as the data suggests that rumination may contribute towards psychological distress amongst veterans affected by limb-loss.

The data suggests a number of additional factors which may maintain psychological distress amongst veterans affected by limb-loss. During the analysis a pervasive pattern of experiential avoidance emerged throughout stories which conform to the 'life-as-normal' narrative type. The term 'experiential avoidance' broadly refers to the excessively negative evaluation of undesirable internal events, resulting in active attempts to suppress control or avoid unwanted cognitions, emotions and bodily sensations<sup>83,84,85</sup>. When telling stories which conformed to the 'life-as-normal' narrative type, it was evident that participants actively sought to suppress psychological distress and to avoid discussions of negative emotions, difficult experiences and personal challenges. Experiential avoidance is considered to be a highly maladaptive coping mechanism which may prolong psychological distress by removing the opportunity for emotional learning, active problem solving and the disconfirmation of distressing cognitions<sup>86,87</sup>. In line with previous research, this study suggests that experiential avoidance may be associated with prolonged psychological distress amongst veterans affected by limb-loss.

In direct contrast to maladaptive coping styles such as experiential avoidance and rumination, is problem-orientated coping (also referred to as active coping or engagement coping). Problem-orientated coping refers to active attempts to influence a situation through actions

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<sup>81</sup> Sarin, S., Abela, J., & Auerbach, R. (2005). The response styles theory of depression: A test of specificity and causal mediation. *Cognition & Emotion*, 19(5), 751-761.

<sup>82</sup> Olatunji, B. O., Naragon-Gainey, K., & Wolitzky-Taylor, K. B. (2013). Specificity of rumination in anxiety and depression: a multimodal meta-analysis. *Clinical Psychology: Science and Practice*, 20(3), 225-257.

<sup>83</sup> Hayes, S. C., Strosahl, K., Wilson, K. G., Bissett, R. T., Pistorello, J., Toarmino, D. & Stewart, S. H. (2004). Measuring experiential avoidance: A preliminary test of a working model. *The psychological record*, 54(4), 553-578.

<sup>84</sup> Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of consulting and clinical psychology*, 64(6), 1152.

<sup>85</sup> Hayes, S. C., Strosahl, K., & Wilson, K. G. (1999). *Acceptance and commitment therapy: Understanding and treating human suffering*. New York: Guilford.

<sup>86</sup> Newman, M. G., & Llera, S. J. (2011). A novel theory of experiential avoidance in generalized anxiety disorder: A review and synthesis of research supporting a contrast avoidance model of worry. *Clinical psychology review*, 31(3), 371-382.

<sup>87</sup> Dugas, M. J., Gagnon, F., Ladouceur, R., & Freeston, M. H. (1998). Generalized anxiety disorder: A preliminary test of a conceptual model. *Behaviour research and therapy*, 36(2), 215-226.

such as problem solving, emotional expression or emotional regulation<sup>88,89,90</sup>. In comparison with other coping styles, problem-orientated coping has been associated with enhanced psychological wellbeing and improvements in physical health status<sup>89</sup>. The data suggests a number of factors which may discourage problem-orientated coping amongst veterans affected by limb-loss. The data suggests that a stoic attitude may prevent problem-orientated coping by discouraging emotional expression. When telling stories, which closely aligned with the 'life-as-normal' narrative type, participants commonly, expressed a resolute attitude or a 'stiff upper lip', suppressing signs of psychological distress when possible and denying the extent of personal challenges. Participants discussed their determination to 'get on with it' regardless of their disability. There was an emphasis on the importance of independence, and an expression of deep reluctance to rely upon external sources of care and support. This suggests that stoicism may prevent problem-orientated coping by limiting help-seeking behaviours.

The data also suggests that social stigma associated with disability may discourage emotional expression and inhibit help-seeking behaviour amongst veterans affected by limb-loss. Previous research suggests that perceived social stigma may result in a reluctance to disclose personal information which has the potential to cause judgment or discrimination<sup>91</sup>. Participants who told stories which aligned with the 'life-as-normal' narrative type, devoted considerable time during the course of their interviews to the discussion of negative perceptions of disability within society and their desire to distance themselves from the identity of victimhood imposed upon them by others.

The impact of social stigma was evident when analysing the ways in which themes such as prosthetics and employment, contribute towards the construction of the 'life-as-normal' narrative type. Within the context of this narrative type, prosthetic limbs provided participants with a means through which to conceal their disability and to distance to themselves from an identity of victimhood. For participants who told stories which conformed to the 'life-as-normal' narrative type, the capacity to conceal their disability was particularly important within professional settings. They emphasised the importance of post-injury employment as

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<sup>88</sup> Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychological bulletin*, 127(1), 87.

<sup>89</sup> Connor-Smith, J. K., & Compas, B. E. (2004). Coping as a moderator of relations between reactivity to interpersonal stress, health status, and internalizing problems. *Cognitive Therapy and Research*, 28(3), 347-368.

<sup>90</sup> Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: a review and critique of category systems for classifying ways of coping. *Psychological bulletin*, 129(2), 216.

<sup>91</sup> Beals, K. P. (2004). *Stigma management and well-being: The role of social support, cognitive processing, and suppression* (Doctoral dissertation, ProQuest Information & Learning).

a self-affirming ‘normalising’ experience, but also described their reluctance to disclose their disability to prospective employers or to request adjustment within the workplace for fear of judgment and discrimination. As such, the findings from this study suggest perceived social stigma may prevent problem orientated coping, ultimately resulting in prolonged psychological distress amongst veterans affected by limb-loss (see Table 7b).

**Table 7b.** Factors maintaining psychological distress.

<b>Factors Maintaining Psychological Distress</b>	
<b>External Locus of Control</b>	The belief that personal outcomes are primarily influenced by external sources, may contribute to the maintenance of psychological distress through the belief that negative circumstances have always been and will continue to be beyond control.
<b>Rumination</b>	A tendency to repetitively contemplate or mentally rehearse negative past events and emotions may inhibit effective problem solving, ultimately contributing towards the maintenance of psychological distress.
<b>Experiential Avoidance</b>	The excessively negative perception of undesirable internal events and a tendency to suppress control or avoid negative emotions, cognitions and sensations, may contribute to the maintenance of psychological distress by removing the opportunity for emotional learning, active problem solving and the disconfirmation of distressing cognitions.
<b>Stoicism</b>	A tendency towards stoicism may contribute towards an avoidant coping style amongst veterans affected by limb-loss. This may result in a reluctance to engage in help-seeking behaviour, limiting emotional expression and prolonging psychological distress.
<b>Social Stigma</b>	Veterans may be influenced by the perceived social stigma attached to those with disabilities. Perceived stigma may contribute towards an avoidant coping style amongst veterans affected by limb-loss, resulting in a reluctance to engage in help-seeking behaviour, limiting emotional expression and prolonging psychological distress.

## Minimisation

While the ‘minimisation’ narrative type is not as newsworthy, nor as popularised within the current social milieu as the ‘dramatic overcoming’ narrative type, this type powerfully demonstrates that limb-loss is not necessarily associated with significant long-term impacts upon health and quality of life. To gain a deeper understanding of the factors which may facilitate the development and maintenance of ‘minimisation’ narratives, it is highly pertinent to explore the key themes which contribute towards the construction of this narrative type. Figure 8 provides a visual representation of the key themes which contribute towards the construction of this narrative type. Arrows are indicative of the subordinate themes which emerged as recurrent or salient subject matter within data extracts which correspond to the ‘minimisation’ narrative type.

**Figure 8.** Visual representation of key themes which contribute towards the ‘minimisation’ narrative type.



#### *Factors Which may ‘Minimise’ the Long-Term Impact of Limb-Loss*

Analysis of the key themes which contribute towards the construction of the ‘minimisation’ narrative type, suggests the experience of early rehabilitation involving the use of prosthetic limbs may act as a foundation for ‘minimisation’ stories amongst veterans affected by limb-loss (see Table 8). Given the importance of prosthetics to participants’ ‘minimisation’ stories, it is unsurprising that prosthetic care emerged as the primary care need for participants who told stories which conformed to this narrative type. Problems with prosthetic limbs which required maintenance, repair or replacement, were a primary cause for experiences of struggle which interrupted ‘minimisation’ stories. However, interruptions were brief, as timely access to specialist prosthetic care, ensured participants who told stories of ‘minimisation’ spent limited time struggling with defective or ill-fitting prosthetics. They reported a general satisfaction of ongoing care and support they received since sustaining their limb-loss and expressed confidence in their capacity to gain timely access to appropriate care and support when required. In contrast to the majority of the participants, some who told stories of ‘minimisation’ also reported limited experiences of pain, reduced physical activity or immobility as a result of limb-loss and prosthetic use. As such, findings illustrate potential benefits of effective ongoing care and support for limbless veterans with regards to minimising pain and discomfort, promoting independence and wellbeing and reducing limitations in physical activity and mobility.

The data suggests that the capacity to secure fulfilling post-injury employment is also fundamental to the development of the 'minimisation' narrative type. Participants who told stories which conformed to this narrative type, devoted the majority of the time during their interviews to the discussion of post-injury employment. The data therefore provides compelling evidence to support the argument that post-injury employment is highly beneficial for veterans affected by limb-loss. It is possible that participants' educational and vocational pre-military background may have facilitated their capacity to secure post-injury employment. Participants who told stories which conformed to the 'minimisation' narrative type typically possessed strong educational backgrounds or work experience outside of the military.

In line with research which suggests that stoicism is associated with impairments in quality of life,<sup>92,93</sup> analysis of the 'victimhood' narrative type illustrated that stoicism may impede psychological adjustment following limb-loss, acting as a significant barrier to emotional expression and preventing help-seeking behaviour. However, there is evidence to suggest that stoicism may be a beneficial trait, associated with psychological resilience in the face of adversity<sup>94</sup>. This study provides compelling evidence to support the argument that stoicism contributes significantly towards the development of the 'minimisation' narrative type amongst veterans affected by limb-loss.

Interestingly, satisfaction regarding the legal support and compensation received following injury was common across all stories of 'minimisation'. There is some debate amongst scholars regarding the potential impact of financial compensation on the health, wellbeing and quality of life of disabled individuals. While some argue that financial compensation may have a negative impact upon quality of life, discouraging successful rehabilitation and psychologically reinforcing behaviours which demonstrate disability<sup>95,96</sup>, others assert that the financial security afforded to individuals who receive compensation reduces the risk of anxiety and depression which may result from an acquired disability<sup>97</sup>. The findings of this study

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<sup>92</sup> Murray, G., Judd, F., Jackson, H., Fraser, C., Komiti, A., Pattison, P. & Robins, G. (2008). Big boys don't cry: An investigation of stoicism and its mental health outcomes. *Personality and Individual Differences*, 44(6), 1369-1381.

<sup>93</sup> Moore, A., Grime, J., Campbell, P., & Richardson, J. (2013). Troubling stoicism: Sociocultural influences and applications to health and illness behaviour. *Health*, 17(2), 159-173.

<sup>94</sup> Spiers, J. (2006). Expressing and responding to pain and stoicism in home-care nurse-patient interactions. *Scandinavian Journal of Caring Sciences*, 20(3), 293-301.

<sup>95</sup> Guest, G. H., & Drummond, P. D. (1992). Effect of compensation on emotional state and disability in chronic back pain. *Pain*, 48(2), 125-130.

<sup>96</sup> Fordyce, W. E. (1985). Back pain, compensation, and public policy. *Prevention in health psychology*, 15, 391-400.

<sup>97</sup> Mendelson, G. (1983). Not 'cured by a verdict.' Effect of legal settlement on compensation claimants. *Pain*, 16(2), 219.

support the notion that satisfactory financial compensation is associated with positive outcomes for veterans affected by limb-loss.

**Table 8.** Factors which may ‘minimise’ the long-term impact of limb-loss.

Factors which may ‘minimise’ the long-term impact of limb-loss	
<b>Prosthetic Limbs</b>	Early rehabilitation, which involved the use of prosthetic limbs, may minimise the long-term impact of limb-loss amongst veterans by facilitating a return to previous physical capabilities.
<b>Continuity of Care</b>	Ongoing access to high quality healthcare throughout the life-course is essential to minimise the long-term health outcomes and barriers to independence associated with limb-loss.
<b>Stoicism</b>	A stoic determination to cope and adapt may minimise the long-term impact of limb-loss amongst veterans by motivating them to achieve successful physical and psychological adjustment.
<b>Employment</b>	The capacity to secure fulfilling post-injury employment is essential to minimise the long-term impact of limb-loss on veterans’ quality of life.
<b>Financial Compensation</b>	Satisfaction with the level of compensation received in accordance with injury, may promote psychological adjustment to limb-loss and improve the quality of life by protecting veterans’ financial security following limb-loss.

## Summary: Key Findings and Actionable Recommendations

Framework analysis identified key superordinate and subordinate themes from across the data. However, narrative analysis identified four distinct narrative types which shape the way in which veterans reconstruct their lives and identities following limb-loss. The identified narrative types encompassed both similarities and stark contrasts in terms of veterans health, wellbeing and independence. By exploring the ways in which the key themes identified through framework analysis contribute towards the construction of each of the narrative types identified through narrative analysis, this research aimed to provide a more comprehensive and accurate understanding of the health and social care needs of this diverse community. The findings, which resulted from this convergent analysis and subsequent actionable recommendations are summarised in [Tables 9a-f](#).

**Table 9a. Key findings and actionable recommendations - physical health.**

Maintaining Independence		
Physical Health	Key Findings	Actionable Recommendations
<b>Continuity of Care</b>	<p>Taking into account the many enduring physical challenges associated with limb-loss, it is unsurprising that participants commonly expressed the need for ongoing healthcare for amputees throughout the life-course. However, many participants reported a lack of continuity in their care, which had a detrimental impact upon their ability to recover from and manage their limb-loss.</p> <p>Participants described the negative physical impact of inconsistencies between services, ineffective inter-service communications, excessive waiting times between healthcare appointments and a paucity of long-term specialist support.</p>	<p>It is essential that veterans affected by limb-loss have timely access to high quality healthcare services, starting from the time of amputation and extending throughout the life-course. Healthcare providers and policy makers must ensure that all limbless veterans are able to access services when required and should aim to standardise the quality of care across services.</p>
<b>Specialist Care</b>	<p>Participants highlighted a paucity of specialist healthcare support for amputees, particularly with regards to prosthetic limb care. The inability to access specialist healthcare services resulted in extended periods of increased pain, reduced physical activity and limitations in mobility. Some participants described a ‘postcode lottery’ with respect to access to care. In order to address the gap in mainstream services, some participants resorted to paying for private care, while others reported the need to travel long distances in order to access required services.</p>	<p>Specialist healthcare services are fundamental to the health and wellbeing of limbless veterans, particularly with regards to the maintenance of prosthetic limbs. Accordingly, access to specialist services must be improved nationwide, in order to reduce health inequalities and promote seamless high-quality care for veterans affected by limb-loss.</p>
<b>Pain Management</b>	<p>Participants described enduring significant amounts of generalised stump pain and phantom limb pain throughout the course of their lives. Participants described pain impacting upon their sleep, mood, and mobility (either directly or by preventing them from using their prosthetics). Many participants suggested that clinicians struggled to manage their pain effectively and therefore resorted to prescribing high doses of pain medication. Such high doses of powerful medications were not only associated with undesirable side effects, but also constitute a risk to the safety of veterans with comorbid mental health issues.</p>	<p>It is evident that there are significant challenges with regards to the management of pain amongst amputees. The development of clear research-based treatment recommendations is essential in order to improve the management of stump pain and phantom limb-pain amongst limbless veterans.</p>

Table 9a. Continued.

Maintaining Independence		
Physical Health	Key Findings	Actionable Recommendations
<b>Age-Related Decline</b>	This report highlights the growing care needs of limbless veterans as they progress throughout later life. Participants described the impact of age-related physical decline and musculoskeletal conditions such as arthritis and the way in which they compound the challenges associated with limb-loss. Due to reduced strength and heightened pain and discomfort, many participants reported reductions in mobility and in their capacity to engage in physical activities. As a result, participants frequently reported increasing physical and social isolation during later life.	Health and social care providers must be aware of the increased vulnerability of limbless veterans as they age. In order to ensure that limbless veterans are able to maintain their health, wellbeing and independence for as long as possible, special attention must be taken to ensure that older limbless veterans receive sufficient care and support to manage their healthcare needs.

**Table 9b.** Key findings and actionable recommendations - social wellbeing.

Maintaining Independence		
Social Wellbeing	Key Findings	Actionable Recommendations
<b>The Military Charity Sector</b>	<p>Some participants described how limb-loss has altered their ability to form and maintain relationships due to concerns around their self-image, their physical limitations and the negative preconceptions of others. The social activities provided by Blesma were therefore highly valued for combating isolation. As such, opportunities provided by third sector organisations were extremely important in helping participants to stay socially connected, facilitating connections among 'likeminded' people who share the 'military mentality' and 'squaddies humour' and providing a sense of comradeship. Events for limbless veterans also worked to inspire confidence and hope by instilling a sense of accomplishment and by demonstrating that it is possible to adapt to limb-loss. Participants described a reduced ability to engage in physical challenges as they aged, instead opting to engage in less intense activities such as photography. It is important to note that geographical distance from available activities, as well as caring responsibilities for others sometimes prevented participation in events.</p>	<p>The work of the military charity sector is highly valued amongst veterans affected by limb-loss. It is important that limbless veterans are able to continue their engagement with military charities such as Blesma as they progress throughout later life. As such, the military charity sector should continue to provide a diverse range of activities and events which are accessible to all limbless veterans, regardless of their physical capabilities. Additionally, the sector should aim to provide opportunities for veterans across the whole of the UK, ensuring that veterans from all geographical locations are able to benefit from their services.</p>
<b>Non-Military Peer-Support</b>	<p>Non-military specific user groups and peer support forums for those who have experienced amputation more generally, were highly valued. Such groups provided a forum for sharing practical tips for coping with limb-loss, using prosthetics and facilitating mobility. Those with access to user groups suggested this had been integral to their ability to adjust, whereas those who had not received this form of support felt it would have benefited them greatly.. Another function of peer groups was to provide an opportunity for social comparisons with others experiencing limb-loss. Reflecting upon the situations of those worse off than themselves helped participants to accept their injuries. Participants also provided advice and assistance to others in a similar position to themselves, with this too appearing to bolster self-esteem.</p>	<p>Access to user groups and peer support forums is associated with significant physical and psychological benefits for veterans affected by limb-loss. In order to promote psychological adjustment and physical rehabilitation, all limbless veterans should be offered access to non-military specific forms of peer-support. Provision of this form of support may be particularly important during the early stages of adjustment following limb-loss.</p>

**Table 9c.** Key findings and actionable recommendations - psychological wellbeing.

Maintaining Independence		
Psychological Wellbeing	Key Findings	Actionable Recommendations
<b>Limb-Bereavement and the Loss of Military Career</b>	Feelings of grief associated with the physical loss of a limb and the subsequent loss of ones' military career may persist throughout the life-course, acting as a significant source of prolonged psychological distress amongst veterans affected by limb-loss.	Veterans affected by limb-loss must have access to support which is able to assist them in coming to terms with the loss of their limb and the subsequent loss of their military career. The time which has elapsed since injury should not impact upon the availability of services, as limb-bereavement and grief regarding the loss of a military career may continue to affect limbless veterans well into later-life.
<b>Stoicism</b>	Participant attitudes towards living with limb-loss were largely characterised by stoic acceptance. This attitude of 'carrying on' despite adversity was attributed to a mind-set and approach to coping with loss. The data suggests that a stoic attitude may prevent adaptive problem-orientated coping by discouraging emotional expression and inhibiting help-seeking behaviours. However, a stoic determination to cope and adapt may minimise the long-term impact of limb-loss amongst veterans by motivating them to achieve successful physical and psychological adjustment.	While stoicism may be associated with self-motivation which promotes positive psychological adjustment following limb-loss, stoicism may also discourage emotional expression and inhibit help-seeking behaviours. Those who provide care and support to veterans affected by limb-loss should be aware of the tendency for stoicism which is typical of this population, and strive to encourage active help-seeking and emotional expression.
<b>Maladaptive Coping</b>	The data identified a number of maladaptive coping strategies which may prolong psychological distress amongst veterans affected by limb-loss. Maladaptive coping strategies described by participants included rumination (the repetitive contemplation and mental rehearsal of negative thoughts, emotions or events), a defensive external locus of control (the belief that personal outcomes are primarily influenced by the actions of others) and experiential avoidance (the excessively negative perception of negative internal events and tendency to suppress control or avoid undesirable emotions, cognitions and sensations).	Maladaptive coping strategies maintain harmful behaviours and psychological distress and have been associated with a wide range of psychopathologies, including anxiety disorders and major depressive disorder. Taking into account the psychological distress associated with limb-loss, it is imperative that limbless veterans are able to develop adaptive forms of coping, which allow for emotional expression, active problem solving and appropriate help-seeking behaviour. Organisations who aim to support veterans affected by limb-loss should therefore strive to encourage problem-orientated coping.

**Table 9d.** Key findings and actionable recommendations - physical isolation.

<b>Maintaining Independence</b>		
<b>Physical Isolation</b>	<b>Key Findings</b>	<b>Actionable Recommendations</b>
<b>Driving</b>	Participants emphasised the importance of driving in terms of their mobility, quality of life and independence. A number of participants discussed the ways in which age-related physical decline has resulted in an inability to continue driving during later life. Participants perceived the inability to drive as a significant threat to independence, resulting in restrictions in mobility and a need to rely upon others in order to engage in regular daily activities.	It is clear that driving is often fundamental to mobility and independence amongst limbless veterans. As such, this study suggests that veterans who find that they are no longer able to drive a car may require additional support in order to maintain their independence and social engagement during later life.
<b>Housing and Home Adaptations</b>	The inability to ambulate independently within the home or to gain access to the local community may greatly impair limbless veterans' quality of life, impacting upon safety and independence and resulting in physical isolation within the home. For many participants receiving support from local authority organisations and third sector charity organisations, in order to secure appropriate housing or to fund required home adaptations, facilitated their capacity to adapt to life following limb-loss.	The Armed Forces Covenant asserts that when appropriate, veterans should receive special treatment above and beyond that which may be expected by a civilian. For those injured during their service, this should include preferential access to appropriate housing schemes and additional assistance with required home adaptations. The present report explicitly illustrates the value of this form of housing support for veterans affected by limb-loss. Local authorities and third sector organisations should work to ensure that all limbless veterans are able to benefit from appropriate housing and home adaptations.

**Table 9e.** Key findings and actionable recommendations - employment and education.

Maintaining Independence		
Employment and Education	Key Findings	Actionable Recommendations
<b>Employment</b>	The capacity to secure fulfilling post-injury employment emerged as a key factor in determining the long-term impact of limb-loss upon participants' perceived quality of life. Employment was crucial for participants in terms of re-forging a sense of purpose and maintaining independence when transitioning back to civilian life. Despite this, many participants experienced significant challenges in securing post-injury employment.	In a time when the media and the current social milieu are dominated by the notion of rehabilitation through sporting competition and expedition style activities, it is crucial for society to recognise the importance of fulfilling employment for limbless veterans. In order to promote a successful transition back into civilian life and maintain independence amongst limbless veterans, all limbless veterans should have access to support and advice around post-injury employment and where possible measures should be taken to reduce existing barriers to employment.
<b>Education and Re-training</b>	Participants who joined the military at a young age reported significant difficulties in securing post-injury employment and associated this with poor pre-military education and a lack of pre-military training and work experience. While the MOD has made efforts to maximise the accreditation of skills gained within the military, the present report suggests that these skills are still poorly understood by civilian employers. The inability to engage in re-training or further education following limb-loss due to limited availability or financial and practical constraints, inhibited participants' capacity to improve the employment opportunities available to them.	This report suggests that veterans who join the military at a young age may be at a significant disadvantage in terms of securing employment after leaving the military. This is a particularly pressing issue for limbless veterans who may have left service abruptly and without preparation following injury. Efforts to improve the accreditation of skills gained within the military should continue. Additionally, care should be taken to ensure that all limbless veterans receive the support and advice they require in order to access education and training opportunities following limb-loss.
<b>Disability Discrimination</b>	Many participants felt that their disability made them an unattractive candidate to prospective employers. Participants described their reluctance to disclose their disability to prospective or current employers or to request adjustment within the workplace for fear of judgment and discrimination.	Within the UK, it is illegal for any employer to discriminate against a job candidate or employee on the basis of a physical or psychological disability. It is clear that further steps must be taken to address professional discrimination against limbless veterans, in order to ensure that they are treated with fairness and respect by prospective or current employers and to assure them with the confidence to request adjustment in the workplace when required.

**Table 9f. Key findings and actionable recommendations - financial and social support**

Maintaining Independence		
Financial and Social Support	Key Findings	Actionable Recommendations
<b>Compensation</b>	The data suggests that access to compensation and pension entitlements were significant factors in the maintenance of independence. Receipt of these financial entitlements was extremely important in signifying recognition of military contribution, providing a form of recompense in light of reduced earning power, and reducing reliance upon charitable support. However, there was variation in the levels of compensation. While some described financial difficulties, others suggested that compensation provided them with financial security. Unfortunately, participants felt alienated from the decisions regarding compensation entitlements and felt unable to challenge the outcome of this decision making process due to the costs of legal representation.	Decisions around compensation entitlements impact upon limbless veterans' financial circumstances and quality of life for the duration of their lives following limb-loss. It is therefore important that veterans do not feel alienated from this decision making process and efforts should be made to improve the experience of injured veterans throughout. Additionally, steps must be taken to improve access to legal representation for veterans who wish to challenge decisions around their compensation entitlements.
<b>'Hierarchy of Wounding'</b>	Participants highlighted a ' <i>hierarchy of wounding</i> ' which places combat injuries above injuries sustained within peacetime operations or during civilian activities. This hierarchical differentiation appears to be both sanctioned and sustained by, not least, the military charity sector, and some charities appear to use the mechanism of injury as the basis for discriminating their provision of support. As compensation, entitlements are also dependent upon whether limb-loss was sustained during or after service, or is considered to be 'attributable or 'non-attributable', the 'hierarchy of wounding' disproportionately affects those who are likely to require the greatest levels of financial support.	It is important to recognise that veterans who lose a limb as a result of peacetime operations or during civilian activities, may be at a significant disadvantage with regards to the level of financial and practical support available to them following their injury. Third sector organisations who aim to support limbless veterans should aim to eradicate this 'hierarchy of wounding', in order to ensure that all limbless veterans are able to benefit equally from their services and support.
<b>Welfare Entitlements</b>	As is the case within the wider population, reliance upon welfare support served as a source of embarrassment and social stigma amongst limbless veterans. As a result, a number of participants reported a reluctance to claim welfare support, regardless of their entitlements.	Local authorities and other organisations responsible for providing social support to limbless veterans must be aware of the reluctance to claim welfare support. Efforts should be made to reduce the stigma around welfare support and action should be taken to ensure that all limbless veterans are in receipt of the appropriate welfare entitlements.



## Discussion of Key Findings and Potential Policy Implications



Following on from the convergence analysis, subject matter experts within the research team identified underlying points for discussion. These discussion points are integral to understanding the health and social wellbeing of older limbless veterans. Points for deeper discussion include: 'limb-loss and pain', 'education and post limb-loss employment', 'limb-loss and social isolation' and 'limb-loss, independence and activities of daily living'.

## Limb-Loss and Pain

The experience of ongoing pain following amputation is complex. It is often described as a mixture of acute post-operative pain; pain of the stump and phantom limb pain caused indirectly by amputation of the limb<sup>98</sup>. The complexity of pain associated with amputation is difficult to manage and has a significant bearing upon daily living and the maintenance of independence for those with limb-loss. Participants in this study shared experiences of their own personal complex relationship with post-amputation pain. These highlighted endeavours to remain independent despite increasing levels of pain associated with ill-fitting or otherwise uncomfortable limbs, mobility issues, and under-diagnosed and poorly treated pain. Participants' responses to limb-loss were also intimately connected to their experience of serving in the Armed Forces and loss of military career.

The topic of pain was prevalent across participants' post limb-loss life-stories and it was evident that the ongoing pain experienced was often highly damaging to quality of life. Participants spoke of the challenges of dealing with pain day-to-day as well as the side-effects of painkillers. Pain was also described as an issue that impacted on family and friends. Family members and significant others described concern about the effects of largely uncontrolled levels of pain and the subsequent loss of ability to carry out day to day tasks:

*I think pain is one of the most debilitating things ... the painkillers just make him on a different planet. So if we want to go places, we want to do stuff and there's lots of jobs, simple jobs around the house that again [spouse] knows [they] could do if [they] could concentrate on those and not the chronic pain (umm) You know there was stuff that [spouse] was doing before (umm) that [they] can't do anymore ... and it worries me an awful lot that you know neither of us can really afford for [their] disability to get any worse. Otherwise we lose what little bit of independence that we have. (Spouse of Participant 2).*

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<sup>98</sup> Kulkarni J., Grady K. (2009) Post Amputation Chronic Pain Profile and Management. In: Murray C. (Ed.) Amputation, Prosthesis Use, and Phantom Limb Pain. New York: Springer.

Maintaining mobility was often referenced as being central to maintaining independence in general, and specifically active ageing, allowing participants to lead independent lives. Ineffective or inappropriately prescribed prostheses were seen as restricting mobility, rehabilitation and limiting independence. As a result of ill-fitting limbs, many participants described mobility issues which impacted on their quality of life, self-esteem and ability to maintain independence. Problems related to pain were often described as decreasing functional ability, preventing or disturbing sleep, impairing social activities and increasing social and physical isolation.

*Cycling particularly ... it's basically ripped my stumps to bits ... and knocked all the skin off, it bleeds, gets infected. I had to stop training ...so its big time held me back from cycling ... if you have discomfort, you can't walk any distance, difficult to go ... even just to go out to the shops or something like that.*

(Participant 6).

The pervasiveness of pain and comorbidities such as arthritis and residual limb pain also appeared to negatively complicate the process of growing older, often leaving participants in the current study 'struggling to adapt'. Pain management in the years after amputation was seen as increasingly challenging when adapting to old age. Many participants demonstrated a nuanced understanding of their pain (and its management) and the complex interaction between socket pain and phantom pain. The failure to initially control acute pain following limb-loss impacted on daily functioning and socialising and, for some participants, has led to chronic stump and phantom pain. It was evident from participants' accounts that the burden of pain after amputation is considerable. Severe post-amputation pains from phantom limbs have been recorded in survivors from World War II, some 50 years after the loss of a limb<sup>99</sup>. The phrase 'phantom pain' is used to define the illusion of presence of a limb after it has been amputated.

Previous research has identified the persistence of phantom pain that is severe enough to cause at least occasional debilitation as the norm rather than the exception. Sherman & Sherman<sup>100</sup> surveyed US veterans (N = 764) with combat or service-related amputations and reported that veterans believed that they were not being listened to when seeking treatment for phantom pains, and were consequently self-medicating with alcohol. Participants in this study described their own experiences of phantom pain in a limb and/or limbs which were

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<sup>99</sup> Neil, M.J.E. (2016) *Pain after Amputation*; *BJA Education*, 16 (3), 107–112.

<sup>100</sup> Sherman, R., and Sherman, C. (1983) Prevalence and characteristics of chronic phantom limb pain among American veterans. *American Journal of Physical Medicine*, 62, 5, 227-238.

removed and provided accounts of various types of persistent phantom sensations, distinct from stump pain, which were described as being felt in the residual body part:

*... my biggest problems weren't that ... my stump although it were tightening and being itchy that were quite (umm) quite bad. It were (umm) phantom pains. I suffered absolutely horrendous phantom pains.* (Participant 30).

*Phantom pain is also a bore. About once a month, it comes on in my right stump which jumps around and prevents me walking.* (Participant 7).

Seeking help for the pain and discomfort associated with phantom pain was described by participants as problematic, both in terms of being able to describe the pain adequately to health professionals and in terms of obtaining effective treatment.

*Well you try and explain it, but they just can't understand it. They don't know how I'm getting pain there when I haven't got an ankle there...And then I have to explain it that its nerve ends that come to here on your stump and you can't... you know it must be the brain doesn't know you haven't got that bit of leg.* (Participant 19).

*Because a lot of what I get is phantom pain. When you say that to a doctor they just look at you...* (Participant 8).

*... I was still in a lot of pain I must admit...there was still a lot of pain (umm) and at that stage the phantom pain was outright...outrageous. So I was on ... and I was on morphine tablets.* (Participant 14).

*Every hour on the hour for about five minutes your leg, [spouse] was trying to stop the pains. You know and ... [name] is on tablets constantly for phantom pains because we know that if [spouse] stops them [spouse] gets it really bad.* (Spouse of Participant 13).

The issue of phantom pain within the limbless veteran population has been acknowledged as a major problem and subject to academic discussion. Medically, phantom pain is viewed as 'difficult to treat' as the exact basis of pain mechanism is still unknown. Opioids are commonly used as a first-line treatment, with dose determined by effect and no defined ceiling dose<sup>101</sup>.

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<sup>101</sup> Kumar, V. Garg, R. Bharati, S.J. Gupta, N. Bhatanagar, S. Mishra, S. & Balhara, Y.P.S (2015) Long-Term High-dose Oral Morphine in Phantom Limb Pain with No Addiction Risk, Indian Journal of Palliative Care, 21 (1), 85 – 87.

Others have suggested that, although phantom pain is often classified as neuropathic pain, few of the large-scale trials of treatments for neuropathic pain have included sufficient numbers of phantom pain sufferers to have confidence that they effectively provide an evidential base for treatment of this condition<sup>102</sup>. In the updated version of the Cochrane Review on phantom limb pain<sup>103</sup>, it is noted that there is still uncertainty in relation to the most effective pharmacological management of symptoms. For participants in this study, it appeared that medications currently prescribed, appeared to provide limited benefits in terms of pain relief or quality of life more generally.

Stump pain presents a further well-known problem following amputation and is an ongoing issue throughout life<sup>104</sup>. Some participants reported that they were unable to routinely wear their prosthesis due to poorly fitting sockets. Adequate care (or rather, lack of such) around prosthetics was often the focus of participants' accounts, with significant emphasis placed on the importance of how the prosthetic 'sits' on the socket. It is noteworthy that comfort of the socket and stump pain are the most common symptoms referred to prosthetics clinics<sup>105</sup> and this was reflected in the experiences of study participants:

*It were a month or so before I could get my first prosthetic limb because obviously you're all angry, your stumps are all angry and sore and sorting yourself out.* (Participant 9).

*Because of my socket pain, I was bodily tense and compressing my spine.*  
(Participant 7).

*I've had to keep going back saying 'You've got to do something about this leg because it's making it sore'.* (Participant 4).

It is also well understood that there is a strong correlation between socket pain and phantom pain. In the UK, Warton and colleagues<sup>106</sup> carried out a survey on the prevalence of phantom pain and stump pain (N = 590 members of Blesma with traumatic limb-loss) and reported a high prevalence of phantom limb pain and stump pain. The intensity of phantom sensations

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<sup>102</sup> Richardson, C. & Kulkarni, J. (2017) A review of the management of phantom limb pain: challenges and solutions, *Journal of Pain Research*, 2017 (10), 1861–1870.

<sup>103</sup> Alviar, M.J.M. Hale, T. & Dungca, M. (2016) Pharmacologic interventions for treating phantom limb pain (Review), *Cochrane Database of Systematic Reviews*, 10.

<sup>104</sup> Ahmed, A, Bhatnagar, S. Mishra, S. Khurana, D. Joshi, S. & Ahmad, S.M. (2017) Prevalence of phantom limb pain, stump pain, and phantom limb sensation among the amputated cancer patients in India: A prospective, observational study, *Indian Journal of Palliative Care*, 23 (1), 24-35.

<sup>105</sup> Hanspal, R.S. Fisher, K. & Nieveen, R. (2003) Prosthetic socket fit comfort score. *Disability and Rehabilitation*, 25 (22), 1278-1280.

<sup>106</sup> Warton, S.W. Hamann, W. Wedley, J.R. & McColl, I. (1997) Phantom pain and sensation among British veteran amputees. *British Journal of Anaesthesia*, 78 (6), 652-659.

was seen as a significant predictor for time-course duration of phantom pain. Of the 149 amputees who reported phantom pain to their family doctor, 49 were told there was no treatment available.

Given the complex interaction between phantom and stump pain, it is unsurprising that concerns around pain management was a consistent issue for many participants: issues typically included a (perceived) inadequate response from care providers as well as a (perceived) lack of choice or options. For instance:

*... [Spouse] been let down time and time again. And this is a [person] who doesn't want to sit on [their] backside and do nothing, but [their] pain is huge! But then on the flipside [spouse] doesn't want to live a life on painkillers. So if we could get the socket sorted, the pain would go ... the pain wouldn't go necessarily, but it would be at a manageable level.* (Spouse of Participant 2).

*I have nerve pain in the stump ... don't mean a thing but the pain is inside and I tried to explain it to these people but [er] it's like I come from space. I've been in pain. I've been to pain clinic and they've tried every blinking thing on me to no avail on the nerve to make it go away.* (Participant 11).

Concern about the prescription and use of opioids was a salient feature of several participants' narratives:

*And I was in so much pain and that's what I said the morphine, it was so upsetting sometimes because I'd come in in tears ... I just didn't know where I was ... they give you a carrier bagful of medication, Tramadol, Oramorph... and I obviously did... I got addicted to morphine ...* (Participant 23)

*I was on so many different versions of morphine, I didn't know whether I was coming or going.* (Participant 2).

The effective treatment of pain requires specialist knowledge and training in pain management and is vital in terms of maintaining independence in the context of both limb-loss and ageing<sup>107</sup>. In the current study, it was clear from participants that pain was not, and should not be treated, as an isolated problem. The substantial health and social problems resulting from persistent pain contribute to greater responsibility, cost and resources for healthcare services<sup>108</sup>.

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<sup>107</sup> Schofield, P. Sofaer-Bennett, B. Hadjistavropoulos, T. Zwakhalen, S. Brown, C. Westerling, D. Weissbrod, D. Škvarč, N.K. & Wright, S. (2012) A collaborative expert literature review of pain education, assessment and management, *Ageing Health*, 8(1).

<sup>108</sup> Cairncross, L. Magee, H. & Askham, J. (2007) *A Hidden Problem: Pain in Older People*. Oxford: Picker Institute Europe.

Furthermore, the failure to assess pain appropriately and an underestimation of amputees levels of pain by healthcare providers contribute to chronic suffering<sup>109</sup> as reported by some participants in the current study. Conversely, 'life-as-normal' narratives highlighted a heightened sense of stoicism and a reluctance to 'make a fuss' and to [honestly] report levels of pain.

Families played a key role in the support networks of participants, the support and encouragement given by family was not only relied upon by participants but recognised as an essential element of their rehabilitation. In line with themes identified from participants, families identified apparent inadequacies in services provided to them for the treatment of pain and the help available was not felt appropriate.

### *Summary*

The maintenance of independence was seen as a fundamental aspect of successful ageing throughout the life-course. Pain management and treatment, particularly for older veterans with limb-loss, is a complex process. Results from this study have shown that some of the complexities relate to stoicism, reluctance to report pain, fear of the side effects of medications. Given these complexities and the potential impact on limbless veterans' and their families' wellbeing, attention must be given to effective management of pain throughout the life-course for those affected by stump and phantom pain. Access to healthcare is a prerequisite to obtaining quality of care and the issue of social unmet needs as a result of lack of mobility, requires further exploration. These issues have wider policy implications in relation to the integration of health and social care.

## **Education and Post Limb-Loss Employment**

Education, training and social backgrounds of participants prior to joining the military were varied. Some participants self-identified as 'not academic' and drawn to the military as an applied career to further their skills and education, whereas others, entered the military with greater levels of education and training. The pre-service social backgrounds of the participants had an important influence on the employment opportunities available to them following limb-loss.

Participants often struggled to transfer the skills gained in the military to civilian roles and those with limited pre-military experience of civilian employment, training and education (as a result of joining at a young age) found it particularly challenging to secure alternative employment.

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<sup>109</sup> Melding P. (2002), Can we improve pain management in nursing homes? Medical Journal of Australia, 177, 5–6.

These findings are mirrored by existing work, highlighting poorer employment and transitional outcomes for those entering the military early on in life, from disadvantaged backgrounds and with low levels of education<sup>110</sup>. Furthermore, research on veterans with lower-limb amputation found increased years of education as a predictor of health-related quality of life<sup>111</sup>. It is important to acknowledge the relevance of this for all participants, regardless of when they lost their limb(s).

For those who experienced in-service limb-loss, premature discharge resulted in the inability to develop skills, qualifications, or education to the level that initially anticipated. Previous observations have pointed to a particular risk of poor transition among those who exit the military prematurely<sup>77</sup>. A lack of support around employment and training during transition out of the military was a common experience for many participants. Although many of the participants noted the (now) increased range of opportunities for further study that are open to current cohorts of veterans, recent work also points to the low and delayed uptake of education and training opportunities post-service such as standard or enhanced learning credits<sup>77</sup>. Support was found here for suggestions that this low uptake was as a result of low consideration given to careers after service.

Previous literature (not specific to, but including the experiences of military veterans) found that the severity of amputation has a variable impact upon employment rates after limb-loss<sup>112</sup>. Participants with lower level amputations (e.g. below-knee) perceived that they faced fewer barriers to employment post-limb-loss in comparison to those with above-elbow or above-knee amputations. This was attributed to lower levels of physical restrictions, as well as the attitudes and practices of employers. The availability of appropriate and well-fitting prosthetics was also essential to the ability to continue to fulfil work roles.

Opportunities such as re-training or studying at university were sometimes closed-off to participants due to pragmatic issues of affordability (e.g. a lack of personal resource or financial support to cover the up-front costs of training) and the need to seek an immediate source of income. Participants' appraisal of opportunities for re-training were also affected by 'breadwinner anxiety'; a term used to describe the pressure participants felt to provide for, and

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<sup>110</sup> Forces in Mind. (2013). *The mental health of serving and ex-Service personnel review*. London: The Forces in Mind.

<sup>111</sup> Christensen J., Ipsen, T., Doherty, P., & Langberg, H. (2016) Physical and social factors determining quality of life for veterans with lower-limb amputation(s): a systematic review. *Disability and Rehabilitation*, 38:24, 2345-2353.

<sup>112</sup> Darter, B. J., Hawley, C. E., Armstrong, A. J., Avellone, L., & Wehman, P. (2018). Factors Influencing Functional Outcomes and Return-to-Work After Amputation: A Review of the Literature. *Journal of occupational rehabilitation*, 1-10.

avoid becoming a burden upon their families. This was exemplified when one participant suggested:

*I feel obligated that I should pay the bills. A bit old-fashioned like that I suppose*  
(Participant 13).

Participant 13 relayed the considerable anxiety and depression which they had previously experienced during a period of unemployment following injury, culminating in alcohol use in an attempt to address these feelings. Such concerns appeared to connect with notions of masculinity and what constituted a 'good husband', this extended to the performance of duties outside of paid employment. One participant described how prior to injury they did '*anything like what a husband would be doing*', including home repairs, driving, shopping, undertaking activities with the children and escorting them to and from school. This conveyed some loss to an identity as a 'husband' or 'father'.

A wife of a participant described how forming relationships with other couples after limb-loss was difficult as other women often assumed that she wanted to borrow their husbands for home repairs or other forms of domestic work. An inability to fulfil paid and domestic work responsibilities, or in some cases, to maintain traditional gender roles, was attached to a more general stigma of being out of work in society and/or to receiving benefits. This adds to the understanding of the pressure participants experienced with regards to finding re-employment, and the experience of low self-esteem where they are unable to do so. The significance of employment can be encapsulated in one participant's suggestion that on gaining employment they no longer felt like a "*dribbly underdog*" and another's description of a 9-month period of unemployment as "*my worst nine months in my life*".

A reticence to undertake further education, and the experience of breadwinner anxiety was connected with class identity. Even where participants possessed the capability, they perceived university as a route that was unavailable to them. In the words of one participant:

*I think for me in the 60s, mid-60s, uni was for rich kids. That was the realm of the rich, not the working people... The realm of the rich kids! The upper class, noses up the air jobs!* (Participant 1).

When describing how nobody in their family had previously attended university, participant 5 commented:

*I didn't get any encouragement so I wasn't sat down saying you know come on you need to revise! Because with two A Levels you could go to university. Or actually, now having had a military career, I knew that really I should have studied a bit harder and could have gone to Sandhurst.* (Participant 5)

Findings suggest multiple factors impacted post limb-loss employment including, participants' attitudes to education, class identity in education, personal assessment of learning capabilities, pressures to generate an income and 'breadwinner anxiety'. The physical side of education and training was also cited as problematic. One participant described how difficulty sitting for extended periods of time, combined with a lower perceived worth of education and old age produced a prohibitive effect upon their engagement in formal training.

Distinct challenges in the forms of employment available to the participants were also identified. Research not specific to veterans showed that only a small proportion of amputees return to their former role of employment, and that those who do so tend to be employed in an office rather than a manual occupation<sup>112</sup>. Greater levels of education have also been associated with access to more flexible forms of employment among amputees<sup>112</sup>. The majority of those leaving the forces find new employment in skilled trades and occupations (20%), associate professional and technical roles (17%), and elementary occupations (15%)<sup>77</sup>. Thus, a considerable proportion of those jobs typically taken up by ex-service personnel involve manual labour. However, the physical restrictions due to limb-loss, and in some cases the unavailability of prosthetics which can withstand the intensity of this work, means that limbless veterans are often unable to take up manual forms of employment. Taken together with a lack of opportunities to re-train for alternative occupations, limbless veterans are therefore at a particular disadvantage in finding employment. The limitations in the support available to veterans around finding employment further exacerbates this issue. As such, advice encouraging veterans to seek employment similar to their role in the military<sup>110</sup> is unlikely to apply to limbless veterans. Likewise, support that is predominantly oriented towards ensuring that ex-military personnel return to employment as soon as possible<sup>110</sup> may, in the case of limbless veterans, actually reinforce the sense of 'breadwinner anxiety' felt by participants.

The ability to continue with paid employment was not only beneficial for participants' self-worth, but also for ensuring a sense of financial security. Participants and families with less material and financial resources experienced a greater sense of precarity as they sought to cope with their injury. This was particularly so given that limb-loss often increased everyday financial outlay (e.g. due to the requirements to buy or hire equipment, make adaptations to the home, or pay for prescriptions and transport), and caring arrangements often reduced household income. In addition, many participants suggested that they self-funded aspects of their care to supplement or overcome gaps in mainstream health and social care provision. As not all veterans are able to afford to do so, this scenario risks widening health and social

inequalities. Drawn-out legal processes and long waiting times for the receipt of compensation disproportionately affected those most vulnerable and therefore exacerbated these inequities.

The transition review<sup>77</sup> posits that the 'most important factor in a successful transition is the attitude and preparation of the individual'. Findings highlight the extension of this to transition in general post limb-loss. Significant structural barriers were identified for participants including potential discrimination from employers and inequalities in access to care and prosthetics available. The transition review<sup>77</sup> recognises the influence of stereotyping and discrimination by employers towards veterans, such as preconceptions that they are institutionalised or aggressive. Limbless veterans are therefore likely to experience double jeopardy due to constrained employment opportunities, assumptions based on their disabilities.

### *Summary*

The ability to maintain a fulfilling career forms a key factor in the ability of veterans to maintain their independence and sense of self-worth following limb-loss. Pre-military education and socio-economic position have been shown to be an important risk indicators of the capacity of veterans to recover successfully following limb-loss. Findings point to the experience of cumulative inequality, whereby early disadvantage can become entrenched and perpetuated through subsequent life experiences and patterns of service provision. Support with re-gaining employment is highly important, particularly in cases where participants have limited education or training. This study points to the distinct and clustering challenges around employment and transition experienced by limbless veterans.

Those who struggled with post limb-loss employment were often unable to engage in further education or training, had preconceived perceptions of education, were unable to sustain previous career due to its physical nature or their employer's attitudes and experienced pressures to maintain their pre limb-loss identity. Forms of employment support offered to such groups must accommodate these challenges, particularly by ensuring that meaningful support for career change is provided where appropriate.

## Limb-Loss and Social Isolation

There are two primary narratives which shape the ways in which people experience older age – these are the ‘narrative of decline’ and narratives of ‘successful ageing’, both of which were reflected in the stories told by participants of this study. Despite ‘successful ageing’ narratives offering a much more positive vision of old age, they too have been criticised for creating unrealistic expectations for older people to live up to, and for creating a category of ‘unsuccessful agers’ who are by default labelled as ‘burdens’<sup>113</sup>. The ‘narrative of decline’ is the culturally pervasive perspective on ageing within Western societies<sup>67</sup>. In this narrative, an ever-ageing population is seen as a social problem as individuals become increasingly dependent on health and welfare services. The ‘narrative of decline’ is a highly negative depiction of ageing. Participants in this study were keen to distance themselves from this narrative.

By describing the ways in which they fought to stay independent, the participants clearly sought to align themselves with narratives of ‘successful ageing’, rather than the ‘narrative of decline’. For the most part, participants’ efforts in this regard were positive, highlighting their resilient ‘get-on-with-it’ approach to staying independent. However, analysis also revealed how this approach can work to the detriment of veterans’ health and well-being, such as being stoic, by ‘doggedly’ striving to complete various physical tasks despite increasing levels of pain and damage to joints, or through being ‘too independent’ to seek help to address care needs or social isolation. Understanding and identifying the point at which veterans’ efforts to stay independent (i.e., to age ‘successfully’) start to become detrimental to health and well-being is therefore an important challenge for ensuring that support is accessed where it is needed. Age was often perceived as ‘exaggerating’ the impact of limb-loss; namely upon, mobility, social isolation and loneliness.

Social isolation and loneliness are different concepts, despite often being misunderstood as one. Whereas social isolation is more objective and considers the social environment, such as the frequency of social relations and social networks<sup>114</sup>, loneliness is a subjective social and emotional experience of the discrepancy between the social relationships an individual has and the social relationships they wish to have<sup>115</sup>. It is now understood that loneliness and social isolation are linked to multiple health related risk factors, such as an increased risk of

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<sup>113</sup> Lamb, S. (2014). Permanent personhood or meaningful decline? Toward a critical anthropology of successful aging. *Journal of aging studies, 29*, 41-52.

<sup>114</sup> Victor, C., Scambler, S., Bond, J., & Bowling, A. (2000). Being alone in later life: loneliness, social isolation and living alone. *Reviews in Clinical Gerontology, 10*(4), 407-417.

<sup>115</sup> Walton, C. G., Shultz, C. M., Beck, C. M., & Walls, R. C. (1991). Psychological correlates of loneliness in the older adult. *Archives of Psychiatric Nursing, 5*(3), 165-170.

high blood pressure<sup>116</sup>, cognitive decline<sup>117</sup>, depression<sup>118</sup>, and mortality<sup>119,120</sup>. Its importance and impact is coming to the forefront of public attention with the founding of charities in the wider population, such as the Campaign to End Loneliness<sup>121</sup>, and the Jo Cox Commission<sup>122</sup> seeking to address these challenges.

Evidence from UK military charities suggests that both loneliness and social isolation are prevalent issues for veterans of all ages<sup>123,124</sup>, and with the majority of available evidence, and public attention, currently focusing on increased age as a risk factor for loneliness<sup>125</sup>, it is imperative to consider the potential impact on aged veterans. Older adults are particularly vulnerable to feelings of social isolation and loneliness due to illness and disability<sup>126</sup> as well as social and geographical mobility issues<sup>127</sup>. Whereas veterans can feel lonely or socially isolated due to military-specific factors including PTSD and trauma<sup>128,129,130,131</sup>.

Within this study, social isolation and loneliness were openly discussed by participants, and were considered to be the result of, increased physical limitations, bereavement or family changes. These factors led to decreased social networks, and are also important factors of

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<sup>116</sup> Hawkey L. C, Masi C. M, Berry J. D, Cacioppo J. T. (2006) Loneliness is a unique predictor of age-related differences in systolic blood pressure. *Psychology and aging*, **21**(1), 152.

<sup>117</sup> James BD, Wilson RS, Barnes LL, Bennett DA. (2011) Late-life social activity and cognitive decline in old age. *Journal of the International Neuropsychological Society*, **17**(6), 998-1005.

<sup>118</sup> Cacioppo J. T, Hughes M. E, Waite L. J, Hawkey L. C, Thisted R. A. (2006). Loneliness as a specific risk factor for depressive symptoms: cross-sectional and longitudinal analyses. *Psychology and aging*, **21**(1), 140.

<sup>119</sup> Steptoe A, Shankar A, Demakakos P, Wardle J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. *Proceedings of the National Academy of Sciences*, **110**(15), 797-801.

<sup>120</sup> Holt-Lunstad J, Smith T. B, Layton J. B. (2010). Social relationships and mortality risk: a meta-analytic review. *PLoS medicine*, **7**(7).

<sup>121</sup> <https://www.campaigntoendloneliness.org>

<sup>122</sup> <https://www.jocoxloneliness.org>

<sup>123</sup> Royal British Legion. (2014). *A UK household survey of the ex-service community*. London: The Royal British Legion.

<sup>124</sup> SSAFA. (2017, 23.10.17). Retrieved from <https://www.ssafa.org.uk/latest/41-veterans-have-felt-isolated-research-reveals>

<sup>125</sup> Kuwert, P., Knaevelsrud, C., & Pietrzak, R. H. (2014). Loneliness Among Older Veterans in the United States: Results from the National Health and Resilience in Veterans Study. *American Journal of Geriatric Psychiatry*, **22**(6), 564-569.

<sup>126</sup> Goll, J. C., Charlesworth, G., Scior, K., & Stott, J. (2015). Barriers to social participation among lonely older adults: the influence of social fears and identity. *PLoS one*, **10**(2).

<sup>127</sup> Valtorta, N., & Hanratty, B. (2012). Loneliness, isolation and the health of older adults: do we need a new research agenda?. *Journal of the Royal Society of Medicine*, **105**(12), 518-522.

<sup>128</sup> Itzhaky, L., Stein, J. Y., Levin, Y., & Solomon, Z. (2017). Posttraumatic stress symptoms and marital adjustment among Israeli combat veterans: The role of loneliness and attachment. *Psychological Trauma: Theory, Research, Practice, and Policy*, **9**(6), 655.

<sup>129</sup> Solomon, Z., Bensimon, M., Greene, T., Horesh, D., & Ein-Dor, T. (2015). Loneliness trajectories: The role of posttraumatic symptoms and social support. *Journal of Loss and Trauma*, **20**(1), 1-21.

<sup>130</sup> Stein, J. Y., & Tuval-Mashiach, R. (2015). Loneliness and isolation in life-stories of Israeli veterans of combat and captivity. *Psychological trauma: theory, research, practice, and policy*, **7**(2), 122.

<sup>131</sup> Celeste Carr, D., Ureña, S., & Taylor, M. G. (2017). Adjustment to Widowhood and Loneliness Among Older Men: The Influence of Military Service. *The Gerontologist*.

social isolation and loneliness within both the veteran<sup>132,133,134</sup> and ageing population<sup>126</sup> literature. However, it is important to note that limb-loss further exacerbated participants' vulnerability to social isolation and loneliness in older age.

Limb-loss affected perceived loneliness and social isolation; either due to mobility issues and not being able to partake in regular activities, concerns about self-image, and not relating to others. Individuals generally understood their decreased mobility (due to their limb-loss and ageing) as having an impact on their independence, completion of daily activities, and quality of life; specifically their ability to participate socially outside of the home. It is understood that loneliness and social isolation experienced by veterans can be the result of 'alienation'<sup>130</sup>, and in this study, this seemed heightened due to limb-loss. Previous literature suggests that group interventions targeting specific groups are most effective in reducing social isolation<sup>135</sup>. In line with this, participants identified peer-support groups, both military and amputee-specific, as highly valuable. Research also found the reactions of others towards limb-loss reinforced the stigma participants felt and their concerns about body image<sup>136</sup>. In light of these issues, many participants, particularly older veterans, opted to hide their limb-loss or prostheses. This was described as a strategy for impression management, and avoiding stigmatisation. Peer-support, including support provided by limb-loss specific charities such as Blesma and non-military charities, was considered to be crucial in terms of providing social networks of like-minded people, with similar experiences and a sense of camaraderie. Being connected to others through shared stories, shared understandings and shared challenges unsurprisingly appeared to be imperative to participants' social participation.

### Summary

Older adults and veterans are both societal groups that are vulnerable to perceived loneliness and social isolation, and it is evident that limb-loss also accentuates this. Both social isolation and loneliness were issues for participants, and this was due to factors including mobility issues, concerns about self-image, and feeling unable to relate to others.

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<sup>132</sup> Carr, D., Ureña, S., & Taylor, M. G. (2017). Adjustment to Widowhood and Loneliness Among Older Men: The Influence of Military Service. *The Gerontologist*, *gnx110*.

<sup>133</sup> Gould, C. E., Shah, S., Brunskill, S. R., Brown, K., Oliva, N. L., Hosseini, C., Bauer, E., Huh, J. W. T. (2017). RESOLV: Development of a telephone-based program designed to increase socialization in older veterans. *Educational Gerontology*, *43*(8), 379-392.

<sup>134</sup> Monin, J. K., Mota, N., Levy, B., Pachankis, J., & Pietrzak, R. H. (2017). Older Age Associated with Mental Health Resiliency in Sexual Minority US Veterans. *American Journal of Geriatric Psychiatry*, *25*(1), 81-90.

<sup>135</sup> Cattan, M., White, M., Bond, J., & Learmouth, A. (2005). Preventing social isolation and loneliness among older people: a systematic review of health promotion interventions. *Ageing & Society*, *25*(1), 41-67.

<sup>136</sup> Murray, C. D., & Fox, J. (2002). Body image and prosthesis satisfaction in the lower limb amputee. *Disability and Rehabilitation*, *24*(17), 925-931.

## Limb-Loss, Independence and Activities of Daily Living

Within health research, the phrase 'Activities of Daily Living'<sup>137</sup> (ADLs) is commonly used to refer to the fundamental skills, capacities and resources required to maintain basic care needs and engagement in regular day-to-day living. ADLs are categorised as basic ADLs or instrumental ADLs. Basic ADLs are essential self-care activities commonly mastered throughout the course of early childhood. There are five domains which are typically included: personal hygiene and grooming, dressing, toileting and continence, mobility and ambulation and eating. Instrumental ADLs include the more complex, higher-order functions which are required in order to maintain independence and quality of life, typically mastered during adolescence or early adulthood. These domains include financial self-management, management of one's health and medications, housekeeping, shopping, food preparation, travelling by car or by public transport and using the telephone.

Previous research has identified limb-loss as a significant cause of disability which may result in heavy ADL dependency. Upper-limb amputees may experience ADL dependency in areas such as dressing or food preparation<sup>138</sup>, while individuals with lower-limb amputations commonly experience ADL dependency in areas such as bathing and home ambulation<sup>139</sup>. Level of amputation is correlated with level of functional impairment amongst upper and lower limb amputees. In both cases, bilateral amputees reported significantly greater levels of functional impairments and ADL dependency than unilateral amputees<sup>139,140,141</sup>. Amongst upper extremity amputees, above-elbow amputees reported significantly greater levels of impairment than below-elbow amputees<sup>142,143</sup>. Similarly, among lower extremity amputees, above-knee amputees reported significantly greater levels of impairments and dependency than below-knee amputees<sup>139,140,144</sup>.

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<sup>137</sup> Roper, N. (2000). *The Roper-Logan-Tierney model of nursing: based on activities of living*. Edinburgh: Churchill Livingstone.

<sup>138</sup> Jang, C. H., Yang, H. S., Yang, H. E., Lee, S. Y., Kwon, J. W., Yun, B. D., . . . Jeong, H. W. (2011). A survey on activities of daily living and occupations of upper extremity amputees. *Ann Rehabil Med*, 35(6), 907-921.

<sup>139</sup> Narang, I. C., Mathur, B. P., Singh, P., & Jape, V. S. (1984). Functional capabilities of lower limb amputees. *Prosthet Orthot Int*, 8(1), 43-51.

<sup>140</sup> Helm, P., Engel, T., Holm, A., Kristiansen, V. B., & Rosendahl, S. (1986). Function after lower limb amputation. *Acta Orthop Scand*, 57(2), 154-157.

<sup>141</sup> Østlie, K., Franklin, R. J., Skjeldal, O. H., Skrondal, A., & Magnus, P. (2011). Assessing physical function in adult acquired major upper-limb amputees by combining the Disabilities of the Arm, Shoulder and Hand (DASH) Outcome Questionnaire and clinical examination. *Arch Phys Med Rehabil*, 92(10), 1636-1645.

<sup>142</sup> McFarland, L. V., Choppa, A. J., Betz, K., Pruden, J. D., & Reiber, G. E. (2010). Resources for wounded warriors with major traumatic limb loss. *Journal of Rehabilitation Research and Development*, 47(4), 1.

<sup>143</sup> Ovadia, S. A., & Askari, M. (2015). Upper extremity amputations and prosthetics. *Semin Plast Surg*, 29(1), 55-61.

<sup>144</sup> Vogel, T. R., Petroski, G. F., & Kruse, R. L. (2014). Impact of amputation level and comorbidities on functional status of nursing home residents after lower extremity amputation. *J Vasc Surg*, 59(5), 1323-1330

Existing research exploring the impact of limb-loss upon ADL independence has typically adopted a quantitative cross-sectional design. As such, there is a paucity of research which aims to explore the real-life impact of limb-loss upon veterans' ADLs throughout the life-course. The present study represents the only qualitative inquiry to date, which has attempted to explore veterans' lived experiences of the immediate, short-term and long-term functional impairments associated with limb-loss.

ADLs featured heavily throughout participants' personal stories, spanning ubiquitously across superordinate themes and narrative types. The capacity to achieve ADL independence emerged as a highly influential factor in determining the trajectory of participants' personal stories at different times throughout their lives. The data suggests that ADL independence is central to participants' perceived quality of life and their confidence in their ability to overcome and adapt to the challenges associated with limb-loss. Furthermore, this study illustrates the many ways in which the physical challenges associated with limb-loss, may impact upon veterans' capacity to achieve ADL independence throughout the life-course.

Findings suggest that the capacity to achieve ADL independence may be significantly impaired during the early stages of limb-loss, as veterans await the initial provision of prosthetic limbs. For many participants, the early post-operative phase was characterised by significant restrictions in mobility and physical functioning, resulting in ADL dependence and heightened psychological distress. Participants frequently reported that psychological distress experienced during the early post-operative phase did not abate until physical rehabilitation began. Contemporary research suggests that pre-prosthetic rehabilitation during the early post-operative stage may promote the rehabilitation of physical functioning and reduce long-term ADL dependency<sup>145</sup>. Pre-prosthetic rehabilitation typically involves strength training, residual limb shaping and non-prosthetic mobility training<sup>146,147</sup>. In addition to promoting physical recovery, the findings of this study suggest that pre-prosthetic rehabilitation may be associated with additional psychological benefits for veterans affected by limb-loss. Interventions which improve mobility and ADL independence during the pre-prosthetic phase, may be associated with reductions in early psychological distress.

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<sup>145</sup> De-Rosende Celeiro, I., Simon Sanjuan, L., & Santos-Del-Riego, S. (2017). Activities of daily living in people with lower limb amputation: outcomes of an intervention to reduce dependence in pre-prosthetic phase. *Disabil Rehabil*, 39(18).

<sup>146</sup> Esquenazi, A., & DiGiacomo, R. (2001). Rehabilitation after amputation. *Journal of the American Podiatric Medical Association*, 91(1), 13-22.

<sup>147</sup> Geertzen, J., van der Linde, H., Rosenbrand, K., Conradi, M., Deckers, J., Koning, J., . . . Voesten, H. (2015). Dutch evidence-based guidelines for amputation and prosthetics of the lower extremity: Rehabilitation process and prosthetics. Part 2. *Prosthet Orthot Int*, 39(5).

This study also demonstrates that appropriate housing and required home adaptations are essential to maintain ADL independence amongst veterans affected by limb-loss. For a number of participants, receiving support from local authorities in order to secure appropriate housing or receiving aid from local authorities and third sector organisations to fund required home adaptations, facilitated a shift in their stories from 'struggling to adapt', to 'adapting to struggle'. This was characterised by reduced ADL dependency and an enhanced quality of life.

Since 1990, UK law has required that local housing authorities provide financial aid to disabled individuals in order to fund required home adaptations<sup>148</sup>. More recently, the Care Act of 2014 has reinforced this statutory obligation, explicitly outlining the importance of suitable living arrangements and appropriate home adaptations. The UK government recognises additional responsibilities to veterans who have acquired a disability or illness due to their military service. The Armed Forces Covenant represents an informal understanding between the government, the nation and the Armed Forces, that those who serve or have served will be treated with fairness, respect and gratitude. This study explicitly illustrates the value of such understanding for support for veterans affected by limb-loss in terms of promoting ADL independence, and maintaining a good quality of life across the whole life-course.

Previous research has identified significant maintenance issues with prosthetic limbs, which require regular adjustment, repairs and replacements in order maintain proper fit and full functionality over time. For example, Nair, Hanspal, Zahedi, Saif and Fisher<sup>149</sup> analysed the provision and maintenance of prostheses amongst 173 above-knee and below-knee amputees over a 10 year period (1993-2002). Above-knee amputees required an average of 0.96 new prosthesis, 2.31 major repairs, 21.85 minor repairs, 3.27 new sockets and 3.36 component changes, while below-knee amputees required an average of 1.44 new prostheses, 3.16 major repairs, 14.19 minor repairs and 2.89 new sockets. Problems with prosthetics may result in significant pain, discomfort and functional impairments for amputees. Other research reported 40% of veterans had experienced medical problems as a result of prosthesis use and 82% reported a limiting capacity to engage in physical activities due to issues related to prosthetics<sup>150</sup>.

This study suggests that problems with prosthetics may significantly impact upon limbless veterans' capacity to engage in ADLs throughout the life-course. Participants reported

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<sup>148</sup> House of Commons (1990) *The National Health Service and Community Care Act*. London: HMSO.

<sup>149</sup> Nair, A., Hanspal, R. S., Zahedi, M. S., Saif, M., & Fisher, K. (2008). Analyses of prosthetic episodes in lower limb amputees. *Prosthet Orthot Int*, 32(1), 42-49.

<sup>150</sup> Sherman, R. A. (1999). Utilization of prostheses among US veterans with traumatic amputation: a pilot survey. *Journal of Rehabilitation Research and Development*, 36(2), 100.

persistent problems with prosthetics, resulting in limitations in mobility and restrictions in physical activities. They emphasised the importance of ongoing high-quality prosthesis care in terms of maintaining independence and quality of life. Therefore, it is suggested that high quality prosthetic limbs and timely access to specialist prosthesis care, is essential in order to maintain ADL independence amongst veterans affected by limb-loss.

ADL dependency is a growing concern as limbless veterans progress throughout later life. Previous research suggests that there is a negative correlation between age and ADL independence amongst amputees, with elderly amputees reporting significantly greater levels of impairment than younger amputees<sup>151,152,153</sup>. In line with previous research, this study suggests that age-related factors may compound the physical challenges associated with limb-loss, resulting in greater levels of ADL dependency during later life. Participants described the impact of age-related physical decline and musculoskeletal conditions such as arthritis. Due to reduced strength and heightened pain and discomfort, many participants reported reductions in their capacity to engage in ADLs independently.

An additional factor which must be considered as limbless veterans progress throughout later-life is their capacity to drive a car. Many participants emphasised the importance of driving in terms of their overall quality of life and ADL independence. However, within the UK, a Group One licence is only valid until the time that the holder reaches 70 years of age. At this time, and every three years thereafter, the holder is required by law to renew their licence by submitting a medical questionnaire to the Driver & Vehicle Licensing Agency (DVLA). Individuals with a medical condition which may impair their capacity to drive may also require a driving assessment or a medical examination. A number of participants in the present study discussed the ways in which age-related physical decline has resulted in an inability to continue driving during later life. Participants perceived the inability to drive as a significant threat to independence, resulting in restrictions in mobility and a need to rely upon others to engage in regular daily activities. It is clear that driving is considered to be fundamental to ADL independence amongst this population. As such, this study suggests that during later life, veterans who are affected by limb-loss may require additional support in order to maintain ADL independence if they find that they are no longer able to drive a car.

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<sup>151</sup> De-Rosende Celeiro, I. D.-R., Santos-del-Riego, S., & García, J. M. (2017). Homebound status among middle-aged and older adults with disabilities in ADLs and its associations with clinical, functional, and environmental factors. *Disability and health journal*, *10*(1), 145-151.

<sup>152</sup> Schoppen, T., Boonstra, A., Groothoff, J. W., de Vries, J., Goeken, L. N., & Eisma, W. H. (2003). Physical, mental, and social predictors of functional outcome in unilateral lower-limb amputees. *Arch Phys Med Rehabil*, *84*(6), 803-811.

<sup>153</sup> Shin, J. C., Kim, E. J., Park, C. I., Park, E. S., & Shin, K. H. (2006). Clinical features and outcomes following bilateral lower limb amputation in Korea. *Prosthet Orthot Int*, *30*(2), 155-164.

### *Summary*

This study illustrates that veterans who are affected by limb-loss require timely access to high quality support and specialist healthcare services, starting from the time of amputation and extending throughout the life-course in order to maintain ADL independence. A holistic, multifaceted approach to care and support which integrates a wide range of services and resources is essential in order to ensure that veterans affected by limb-loss receive the care and support they require to maintain ADL independence. Special attention must be paid to older veterans who suffered limb-loss prior to contemporary medical advances in prosthetic devices and prosthetic care. The present study demonstrates that such individuals may experience a number of barriers to ADL independence, due to the long-term use of poor quality prosthetic devices and limitations in early rehabilitation and prosthetic care. Age-related physical decline and medical comorbidities may further impair older veterans' capacity to achieve ADL independence as they progress throughout later-life. The capacity to engage in ADLs independently was a highly influential factor in the trajectory of participant's personal life-stories, which determined their perceived wellbeing and quality of life and confidence in their ability to successfully adapt to the challenges associated with limb-loss. As such, promoting ADL independence should be a key priority for organisations wishing to support veterans affected by limb-loss.





**APPENDIX J**  
**RESEARCH REPORT 3**

Delphi Study - Technical Report  
Understanding Unique Factors of Social Isolation and Loneliness of Military Veterans – A  
Delphi Study

# Understanding Unique Factors of Social Isolation and Loneliness of Military Veterans: A Delphi Study



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## The Northern Hub for Veterans and Military Families Research

The Northern Hub for Veterans and Military Families Research was established in 2014 and sits within Northumbria University Newcastle. It is a collective of academics, service providers and service users with an interest in improving the health and social wellbeing of veterans and their families. The Hub is led by Dr Matthew D. Kiernan, Lieutenant Commander RN (Q) retired.

The hub has established itself through an evolutionary process attracting and welcoming anyone with a genuine interest in its vision. A fundamental principle of the hub is collaboration in research for the benefit of others. We openly welcome innovative research that helps improve and understand the complexities that our veterans and their families experience across the whole lifespan.



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# ARMED FORCES COVENANT FUND TRUST

### **The Armed Forces Covenant Fund Trust**

This project is funded by The Armed Forces Covenant Fund Trust. The trust makes grants to support members of the Armed Forces Community. Launched in 2015, the Covenant Fund work with organisations across the UK to support delivery of the Armed Forces Covenant locally. Aged Veterans Fund is funded by the Chancellor using LIBOR funds.



### **The Royal British Legion**

The Royal British Legion help members of the Royal Navy, British Army, Royal Air Force, Reservists, veterans and their families all year round. They also campaign to improve their lives, organise the Poppy Appeal and remember the fallen.

### **Participants**

Participants were recruited from various organisations across the United Kingdom. We would like to thank all participants for your time in completing this study - without you, this research would not be possible.

## Executive Summary

Social isolation and loneliness are recognised societal issues, and it is estimated that between 5% and 18% of adults in the United Kingdom feel that they are 'often' or 'always' lonely (Co-Op Foundation and The Red Cross, 2016; Office for National Statistics, 2018). Furthermore, social isolation and loneliness are highlighted as being central to the narratives of military veterans, and the Armed Forces Community (Kiernan et al., 2018; Stapleton, 2018; Wilson, Hill, & Kiernan, 2018).

This study aimed to gather expert consensus relating to the cause, impact and ways to tackle social isolation and loneliness of military veterans. It builds on previous research conducted by the Northern Hub for Veterans and Military Families Research, Northumbria University which highlighted that military veterans can experience social isolation and loneliness in a 'unique' way (Kiernan et al., 2018; Wilson, Hill & Kiernan, 2018). This 'uniqueness' is due to military-related intrinsic and extrinsic factors including number of transitions, military-related trauma such as limb loss, physical health and mobility, and losing touch with comrades (Kiernan et al., 2018; SSAFA, 2017; Stapleton, 2018; Wilson et al., 2018).

Using the Delphi method (Helmer-Hirschberg, 1967) to gather expert consensus of military veterans' social isolation and loneliness, this study aimed to:

- Further explore the concept that veterans are considered as being 'unique' to adults to the general population, and other members of the armed forces community in their experiences of social isolation and loneliness.
- Consider whether older veterans are 'unique' to younger veterans in their experiences of social isolation and loneliness.
- Examine perceived factors leading to social isolation and loneliness of veterans.
- Identify perceptions of how to tackle veterans' social isolation and loneliness.

Three surveys were disseminated to a panel of experts consecutively, with each new phase building on the findings of the previous. To be an 'expert' as part of this study, participants were either a veteran themselves, or working with veterans and had knowledge of social isolation and loneliness. The first phase of the study utilised a qualitative design and broadly aimed to identify expert opinion of issues of social isolation and loneliness in the veteran population. Phases Two and Phase Three used mixed-methods to develop themes generated in Phase One.

The study resulted in ten assertions that attained clear consensus agreed by experts:

- Social prescribing services should link veterans to relevant community/civilian services

- Building emotional resilience during transition is an important part of transitioning to civilian life
- Veterans would benefit from integrating into the wider community
- Awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and loneliness
- Transportation should be considered when delivering programmes/activities
- During transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services
- Social prescribing services should link veterans to relevant military-specific services
- Awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and loneliness
- Technology should be supplementary within programmes/activities
- The content of regular programmes/activities should change frequently

#### Recommendations for practice

Listed below, the recommendations for practice underline the consensus from the experts who took part in this study:

1. Transition from the military is a key period to highlight the impact of social isolation and loneliness, and to increase emotional resilience. Lifelong psychosocial well-being should be recognised and promoted throughout transition.
2. Veterans should be made aware of both civilian and military-specific services available to them across the UK. Both social prescribing and transition are key to this. The Ministry of Defence, and Health and Social Care service providers must understand the severity of these issues, and their consequences, throughout the life course.
3. Activities/programmes for social isolation and loneliness should consider how individuals access them. Transportation and access to activities are fundamental to their success, to ensure that those who live in rural areas or have trouble with transportation are able to attend.
4. Experts considered a number of different features of activities/programmes, ranging from technology use, changing content, and intergenerational content (such as skills-based activities). The value of consultation with veterans themselves (or the target population) is fundamental to success.
5. There is a need for further understanding of the cause and impact of social isolation and loneliness of veterans. An initial lack of consensus demonstrated the varying views of experts, some of which was significantly contrary to developed evidence.

## Future Research

In order to ensure best practice is evident, future research should aim to capture veterans' perspectives as to the unique factors they face when it comes to social isolation and loneliness to further develop this narrative, and the evidence base. In continuing to develop partnerships between academics and practitioners, it is possible to create and evaluate activities/programmes aiming to tackle veterans' social isolation and loneliness in order to develop this evidence base. To better understand the causes, impacts and methods to tackle social isolation and loneliness, it is also worth considering further research with the wider Armed Forces Community.

# 1. Introduction

## 1.1 Background

Both social isolation and loneliness are different concepts but are often inaccurately defined and measured as one. Loneliness is a subjective social and emotional experience, characterised as the discrepancy between the social relationships we have and the social relationships we wish to have (Walton, Shultz, Beck, & Walls, 1991). Whereas, social isolation is an objective state which considers the integration of the individual in a social environment, such as the frequency of social relations and social networks (Victor, Scambler, Bond, & Bowling, 2000). Despite there being no direct link between social isolation and loneliness (Wenger, 1983), individuals can experience both social isolation and loneliness together, especially if presenting with factors relating to both, namely: living alone, never being married, widowhood, advanced age, and poor health (Wenger, Davies, Shahtahmasebi, & Scott, 1996).

Social isolation and loneliness are linked to poor physical health and well-being, such as an increased risk of high blood pressure (Hawkey, Masi, Berry, & Cacioppo, 2006), cognitive decline (James, Wilson, Barnes, & Bennett, 2011), depression (Cacioppo, Hughes, Waite, Hawkey, & Thisted, 2006) and mortality (Holt-Lunstad, Smith, & Layton, 2010; Steptoe, Shankar, Demakakos, & Wardle, 2013).



Over the past two years, the national conversation around these issues has dramatically increased, with cause-specific organisations such as the Jo Cox Commission, and the Campaign to End Loneliness having advanced this agenda. The increased recognition of social isolation and loneliness has resulted in the introduction of the United Kingdom's first Minister for Loneliness, and a governmental report which sets out goals to improve the evidence base, embed loneliness across policy, and build national conversation (Department for Digital Culture Media and Sport, 2018).

Both social isolation and loneliness are central to the narratives of military veterans, and across the whole Armed Forces Community (Kiernan et al., 2018; Stapleton, 2018; Wilson et al., 2018). The 'uniqueness' of the military cohort in their experiences of social isolation and loneliness has been acknowledged, with intrinsic and extrinsic factors related to military experiences, such as increased number of transitions, military-related trauma, physical health, and losing touch with comrades, being associated with the prevalence and experiences of social isolation and loneliness of veterans (Kiernan et al., 2018; SSAFA, 2017; Stapleton, 2018; Wilson et al., 2018). Currently, most of the broader evidence base has been developed with a focus on older adults in the wider population. Older adults can be more likely to experience feelings of social isolation and loneliness due to illness and disability (Goll, Charlesworth, Scior, & Stott, 2015) and social and geographical mobility issues (Valtorta & Hanratty, 2012). Age-related factors in this area have also been acknowledged in military-specific research led by the Royal British Legion (Stapleton, 2018), and the Royal British Legion found that 370,000 older military veterans reported being lonely, with over twice that number reporting some difficulties with relationships or isolation (Royal British Legion, 2014).

Although social isolation and loneliness have been highlighted as an issue within the Armed Forces Community, the evidence base remains limited. Current available information primarily focuses on causes and impact of social isolation and loneliness, however, there is a distinct lack of literature looking at 'what works' when aiming to tackle social isolation and loneliness in this population (Stapleton, 2018).

## 2. Project Aims

This study aims to gather expert consensus relating to the cause, impacts and ways to tackle social isolation and loneliness of military veterans by:

- Further exploring the concept that veterans are considered as being 'unique' to adults to the general population, and other members of the armed forces community in their experiences of social isolation and loneliness.
- Considering whether older veterans are 'unique' to younger veterans in their experiences of social isolation and loneliness.
- Examining perceived factors leading to social isolation and loneliness of veterans.
- Identifying perceptions of how to tackle veterans' social isolation and loneliness.



## 3. Methodology

### 3.1 Design

The Delphi method is a forecasting process designed to achieve consensus from a group of experts, around issues where there is little definitive evidence (Helmer-Hirschberg, 1967; McKenna, 1994; Thangaratinam & Redmann, 2005). To obtain this consensus, the Delphi method uses a series of surveys interspersed with controlled feedback from the research team (Dalkey & Helmer, 1963). The panel of experts are unknown to each other, therefore avoiding counterproductive group dynamics that can occur within group settings (Thangaratinam & Redmann, 2005). Furthermore, within this study, whilst the expert panel were known to the research team, the responses were anonymous.

This Delphi study utilised a mixed-method design, and was carried out over three phases:

- **Phase One** took a qualitative approach by asking open-ended questions.
- **Phase Two and Phase Three** utilised a mixed-methods design in which both Likert scales, and open-ended questions were used.

The study has received full ethical approval from Northumbria University's Ethical Approval System (reference code: 12357).

### 3.2 Participants and Recruitment

The Delphi method is built on the premise of participants being 'experts'. To be an 'expert' within this study, participants were either a veteran themselves, or working with veterans, and had knowledge of social isolation and loneliness.

The research team identified twenty-four individuals as experts in the field and each were contacted via email in each phase. Using a snowball technique, participants were asked to forward the study to anyone they knew who fit the study's criteria of 'expert' (Jorm, 2015).

### 3.3 Data Collection and Analysis

Each round was designed and developed separately. Each phase will be discussed in separate chapters. Prior to each survey being sent to the expert panel, it was piloted with up to five individuals using the Think Aloud technique (Collins, 2003). Individual feedback was used to edit the survey, to ensure accuracy and readability.

## 4. Phase One

### 4.1 Survey Development

This phase of the Delphi study aimed to broadly identify participants' opinions of social isolation and loneliness in the veteran population. The questions within the first phase were developed from previous evidence, including academic research and grey literature. This evidence highlighted differing experiences of social isolation and loneliness of both younger and older veterans, and that these groups had different needs when tackling social isolation and loneliness (Kiernan et al., 2018; Stapleton, 2018; Wilson et al., 2018). There was also evidence to suggest that veterans were a 'unique' cohort, compared to the wider population (Wilson et al., 2018). Therefore, Phase One posed five open-ended questions to the expert panel (Table 1).

Table 1. Questions presented in Phase One

Questions
From your experience, do you believe that older veterans (aged 60+) experience social isolation and/or loneliness in a different way to older adults in the wider population? Please explain.
From your experience, do you believe that older veterans (aged 60+) access programmes to tackle social isolation and/or loneliness in a different way to older adults in the general population? Please explain.
From your experience, do you believe that younger veterans and older veterans (aged 60+) experience social isolation and/or loneliness, or access programs to tackle social isolation and/or loneliness in different ways? Please explain.
From your experience, what do you believe are the factors that lead to social isolation and/or loneliness for older veterans? Please explain.
From your experience, how would you tackle social isolation and/or loneliness in older veterans? Please explain.

Four demographic questions were also asked: 'Are you a veteran?'; 'What is your job role?'; 'Which best describes the area you work in?'; 'How many years have you worked in this area?' (See Appendix A for Phase One survey).

## 4.2 Analysis

Thematic Analysis (Braun & Clarke, 2006) was used to analyse the participant's responses in Phase One. This process involved steps to generate themes from the participant responses. Initially, the data was examined by the research team to elicit as much information as possible in order to understand and organise the responses. Codes were then generated and quotes from the participants were collated, in line with the aims and objectives to the study. By this stage of the process, the data had been sifted and sorted in its core themes in preparation for summary and interpretation.

## 4.3 Findings

### Participant Characteristics

Twenty-seven participants took part in Phase One. Of these 27, 15 were veterans aged 59 and younger, four were veterans aged 60 years or over, seven were not veterans and one did not disclose this information (Table 2).

Table 2. Phase One participants veteran status (N=27)

Number of Participants	Veteran Status
Veteran <60 years old	15
Not a veteran	7
Veteran ≥60 years old	4
Undisclosed	1

Participants, on average, had spent 6.2 years in their role working in a wide range of occupations. Individuals worked in multiple areas (Table 3).

Table 3. Phase One participants' area of work (N = 27)

Number of Participants	Area
Military Charity	14
Academia	4
Ministry of Defence	2
Local Government	2
Non-Military Charity	1
NHS	1
Aftercare Service	1
Carer	1
Undisclosed	1

## Themes

Four themes were generated from participant responses: Accessing programmes/activities, management and organisation of programmes/activities, focus of programmes/activities, and transition to civilian life.

### Theme 1. Accessing Programmes/Activities

Participants highlighted the importance of the ability to access programmes/activities aimed at tackling social isolation and loneliness. Transportation was perceived to be an issue for veterans, which can hinder attendance.

*“Poor public transport [can lead to social isolation and/or loneliness for older veterans]” (Phase One, Participant 3, Veteran <60 years old)*

*“Many of the drivers for loneliness amongst members are the same as those for other groups in society: problems accessing transport” (Phase One, Participant 16, not a veteran)*

In addition, participants felt that living in a rural area would present further problems in accessing help.

*“Lack of adequate transport in rural areas [can lead to social isolation and/or loneliness for older veterans]” (Phase One, Participant 4, Veteran <60 years old)*

*“Isolation due to demographics in rural life may increase the risk of isolation with lack of transport a contributing factor” (Phase One, Participant 12,*

*Veteran <60 years old)*

Due to the issues identified, it was suggested that increasing access and providing transportation would better enable veterans to attend activities.

*“Provide increased accessibility to transport options to and from social activities [to help tackle social isolation and/or loneliness in older veterans]”  
(Phase One, Participant 12, Veteran <60 years old)*

However, participants also felt that this might not be an issue for younger veterans.

*“Younger veterans generally have better transport capability” (Phase One, Participant 4, Veteran <60 years old)*

## Theme 2. Management and Organisation of Programmes/Activities

There were multiple suggestions of how programmes/activities aimed at tackling social isolation and loneliness should be managed and organised, including provision of age-specific activities/programmes.

*“I'm not sure that [social isolation/loneliness are] experienced differently [depending on their age], but I think it's a challenge to get the two groups into the same space. Especially, if your offer is around activities. If it's a working cafe with people coming and going I suspect this is less of a problem, but if you are providing activities and groups that appeal to older veterans, in my experience, younger veterans don't engage so well” (Phase One, Participant 3, Veteran <60 years old)*

*“Programmes for younger veterans may also focus on areas such as employability while for older veterans it is more likely to be on areas such as independent living skills, crafts, hobbies and social activities” (Phase One, Participant 16, not a veteran)*

There were also differing opinions of how either younger veterans or older veterans engaged in services to a lesser degree.

*“[Older veterans are] less willing to talk to people and ask for help” (Phase One, Participant 10, Veteran ≥60 years old)*

*“Younger vets are less likely to get help” (Phase One, Participant 11, Veteran <60 years old).*

It was suggested that veterans should have an integral role in the delivery of programmes/activities in terms of offering support to other veterans who may be struggling with social isolation and loneliness.

*“There was a particular benefit to overcoming or preventing loneliness from coming together to participate in activities with other veterans” (Phase One, Participant 16, not a veteran)*

*“Veterans respond far better in a group of fellow veterans than they do with other groups” (Phase One, Participant 21, Veteran <60 years old)*

*“Available schemes attractive to the general population may be either lack sufficient focus or be too mundane for veterans or indeed attended by other aged people who are too antagonistic” (Phase One, Participant 4, Veteran ≥60 years old)*

For some, peer-led programmes were considered as being fundamental to success.

*“There may, therefore, be a role for either peer support groups, or drop-in centres, that mirror or complement groupings for older people in any population” (Phase 1, Participant 1, Veteran <60 years old)*

### Theme 3. Focus of Programmes/Activities

Participants discussed the issues veterans face in terms of social isolation and loneliness, and how these could be tackled within these programmes/activities. Bereavement was identified as one of the main factors affecting social isolation and loneliness, and this was perceived as being more prevalent for older veterans.

*“The big factor I have found [that can lead to social isolation and/or loneliness] is a losing a loved one” (Phase One, Participant 8, not a veteran)*

*“Younger vets will likely still have friends and family and are less likely to feel lonely compared to older vets who have likely experienced loss” (Phase One, Participant 14, Veteran <60 years old)*

There was also discussion around the use of technology and some assumptions as to the potential barriers faced.

*“Technology advances is one way in which accessing programs will test the older veteran. Access to the World Wide Web is required and the ability to*

*do this is not possessed by all [...] the older veteran benefits from personal interaction whilst the younger veteran can access social media” (Phase One, Participant 19, Veteran <60 years old)*

There was a belief that younger and older veterans would want different things from the programmes/activities.

*“Programmes for younger veterans may also focus on areas such as employability while for older veterans it is more likely to be on areas such as independent living skills, crafts, hobbies and social activities” (Phase One, Participant 16, not a veteran)*

*“I think it’s a challenge to get the two groups [older and younger veterans] into the same space. Especially, if your offer is around activities. If it’s a working cafe with people coming and going I suspect this is less of a problem, but if you are providing activities and groups that appeal to older veterans, in my experience, younger veterans don’t engage so well” (Phase One, Participant 3, Veteran <60 years old)*

#### Theme 4. Transition to Civilian Life

Transition from the military to civilian life was believed to have a significant impact on experiences of social isolation and loneliness.

*“[There is] no help when leaving the military” (Phase One, Participant 11, Veteran <60 years old)*

*“Points of transition are key risk factors for loneliness, and so for younger veterans these will be experiences such as leaving the forces, moving home and changing employment” (Phase One, Participant 16, not a veteran)*

*“I think their most vulnerable time is just after leaving the forces” (Phase One, Participant 20, not a veteran)*

Participants suggested that problems with transitioning from military to civilian life can lead to further problems with veterans struggling to reconnect to civilian life. This was believed to extend to difficulty connecting with civilians as well as local services.

*“Being away from normal life means it may take longer to integrate with civilians’ neighbours, local facilities / amenities” (Phase One, Participant 2, Veteran ≥60 years old)*

*“They are a very unique community and often will interact with each other but don’t necessarily interact with those who are not veterans” (Phase One, Participant 20, not a veteran)*

#### 4.4 Phase One summary

Four themes were generated from the open-ended questions posed in Phase One: Accessing programmes/activities, management and organisation of programmes/activities, focus of programmes/activities, and transition to civilian life.

A number of factors were believed to contribute to programme success. For example, having an age-related focus, being peer-led, and using caution with integrated technology. Transition, and difficulties re-integrating into civilian life, were considered as being as key contributors to veterans’ social isolation and loneliness. However, it was evident that there were contradictory opinions presented from expert participants across each of these areas.



## 5. Phase Two

### 5.1 Survey Development

In line with the Delphi process, categories and statements used within Phase Two were developed from the four themes generated in Phase One. Each statement was based on a five-point Likert scale ranging from 'strongly agree' to 'strongly disagree'. Open-ended questions were provided at the end of each category for optional further information.

The first category was based on the theme 'accessing programmes/activities'. Seven statements were developed based on to the thematic findings within this category (Table 4).

Table 4. Questions presented to participants in the Phase Two category 'accessing programmes/ activities'

Accessing programmes/ activities
Access and transportation should be considered when delivering programmes/activities
Programmes/activities should be held in one continuous geographical location
Programmes/activities should be based in a city/town centre
Separate programmes/activities should be carried out for those living in urban areas and those living in rural areas
Programmes/activities should be based in the person's own home
Technology should be the focus of programmes/activities
Technology should be supplementary within programmes/activities

The second category was based on the theme 'management and organisation of programmes/activities'. Eight statements developed based on the thematic findings within this category (Table 5).

Table 5. Questions presented to participants in the Phase Two category 'management and organisation of programmes/activities'

Management and organisation of programmes/activities
Programmes/activities should be peer-led
Programmes/activities should be led by third sector military specific charities/organisations
It does not matter which third sector charity/organisation leads the programme/activity
Programmes/activities should be veteran exclusive
Programmes/activities should be age-specific
Programmes/activities should be inter-generational
Social prescribing services should link veterans to relevant military-specific services
Social prescribing services should link veterans to relevant community/civilian services

The third category was based on the theme 'focus of programmes/activities'. Six statements developed based on the thematic findings within this category (Table 6).

Table 6. Questions presented to participants in the Phase Two category 'focus of programmes/activities'

Focus of programmes/activities
Programmes/activities should solely aim to bring people together and interact with one another
Programmes/activities should also aim to tackle other personal issues, such as bereavement, employment, emotional resilience etc.
Programmes/activities should involve age-specific activities
Programmes/activities should be skill-based
The content of regular programmes/activities should change frequently
The content of programmes/activities should mirror community/civilian services

The fourth category was based on the theme 'transition to civilian life'. Five statements were developed based on the thematic findings within this category (see Table 7).

Table 7. Questions presented in the Phase Two category 'transition to civilian life'

Transition to civilian life
Awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness
Awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness
During transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services
Building emotional resilience during transition is an important part of transitioning to civilian life
Veterans would benefit from integrating into the wider community

Demographic questions from the first phase were repeated to the participants, with the addition of: *'Which of the four nations do you represent?'* This was to ensure that our responses represented experts from across the United Kingdom (See Appendix B for Phase Two survey).

## 5.2 Analysis

An average score (mean) was calculated for each of the 26 statements. Quotes from open-ended statements were used as supporting evidence.

## 5.3 Findings

### Participant Characteristics

Nineteen experts participated in this phase (Table 8).

Table 8. Participants' veteran status (N=19)

Veteran status	Number of Participants
Veteran <60 years old	8
Not a veteran	6
Veteran ≥60 years old	3
Undisclosed	2

Participants worked in military charities, academic, non-military charities, local government and MoD. Three participants did not disclose place of work (Table 9).

Table 9. Participant organisations (N = 19)

Organisation	Number of Participants
Military charity	8
Academia	3
Non-Military Charity	2
Ministry of Defence	1
Local Government	1
Covenant	1
Undisclosed	3

Participants represented each of the UK's four nations (Table 10).

Table 10. Represented nations (N=19)

Nation	Number of Participants
England	7
Wales	4
Scotland	3
Northern Ireland	3
Undisclosed	2

### Participant Responses

Participants' scores were merged and an average score (mean) was calculated. An average score of 1 equates to 'strongly agree', 2 'agree', 3 'unsure', 4 'disagree', and 5 'strongly disagree'. This chapter reports on the most and least agreed upon statements. All findings can be viewed in Appendix C.

### Accessing Programmes/Activities

Participants agreed that access and transportation should be an important consideration when delivering programmes/activities (mean 1.882), and that technology should be supplementary within programmes/activities rather than a focus (mean 2.353).

*Technology can be off-putting to some while others embrace it, so a balance is required” (Phase 2, Participant 1, Veteran ≥60 years old)*

In this section, participants only disagreed to the statement that the programmes/activities should be based in the person's own home (mean 3.706), suggesting participants felt that activities/programmes should be carried out in community settings, outside of the home.

### Management and Organisation of Programmes/Activities

Participants mostly agreed that social prescribing services should link veterans to both community/civilian services (mean 1.765) and military-specific services (mean 2.000). Furthermore, participants also agreed that programmes/activities should be inter-generational (mean 2.353) and peer-led (mean 2.471).

*“It is important veterans can receive support from whoever is best placed to provide it, and we often signpost our members to other services and charities who can also help them” (Phase 2, Participant 15, Not a Veteran)*

*“There are many and varied methods of interaction and the benefit of involving all age groups is the sharing of experience and knowledge” (Phase 2, Participant 2, Veteran <60 years old)*

*“Shared experience of service is often enough to form a bond regardless of an age gap” (Phase 2, Participant 6, Veteran <60 years old)*

### Focus of Programmes/Activities

Participants mostly believed that programmes/activities should aim to bring people together to interact with one another (mean 2.294), and equally that programmes/activities should aim to tackle other personal issues, such as bereavement, employment, and emotional resilience (mean 2.294). Participants agreed that the content of regular programmes/activities should change frequently (mean 2.353).

*“(Veterans) need a diverse set of activities” (Phase 2, Participant 15, Not a Veteran)*

*“Changing groups keeps things fresh” (Phase 2, Participant 7, Veteran <60 years old)*

## Transition to Civilian Life

Within the category of transitioning to civilian life, all five of the statements were agreed upon. On average this was the most agreed upon category of the four (mean 4.835, standard deviation 0.49). It was agreed that building emotional resilience was an important part of transition back to civilian life (mean 1.765), as well as integration back into the wider community (mean 1.824) and raising awareness of local services and services across the UK (mean 1.824). It was equally agreed that raising awareness of both veteran-specific services (mean 1.882) and civilian-specific services (mean 1.882) during transition is central to the success in tackling social isolation and loneliness.

*“Veterans are citizens of this country and therefore part of the civilian component, albeit with many military connotations. Therefore, they should be supported in making transition with this concept in mind - they are effectively leaving the military cocoon” (Phase 2, Participant 1, Veteran ≥60 years old)*

*“I believe a transition programme/package for anyone leaving the military would be beneficial” (Phase 2, Participant 7, Veteran <60 years old)*

*“It is important to help veterans transition into civilian life and therefore important not to have a complete focus on a former military life/issues, whilst recognising the importance of an individual's service” (Phase 2, Participant 7, Veteran <60 years old)*

## 5.4 Consensus of Statements

Consensus of statements was analysed using a consensus rate of 70% agreement (e.g. Keeney, Hasson & McKenna, 2011). Ten of the 26 statements achieved the consensus rate based on this calculation (Tables 11-20). Each table demonstrates how many participants rated the statements as well as the cumulative percentage of each statement. If the statement achieved a 70% cumulative percentage in the ‘agree’ rating, then the statement achieved consensus.

Table 11. Transportation should be considered when delivering programmes/activities

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	7	36.8	41.2	41.2
Agree	7	36.8	41.2	82.4
Unsure	1	5.3	5.9	88.2
Disagree	2	10.5	11.8	100
Total	17	89.5	100	
Missing	2	10.5		

Table 12. Technology should be supplementary within programmes/activities

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	1	5.3	5.9	5.9
Agree	11	57.9	64.7	70.6
Unsure	3	15.8	17.6	88.2
Disagree	2	10.5	11.8	100
Total	17	89.5	100	
Missing	2	10.5		

Table 13. Social prescribing services should link veterans to relevant military-specific services

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	5	26.3	29.4	29.4
Agree	8	42.1	47.1	76.5
Unsure	3	15.8	17.6	94.1
Disagree	1	5.3	5.9	100
Total	17	89.5	100	
Missing	2	10.5		

Table 14. Social prescribing services should link veterans to relevant community/civilian services

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	6	31.6	35.3	35.3
Agree	10	52.6	58.8	94.1
Disagree	1	5.3	5.9	100
Total	17	89.5	100	
Missing	2	10.5		

Table 15. Awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	6	31.6	35.3	35.3
Agree	8	42.1	47.1	82.4
Unsure	2	10.5	11.8	94.1
Disagree	1	5.3	5.9	100
Total	17	89.5	100	
Missing	2	10.5		

Table 16. Awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	7	36.8	41.2	41.2
Agree	7	36.8	41.2	82.4
Unsure	1	5.3	5.9	88.2
Disagree	2	10.5	11.8	100
Total	17	89.5	100	
Missing	2	10.5		

Table 17. During transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	8	42.1	47.1	47.1
Agree	5	26.3	29.4	76.5
Unsure	3	15.8	19.6	94.1
Disagree	1	5.3	5.9	100
Total	17	89.5	100	
Missing	2	10.5		

Table 18. The content of regular programmes/activities should change frequently

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	1	5.3	5.9	5.9
Agree	11	57.9	64.7	70.6
Unsure	3	15.8	17.6	88.2
Disagree	2	10.5	11.8	100
Total	17	89.5	100	
Missing	2	10.5		

Table 19. Veterans would benefit from integrating into the wider community

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	6	31.6	35.3	35.3
Agree	9	47.4	52.9	88.2
Unsure	1	5.3	5.9	94.1
Disagree	1	5.3	5.9	100
Total	17	89.5	100	
Missing	2	10.5		

Table 20. Building emotional resilience during transition is an important part of transitioning to civilian life

	Frequency	Percent	Valid Percent	Cumulative Percentage
Strongly Agree	7	36.8	41.2	41.2
Agree	8	42.1	47.1	88.2
Unsure	1	5.3	5.9	94.1
Disagree	1	5.3	5.9	100
Total	17	89.5	100	
Missing	2	10.5		

## 5.5 Phase Two summary

Ten of the statements reached the consensus rate of 70%:

- 94.1% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant community/civilian services.
- 88.2% of participants either agreed or strongly agreed that building emotional resilience during transition is an important part of transitioning to civilian life.

- 88.2% of participants either agreed or strongly agreed that veterans would benefit from integrating into the wider community.
- 82.4% of participants either agreed or strongly agreed that awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness.
- 82.4% of participants either agreed or strongly agreed that awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness.
- 82.4% of participants either agreed or strongly agreed that access and transportation should be considered when delivering programmes/activities.
- 76.5% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant military-specific services.
- 76.5% of participants either agreed or strongly agreed that during transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services.
- 70.6% of participants either agreed or strongly agreed that technology should be supplementary within programmes/activities.
- 70.6% of participants either agreed or strongly agreed that the content of regular programmes/activities should change frequently



## 6. Phase Three

### 6.1 Survey Development

Participants were asked the same demographic questions as in Phase Two (see Appendix D for Phase Three survey).

The ten statements achieving consensus in Phase Two were re-presented to participants in Phase Three. This was the method used to gain further consensus of the specific areas agreed upon by the participants in Phase Two. The participants were given details of the findings from the previous round, based on cumulative percentages, and were again asked for their agreement (tables 21-24).

Table 21. Questions presented to participants in Phase Three in the category 'access to programmes/activities'

Question
In Phase Two, 82.4% of participants either agreed or strongly agreed that access and transportation should be considered when delivering programmes/activities.
In Phase Two, 70.6% of participants either agreed or strongly agreed that technology should be supplementary within programmes/activities.

Table 22. Questions presented to participants in Phase Three in the category 'management and organisations of programmes/activities'

Question
In Phase Two, 76.5% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant military-specific services.
In Phase Two, 94.1% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant community/civilian services.

Table 23. Questions presented to participants in Phase Three in the category 'focus of programmes/activities'

Question
In Phase Two, 70.6% of participants either agreed or strongly agreed that the content of regular programmes/activities should change frequently.
In Phase Two, 88.2% of participants either agreed or strongly agreed that building emotional resilience during transition is an important part of transitioning to civilian life.

Table 24. Questions presented to participants in Phase Three in the category 'transition to civilian life'

Question
In Phase Two, 82.4% of participants either agreed or strongly agreed that awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness.
In Phase Two, 82.4% of participants either agreed or strongly agreed that awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness.
In Phase Two, 76.5% of participants either agreed or strongly agreed that during transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services.
In Phase Two, 88.2% of participants either agreed or strongly agreed that veterans would benefit from integrating into the wider community.

At the end of each statement, participants were presented with space for optional open-ended answers.

## 6.2 Analysis

An average score (mean) was calculated for each of the ten statements. Quotes from open-ended statements were used as supporting evidence.

## 6.3 Findings

### Participant Characteristics

In total, 10 participants took part in Phase Three of this study (Table 25).

Table 25. Participants veteran status (N=10)

Veteran Status	Number of Participants
Not a veteran	4
Veteran <60 years old	3
Veteran ≥60 years old	1
Undisclosed	2

Three participants worked in a military charity, one in academia, two in local government, one in the Ministry of Defence and three did not disclose this information (Table 26). On average, participants spent 12.5 years in their job role.

Table 26. Participants organisation (N = 10)

Organisation	Number of Participants
Military Charity	4
Academia	1
Local Government	1
Ministry of Defence	1
Undisclosed	3

Only Wales was not represented in the Phase of the study (Table 27).

Table 27. Participants represented nation (N=10)

Nation	Number of Participants
England	6
Scotland	1
Northern Ireland	1
Undisclosed	2

### Participant Responses

Participants' scores were merged and an average score (mean) was calculated. An average score of 1 equates to 'strongly agree', 2 'agree', 3 'unsure', 4 'disagree', and 5 'strongly disagree' (Table 28).

Table 28. Participant responses to the ten statements in Phase Three

Question	Range	Mean (SD)
In Phase Two, 94.1% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant community/civilian services.	1-2	1.500 (0.53)
In Phase Two, 88.2% of participants either agreed or strongly agreed that building emotional resilience during transition is an important part of transitioning to civilian life.	1-2	1.625 (0.52)
In Phase Two, 88.2% of participants either agreed or strongly agreed that veterans would benefit from integrating into the wider community.	1-4	1.625 (1.06)
In Phase Two, 76.5% of participants either agreed or strongly agreed that during transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services.	1-2	1.750 (0.46)
In Phase Two, 82.4% of participants either agreed or strongly agreed that awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness.	1-2	1.750 (0.46)
In Phase Two, 82.4% of participants either agreed or strongly agreed that access and transportation should be considered when delivering programmes/activities.	1-2	1.750 (0.46)
In Phase Two, 76.5% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant military-specific services.	1-3	1.750 (0.71)
In Phase Two, 82.4% of participants either agreed or strongly agreed that awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness.	1-3	1.875 (0.64)
In Phase Two, 70.6% of participants either agreed or strongly agreed that technology should be supplementary within programmes/activities.	2-3	2.125 (0.35)
In Phase Two, 70.6% of participants either agreed or strongly agreed that the content of regular programmes/activities should change frequently.	2-4	2.375 (0.74)

All but one statement reached higher agreement than in the previous round (see Appendix E for full table). Once more, the statistics were supported by open-ended responses.

Awareness raising of veteran-specific services (mean 1.750) and of civilian-specific services (mean 1.875) were both viewed as being central to the success in tackling social isolation and/or loneliness. Transition was also considered as a period which could build emotional resilience (mean 1.625).

*Raising awareness for services would be a huge help to veterans (Phase 3, Participant 6, not a veteran)*

*[Raising awareness of services across the UK] is essential during transition, and could help avoid anyone slipping through the net and missing out on accessing support when it's really needed before they become isolated (Phase 3, Participant 2, not a veteran)*

*There should be a good mix [of linking veterans to both community/civilian specific services] (Phase 3, Participant 2, not a veteran)*

Participants also 'agreed' that there was a role for social prescribing services to link veterans with both relevant community/civilian services (mean 1.500) and relevant military-specific services (mean 1.750).

*I believe it would help veterans transition better if they were linked to a mixture of military and civilian services awareness of services (Phase 3, Participant 2, not a veteran)*

*As mentioned previously having veteran specific services is favoured by veterans but we are creating a problem in that not all veterans' services are SME's and again striking a balance with civilian services is healthy (Phase 3, Participant 3, veteran <60 years old)*

Again, the idea that the use of technology in programmes/activities aimed at tackling social isolation and loneliness should be supplementary was agreed upon (mean 2.125). Participants were concerned that technology may be an obstacle to participation, and therefore should be supplementary, rather than the focus of programmes/activities. However, its benefits were also realised.

*While we should not shy away from using technology where it assists, it should not be allowed to dictate engagement or be an obstacle to participation (Phase 3, Participant 1, veteran <60 years old)*

*If 'supplementary' is in the sense of 'complementary' I would very much agree with this (Phase 3, Participant 9, not a veteran)*

*Where technology is available and can enhance the experience it should be available (Phase 3, Participant 10, veteran <60 years old)*

Participants also agreed that transportation should be considered when delivering programmes/activities (mean 1.750), and that the content of the programmes/activities should also be changed frequently (mean 2.375).

*Where a veteran is physically unable to access services he/she should be facilitated (Phase 3, Participant 1, veteran <60 years old)*

*[Regularly changing content] gives them a good variety of skills to learn, it also allows for veterans to meet other people all the time rather than relying on one group at one activity that they may become dependent of (Phase 3, Participant 2, not a veteran)*

*Variety will keep services fresh and interesting (Phase 3, Participant 3, veteran <60 years old)*

However, the idea that programme/activity content should change frequently was not agreed upon by all participants.

*The content of regular programmes/activities should be maintained for a changing audience (Phase 3, Participant 1, veteran <60 years old)*

## 6.4 Phase Three summary

Phase Three demonstrates an agreed consensus of statements. Across the three phases participants have come to the consensus that consideration needs to be given to the period of transition out of the military as this is fundamental to the success in tackling social isolation and loneliness. Furthermore, the use of social prescribing to link veterans to both military-specific and civilian services across the UK are viewed as being fundamental in tackling social isolation and loneliness. There are some key features of programmes/activities that were also

agreed upon, namely, the supplementary use of technology, consideration of transportation, and regularly changing the content of regular programmes/activities. These factors can be used to develop and implement a programme/activity that could help veterans tackle social isolation and loneliness.



## 7. Discussion

### 7.1 Summary

Using the Delphi method, this study aimed to gather expert consensus relating to the cause, impact and ways to tackle social isolation and loneliness of military veterans. Three surveys were disseminated to experts, resulting in consensus of 10 statements, relating to the importance of the period of transition, the role of social prescribing, and features to be considered within programmes/activities aiming to tackle social isolation and loneliness.

This consensus was developed from open-ended questions posed in Phase One, which generated four key themes:

- accessing programmes/activities;
- management and organisation of programmes/activities;
- focus of programmes/activities;
- transition to civilian life.

Across the three phases, participants agreed that the period of transition out of the military is fundamental to the success in tackling social isolation and loneliness, as well as the use of social prescribing. Valuable features of programmes/activities were also highlighted, specifically the supplementary use of technology, consideration of transportation, and regularly changing the content of regular programmes/activities.

### 7.2 Key Findings

#### Military Transition

Transitional life events are well-recognised as periods which can increase risk of social isolation and loneliness, such as motherhood, taking on a caring role, and retirement (Co-Op Foundation and The Red Cross, 2016). Military transition is one transitional life event that is receiving more attention for its links to the potential risk of social isolation and loneliness. This current study highlighted the importance of transition in improving awareness of social isolation and loneliness, building emotional resilience, and also signposting to relevant military-specific and civilian services to tackle social isolation and loneliness. Consideration also needs to be given to military transition as military-specific factors can already predispose serving personnel to experiences of social isolation and loneliness, specifically mental health issues and trauma related to military service (Wilson, Hill, & Kiernan, 2018).

The Royal British Legion identified that leaving the Armed Forces caused individuals to feel lonely and/or socially isolated due to concerns of integrating back into civilian society and loss of military friendships (Stapleton, 2018). Furthermore, recent research by the Royal Blind and Scottish War Blinded services highlighted veterans' concerns over transitioning from the military back into civilian life and felt more support was required at that time (Royal Blind and Scottish War Blinded, 2018). In response to the findings, The Royal British Legion recommend the introduction of a module on social resilience for all serving personnel as part of resettlement provision, with a focus on loneliness and social isolation and preparation for transition out of the Forces.

Experts have expressed the need to build emotional reliance during transition, as a way to combat social isolation and loneliness. Improving emotional resilience is commonly defined as "*a dynamic process encompassing positive adaptation within the context of significant adversity*" (Luthar, Cicchetti, & Becker, 2000), although there are wide inconsistencies in the way it is both defined and conceptualised (Fletcher & Sarkar, 2013). Resilience consists of several factors, including emotional, psychological and contextual conditions, which "*promote personal assets and protect individuals from the negative appraisal of stressors*" (Fletcher & Sarkar, 2013, p. 14). Rather than focusing on social participation alone, psychological adjustment is also required to combat feelings of loneliness, as highlighted in the cognitive discrepancy model, and further evidence based on this model (Burholt & Scharf, 2013; Perlman & Peplau, 1981).

Evidence suggests that transition is undoubtedly an important period, and has the potential to increase risk of social isolation and loneliness. However, there is opportunity to increase awareness of social isolation, loneliness, and related services, as well as improving emotional resilience, through the inclusion of specific modules and focus during transition.

### Social Prescribing

Social prescribing is a holistic approach to considering health and well-being, and findings demonstrated that experts perceive social prescribing as being a useful tool to link individuals to relevant services and support networks. It enables GPs, nurses and other primary health care professionals to refer people to a range of local, non-clinical services for practical and emotional support (NHS England, 2019). Recognising that health is primarily determined by a range of social, economic and environmental factors, social prescribing seeks to address health and social care needs in a holistic way. It also aims to support individuals to take greater control of their own health and wellbeing. Social prescribing services have been shown to be

successful in reducing social isolation and loneliness (Co-Op Foundation and The Red Cross, 2019; Vogelpoel & Jarrold, 2014; White & Kinsella, 2010; Brandling & House, 2007).

The renewed focus on social prescribing within the NHS (2019) long-term strategy may increase the use of social prescribing as a method of signposting individuals to services, with a focus on developing services for veterans that are designed for their particular needs. This includes services that are accessible and offer the 'right' care and support regardless of when people leave the armed forces.

### Technology

Expert participants within this study expressed consensus that technology should be supplementary within programmes/activities, as opposed to the focus.

Whilst digital technology is one tool to tackle social isolation and loneliness, evidence also recognises that it can exacerbate experiences of both social isolation and loneliness (Department for Digital, Culture, Media and Sport, 2019). Using information and communication technologies can have a positive effect on social support, social connectedness and social isolation among older adults (Chen & Schulz, 2016; Tsai & Tsai, 2011) and reducing loneliness (Chopik, 2016). However, there are multiple perceived barriers to the use of technology as a social connector, including access, usability, and opposing, the continued reliance on technology. A recent Royal Blind and Scottish War Blinded services report stated that whilst individuals found talking with family and friends of the phone, and local community groups/activities were more beneficial in overcoming feelings of loneliness than the use of social media, video calling friends and family, and also support to use technology (Royal Blind and Scottish War Blinded, 2018).

It was widely recognised that technology is a useful way to connecting people and, therefore a useful tool to tackle social isolation. However, rather than technology being the 'end goal', it is a tool for social connection, and whilst it can have a beneficial impact, it is not seen as a replacement for face-to-face contact.

### Transportation

Equity of access to programmes/activities relating to social isolation and loneliness is fundamental. Within this study, assistance with transportation was perceived as an important way to remove some of the barriers to participation. Research specifically focusing on older veterans identified lack of access to services, financial constraints, physical limitations and

transportation difficulties as barriers to participation (Kiernan et al., 2018; Royal Blind and Scottish War Blinded, 2018; Wilson et al., 2018). These differences need to be considered when designing interventions aimed at tackling social isolation and loneliness within this sub-population, and one way of doing so is to consider access to and availability of transportation (Department for Digital, Culture, Media and Sport, 2019). One flagship example of this is the “Community Transport Waltham Forest”, a charitable scheme which provides affordable and accessible group travel services to local community and voluntary groups (Community Transport Waltham Forest, 2016). The transportation service aims to improve access to health, education, social and economic opportunities to the community.

Access to the service is as important as the service itself, and expert participants within this study advocate for support with transportation as part of social isolation and loneliness programmes/activities.

### 7.3 Recommendations for practice

1. Transition from the military is a key period to highlight the impact of social isolation and loneliness, and to increase emotional resilience. Lifelong psychosocial well-being should be recognised and promoted throughout transition.
2. Veterans should be made aware of both civilian and military-specific services available to them across the UK. Both social prescribing and transition are key to this. The Ministry of Defence, and Health and Social Care service providers must understand the severity of these issues, and their consequences, throughout the life course.
3. Activities/programmes for social isolation and loneliness should consider how individuals access them. Transportation and access to activities are fundamental to their success, to ensure that those who live in rural areas or have trouble with transportation are able to attend.
4. Experts considered a number of different features of activities/programmes, ranging from technology use, changing content, and intergenerational content (such as skills-based activities). The value of consultation with veterans themselves (or the target population) is fundamental to success.
5. There is a need for further understanding of the cause and impact of social isolation and loneliness of veterans. An initial lack of consensus demonstrated the varying views of experts, some of which was significantly contrary to developed evidence.

## 7.4 Recommendations for further research

6. Future research should aim to capture veterans' perspectives of the unique factors they face when it comes to social isolation and loneliness to further develop this narrative, and the evidence base.
7. Partnerships between academics and practitioners will help to build the evidence base of best practice within the community.
8. Further research must be carried out with the wider Armed Forces Community to better understand the causes, impacts, and methods to tackle social isolation and loneliness in this wider community.

## 7.5 Limitations

A strength of this study is that respondents remained entirely anonymous. This is a sensitive area, and as this primarily relied upon the perspectives of prominent experts in the area it was essential that all responses were anonymous to each other, and the research team. Furthermore, a key strength of this research is that participants were recruited from across the United Kingdom, and from a range of public sector and third-sector organisations. The hub's international network was fundamental to the success of the project, both in terms of recruiting the most prominent experts in the field with a breadth of expertise, and for the response rate.

There were however some limitations. Despite the high response rate, we had progressively less responses across the three phases - although this represents typical trends of a Delphi method. Furthermore, we utilised a snowball sampling approach which meant that we did not have direct contact with all participants, and we do not know the total participant numbers. Although we were assured that emails were disseminated to the same individuals at each phase, we do not know the total number participants this was disseminated to, in order to calculate response rate. This also meant that we relied on third parties to contact individuals, and we could not contact them directly. This study was completed over quite a short timeline and there was some burden on participants' time. Finally, whilst the concepts of social isolation and loneliness were clearly defined at the beginning of each survey, they were both grouped together in each question/statement, rather than being separate. Therefore, we cannot distinguish between loneliness and social isolation in the absence of specific qualitative text.

## 7.6 Conclusions

This Delphi study recognises the value of expert opinions and experiences. The areas of consensus have been summarised to generate recommendations shown in 7.3 and 7.4 above. There was strong support for the notion that transition out of the military is a key period, and social prescribing during and after transition is worth pursuing, particularly in relation to integration into the wider community. There was also agreement that there is a need to raise awareness of both military and non-military services. Interventions aimed at tackling social isolation and loneliness need to be responsive to the needs of veterans who may struggle to access appropriate transportation, and programmes should have varied content, and be supplemented by technology (rather than technology being the focus).



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## Appendices

### Appendix A – Phase One survey

Are you a veteran?

- Yes, I am a veteran over the age of 60
- Yes, I am a veteran aged 59 or under
- No, I am not a veteran

What is your job role?

Which best describes the area you work in?

- NHS
- Military Charity
- Non-Military Charity
- Academia
- Other

If other, what?

How many years have you worked in this area?

Please remember all information provided in this survey will remain anonymous. Please leave a question blank if you feel you cannot/do not wish to answer one of the questions.

Question 1- From your experience, do you believe that older veterans (aged 60+) experience social isolation and/or loneliness in a different way to older adults in the wider population? Please explain.

Question 2- From your experience, do you believe that older veterans (aged 60+) access programmes to tackle social isolation and/or loneliness in a different way to older adults in the general population? Please explain.

Question 3- From your experience, do you believe that younger veterans and older veterans (aged 60+) experience social isolation and/or loneliness, or access programs to tackle social isolation and/or loneliness in different ways. Please explain.

Question 4- From your experience, what do you believe are the factors that lead to social isolation and/or loneliness for older veterans?

Question 5- From your experience, how would you tackle social isolation and/or loneliness in older veterans?

## Appendix B – Phase Two survey

Are you a veteran?

- Yes, I am a veteran over the age of 60
- Yes, I am a veteran aged 59 or under
- No, I am not a veteran

What is your job role?

Which best describes the area you work in?

- NHS
- Military Charity
- Non-Military Charity
- Academia
- Other

If other, what?

How many years have you worked in this area?

Which of the four nations do you represent?

- England
- Scotland
- Wales
- Norther Ireland

Please remember all information provided in this survey will remain anonymous. Please leave a question blank if you feel you cannot/do not wish to answer one of the questions.

**The following questions are relating to accessing programmes/activities aimed at tackling social isolation and/or loneliness**

Question 1 - Access and transportation should be considered when delivering programmes/activities

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 2 - Programmes/activities should be held in one continuous geographical location

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 3 - Programmes/activities should be based in a city/town centre

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 4 - Separate programmes/activities should be carried out for those living in urban areas and those living in rural areas

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 5 - Programmes/activities should be based in the person's own home

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 6 - Technology should be the focus of programmes/activities

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 7 - Technology should be supplementary within programmes/activities

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide further detail on any of the questions in this section (optional)

**The following questions relate to management and organisation of programmes/activities tackling social isolation and/or loneliness**

Question 1 - Programmes/activities should be peer-led

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 2 - Programmes/activities should be led by third sector military specific charities/organisations

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 3 - It does not matter which third sector charity/organisation leads the programme/activity

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 4 - Programmes/activities should be veteran exclusive

- Strongly Agree
- Agree
- Unsure
- Disagree

- Strongly Disagree

Question 5 - Programmes/activities should be age-specific

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 6 - Programmes/activities should be inter-generational

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 7 - Social prescribing services should link veterans to relevant military-specific services

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 8 - Social prescribing services should link veterans to relevant community/civilian services

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide further detail on any of the questions in this section (optional)

**The following questions relate to content of programmes/activities tackling social isolation and/or loneliness**

Question 1 - Programmes/activities should solely aim to bring people together and interact with one another

- Strongly Agree
- Agree

- Unsure
- Disagree
- Strongly Disagree

Question 2 - Programmes/activities should also aim to tackle other personal issues, such as bereavement, employment, emotional resilience etc.

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 3 - Programmes/activities should involve age-specific activities

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 4 - Programmes/activities should be skill-based

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 5 - The content of regular programmes/activities should change frequently

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 6 - The content of programmes/activities should mirror community/civilian services

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide further detail on any of the questions in this section (optional)

**The following questions relate to the transition to civilian life:**

Question 1 - Awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 2 - Awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 3 - During transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 4 - Building emotional resilience during transition is an important part of transitioning to civilian life

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Question 5 - Veterans would benefit from integrating into the wider community

- Strongly Agree
- Agree
- Unsure

- Disagree
- Strongly Disagree

Please provide further detail on any of the questions in this section (optional)

## Appendix C - Phase Two findings

Within the category of 'accessing programmes/activities', participants 'agreed' to two of the statements (see statement 1-2, Table 30), four statements were classed as being unsure (see statements 3-6, Table 30) and one of the statements was disagreed upon (see statement 7, Table 29). Overall, participants averaged at being unsure to the statements in this section (Mean – 2.924, Standard Deviation – 0.65) and this was the least agreed of all categories.

Table 29. Responses of the questions in the category of 'access to programmes/activities' (N=19)

Question	Range	Mean (SD)
1. Access and transportation should be considered when delivering programmes/activities	1-4	1.882 (0.99)
2. Technology should be supplementary within programmes/activities	1-4	2.353 (0.79)
3. Separate programmes/activities should be carried out for those living in urban areas and those living in rural areas	1-4	2.706 (1.10)
4. Programmes/activities should be based in a city/town centre	1-4	3.059 (1.03)
5. Technology should be the focus of programmes/activities	1-4	3.294 (0.92)
6. Programmes/activities should be held in one continuous geographical location	2-5	3.471 (1.07)
7. Programmes/activities should be based in the person's own home	2-5	3.706 (0.77)

Within the category of management and organisation of programmes/activities, four of the statements were agreed upon (see statements 1-4, Table 31) and four of the statements the participants were unsure of (see statements 5-8, Table 31) On average, participants were again unsure to the statements in this section (Mean – 2.537, Standard Deviation – 0.52). However this was the second most agreed upon section out of the four categories.

Table 30. Responses of the questions in the category 'management and organisation of programmes/activities' (N=19)

Question	Range	Mean (SD)
1. Social prescribing services should link veterans to relevant community/civilian services	1-4	1.765 (0.75)
2. Social prescribing services should link veterans to relevant military-specific services	1-4	2.000 (0.87)
3. Programmes/activities should be inter-generational	1-4	2.353 (1.00)
4. Programmes/activities should be peer-led	1-4	2.471 (1.01)
5. Programmes/activities should be led by third sector military specific charities/organisations	2-4	2.647 (0.70)
6. It does not matter which third sector charity/organisation leads the programme/activity	1-5	2.647 (1.32)
7. Programmes/activities should be age-specific	2-4	3.000 (1.00)
8. Programmes/activities should be veteran exclusive	1-4	3.412 (1.00)

Within the category of focus of programmes/activities, three of the statements were agreed upon (see statements 1-3, Table 32) and three of the statements the participants were unsure of (see statements 4-6, Table 32). On average, participants were again unsure of the questions in this section (Mean – 2.872, Standard Deviation – 0.54). This was the second least agreed upon category of the four.

Table 31. Responses of the questions in the category of 'focus of programmes/activities' (N=19)

Question	Range	Mean (SD)
1. Programmes/activities should solely aim to bring people together and interact with one another	1-4	2.294 (1.05)
2. Programmes/activities should also aim to tackle other personal issues, such as bereavement, employment, emotional resilience etc.	1-4	2.294 (1.05)
3. The content of regular programmes/activities should change frequently	1-4	2.353 (0.79)
4. The content of programmes/activities should mirror community/civilian services	1-4	2.647 (0.93)
5. Programmes/activities should involve age-specific activities	2-4	3.471 (0.80)
6. Programmes/activities should be skill-based	2-5	3.529 (0.80)

Within the category of transitioning to civilian life, all five of the statements were agreed upon (see Table 33). One average this was the most agreed upon category of the four (Mean – 4.835, Standard Deviation – 0.49).

Table 32. Responses of the questions in the category of 'transition to civilian life' (N=19)

Question	Range	Mean (SD)
1. Building emotional resilience during transition is an important part of transitioning to civilian life	1-4	1.765 (0.83)
2. Veterans would benefit from integrating into the wider community	1-4	1.824 (0.81)
3. During transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services	1-4	1.824 (0.95)
4. Awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness	1-4	1.882 (0.86)
5. Awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness	1-4	1.882 (0.99)

In total, 14 of the statements were agreed upon, 10 of the statements participants were unsure of and two of the statements were disagreed upon.

## Appendix D – Phase Three survey

Are you a veteran?

- Yes, I am a veteran over the age of 60
- Yes, I am a veteran aged 59 or under
- No, I am not a veteran

What is your job role?

Which best describes the area you work in?

- NHS
- Military Charity
- Non-Military Charity
- Academia
- Other

If other, what?

How many years have you worked in this area?

Which of the four nations do you represent?

- England
- Scotland
- Wales
- Northern Ireland

Please remember all information provided in this survey will remain anonymous. Please leave a question blank if you feel you cannot/do not wish to answer.

Question 1 - In Phase Two, 82.4% of participants either agreed or strongly agreed that access and transportation should be considered when delivering programmes/activities. Please indicate your own response to this statement:

- Strongly Agree

- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 2 - In Phase Two, 70.6% of participants either agreed or strongly agreed that technology should be supplementary within programmes/activities. Please indicate your own response to this statement:

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 3 - In Phase Two, 76.5% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant military-specific services. Please indicate your own response to this statement:

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 4 - In Phase Two, 94.1% of participants either agreed or strongly agreed that social prescribing services should link veterans to relevant community/civilian services. Please indicate your own response to this statement:

- Strongly Agree

- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 5 - In Phase Two, 82.4% of participants either agreed or strongly agreed that awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness. Please indicate your own response to this statement:

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 6 - In Phase Two, 82.4% of participants either agreed or strongly agreed that awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness. Please indicate your own response to this statement:

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 7 - In Phase Two, 76.5% of participants either agreed or strongly agreed that during transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services. Please indicate your own response to this statement:

- Strongly Agree

- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 8 - In Phase Two, 70.6% of participants either agreed or strongly agreed that the content of regular programmes/activities should change frequently. Please indicate your own response to this statement:

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 9 - In Phase Two, 88.2% of participants either agreed or strongly agreed that veterans would benefit from integrating into the wider community. Please indicate your own response to this statement:

- Strongly Agree
- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

Question 10 - In Phase Two, 88.2% of participants either agreed or strongly agreed that building emotional resilience during transition is an important part of transitioning to civilian life. Please indicate your own response to this statement:

- Strongly Agree

- Agree
- Unsure
- Disagree
- Strongly Disagree

Please provide any further comments on this question in the box below

## Appendix E – Consensus of statements (Phases Two and Three)

All statements in phase three reached higher agreement than in phase two, with the exception of one statement ('the content of regular programmes/activities should change frequently', however the difference was minimal; M – 2.353 vs. 2.375). Again, all statements reached an agreed upon consensus rate of 70%.

Table 33. Means (SD) of participant's ratings of the questions that gained the most consensus in Phases two and three

Question	Phase Two Mean (SD)	Phase Three Mean (SD)
Social prescribing services should link veterans to relevant community/civilian services	1.765 (0.75)	1.500 (0.53)
Building emotional resilience during transition is an important part of transitioning to civilian life	1.765 (0.83)	1.625 (0.52)
Veterans would benefit from integrating into the wider community	1.824 (0.81)	1.625 (1.06)
Awareness raising of veteran-specific services during transition is central to the success in tackling social isolation and/or loneliness	1.882 (0.86)	1.750 (0.46)
Transportation should be considered when delivering programmes/activities	1.882 (0.99)	1.750 (0.46)
During transition, it is important to raise individuals' awareness of services across the UK, as well as geographically-specific services	1.824 (0.95)	1.750 (0.46)
Social prescribing services should link veterans to relevant military-specific services	2.000 (0.87)	1.750 (0.71)
Awareness raising of civilian-specific services during transition is central to the success in tackling social isolation and/or loneliness	1.882 (0.99)	1.875 (0.64)
Technology should be supplementary within programmes/activities	2.353 (0.79)	2.125 (0.35)
The content of regular programmes/activities should change frequently	2.353 (0.79)	2.375 (0.74)







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## Appendix K

**Table: Overview of the research, outputs and personal contribution**

Research Project	Personal Contribution	Outputs
<p>Improving Access - Understanding Why Veterans are Reluctant to Access Help for Alcohol Problems (2015 - 2017)</p> <p>This research project arose from two frequently asked questions:</p> <p>Why is it so difficult to engage ex-service personnel in treatment programmes?</p> <p>Once they engage, why is it so difficult to maintain that engagement?</p> <p>The study explored the relationship between being a UK military veteran, the provision of alcohol misuse services and veterans' experiences of engaging with these services.</p>	<p>Senior Research Assistant -recruitment of participants, data collection/analysis/contribution to the findings/recommendations for practice/policy</p> <p><b>1</b> Publication – lead author</p> <p><b>2</b> Contributed to writing/editing the Method and Design section of the paper - the Setting and Participants section, sourcing participant quotes from the transcripts to illustrate the findings in the Results section</p>	<p>Technical Report: Improving Access Report 2017 Understanding Why Veterans are Reluctant to Access Help for Alcohol Problems</p> <p><b>1. McGill, G.,</b> Wilson-Menzfeld, G., Hill, M., &amp; Kiernan, M. (2019). Supporting the principles of the armed forces covenant in NHS trusts and clinical commissioning groups across England. <i>BMJ Open</i>.</p> <p><b>2. Kiernan, M., D.,</b> Osborne, A., <b>McGill, G.,</b> Greaves, P., J., Wilson-Menzfeld, G. &amp; Hill, M. (2018). Are veterans different? Understanding veterans' help seeking behaviour for alcohol problems. <i>Health and Social Care in the Community</i></p>
<p>Maintaining Independence: A Study into the Health and Social Wellbeing of Older Limbless Veterans (2016 – 2018)</p> <p>The research study considered the impact of limb-loss for military veterans across the life-course. The main aims of the study were:</p> <p>To explore the physical, psychological and social wellbeing of older veterans who experienced limb-loss and ageing.</p> <p>To ascertain the factors that contribute to the ability of veterans who have experienced limb-loss to maintain their independence at various stages in their lives.</p>	<p>Senior Research Assistant responsible for recruitment, data collection/analysis/collating findings and recommendations for policy and practice.</p> <p><b>3</b> Contributed to literature review (USA papers) and approval of the final draft following recommendations by reviewers.</p> <p><b>4</b> Worked closely with the lead author to collect the data, complete the complex analysis and source the participant quotes for this paper. Final edit and responses to the reviewers comments to meet the journal requirements.</p> <p><b>5</b> Worked closely with lead author - sourcing quotes to support the result section, to write the material and methods section and the discussion section. Supported the final edit phase of the paper production and responded to reviewers recommendations</p> <p><b>6</b> Lead Author - designed and developed this paper. Responded to reviewers recommendations prior to acceptance by the journal</p>	<p>Technical Report: Maintaining Independence: A Study into the Health and Social Wellbeing of Older Limbless Veterans (June 2018 – Technical Report)</p> <p><b>3. Caddick, N.,</b> Cullen, H., Clarke, A., Fossey, M., Harrington, B., Hill, M., <b>McGill, G.,</b> Taylor, T. &amp; Kiernan, M. (2018). Ageing, limb-loss, and military veterans: A systematic review of the literature. <i>Ageing &amp; Society</i>.</p> <p><b>4. Caddick, N., McGill, G.,</b> Greaves, P., J., Kiernan, M. (2018). Resisting decline? Narratives of independence among ageing limbless veterans. <i>Journal of Aging Studies</i>.</p> <p><b>5. Wilson-Menzfeld, G., McGill, G.,</b> Osborne, A., &amp; Kiernan, M. (2020). Housing needs of ageing veterans who have experienced limb loss. <i>International Journal of Environmental Research and Public Health</i></p> <p><b>6. McGill, G.,</b> Wilson-Menzfeld, G., Foster, N., Osborne, A., Caddick, N., &amp; Kiernan, M. (2020). Rehabilitation and transition in military veterans after limb-loss. <i>Disability and Rehabilitation</i>.</p>
<p><i>Understanding Unique Factors of Social Isolation and Loneliness of Military Veterans</i></p> <p>This study aimed to explore the concept that veterans are considered as being 'unique' to adults in the general population and other members of the Armed Forces community in their</p>	<p>Co-investigator Project design, data collection and analysis</p> <p><b>7</b> Supporting the design of the paper to meet the journal requirements. Significant input into the writing of the introduction and discussion sections and sourcing</p>	<p>Delphi Study - Technical Report <i>Understanding Unique Factors of Social Isolation and Loneliness of Military Veterans – A Delphi Study</i></p> <p><b>7. Leslie, C., McGill, G.,</b> Kiernan, M., &amp; Wilson-Menzfeld, G. (2020). Social isolation and loneliness of military</p>

experience of social isolation and loneliness.	quotes from the data to support the results section. Responding to reviewers.	veterans: A Delphi study. <i>Occupational Medicine</i> .
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