

Injecting Equipment Schemes for Injecting Drug Users Qualitative Evidence Review

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List of abbreviations

IDUs	Injecting drug users
NSPs	Needle and syringe programmes
NEP	Needle exchange programme
SEP	Syringe exchange programme

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Executive Summary

Background

This review of the qualitative literature about needle and syringe programmes (NSPs) for injecting drug users (IDUs) complements the review of effectiveness and cost-effectiveness. It aims to provide a more situated narrative perspective on the overall guidance questions.

Objectives

The review sought qualitative evidence on six specific questions:

1. What do IDUs and professionals working with IDUs, including service commissioners, identify as suitable types of needle and syringe programmes, and what do they believe is the ideal level of coverage?
2. What types of NSP (needle and syringe programmes) are valued (by IDUs, providers and stakeholders) and accessed by IDUs?
3. Which additional harm reduction interventions offered by Needle and Syringe Programmes are valued (and accessed) by IDUs and professionals working with IDUs?
4. How is opiate substitution therapy (OST) and NSPs (perceived to be) used together by IDUs and service providers?
5. How do the general public (including the media) perceive the effectiveness and acceptability of NSPs?
6. What are the views, experiences and attitudes of carers and families of IDUs to NSPs?

Methods

The methods for the review followed the National Institute for Clinical Excellence (NICE) protocols for the development of NICE public health guidance. Ten electronic databases were searched for studies using qualitative or mixed methodology, published in English since 1990. Websites of organisations and voluntary agencies were also searched. Two reviewers independently screened all titles and abstracts. Data extraction and quality assessment were undertaken by one reviewer and checked for accuracy by a second reviewer. Each study was also graded (++, + or -) based on the extent to which the design and execution of the study facilitated a rich, credible, internally coherent and reliable

account. Results of the data extraction and quality assessment for each study were presented in structured tables and as a narrative summary.

Results

Forty studies are included in the review¹. Of these, 10 were from the UK, 20 from the USA, five from Canada, two from Australia, and three from other European countries. Thirty eight used interview or focus group methods and 17 used ethnographic or observation methods (some studies used both).

Ten studies were assessed as good quality (rating ++); of these three were from the UK. Twenty-five studies were assessed as being of moderate quality and five of poor quality. Common barriers to validity included poor reporting of sampling strategy, data collection and analysis methods. Frequently the actual research process was either not described at all or so poorly reported that it was not possible to make any judgements about validity. In addition, the theoretical underpinning was rarely mentioned. There were several studies that, despite using qualitative methods to collect data, presented only quantitative data, and so were excluded from the review. In a substantial proportion of included studies, the data presented was not rich, lacking illustrative quotes and/ or context. Some of these issues may be due to editorial limitations on space or word count in journals, rather than due to poor conduct of the research. However, without these details it is not possible to judge whether the omissions are due to poor reporting or poor quality research, and, without details of the included sample, it is difficult to decide whether the findings are generalisable.

Ten UK studies received applicability grading A (most applicable); nine Canadian, Australian or European studies received grade B; 17 US studies and one Australian study received grade C; and three US studies that contained very little relevant data were ranked applicability grade D.

There was insufficient qualitative evidence found to assess some of the research questions and sub-questions (see Table)

¹ References to included studies can be found in the main report

Table: Availability of evidence for questions and subquestions

Question/ subquestion	Evidence?
1. What do injecting drug users (IDUs) and professionals working with IDUs, including service commissioners, identify as suitable types of needle and syringe programmes, and what do they believe is the ideal level of coverage?	✓
Diversity of the population (e.g. age, gender and ethnicity);	✓
Whether or not users are homeless;	✓
Type of drugs injected;	X
Patterns of injecting, including who needle and syringe programme (NSP) users inject with;	X
Method and site of injection;	X
Where IDUs acquire needles from (in addition to/in place of NSPs);	✓
Whether and how IDUs informally distribute needles, syringes and other paraphernalia with other users;	✓
Whether and how users choose between multiple local NSPs;	✓
The 'constellation' or mix of services available;	X
The 'constellation' or mix of services desired.	X
IDUs' involvement in service planning and/or evaluation	✓
2. What types of Needle and Syringe Programmes are valued and accessed by IDUs?	✓
Providers (including personal characteristics, skill mix and level of training/competency of staff) site and size of setting, and commercial status of provider (including specialist providers, independent and multiple pharmacies);	✓
Availability (opening times) and accessibility;	✓
Acceptability	✓
How able is target group to access services (not just how accessible are the services)?	✓
Type of injection equipment supplied;	X
Return policy on used equipment;	✓
Views on syringe pack components;	X
Beliefs about vulnerability to BBVs and wound site infections;	✓
How appropriate to meeting IDUs' needs.	✓
3. Which additional harm reduction interventions offered by Needle and Syringe Programmes are valued (and accessed) by IDUs and professionals working with IDUs?	✓
Provision of additional harm-reduction equipment such as filters, mixing containers, sterile water;	✓
Availability of additional harm-reduction interventions such as advice and information on safer injecting practices, treatment for injection-site infections, onsite vaccination services, testing for hepatitis B and C and HIV, pre- and post-diagnostic counselling, general health advice, and primary health care;	✓
Provision of spoken vs. printed advice and information;	X
Services which promote, or refer people to, a range of additional support services (including drug and alcohol treatment and support services, specialist support for those engaged in high-risk injecting methods, emergency referrals to secondary care. GP registration, dental care, safer sex/sexual health advice and condom distribution; referral to primary care services, and welfare, housing and legal advice);	✓
Encouraging current (or employing former) IDUs to pass on sterile and unused injecting equipment to their peers.	✓
4. How are opiate substitution therapy (OST) and NSPs (perceived to be) used together by IDUs?	✓
Can users formally access OST and needles from the same NSP?	X
Do users formally access OST and needles from the same NSP?	X
Do users informally access OST and needles from the same NSP?	X
What do care providers and users consider to be the advantages and disadvantages of integrated services?	✓
5. How do the general public perceive the effectiveness and acceptability of NSPs?	✓
6. What are the views, experiences and attitudes of carers and families of IDUs to NSPs?	X

Question 1: Suitable types of programmes and ideal level of coverage

Two US studies were found relating to key question 1. Both examined implementation of NSPs from the point of view of stakeholders and providers.

Evidence statement 3.2a

There is evidence from one moderate quality (+ rating) US study that the features of a successful NSP include: flexibility in process and management models; knowledge; coalition building and community involvement; strong leadership; staging debate with sensitivity to political and cultural norms; access to resources; use of research; overcoming fear.

Question 2: Types of NSPs valued and accessed by IDUs

Thirty one studies were found relating to key question 2. Eight of these were from the UK (three ++ rating, four + rating and one – rating), 14 from the USA, five from Canada, one from Australia and two from other European countries. One compared people from the UK and the USA .

Evidence statement 3.3a

There is evidence from one good quality (++) rating) UK study and two moderate quality (+ rating) UK studies to suggest that immediate availability of injecting equipment is more important to injecting drug users than perceptions of risk associated with injecting behaviour.

Evidence statement 3.3b

There is evidence from two good quality (++) rating) UK studies and three moderate quality (+ rating) studies, two of which are from the UK, that pharmacy-based needle and syringe programmes are popular with injecting drug users. Pharmacies were rated more highly than drug agency based NSPs for accessibility in 3 UK studies; although in another 2 UK studies, embarrassment, negative staff attitudes or fear of exposure led to negative feelings about pharmacy based NSPs, particularly in women. Agency based NSPs were rated more highly than pharmacies for advice and information.

Evidence statement 3.3c

There is evidence from one good quality (++) rating) UK study, one good quality (++) rating) US study, one moderate quality (+ rating) UK study, two moderate quality (++) rating) US studies and one poor quality (- rating) UK study to suggest that convenience or otherwise (specifically opening hours, location and queues) of NSPs are very important to IDUs and can influence decisions on whether to obtain equipment from them or from street sellers or secondary exchange.

Evidence statement 3.3d

d. There is evidence from two good quality (++) rating) studies, one of which is from the UK, and seven moderate quality (+ rating) studies, two of which are from the UK, to suggest that IDUs are not a homogeneous group: there are different cultures, some of whom disapprove of others' drug using behaviours and some of whom are more affluent than others. Fear of being caught and publicly exposed as a drug user (to police (USA studies), neighbours or family (UK studies)) is a prominent theme and can impact upon use of NSPs and other services, with some IDUs preferring secondary syringe exchange for this reason.

Evidence statement 3.3e

There is evidence from one good quality (++) qualitative study that prison-based NSPs may find support but also opposition, both among IDUs and non-IDUs. There is evidence from one moderate (+) quality qualitative study that anonymity was seen as important by IDUs in relation to prison-based NSPs.

Question 3: Additional harm reduction interventions valued and accessed by IDUs

Nineteen studies were found relating to key question 3. Three of these were from the UK (1 rating ++, 2 rating +), ten from the USA, one from Australia, two from Canada, one from the Netherlands and one from Ireland. One study compared people from the UK and the USA.

Evidence statement 3.4a

There is evidence from two moderate quality (+ rating) UK studies of gender differences in patterns of equipment sharing and use of services. Women are

less likely than men to share equipment with friends, preferring to share only with their sexual partner. Women are also more likely to have negative feelings about using pharmacy-based NSPs and to obtain equipment by secondary exchange, particularly with their sexual partner.

Evidence statement 3.4b

There is evidence from three good quality (++) rating) and one moderate quality (+ rating) study to suggest that a range of harm reduction interventions (referrals to drug treatment and other services; HIV testing; medical care) in addition to needle and syringe programmes were accessed and valued by IDUs.

Evidence statement 3.4c

There is evidence from three good quality (++) rating) studies, one of which is from the UK, and six moderate quality (+ rating) studies, one of which is from the UK, that secondary syringe exchange² is a valued method for obtaining clean syringes because it is convenient and relieves the fear of exposure.

Question 4: Opiate substitution therapies and NSPs.

Two UK studies (one rating ++, one rating +) were found relating to key question 4. However, there was very little data presented in either study about how OST and NSPs are used together.

Evidence statement 3.5a

In two UK studies (one good quality ++ rating, one moderate quality + rating), IDUs obtained oral methadone prescriptions from the same pharmacy they used for needle and syringe exchange. A need for privacy when collecting needles and taking oral methadone was expressed.

Question 5: Perceptions of the general public

Nine studies were found relating to key question 5. Two of these (++) rating) were from the UK, five from the USA, one from Australia and one from Canada.

² where one person exchanges syringes at the NSP on behalf of others

Evidence statement 3.6a

There was evidence from one good quality (++) rating) US study and two moderate quality (+ rating) studies, one of which was from the UK, that the general public, particularly religious groups, had concerns about the ethics or morality of providing syringes and needles to injecting drug users, with some stating that it was helping them (IDUs) to harm themselves; others were more concerned that it discouraged IDUs from taking personal responsibility for their drug use.

Evidence statement 3.6b

There was evidence from three moderate quality (+ rating) studies, one of which was from the UK, that the general public and IDUs themselves had some concerns about the environmental and health consequences (e.g. discarded needles, increased crime) of fixed site NSPs. In some cases direct opposition came from a vocal, more affluent, minority.

Question 6: Perception of families and carers

No qualitative studies were found that were conducted with families or carers of IDUs, therefore there was no evidence available that related to this question.

Main report

1. Background

For a background on health, policy and social implications of needle and syringe programmes for injecting drug users, readers should refer to the main effectiveness review.

Research Questions

This review is complementary to the reviews of the evidence of effectiveness and the evidence of cost-effectiveness. It aims to provide a more situated narrative perspective on the overall guidance questions. With this in mind, the questions in the scope were developed to make them more suited to a qualitative review:

1. What do injecting drug users (IDUs) and professionals working with IDUs, including service commissioners, identify as suitable types of needle and syringe programmes, and what do they believe is the ideal level of coverage?

Sub-questions considered the impact of the following components:

- Diversity of the population (e.g. age, gender and ethnicity);
- Whether or not users are homeless;
- Type of drugs injected;
- Patterns of injecting, including who needle and syringe programme (NSP) users inject with;
- Method of injection;
- Where IDUs acquire needles from (in addition to/in place of NSPs);
- Whether and how IDUs informally distribute needles, syringes and other paraphernalia with other users;
- Whether and how users choose between multiple local NSPs;
- The 'constellation' or mix of services available;
- The 'constellation' or mix of services desired.
- IDUs' involvement in service planning and/or evaluation

2. What types of Needle and Syringe Programmes are valued and accessed by IDUs?

Sub-questions considered the impact of the following components on the opinions of the included participants outlined above.

- Providers (including personal characteristics, skill mix and level of training/competency of staff) site and size of setting, and commercial status of provider (including specialist providers, independent and multiple pharmacies);
- Availability (opening times) and accessibility;
- Acceptability
- How able is target group to access services (not just how accessible are the services)?
- Type of injection equipment supplied;
- Return policy on used equipment;
- Views on syringe pack components;
- Beliefs about vulnerability to BBVs and wound site infections;
- How appropriate to meeting IDUs' needs.

3. Which additional harm reduction interventions offered by Needle and Syringe Programmes are valued (and accessed) by IDUs and professionals working with IDUs?

Sub-questions considered the impact of the following components on the opinions of the included participants outlined above.

- Provision of additional harm-reduction equipment such as filters, mixing containers, sterile water;
- Availability of additional harm-reduction interventions such as advice and information on safer injecting practices, treatment for injection-site infections, onsite vaccination services, testing for hepatitis B and C and HIV, pre- and post-diagnostic counselling, general health advice, and primary health care;
- Provision of spoken vs. printed advice and information;
- Services which promote, or refer people to, a range of additional support services (including drug and alcohol treatment and support services, specialist support for those engaged in high-risk injecting methods, emergency referrals to secondary care. GP registration, dental care, safer

sex/sexual health advice and condom distribution; referral to primary care services, and welfare, housing and legal advice);

- Encouraging current (or employing former) IDUs to pass on sterile and unused injecting equipment to their peers.

4. How is opiate substitution therapy (OST) and NSPs (perceived to be) used together by IDUs?

OST is defined as the prescription of substitute drugs for drug dependence, such as methadone and buprenorphine for a sustained period (maintenance therapy). Sub-questions considered the impact of the following components on the opinions of the included participants outlined above.

- Can users formally access OST and needles from the same NSP?
- Do users formally access OST and needles from the same NSP?
- Do users informally access OST and needles from the same NSP?
- What do care providers and users consider to be the advantages and disadvantages of integrated services?

5. How do the general public perceive the effectiveness and acceptability of NSPs?

This question considered the perceptions of NSPs of groups including:

- Local community representatives;
- Schools;
- Local councils and local councillors;
- Local and national media;
- Voluntary sector.

6. What are the views, experiences and attitudes of carers and families of IDUs to NSPs?

- Effectiveness of NSPs
- Acceptability of NSPs
- Information and advice needs (for themselves)

Question six is an additional question, for the review of qualitative evidence only.

2. Methodology

2.1 Literature Search

A database of published and unpublished literature was compiled from systematic searches of electronic sources and websites and searching reference lists. Relevant articles, published since 1990, including literature from all OECD³/1st world countries were identified by searching the following sources (see Box 1).

Box 1. Sources Searched

- Sociological Abstracts
- International Bibliography of the Social Sciences
- Web of Knowledge (Social Science)
- Social Care Online
- SSCI
- ASSIA
- PsycLIT
- CINAHL
- MEDLINE
- ERIC
- World Health Organisation
- Joseph Rowntree Foundation
- King's Fund
- National Treatment Agency
- Drug Organisations (drugs)
 - Lifeline
 - HIT
 - ADFAM
 - Action on Addiction
 - Addaction
 - Black Poppy
 - Exchange Supplies

³ Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States

- Hepatitis C Trust
- Release
- Drugs Futures
- National Needle Exchange Forum
- UK Harm Reduction Alliance
- International Harm Reduction Association

A search strategy was developed based on the following population and intervention keywords (see also Appendix D):

Search keywords

Population: Substance, drug, abuse, dependence, use, misuse, addict, addiction, injection, injecting, intravenous

Interventions

Needle exchange terms: needle exchange programs, syringe exchange, needle exchange, supply, provision, exchange, distribution, dispensing/vending machine, mobile, outreach, backpack, drug consumption rooms, safe injecting sites, shooting gallery, safe injecting facilities, prison, pharmacy, coverage, provision

Additional injecting equipment terms: paraphernalia, (injection) equipment, bleach, disinfectant, sterile, citric acid

Harm reduction terms: Harm reduction, preventive health services, referral, peer intervention, patient education, counselling, health promotion, safer sex advice, vaccination, testing, advice, information

Qualitative terms: phenomeno\$, grounded theory, constructionist, thematic analysis, observation study, survey, demonstration project, ethnograph\$, evaluation, perception, experience, understanding, neighbourhood, family, carer, community, school, commissioner, commissioning, belief, network(s), distribution, attitudes, knowledge, values, motivation, behaviour, access, involvement, participation, collaboration, consultation, contribution, stakeholder, user

It was not possible to combine all the search terms in all databases due to limitations of some of the search engines, for example, Social Care Online, WHO, Joseph Rowntree and Kings Fund only allowed for a limited number of keywords per query and as such keywords could not be combined appropriately. All databases were

searched from 1990 to March 2008. Search results were exported to an Endnote reference manager library for ease of handling.

2.2 Selection of Studies for Inclusion

Inclusion/exclusion criteria

a. Participants

Literature was selected that explored the views and perspectives of groups relating to the supply and use of injection equipment, including, but not limited to:

- Current and former injecting drug users (IDUs);
- The families and carers of IDUs;
- Professionals working with IDUs, including pharmacists, drug workers, healthcare providers, GPs, A&E staff, prison staff;
- Policy makers, service commissioners and budget holders

'Injecting drug users' includes those who inject illicit substances, including non-prescribed anabolic steroids and other performance and image enhancing drugs (PIED) and those who inject prescribed opiate substitutes such as methadone. For the purposes of this review, studies that include former injecting drug users are included. It does not include those people who inject drugs prescribed for a medical condition.

For research question 5 we focused on literature that explored the views and perspectives of the general public including, but not limited to:

- Local community representatives;
- Schools;
- Local councils and local councillors;
- Local and national media;
- Voluntary sector.

For research question 6 we focused specifically on families and carers of IDUs.

b. *Study design*

Any qualitative design was considered as long as it was judged to be internally coherent⁴ in its methodology. The qualitative elements of mixed methods research were also included if they were of sufficient quality.

c. *Outcomes*

Although many qualitative studies are not intervention studies and therefore do not include outcomes *per se*, the following types of themes were of particular interest:

- Beliefs, attitudes, knowledge and skills;
- Preferred NSP structure, location and service provision;
- Barriers to treatment;
- Barriers to safe disposal;
- Patterns of needle and syringe acquisition/disposal;
- Injecting and related risk behaviours;
- Views, attitudes and experiences of those using (or choosing not to use) needle and syringe programmes;
- Views and attitudes of carers, families, drugs professionals and the general public;
- Views on, and histories of, drug-related violence, crime, prosecutions, incarcerations and anti social behaviour;
- Drug-related hospitalisation

Screening of electronic search results was carried out by two reviewers independently, with discussion over uncertainties. If either reviewer was unsure about whether to obtain a full paper, it was obtained. Selection of studies from full papers was carried out by two reviewers independently, with disagreements being resolved by consensus and, if necessary, consultation with a third reviewer.

2.3 Quality Appraisal

Data relating to both study design and quality were extracted by one reviewer into Word tables and independently checked for accuracy by a second reviewer. Disagreements were resolved through consensus and if necessary a third reviewer was consulted. Time constraints did not allow us to contact authors for missing data.

2. Was it appropriate as a qualitative study design? Was the intended study design followed through i.e. was it conducted and analysed qualitatively?

The quality of the studies was assessed according to the NICE Centre for Public Health Excellence Methods Manual. Each of the studies was graded using a code, [++], [+] or [-] based on the extent to which the papers were judged to meet the validity criteria set out in the CPHE tool, where [++] represents the highest level of internal coherence and [-] is the least.

It should be noted that validity cannot be measured or tested in qualitative research as in quantitative research. Validity and reliability are therefore addressed using a range of other tools, such as respondent validity, triangulation or 'good research practice' (Ritchie and Lewis 2003; Silverman 2006)⁵

2.4 Study categorisation

In this review, all included studies use qualitative methods. We have noted which studies used semi-structured or in-depth interviews or focus groups, and which studies used ethnographic or observation methods. Mixed methods studies (that used both quantitative and qualitative methods) were also included. Qualitative surveys that were analysed quantitatively were excluded on the grounds of lack of internal coherence.

2.5 Assessing applicability

The studies were graded for applicability to the population and settings defined above, using the existing grading from A to D, where A is the most applicable and D the least. See table 1 below:

Table 1: Applicability grading

Applicability grade	Description
A	Studies carried out with IDUs and related professionals or stakeholders in the UK
B	Studies carried out in non-UK countries that have similar legislation and policy to the UK (e.g. Canada);

⁵ Ritchie, J. and J. Lewis, Eds. (2003). Qualitative Research Practice. A Guide for Social Science Students and Researchers. London, Sage Ltd.
Silverman, D. (2006). Interpreting Qualitative Data: Methods for Analyzing Talk, Text and Interaction. London, Sage.

C	Studies with relevant data carried out in non-UK countries that do not have similar legislation and policy (e.g. USA)
D	Studies containing very little relevant data carried out in non-similar non-UK countries (e.g. USA)

2.6 Synthesis

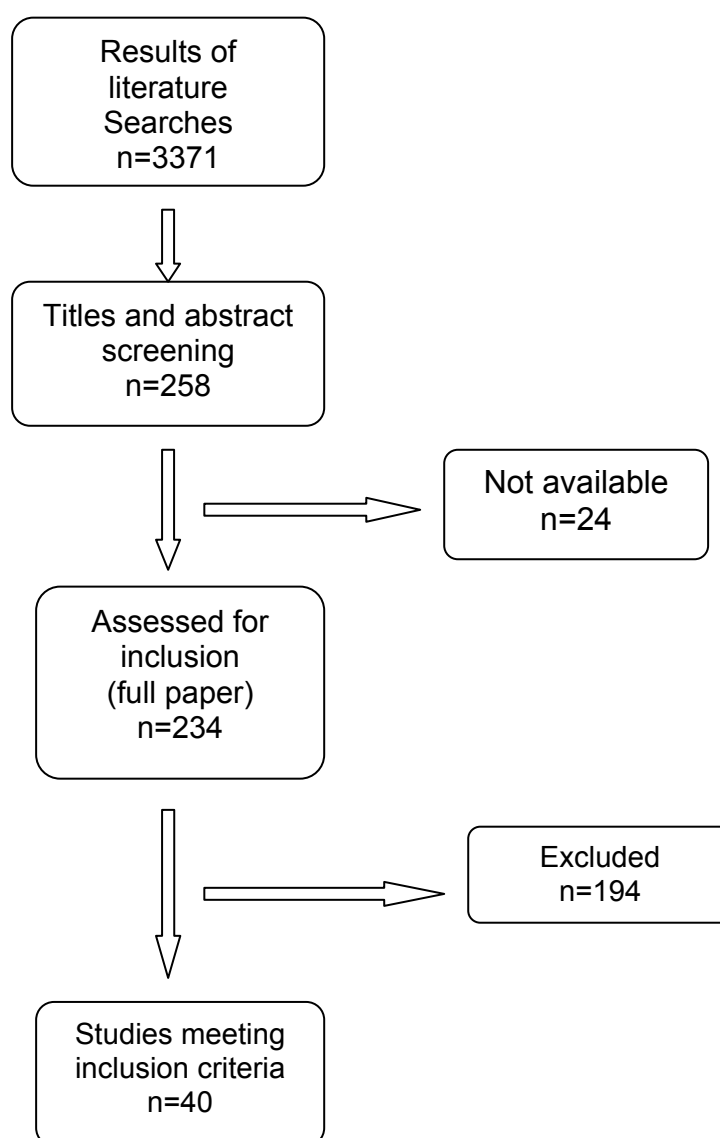
The results of the data extraction and quality assessment for each study are presented in structured tables (Appendix C) and summarised narratively and in short tables by key question. Evidence statements are presented which take into account the strength and the applicability of the evidence for each key question and sub question.

3. Summary of Findings

3.1 Overall summary of studies identified

The electronic searches identified 3371 potentially relevant articles. 258 were ordered and 234 were obtained as full papers by the cut off date and screened for inclusion. Of these 194 were excluded: 133 did not use qualitative methods; 46 did not pertain to needle and syringe programmes, 11 were from a non-first world country and four were non-English language. A list of excluded studies with reasons for exclusion can be found in Appendix B. We were unable to obtain 24 papers: these are listed in Appendix E.

Figure 1: Flowchart showing process of study identification



Forty studies were included in the review. Of these, 10 were from the UK, 20 from the USA, five from Canada, two from Australia, and three from other European countries. 38 used interview or focus group methods and 17 used ethnographic or observation methods (some studies used both).

Ten studies were assessed of being as good quality (++) rating); of these three were from the UK. Twenty-five studies were assessed as being of moderate quality (+ rating); five of these were from the UK and one included people from the UK and the USA. Five studies were of poor quality (- rating); one of these was from the UK. Common barriers to validity included poor reporting of sampling strategy, data collection and analysis methods. Frequently the actual research process was either not described at all or so poorly reported that it was not possible to make any judgements about validity. In addition, the theoretical underpinning was rarely mentioned. There were several studies that, despite using qualitative methods to collect data, presented only quantitative data in their findings, and so were excluded from the review. In a substantial proportion (25%) of included studies, the data presented was not rich, lacking illustrative quotes and/ or context. Some of these issues may be due to editorial limitations on space or word count in journals, rather than poor conduct of the research, but without these details it is not possible to judge whether the omissions are due to poor reporting or poor quality research, and, without details of the included sample, it is difficult to decide whether the findings are generalisable.

Many of the included studies addressed more than one of the key questions and there was considerable overlap between questions and subquestions as originally posed. In order to avoid repetition as much as possible we have tried to include information only once in the narrative summary and cross-reference to other questions where the same information is relevant.

Ten UK studies received applicability grading A (most applicable), nine Canadian, Australian or European studies received grade B, 17 US studies and one Australian study received grade C and three US studies that contained very little relevant data were ranked grade D.

3.2 Key question (1)

What do IDUs and professionals working with IDUs, including service commissioners, identify as suitable types of needle and syringe programmes, and what do they believe is the ideal level of coverage?

3.2.1 Narrative summary

Two US studies were found relating to key question 1 (Downing 2005, Kelley 2005). Both examined implementation of NSPs from the point of view of stakeholders and providers.

Quality assessment

Both included studies were rated as being of moderate quality (+ rating). Both were assessed as having a clear research objective for which a qualitative study design was appropriate. Both presented rich data and findings that were judged to be credible and relevant, with plausible conclusions. Details of the data collection and analysis processes and the role of the researcher(s) were poorly described in both studies. In Downing 2005, no details were given of sampling strategy at an individual level, and the context was not described, which limits the generalisability of the findings. In Kelley 2005, reporting of consent and ethics procedures was poor.

Findings: implementation

Two moderate quality (+ rating) US studies interviewed stakeholders and providers about the process of implementing NSPs (Downing 2005, Kelley 2005). Downing 2005 (C+) identified three models for formation of a NSP: community coalition, community activists or top down from government. All had strengths and weaknesses and the strongest programmes were able to move from one model to another as required. Other features associated with successful programmes were: knowledge; staging the debate with sensitivity to political and cultural norms; coalition building and community involvement; strong leadership; access to resources; use of research; overcoming fear.

In Kelley 2005 (D+) it was seen that when a programme moved from being illegal to having legal status, although access to resources and other physical issues were greatly improved, many motivating factors for providers, such as participant

management, personal responsibility to clients, and even deviant status, were removed, which reduced the sense of belonging among providers. This study was not very relevant to the UK, where historically NSPs are supported by government policy and specialist organisations (e.g. National Treatment Agency).

The two studies included in key question (1) did not contain any information about the impact of: population diversity; whether or not users were homeless; type of drugs injected; patterns of injecting; method and site of injection; where else needles are acquired from; whether and how equipment is informally distributed; whether and how IDUs choose between multiple local NSPs; constellation or mix of services available or desired; involvement of IDUs in service planning and/ or evaluation. However, some of the studies included in key question (2) did contain some information pertinent to these subquestions, and these are therefore discussed under key question (2).

3.2.2 Evidence statement 3.2

a. There is evidence from one moderate quality (C + rating) US study^a that features of a successful NSP include: flexibility in process and management models; knowledge; coalition building and community involvement; strong leadership; staging debate with sensitivity to political and cultural norms; access to resources; use of research; overcoming fear.

a Downing 2005

Summary Table: Qualitative evidence for key question 1

Author (Year)	Design	Population	Outcomes	Quality	Applicability
Downing 2005	Qualitative interviews with key informants. Extended interview Semi-structured interview	US 17 interviews with Public health officials, HIV prevention and drug treatment providers, researchers, policy makers, staff of community based organisations and activists	Three implementation models were identified: 1. NSPs established by community coalitions. 2. NSPs established by community activists. 3. NSPs established top down by govt. authorities. Successful implementation sometimes involved movement from one model to another as appropriate. Six strategies and resources were identified as characterising successful implementation of an NSP.	+	C
Kelley 2005	Survey Evaluation Case study Extended interview Observation (Participant) Appraisal of attitudes, beliefs and values	San Francisco, US Needle and syringe programme 56 Service providers at the needle and syringe programme	The illegal nature of the operations was an attractive element of the experience for many and enhanced identification with the clients they were serving. The clandestine nature of the work also served to strengthen bonds among the providers. While the organisational transition fulfilled many of the positive practical expectations of the volunteers many of the motivating factors or 'ideational rewards' such as participant management, personal responsibility to the needs of the clients and even the deviant status of the group were removed. This reduced the volunteers' sense of belonging. Many volunteers continued to participate however	+	D

3.3 Key question (2)

What types of Needle and Syringe Programmes are valued and accessed by IDUs?

3.3.1 Narrative summary

Thirty-one studies were found relating to key question 2. Eight of these were from the UK (Barnard 1993, Clarke 2001, Hay 2001, Matheson 1998, Matheson 1999, Neale 1998, Rhodes 2007, Power 1996), 14 from the USA (Buchanan 2003, Cooper 2005, Finlinson 2000, Junge 2000, Larkins 2000, Lewis 1996, Moore 1995, Murphy 2004, Singer 1995, Somlai 1999, Springer 1999, Strenski 2000, Voytek 2003, Weiker 1999), five from Canada (Spittal 2003, Strike 2002a, Strike 2002b, Strike 2004, Strike 2005), one from Germany (Jacob 2000), one from Australia (Miller 2001) and one from Ireland (Long 2004). One study compared service IDUs from the UK and the USA (Phillips 2007).

Three UK studies (Barnard 1993, Neale 1998, Power 1996) examined IDUs' beliefs and attitudes related to injecting behaviour and needle sharing. One US study reported NSP staffing as one of the issues covered in interview (Weiker 1999 D-); six studies (2 UK, 3 US, 1 Canadian) reported IDUs' preferences for sources of needles and syringes. Six studies focused on the pharmacy as a means of needle exchange (5 UK). Barriers to using NSPs were discussed in 12 studies (4 UK, 7 US, 1 Australian); in addition, two Canadian studies discussed location of NSPs and another two Canadian studies discussed exchange policy. Two US studies mentioned IDUs' sense of place in the community related to NSPs, and there were two studies of NSPs in prisons: one an evaluation of NSPs in prisons in Germany and one an examination of Irish prisoners' attitudes towards NSP.

Quality assessment

Six (Finlinson 2000, Long 2004, Matheson 1998, Matheson 1999, Moore 1995, Power 1996) of the 31 included studies were rated ++ (good quality). Three of these (Matheson 1998, Matheson 1999 and Power 1996) were from the UK. The two Matheson (1998, 1999) studies were pharmacy-based. In five of the six ++ rated studies, all of the quality assessment criteria on the CPHE checklist were judged to have been adequately met. In Matheson 1999, details of ethics and

consent procedures and the role of the researcher were not clearly described, but these were thought unlikely to have a significant impact on the study findings.

Of the remaining studies, five (Hay 2001, Junge 2000, Larkins 2000, Somlai 1999 and Weiker 1999) were rated – (poor quality) and twenty were rated + (moderate quality). Larkins 2000 was published only as an abstract therefore many details were missing. In the other four studies, very few details of methodology were provided.

Reporting of consent and ethics procedures was poor in eight (Barnard 1993, Miller 2001, Neale 1998, Springer 1999, Strike 2002b, Strike 2004, Strike 2005, Voytek 2003) of the 20 + rated studies. In Strike (2002b) it was unclear to the reviewers whether the study's conclusions were plausible (due to missing data). In one study (Murphy 2004) the research objectives were unclear. In ten studies (Clarke 2001, Cooper 2005, Lewis 1996, Murphy 2004, Neale 1998, Rhodes 2007, Strike 2002b, Strike 2004, Strike 2005, Voytek 2003) insufficient detail of data collection was given or it was unclear whether the methods used were reliable; in fourteen studies insufficient detail of data analysis was given or it was unclear whether the methods used were reliable (Barnard 1993, Buchanan 2003, Clarke 2001, Jacob 2000, Lewis 1996, Miller 2001, Murphy 2004, Neale 1998, Singer 1995, Spittal 2003, Springer 1999, Strike 2002b, Strike 2004, Voytek 2003). Three studies did not report sufficient detail of context (Murphy 2004, Rhodes 2007, Strike 2005), in five studies the data reported was poor or unclear (Clarke 2001, Lewis 1996, Neale 1998, Phillips 2007, Strike 2002a) and in two studies the reviewers were not sure whether the data were credible (Clarke 2001, Strike 2002b).

Reasons for sharing

Situational factors *i.e.* the immediate availability of a syringe when drugs are available, was said to play a more important role than the availability of a NSP in three UK studies: even a short distance to walk can seem too far when someone is desperate to inject: *"I know it's not a long walk, just a 15 minute walk... but I mean for a drug addict... when they've got their tack sitting right there, you would rather use somebody else's needle than have to walk all the way to get it"* (Neale 1998 A+). Most often it was the case that drugs were immediately available when

clean equipment was not and IDUs would use the nearest available needle and syringe rather than risk losing the “hit”. (Barnard 1993 A+, Power 1996 A++, Neale 1998 A+). In one UK study male and female IDUs believed there was no additional risk if sharing syringes with a sexual partner (Power 1996 A++). In another UK study a difference between genders in sharing patterns was noted: women were more likely to share with sexual partners only than with others, while men were more likely to share with friends than women were (Barnard 1993 A+)

In two UK studies (Power 1996, Neale 1998) the majority of IDUs did not realise that sharing other drug paraphernalia (e.g. filters, spoons and water) are also high risk activities.

Preferences

Staffing of NSPs

In a US study, use of peers (IDUs) as staff on NSPs was found to increase engagement of clients with the NSPs although recruitment and training of peer staff was said to be time consuming (Weiker 1999 D-).

Single versus multiple sources

Preferences for obtaining syringes may be dependent on the social circumstances of the user: one US study found that IDUs from more affluent neighbourhoods were more likely to obtain syringes from a single source than multiple sources, more likely to inject alone in a private place than publicly, and more likely to dispose of syringes in a garbage can than in alleys or dumpsters (Buchanan 2003 C+).

Buying equipment versus exchange

In one US study IDUs reported that buying equipment from sellers (who may themselves have obtained it from a NSP) was quicker and easier than obtaining it from a fixed site NSP, although the cost may be prohibitive (Finlinson 2000 C++). A UK study similarly reported that IDUs would rather buy equipment from fellow users (who themselves obtain it from NSPs) than fixed site NSPs (Power 1996 A++). A Canadian study reported that some users preferred to obtain equipment from NSPs because it is free while others preferred to buy it over the counter for convenience and anonymity (Strike 2005 B+). Three behaviours were noted in

obtaining equipment: stockpiling large quantities, often for secondary exchange (more common in those with stable living arrangements); maintaining 1-2 weeks supply; or obtaining equipment as needed (linked to less stable living arrangements, lack of planning, or fear of arrest for carrying used drug paraphernalia, Strike 2005 B+). One UK study reported that IDUs obtained equipment from multiple sources (Hay 2001 A-). In one US study where users were asked about syringe disposal methods, NSPs were preferred to other disposal methods, namely syringe collection programmes (accumulation of used syringes in a container which is then thrown away) or one way disposal boxes (Springer 1999 C++).

Pharmacies

Six studies focused on the pharmacy as a means of needle exchange (Clarke 2001, Lewis 1996, Matheson 1999, Neale 1998, Power 1996, Rhodes 2007); five of these were from the UK. Pharmacies were rated more highly than drug agency based NSPs by IDUs for accessibility (3 UK studies Power 1996 A++, Clarke 2001 A+ and Neale 1998 A+) although the opening hours could still be a problem (UK study Neale 1998 A+) but agency based NSPs were rated higher for receiving advice and information (UK study Clarke 2001 A+). From the point of view of pharmacists, those interviewed were largely willing and committed to providing NSPs (2 UK and 1 US studies Matheson 1998 A++, Clarke 2001 A+ and Lewis 1996 C+) and preferred the concept of exchanging rather than selling syringes (UK study Matheson 1998 A++, US study Lewis 1996 C+). Pharmacists in South London, UK reported poor or non-existent links with local drug agencies⁶, although five of a sample of nine pharmacists in one study had received training from the local drug and alcohol team (Clarke 2001 A+). Pharmacists in the UK and the USA had business related concerns about running a NSP: they worried about negative effects on other customers (US study Lewis 1996 C+; UK studies Clarke 2001 A+ and Matheson 1999 A++) and “encouragement” of other drug users to “indulge even more” (UK study Matheson 1999 A++). In the USA, pharmacists had additional concerns about legality of NSPs (Lewis 1996 C+) and some pharmacists (those who did not sell syringes) were also concerned about ‘supporting drug abuse’ (Lewis 1996 C+).

⁶ Each English DAAT/PCT should have a dedicated pharmacy lead that liaises with pharmacy NSP, and in some cases a pharmacy coordinator as well.

From the point of view of UK IDUs, a good pharmacy was stated to be one with good staff attitudes, although definitions of this varied, with some users preferring pharmacists to be 'strict' about dispensing equipment and others valuing discreet service, provision of advice or flexibility more (Matheson 1998 A++). Many did not want a prolonged conversation with staff and expressed a need for privacy (Matheson 1998 A++). In another UK study a dedicated NSP was preferred to pharmacy based NSPs due to fear of exposure, shaming and staff attitudes at the pharmacy (Rhodes 2007 A+). Female IDUs were more likely than male IDUs to have negative feelings about pharmacy based NSPs in one UK study (Neale 1998 A+), this was thought to be due to embarrassment and a fear of being recognised and exposed. IDUs identified a need for improved publicity about services offered in UK pharmacies (Neale 1998 A+).

Barriers to use of NSPs

In addition to, and building on, barriers mentioned above, fear of public exposure, either to police, co-workers, neighbours or family members and associated issues of shame was a barrier reported in one UK and three US studies (Rhodes 2007 A+, Strenski 2000 C++, Murphy 2004 C+, Voytek 2003 C+). Women and professionals were particularly concerned about exposure. In the USA, law enforcement issues presented a barrier to use of NSPs, with IDUs fearing arrest (Somlai 1999 C-, Strenski 2000 C++, Springer 1999 C++, Voytek 2003 C+) leading to an inhibition of their capacity to engage in harm reduction (Cooper 2005 C++). Users were more willing to risk arrest by carrying used equipment for exchange rather than for disposal only (Voytek 2003 C+).

Issues of personal safety were found to be a concern in one US study (Strenski 2000 C++) as IDUs feared being robbed by non-NSP-using IDUs after visiting the NSP. Another prominent theme was (in)convenience, either due to location of the NSP (two UK and two US studies: Finlinson 2000 C++, Neale 1998 A+, Power 1996 A++, Voytek 2003 C+), queues (US study: Voytek 2003 C+) or opening hours (two UK, one US and one Australian studies: Finlinson 2000 C++, Hay 2001 A-, Miller 2001 C+, Neale 1998 A+). In one US study, IDUs reported that for these reasons they preferred to use street sellers, although the price could then be prohibitive (Finlinson 2000 C++).

Location of NSP

One Canadian study (Strike 2002a B+) reported that in fixed sites, location, adequate space and opening hours are seen as constraints that can negatively impact on client development and retention. Negative attitudes can reduce programme attendance. Fixed sites can also attract local opposition. Mobile NSP services on the other hand are believed to increase accessibility for clients who prefer to exchange in evening hours, do not have a vehicle or money to travel and/ or cannot travel, although mobile services are viewed as insufficient for incorporating other harm reduction interventions. There were perceived problems with using satellite sites including satellite agency staff not following NSP service guidelines, and refusal to act as satellite sites due to rejection of harm reduction principles. Perceived benefits of a home visit model included accessibility and credibility of the NSP. Workers who were former IDUs were more accepting and comfortable with this mode of delivery than other workers.

Another study by the same authors (Strike 2004 B+) reported that where NSPs are housed in 'parent' organisations (e.g. public health units or AIDS service organisations) this can lead to negative effects: on the one hand the parent organisations may perceive the NSP and/ or IDUs as 'non-core' and 'undesirable'; on the other hand IDUs may be put off attending the NSP by stigma associated with the parent organisation (e.g. AIDS-related) or by a perception of the parent organisation as being too clinical.

Exchange policy

In the two Canadian studies that reported on exchange policy (Spittal 2003 B/C+, Strike 2002b B+) it was seen that the one-for-one exchange policy was dominant, particularly in more recently established programmes (Strike 2002b B+) but that policies became more lenient over time, as increased access to needles (needles as objects of 'prevention' rather than 'risk') became the main focus of the programme and as relationships were formed between providers and clients.

Sense of community

In two US studies, IDUs mentioned the place of NSPs in the community, either by expressing the hope that NSPs would lead to greater acceptance in the community of drug use as a medical issue (Somlai 1999 C-) or by expressing a

sense of ownership and of wanting to give something back (Moore 1995 C++), feelings that were not translated into broader action due to poor living and social conditions.

Prisons

One study examined two NSPs in two prisons in Germany (Jacob 2000 B+). Anonymity was seen as important by IDUs within the prisons, which was dependent on the mode of delivery: the NSP that used a vending machine was more popular than the one that used hand to hand exchange. NSPs were more likely to be accepted by prison staff if they played an active part in planning and decision making processes.

One study found support among prisoners (both IDUs and non-IDUs) for NSPs but also opposition, again from both IDUs and non-IDUs. Perceived benefits of NSPs were reduction in infection; perceived risks were safety and increased drug consumption (Long 2004 B++).

Summary

Prominent themes in key question (2) were: use of pharmacies; fear of exposure; fear of arrest (non-UK studies). In the UK, pharmacies were preferred to agency based NSPs for accessibility (opening hours and locations) while agency based NSPs were preferred for advice and information and, for some IDUs, there was felt to be less risk of shaming (due to negative staff attitudes and/ or embarrassment and exposure) at the agency based NSPs. Fear of exposure was particularly prominent for women and 'professional' IDUs and was lessened by using agency based rather than pharmacy based NSPs and by secondary syringe exchange or buying equipment from street sellers.

Fixed site NSPs were found to be preferable (by providers) for providing a range of services in addition to NSP, but could attract local opposition or be viewed negatively by IDUs when based in parent organisations. Mobile NSPs were thought to increase accessibility for clients but could not offer the full range of services. Exchange policies became more lenient as NSPs became more established. Use of peers (IDUs) as staff on NSPs was found to increase engagement of clients with the NSPs although recruitment and training of peer staff was said to be time consuming (Weiker 1999 D-). In Singer 1995, an important product of the informal relationship

between NSP staff and clients was reported to be the significant level of program recruitment by satisfied users. Informal conversations provided a foundation for the collection of attitudinal and life history data on IDU for evaluation purposes.

Accessibility of NSPs was related not just to opening hours, location and fixed versus mobile sites, but also to fear of exposure and shaming and to staff attitudes.

There was no information in included studies about type of equipment supplied or views on syringe pack components.

Not all the included studies reported even basic demographic details such as age, sex and ethnicity of study participants. Of those that did, women were more likely than men to use secondary exchange and to have negative feelings about using pharmacy-based needle and syringe programmes, due to fear of exposure as a drug user and more negative and stigmatised perceptions of female drug users by male drug users and the general population.

Most included studies did not report on the living arrangements of participants. Of those that did, two mentioned ways in which less stable living arrangements can have an impact on patterns of syringe acquisition and disposal and consequently increased levels of risk.

Very little information was provided in the included studies about types of drug injected, methods or sites of injection, and almost none about what impact this would have on perceptions of suitable types of NSPs.

3.3.2 Evidence statement 3.3

a. There is evidence from one good quality (++) rating) UK study^a and two moderate quality (+ rating) UK studies^b to suggest that immediate availability of injecting equipment is more important to injecting drug users than perceptions of risk associated with injecting behaviour.

b. There is evidence from two good quality (++) rating) UK studies^c and three moderate quality (+ rating) studies, two of which are from the UK,^d that pharmacy-based needle and syringe programmes are popular with injecting

drug users. Pharmacies were rated more highly than drug agency based NSPs for accessibility in 3 UK studies, although in another 2 UK studies, embarrassment, negative staff attitudes and fear of exposure were associated with negative feelings about pharmacy based NSPs, particularly among women. Agency based NSPs were rated more highly than pharmacies for advice and information.

c. There is evidence from one good quality (++) rating) UK study, one good quality (++) rating) US study^e, one moderate quality (+ rating) UK study, two moderate quality (++) rating) US studies^f and one poor quality (- rating) UK study^g to suggest that convenience or otherwise (specifically opening hours, location and queues) of NSPs are very important to IDUs and can influence decisions on whether to obtain equipment from them or from street sellers or secondary exchange.

d. There is evidence from two good quality (++) rating) studies, one of which is from the UK^h, and seven moderate quality (+ rating) studies, two of which are from the UKⁱ, to suggest that IDUs are not a homogeneous group: there are different cultures, some of whom disapprove of others' drug using behaviours and some of whom are more affluent than others. Fear of being caught and publicly exposed as a drug user (to police (USA studies), neighbours or family (UK studies)) is a prominent theme and can impact upon use of NSPs and other services, with some IDUs preferring secondary syringe exchange for this reason.

e. There is evidence from one good quality (++) qualitative study that prison-based NSPs may find support but also opposition, both among IDUs and non-IDUs^j. There is evidence from one moderate (+) quality qualitative study that anonymity was seen as important by IDUs in relation to prison-based NSPs^k.

a Power 1996

b Barnard 1993, Neale 1998

c Matheson 1999, Power 1996

d Clarke 2001, Lewis 1996, Neale 1998

e Power 1996, Finlinson 2000

f Neale 1998, Voytek 2003, Miller 2001

g Hay 2001

h Matheson 1998, Strenski 2000

i Buchanan 2003, Murphy 2004, Neale 1998, Spittal 2003, Strike 2005, Voytek 2003

j Long 2004 k.Jacob 2000

Summary table: evidence for key question 2

Author (Year)	Design	Population	Outcomes	Quality	Applicability
Barnard 1993	Qualitative: Ethnographic study Extended interview Observation (Passive/Participant) Short standard schedule(structured) : variable depending on time and willingness of participants	Glasgow, Scotland. Drug injectors in two treatment centres, a needle and syringe programme centre and a local pharmacy providing sterile injecting equipment. Injectors and non injectors around the streets (community) 122 men and women	Availability does not have an important part to play in the creation of some of the situations where needle sharing takes place, but it thus can only constitute a part of the explanation as instances of sharing was shown to be highly situationally variable. Patterns of sharing between injectors highlighted sharing as rarely being an indiscriminate activity but one which frequently follows a pattern of sociability quite closely. So also author critically commented on gender distinct nature of the social activity which suggests that the risks of HIV infection are differently focussed for men and women	+	A
Clarke 2001	Qualitative semi- structured and structured interviews	South London, UK 155 needle and syringe programme clients and 9 community pharmacists	90% of IDUs had never asked pharmacists for advice about drug use. Clients rated pharmacies higher for being open when needed and easy to get to, but drug agencies were rated higher for receiving advice and information. . Most pharmacists reported poor or non-existent links with local drug agencies. Just over half had received training from the local drug and alcohol team	+	A
Matheson 1998	Descriptive study with evaluation (qualitative study) Semi-structured interview Observation (Passive/Participant) Appraisal of attitudes, beliefs and values	Aberdeen, Dundee, Edinburgh, Glasgow and adjacent rural areas/ Scotland 124 illicit drug users interviewed in 23 pharmacies and 8 drug agencies	Most frequently mentioned feature of a good pharmacy is the characteristics and attitude of the pharmacists or staff at the pharmacy. Many of the respondents did not want to enter a prolonged conversation with the staff. A good process was seen as one which was discreet, flexible, strict or if advice was offered. The need for privacy was mentioned by 6 respondents to reduce embarrassment faced by them and other customers, particularly w.r.t. supervised methadone.	++	A
Matheson 1999	Descriptive study with evaluation (qualitative study) Extended interview Semi-structured interview Appraisal of attitudes, beliefs and values	Scotland 45 Pharmacists. Interviewed at work place through telephone interviews	Two thirds of the participants sold or will sell needles and syringes. Among those not willing to sell, the reason often given was from concerns about the negative effect on other customers and the encouragement of other drug users. Several participants considered that NSP was an appropriate service and the reducing of injecting equipment sharing and communicable diseases was a motivating factor.	++	A
Neale 1998	Qualitative study	Scotland, UK	Broad support for increased availability of sterile injecting	+	A

	<p>examining drug users attitudes and behaviour</p> <p>Descriptive study with evaluation (qualitative study)</p> <p>Semi-structured interview</p> <p>Appraisal of attitudes, beliefs and values</p> <p>Appraisal of knowledge, skills and behaviour</p>	<p>Pharmacies and drug agencies</p> <p>124 illicit drug users</p>	<p>equipment. Problems of accessibility in relation to geographical location of services and opening hours.</p> <p>A need for improved publicity about services offered in pharmacies.</p> <p>Motivations for sharing were mostly situational.</p> <p>Female respondents were disproportionately more likely to experience negative feelings regarding using a pharmacy to access/dispose of injecting equipment.</p> <p>Secondary syringe exchange was described by some respondents.</p> <p>No consensus regarding preference for pharmacy or dedicated needle and syringe programmes.</p>		
Power 1996	<p>Descriptive study with evaluation (qualitative study)</p> <p>Survey</p> <p>Semi-structured interview</p> <p>Observation (Participant)</p> <p>Ethnographic study</p>	<p>London, semi-rural area and Midlands town /UK</p> <p>Field sites, research centres (work place), semi-public venues (pubs and cafes) and private homes.</p> <p>70 Injecting drug users</p>	<p>IDUs adopted a variety of strategies to avoid risks associated with injecting. Respondents would rather buy a syringe from fellow colleagues who are in direct contact with NSPs over fixed site NSPs. Respondents preferred to use pharmacies than NSPs because of the distance</p> <p>The awareness of the risk of sharing needles was high. Re-used syringes are often stored in a secured place at home. Cleaning was another strategy mostly by flushing with water, if sharing more rigorous methods of cleaning such as bleaching will be used.</p> <p>Respondent believed that no additional risk was involved if you shared your needle with your sex partner, some were prepared to share the risk of HIV infection with their intimate partner, syringe availability was also a factor in determining risk management.</p>	++	A
Rhodes 2007	<p>Descriptive study with evaluation</p> <p>Semi-structured interview</p> <p>Appraisal of attitudes, beliefs and values</p>	<p>South Wales, UK</p> <p>The interviews were conducted in six locations, This enabled data to be collected from urban, semi-rural and rural settings.</p> <p>49 active IDUs</p>	<p>Respondents made a distinction between themselves as responsible, more hygienic drug users and irresponsible 'smackheads', with responsible users safely disposing of not only their needles, but sometimes those discarded in public spaces as well.</p> <p>Accessing dedicated needle and syringe programmes was preferred to pharmacy based exchanges. Using pharmacy based services risked public exposure as an IDU and was also linked to shaming, both in being overheard when being served and in the way IDUs are treated by the staff.</p>	+	A
Phillips 2007	<p>Qualitative: Appraisal of attitudes, beliefs and values</p> <p>Structured interview with open ended questions</p>	<p>Two samples: Nottingham, England; Northwest Ohio, USA.</p> <p>UK sample: Recruited from an outpatient drug clinic or inpatient</p>	<p>Large proportion reported acceptance of various abstinence-oriented treatments and harm reduction interventions. Only 15% of US sample found safer injection facilities acceptable</p> <p>Needle and syringe programme rated as acceptable by more than two thirds of both samples, the English sample had much</p>	-	A

		detoxification ward. 48 clients (35 men / 13 women) US sample: Recruited from an inpatient residential program for women. 40 female clients	greater experience of it). Most frequently reported advantage was disease prevention. Among the UK sample the most frequently reported disadvantage was harm to the larger community (from inappropriate disposal of syringes); also encouraging a shift from smoking to injecting.		
Hay 2001	Qualitative: <i>Mixed methods:</i> 1. Descriptive study with evaluation (qualitative study) 2. Survey (Questionnaire) 3. Audit/Evaluation	Scottish city-centre needle and syringe programme which covers the whole of the city (limited needle exchange provision by retail pharmacies) 10 clients of needle and syringe programme 5 staff of needle and syringe programme	Significant minority of clients only attend once or twice a year. Interviews explored potential reasons for this, including: Whether clients were providing false identifying details. This was thought by clients and staff to not be a problem. Injecting on an infrequent basis. Staff thought that this could be a potential explanation for infrequent attendance. Use of alternative sources of accessing sterile injecting equipment. Staff and clients confirmed that alternative sources were used. Opening hours. It was noted that the needle and syringe programme normally closed at 5pm and was open until 8pm only one day per week.	-	A
Jacob 2000	Audit/Evaluation Local practice report Appraisal of knowledge, skills and behaviour Half standardized longitudinal examination Qualitative examination	Lower Saxony/Germany Male and female prison 224 male and female prison inmates, 153 staff of drug counselling service and health care unit, 75 members of external organizations (AIDS-Help-Groups)	The level of acceptance among prisoners largely depends on whether anonymity is maintained during needle exchange which can largely be affected by the mode of delivery. The level of acceptance among prison staff depends on whether staff members could identify with the goals of the project, whether they could actively participate in the planning and decision making processes and in setting the implementation modalities	+	B
Long 2004,	Qualitative: Semi-structured interview; Appraisal of attitudes, beliefs and values	Dublin, Ireland: 31 male prisoners. 16 were injecting drug users and 15 were non injectors	Two key themes are identified: injectors take risks inside prison that they would not if they were outside; and there is support among prisoners for interventions to address drug misuse. Opinions on the provision of a needle and syringe programme in prison are divided, with some support coming from both injectors and non-injectors, and an equal number of each rejecting the idea. The potential to reduce infection is acknowledged and concerns relate to safety and the possibility of increased consumption.	++	B
Strike 2002a	Descriptive study with evaluation (qualitative study) Semi-structured interview	Ontario, Canada Needle and syringe programmes 59 NSP staff and managers at all 15 Ontario NSPs and government	Fixed sites: Location, adequate space and opening hours are seen as constraints that can negatively impact on client development and retention. Negative attitudes can reduce program attendance. Fixed sites can also attract local opposition. Mobile NSP services: believed to increase accessibility for clients	+	B

	Observation (Passive/Participant)	officials involved with the Ontario provincial needle and syringe programme.	who prefer to exchange in evening hours, do not have a vehicle or money to travel and/ or cannot travel. Mobile service is viewed as insufficient for incorporating other harm reduction interventions. Satellite NSP site model: Perceived problems include satellite agency staff not following NSP service guidelines, and refusal to act as satellite sites due to rejection of harm reduction principles. Home visit model: Perceived benefits include accessibility and credibility of the NSP. Workers who are former IDUs are more accepting and comfortable with this mode of delivery than other workers.		
Strike 2002b	A qualitative study using a modified ethnographic approach. Extended interview; Semi-structured interview	Ontario, Canada Medical and Executive directors, Coordinators and workers at NSPs in Ontario, and Provincial government officials (n=59) from/ related to 15 Needle and Syringe Programme.	Exchange policies within the NSPs vary from a one-for-one exchange to a distribution policy. The flexibility with which these are applied also varies. Exchange rate policies are more lenient as increased access to and distribution of needles is the main focus. Younger programmes are more likely than older programmes to conceptualise needles as objects of risk and have strict exchange policies.	+	B
Strike 2004	Qualitative: Local practice report ; Semi-structured interview	Ontario, Canada 59 Coordinators, managers and workers at 15 NSPs in Ontario Medical Officers of Health, Executive Directors and key informants from Ontario Ministry of Health and Long Term Care	The operation of an NSP is likely to require delicate balancing of interests of the clients, workers, organisations overseeing the service and the wider community. Workers respond to the stigmatisation of their clients by contesting the differentness of their clients from the wider community. Approaches developed to contend with opposition are described including, the involvement of community partners in the planning process, keeping a low profile and locating to less contentious locations.	+	B
Strike 2005,	Qualitative: Audit/Evaluation Brief interview Extended interview Semi-structured interview	Toronto, Canada Some participants recruited / interviewed at Needle and Syringe Programme, others from the wider drug using community 80 IDUs were interviewed. Other key informants were also interviewed as part of the evaluation of the NSP.	IDUs are able to determine from where they get their injecting equipment and in what quantities. Some prefer the free syringes available from NSPs while others prefer to pay for OTC equipment for convenience and anonymity. Three behavioural patterns were identified related to syringe access: those who stockpile large numbers of sterile syringes (typically over 100), often for secondary distribution to friends and acquaintances as well as for personal use; those who plan ahead and maintain a 1-2 week supply often from a range of sources, based on convenience; and IDUs who obtain equipment as needed, either through a conscious decision to not be in possession of syringes (for example for fear of police harassment) or through a lack of organisation.	+	B
Spittal 2003	Ethnographic 'ride along'/walk along' study Extended interview	Vancouver, Canada Needle and Syringe Programme	Discrepancies between policy and practice are described. While one-for-one exchange is still the dominant policy, evidence suggests that there is a large demand for needles from clients	+	B/C

	Observation (Passive/Participant)	staff members – exchange agents.	with none to exchange. As a result an informal 'loaner' system has developed based on agreements and relationships between exchange agents and their clients. The decision to 'loan' equipment is made on a client-by-client basis and the need for clients to return the equipment is stressed.		
Buchanan 2003	Quantitative and Qualitative Brief interview Document Analysis Observation (Participant)	Springfield/USA Field sites 332 Injecting drug users	IDUs in more economically advantaged neighbourhood were more likely to obtain syringes from a single source rather than from multiple sources, were more likely to inject alone in their private residence rather than in public places, also are more likely to dispose of syringes in private garbage cans rather than alleys or dumpsters.	+	C
Cooper 2005	Open ended interviews plus a short survey.	New York City, USA 40 IDU participants took part in the research	Overall, the analysis suggests that particular crackdown tactics, notably frequent police searches of participants' bodies and elevated surveillance of the precinct's public spaces, reconfigured participants' experiences of their bodies and the public spaces comprising the precinct in ways that adversely affected their capacity to engage in harm reduction.	++	C
Finlinson 2000	Qualitative and Quantitative study Survey Focus group(s) Extended interview Observation (Participant) Structured interview	East Harlem New York/ USA, Bayamon/ Puerto Rico 165 New York, 115 Bayamon 94 Puerto Ricans (qualitative) men who have sex with men/Gay men IDUs, Male IDUs, Female crack users, Community Health promoters/outreach workers and drug users in recovery (qualitative)	Clogging was a commonly encountered problem especially with re-used syringes. Can lead to borrowing of used syringe and use of discarded needles. Syringes obtained from gallery managers are obtained by them from NSPs and re-sold to gallery clients, or used syringes left by IDUs and rinsed with water and loaned out to clients. IDUs in NY obtain syringes from diabetics and colleagues who primarily use NSPs Ease of purchase of syringes from the syringe sellers: faster and always there for purchase. Price inhibits some IDUs from obtaining as many new syringes as needed.	++	C
Larkins 2000	Descriptive study with evaluation (qualitative study) Survey Extended interview Appraisal of attitudes, beliefs and values	14 NSP workers 29 NSP clients Additional 48 NSP clients completed survey Drugs professionals and IDUs	Needle exchange contact provided significant physical and modest emotional health benefits to clients. All participants claimed to receive physical benefits beyond disease prevention: increased access to supplies, information and services was health promoting.	-	C
Lewis 1996	Qualitative study	Denver, Colorado/USA	Concerns about disease transmission and increased drug use	+	C

	Semi-structured interview Appraisal of attitudes, beliefs and values	Workplace (pharmacy), social place (coffee shop); interviews took place in a convenient location 32 pharmacists at 24 pharmacies	Business concerns Uncertainty about legality Views on Needle and Syringe programmes.		
Miller 2001	Quantitative and qualitative study Before and after study Semi-structured interview	Geelong, Australia Needle and Syringe Programme sites 60 injecting drug users	Females and younger heroin users were less likely to access NSPs directly, preferring to have an older friend (male or female) to get their needles for them (secondary exchange). Some respondents reported that the need to pay for needles and syringes after hours and at weekends when NSPs were closed often resulted into risky behaviour. The presence of needle disposal bins was highly welcomed by the respondents. The issue of discarded needles was identified as a major concern for majority of the respondents	+	C
Moore 1995	Ethnographic Study Descriptive study with evaluation (qualitative study) Extended interview (open ended) Observation (Passive/Participant) Literature review	San Francisco/ United States Needle and Syringe Programme site 20 respondents (10 clients and 10 providers of NSPs)	Injecting drug users felt a sense of ownership and involvement in their participation in needle and syringe programme services as evidenced by out-reaches, education efforts and sourcing of sites for the programme. The injecting drug users also provided a source of information and encouragement to their friends and associates about the needle and syringe programme services, they were also a source of secondary needle exchange of syringes, condoms and bleach within their social networks.	+	C
Murphy 2004	A process evaluation of a large needle and syringe programme. Extended interview Observation (Participant)	San Francisco, US Needle and Syringe Programme 244 IDUs	Three general routes of syringe distribution were identified between primary and secondary exchangers: exchanges took place between close friends and lovers; for people living nearby; and as part of a drug deal. Barriers to attendance at the NSP included fear of public exposure, including being seen by the police, co-workers and family members. Secondary exchange is able to respond to all barriers to attendance cited, except for those related to alternative sources of provision.	+	C
Singer 1995	Ethnographic study Descriptive study with evaluation (qualitative study) Survey	Hartford/USA Injecting drug users of Hartford NSP	With continuous use of NSP, the social interaction between the staffs and clients become more cordial and informal creating room for discussion of more personal topics such as emotional, health, family and money. NSP can come to be an important part of a client's social network by providing a safe and friendly site for accessing needed social	+	C

	Brief interview Observation (Participant)		support. An important product of the relationship is the significant level of program recruitment by satisfied users. Informal conversations provide foundation for the collection of attitudinal and life history data on IDU which provides detailed answers provided in structured interviews. IDUs have special attitudes towards their needles and stylized ways of handling and referring to them. A fair number of needles are brought in by clients picked up from the streets.		
Snead 2003	A formative qualitative study to inform development of a peer HIV prevention initiative. Semi-structured interview	Oakland and Richmond, California, US Needle and Syringe Programmes IDUs engaging in SSE as either provider or recipient n=47, providers = 26, recipients =21	Secondary syringe exchange predominantly takes place within existing social networks, providers supplying their friends and family rather than strangers. In some cases new recipients may be introduced by a trusted friend. Many providers reported highly organised NSP operations, particularly among those who had a lot of recipients. Most NSP was conducted in the providers' home. Nearly half of providers allowed recipients to inject in their home, in some cases the primary activity was drug use, in others it was syringe exchange. All providers reported distributing other harm reduction materials alongside syringes. None reported having difficulty accessing supplies from the NSP.	+	C
Somlai 1999	A case study of the implementation of an intervention based upon social science and community assessment research. Semi-structured interview Observation (Passive/Participant)	Milwaukee, Wisconsin, US The following participated in the development of the NSP: IDUs Outreach workers Researchers Alcohol/drug professionals treatment Physicians and other key stakeholders 300 individuals were recruited to the study. It is unclear whether the whole sample was interviewed	In relation to NSPs, there was an 'overwhelming' amount of support from IDUs, with some hoping that it may lead to greater community acceptance of their drug use as a medical rather than criminal behaviour. However many of the respondents were sceptical about the amount of political/community support for the service. While possession of injecting equipment is not prohibited in the study area, IDUs were regularly arrested under drug possession laws if a syringe had a trace of illegal substances, it is suggested that this acts as a barrier to access to sterile equipment. The legal purchase of syringes from pharmacies was also shown to be problematic. Concerns were expressed at community meetings about a fixed site NSP encouraging violent and criminal behaviour. A mobile facility was more acceptable.	-	C
Springer 1999	Qualitative study Extended interview Appraisal of attitudes,	Atlanta/USA: area of high drug sales and drug use.	The injecting drug users preferred using NSPs to the other disposal methods and community members' opinion about NSPs were generally positive.	++	C

	beliefs and values	Street outreach: interviews conducted in 2 offices centrally located in the community 32 non injecting community members 26 injecting drug user community members	Both IDUs and community members believed that access to new syringes will be beneficial largely because it would reduce the reuse of syringes and thus reduce the risk of HIV transmission in the long run. IDUs major concern was the risk of getting arrested for possession of a syringe IDUs were more willing to take the risk of getting caught and arrested for syringe possession if they were receiving a new syringe for an old one disposed Disadvantages mentioned by community members centred on moral issues of providing new syringes to IDUs, it is believed that stopping drugs altogether is better than giving new syringes.		
Strenski 2000	Ethnographic study Brief interview Extended interview Semi-structured interview Appraisal of attitudes, beliefs and values	Chicago/USA Work place/Needle and Syringe Programme sites 14 Injecting drug users using Needle and Syringe Programme services provided by Chicago Recovery Alliance.	Impact of NSPs on Shooting Galleries Barriers to NSP use Concerns about privacy, fear of being seen exchanging and been exposed as a user, this is more popular amongst business professionals, health workers and bus drivers who send some else on their behalf. Problems with Law enforcement such as police harassments, confiscation of possessed needles and arrest. Personal safety issues and fear of being robbed by fellow addicts who don't want to go to the sites themselves.	++	C
Voytek 2003	Qualitative interviews exploring the motivations of participants Semi-structured interview	Baltimore, US Needle and Syringe Programme Providers of secondary syringe exchange (n=20) Recipients of secondary syringe exchange who had never used the NSP in 1997 (n=10).	Providers reported motivations centred around altruism and economic gain. The specific circumstances of the transaction often influenced whether the syringe was sold or given away. Influential factors included: relationship to recipient, current wealth, and desperation. Among those that regularly sold syringes a quarter reported collecting discarded needles from public places to exchange at the NSP. While recipients of SSE generally believed the NSP to be a valuable service, they felt it was not suitable for them for a range of reasons including; not convenient, location, not wanting to carry equipment, queues and lack of privacy. The most common sources of needles distributed through SSE were: NSP, diabetic, pharmacy, hospitals, clinics and street sales.	+	C
Weiker 1999	Survey Evaluation Focus group(s) Observation (Passive/Participant)	Los Angeles, US A community based needle and syringe and harm reduction programme for young people.	The focus of the article is the lessons to be learned from a collaborative evaluation. Some findings from the qualitative data are also presented. Engagement is seen as the primary aim for CNN/HRC. It was observed that youth who initially engaged with the service to use	-	D

	Ethnographic interview	N not reported	the Needle and Syringe Programme became more involved over time. Peer staff are also found to be important in encouraging engagement with many young people describing their relationship with peer staff as the source of their engagement. While the peer staff are seen as a crucial component of the service, training and supervision is time consuming. The CNN/HRC is portrayed by the clients as a safe, non-judgemental place to seek services related to drug use.		
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3.4 Key question (3)

Which additional harm reduction interventions offered by Needle and Syringe Programmes are valued (and accessed) by IDUs and professionals working with IDUs?

3.4.1 Narrative summary

Nineteen studies were found relating to key question 3. Three of these were from the UK (Clarke 2001, Matheson 1998, Rhodes 2007), ten from the USA (Finlinson 2000, Junge 2000, Larkins 2000, Moore 1995, Murphy 2004, Porter 2002, Snead 2003, Somlai 1999, Springer 1999, Voytek 2003), one from Australia (Miller 2001), one from the Netherlands (Grund 1992), two from Canada (Spittal 2003, Strike 2002a), and one from Ireland (Long 2004). One study compared people from the UK and the USA (Phillips 2007).

Quality assessment

Four of the included studies were rated ++ (good quality), one of these was from the UK (Matheson 1998), two from the USA (Finlinson 2000, Moore 1995) and one set in an Irish prison (Long 2004). In all four ++ rated studies, all of the quality assessment criteria on the CPHE checklist were judged to have been adequately met.

Three of the included studies (Junge 2000, Larkins 2000, Somlai 1999) were judged to be poor quality (- rating), all were from the US. Larkins 2000 was published only as an abstract so many methodological details were missing. In the other two studies, many of the quality assessment criteria were not met either due to poor reporting or poor conduct of the study.

In six of the + rated studies (Grund 1992, Miller 2001, Porter 2002, Snead 2003, Springer 1999, Voytek 2003), consent and ethics procedures were poorly reported. In two of the + rated studies (Grund 1992, Murphy 2004) the research objective was unclear. In six + rating studies (Clarke 2001 (UK), Grund 1992, Murphy 2004, Rhodes 2007 (UK), Snead 2003, Voytek 2003) methods of data collection were poorly described or it was unclear whether the methods used were reliable. In eight + rated studies methods of data analysis were poorly described or it was unclear whether they were reliable (Clarke 2001 (UK), Grund

1992, Miller 2001, Murphy 2004, Snead 2003, Spittal 2003, Springer 1999, Voytek 2003). In three studies the role of the researcher was unclear (Clarke 2001 (UK), Miller 2001, Spittal 2003) and in three studies context was not clearly described (Clarke 2001 (UK), Murphy 2004, Rhodes 2007 (UK)). Two studies presented data that was not rich (Clarke 2001 (UK), Grund 1992) and in both of these studies reviewers were not sure whether the findings were credible.

Awareness of and attitudes towards harm reduction services were examined in four studies (Phillips 2007, Porter 2002, Strike 2002a, Long 2004). One Australian study mentioned needle disposal bins (Miller 2001), while in two UK studies harm reduction advice at pharmacies was discussed (Matheson 1998, Clarke 2001). Five studies mentioned beneficial aspects of NSPs and other harm reduction interventions (Springer 1999, Larkins 2000, Phillips 2007, Moore 1995, Junge 2000), and a further nine studies (2 UK, 6 US, 1 Netherlands) mentioned secondary syringe exchange. Perceptions of harmful aspects of NSPs were looked at in three studies (Phillips 2007, Rhodes 2007, Spittal 2003).

The included studies did not address the question of *which* additional harm reduction interventions were valued, only *whether* they were valued.

In one US/UK study, a large proportion of former IDUs undergoing treatment reported acceptance of various harm reduction interventions, however the majority of the US sample found safer injection facilities unacceptable (Phillips 2007 A-). The main reasons given for this were “encouragement” of drug use and fears that crime would increase in the immediate vicinity. In a US study around two thirds of those interviewed either used NSPs for services other than needle exchange (specifically: HIV testing, medical care, drug-user treatment referrals, referrals to other services) or were aware of these services (Porter 2002 C++). A Canadian study looking at different service models found that, in contrast to a parent site, satellite sites may reject harm reduction principles (Strike 2002a B+).

In one US study, increased access to additional services, advice and information was health promoting and led to physical and emotional benefits beyond disease prevention (Larkins 2000 C-). Benefits may also have derived from increased social contact in this study. In an Irish study, there was support for harm reduction services, including methadone maintenance, needle and syringe programmes,

individual counselling and support, and a regular routine of activities among injectors and non-injectors in prison (Long 2004 B++). In a Canadian study, mobile NSPs were viewed by providers as insufficient for providing other harm reduction interventions (Strike 2002a B+).

Needle disposal bins were a popular concept among IDUs in one Australian study (Miller 2001 C+)

Within UK pharmacies, while most IDUs did not want to engage in a long conversation with pharmacy staff, some did or would value advice from them, although not specifically about drug misuse “*somebody that’s pleasant and willing to speak to you about your medication and if you’ve got any problems*” (Matheson 1998 A++). Some interviewees suggested that pharmacies should keep leaflets on drug misuse or give advice on safer injecting, while others felt that their information needs were met elsewhere by GPs, drug workers and other drug users. There was insufficient detail of respondents given to determine whether attitudes to receiving information were associated with any IDU or staff characteristics (Matheson 1998 A++). In another UK study, when questioned, 90% of IDUs said they had never asked the pharmacist for advice regarding their drug use (Clarke 2001 A+)

Harm reduction materials, advice and information were also provided in the context of secondary exchange.

Secondary syringe exchange (SSE)

This was mentioned in nine studies (two UK studies, five US studies, 1 Australian study, 1 Netherlands study: Finlinson 2000 C++, Grund 1992 B/C +, Miller 2001 C+, Moore 1995 C++, Murphy 2004 C+, Neale 1998 A+, Power 1996 A++, Snead 2003 C+, Voytek 2003 C+) and seemed to be a popular method for obtaining clean syringes. Secondary exchange (where one person exchanges syringes at the NSP on behalf of others) relieves the fear of exposure (US study Murphy 2004 C+, Australian study Miller 2001 C+) and was mentioned in one UK study as being preferred to direct NSP use by IDUs (Power 1996 A++) and, in an Australian study, by women (Miller 2001 C+). Secondary exchange can involve giving away clean needles or selling them, this can depend on the situation (US studies Finlinson 2000 C++, Voytek 2003 C+). Motivations for becoming a secondary exchanger are either altruism or economic gain (US studies Finlinson

2000 C++, Voytek 2003 C+). Secondary exchangers obtain clean needles from a variety of sources including NSPs (US study Voytek 2003 C+) and these exchanges tend to take place within existing social networks (US studies Moore 1995 C++, Snead 2003 C+). Collective exchangers were found in one study from the Netherlands to be more aware of high risk behaviours such as sharing needles and to make more effort to maintain health and injection-related hygiene than individual exchangers (Grund 1992 B/C+). They were found in one US study to be more highly organised (Snead 2003 C+), and in two US studies to distribute other harm reduction materials (e.g. bleach and condoms) as well as needles and syringes (Moore 1995 C++, Snead 2003 C+). In one study secondary exchange coordinators were involved with the NSP's outreach, fundraising and education efforts (Moore 1995 C++). In the other study (Snead 2003 C+) that presented some demographic details of participants, no differences were seen between secondary exchangers and recipients. In Snead 2003 (C+), although most secondary exchange coordinators provided associated equipment such as filters, some reused this equipment due to lack of awareness of associated risks.

Perceived benefits of NSPs

NSPs were perceived by both IDUs and non-IDUs to reduce the risk of reuse of injecting equipment and of HIV transmission (US study: Springer 1999 C++) and to facilitate disease prevention (US study Larkins 2000 C-, US/ UK study Phillips 2007 A-). Social contact was also mentioned as a benefit associated with NSPs in two US studies (Junge 2000 D-, Larkins 2000 C-), providing modest emotional health benefits and significant physical health benefits (Larkins 2000 C-). Increased access to supplies, information and services and consequent physical health benefits beyond disease prevention were mentioned in one US study (Larkins 2000 C-), and a sense of ownership and involvement with the NSP was also noted as a positive feature in another US study (Moore 1995 C+).

Perceived harms of NSPs

In one study with former IDUs, most of whom described themselves as “addicted users”, in the US and the UK undergoing drug treatment, potential harms mentioned were harm to the community through inappropriate disposal of syringes and encouragement of a shift from smoking to injecting drugs (Phillips 2007 A-). Irresponsible disposal of needles was also mentioned as a perceived

harm in a UK study with ‘responsible’ IDUs disapproving of the behaviour of irresponsible ‘smackheads’ (interpreted as being chaotic heroin users) (Rhodes 2007 A+). In a Canadian study (Spittal 2003 B/C+) ‘responsible’ IDUs collected used needles discarded in public places by ‘irresponsible’ IDUs, saying that it was their civic duty as ‘junkies’ to prevent the needles from causing harm to others.

Summary

Several studies examined IDUs’ perceptions of risk in injecting behaviour: themes were lower perception of risk if sharing with a sexual partner and gender differences in sharing behaviour. Additional harm reduction interventions were valued, specifically, increased access to drug treatment and other services, HIV testing and medical care, advice and information. A Canadian study with stakeholders and providers concluded that mobile sites, while increasing accessibility, were not appropriate for providing additional harm reduction interventions. Secondary syringe exchange was important for provision of additional equipment (e.g. filters) particularly as many IDUs do not realise that sharing these items is a high risk activity. None of the included studies reported preferences for spoken or written information.

3.4.2 Evidence statement 3.4

- a. There is evidence from two moderate quality (+ rating) UK studies^a of gender differences in patterns of equipment sharing and use of services. Women are less likely than men to share equipment with friends, preferring to share only with their sexual partner. Women are also more likely to have negative feelings about using pharmacy-based NSPs and to obtain equipment by secondary exchange, particularly with their sexual partner.

- b. There is evidence from three good quality (++) rating^b and one moderate quality (+ rating)^c qualitative studies to suggest that a range of harm reduction interventions (referrals to drug treatment and other services; HIV testing; medical care) in addition to needle and syringe programmes were accessed and valued by injecting drug users.

- c. There is evidence from three good quality (++) rating studies, one of which is from the UK^d, and six moderate quality (+ rating) studies, one of which is

from the UK^e, that secondary syringe exchange is a valued method for obtaining clean syringes because it is convenient and relieves the fear of exposure.

a Barnard 1993, Neale 1998

b Long 2004, Power 1996, Porter 2002

c Phillips 2007

d Finlinson 2000, Power 1996, Moore 1995

e Voytek 2003, Grund 1992, Miller 2001, Murphy 2004, Neale 1998, Snead 2003

Summary table: Evidence for key question 3

Author (Year)	Design	Population	Outcomes	Quality	Applicability
Clarke 2001	Qualitative semi-structured and structured interviews	South London, UK 155 needle and syringe programme clients and 9 community pharmacists	90% of IDUs had never asked pharmacists for advice about drug use. Clients rated pharmacies higher for being open when needed and easy to get to, but drug agencies were rated higher for receiving advice and information. . Most pharmacists reported poor or non-existent links with local drug agencies. Just over half had received training from the local drug and alcohol team	+	A
Matheson 1998	Descriptive study with evaluation (qualitative study) Semi-structured interview Observation (Passive/Participant) Appraisal of attitudes, beliefs and values	Aberdeen, Dundee, Edinburgh, Glasgow and adjacent rural areas/ Scotland 124 illicit drug users interviewed in 23 pharmacies and 8 drug agencies	Most frequently mentioned feature of a good pharmacy is the characteristics and attitude of the pharmacists or staff at the pharmacy. Many of the respondents did not want to enter a prolonged conversation with the staff. A good process was seen as one which was discreet, flexible, strict or if advice was offered. The need for privacy was mentioned by 6 respondents to reduce embarrassment faced by them and other customers, particularly with regards to supervised methadone.	++	A
Rhodes 2007	Descriptive study with evaluation Semi-structured interview Appraisal of attitudes, beliefs and values	South Wales, UK The interviews were conducted in six locations, This enabled data to be collected from urban, semi-rural and rural settings. 49 active IDUs	Respondents made a distinction between themselves as responsible, more hygienic drug users and irresponsible 'smackheads', with responsible users safely disposing of not only their needles, but sometimes those discarded in public spaces as well. Accessing dedicated needle and syringe programmes was preferred to pharmacy based exchanges. Using pharmacy based services risked public exposure as an IDU and was also linked to shaming, both in being overheard when being served and in the way IDUs are treated by the staff.	+	A-
Phillips 2007	Qualitative: Appraisal of attitudes, beliefs and values Structured interview with open ended questions	Two samples: Nottingham, England; Northwest Ohio, USA. UK sample: Recruited from an outpatient drug clinic or inpatient detoxification ward. 48 clients (35 men / 13 women) US sample: Recruited from an inpatient residential program for	Large proportion reported acceptance of various abstinence-oriented treatments and harm reduction interventions. Only 15% of US sample found safer injection facilities acceptable Needle and syringe programme rated as acceptable by more than two thirds of both samples, the English sample had much greater experience of it). Most frequently reported advantage was disease prevention. Among the UK sample the most frequently reported disadvantage was harm to the larger community (from inappropriate disposal of syringes); also encouraging a shift from smoking to injecting.	+	A/B

		women. 40 female clients			
Strike 2002a	Descriptive study with evaluation (qualitative study) Semi-structured interview Observation (Passive/Participant)	Ontario, Canada Needle and syringe programmes 59 NSP staff and managers at all 15 Ontario NSPs and government officials involved with the Ontario provincial needle and syringe programme.	Fixed sites: Location, adequate space and opening hours are seen as constraints that can negatively impact on client development and retention. Negative attitudes can reduce programme attendance. Fixed sites can also attract local opposition. Mobile NSP services: believed to increase accessibility for clients who prefer to exchange in evening hours, do not have a vehicle or money to travel and/ or cannot travel. Mobile service is viewed as insufficient for incorporating other harm reduction interventions. Satellite NSP site model: Perceived problems include satellite agency staff not following NSP service guidelines, and refusal to act as satellite sites due to rejection of harm reduction principles. Home visit model: Perceived benefits include accessibility and credibility of the NSP. Workers who are former IDUs are more accepting and comfortable with this mode of delivery than other workers.	+	B
Long 2004,	Qualitative: Semi-structured interview; Appraisal of attitudes, beliefs and values	Dublin, Ireland: 31 male prisoners. 16 were injecting drug users and 15 were non injectors	Two key themes are identified: injectors take risks inside prison that they would not if they were outside; and there is support among prisoners for interventions to address drug misuse. Opinions on the provision of needle and syringe programmes in prison are divided, with some support coming from both injectors and non-injectors, and an equal number of each rejecting the idea. The potential to reduce infection is acknowledged and concerns relate to safety and the possibility of increased consumption.	++	B
Grund 1992	Audit/Evaluation Semi-structured interview Observation (Passive/Participant) Appraisal of knowledge, skills and behaviour Ethnographic fieldwork	Rotterdam, The Netherlands HADON: community based information programme providing outreach, prevention and referral services to active out of treatment IDUs 104 exchangers in quantitative part of research (25 collective and 79 individual exchangers). The authors do not report how many people took part in the qualitative part of the research.	Findings from fieldwork: Users who engaged in collective exchange seemed more aware of high risk behaviours and made more effort to maintain health and hygiene than individual exchangers. Needles distributed through collective exchange have an impact beyond the user collective (e.g. friends who visit a collective exchanger's house to inject). Nonetheless, there is often pressure on IDUs to share needles.	+	B/C

Spittal 2003	Ethnographic 'ride along'/walk along' study Extended interview Observation (Passive/Participant)	Vancouver, Canada Needle and Syringe Programme staff members – exchange agents.	Discrepancies between policy and practice are described. While one-for-one exchange is still the dominant policy, evidence suggests that there is a large demand for needles from clients with none to exchange. As a result an informal 'loaner' system has developed based on agreements and relationships between exchange agents and their clients. The decision to 'loan' equipment is made on a client-by-client basis and the need for clients to return the equipment is stressed.	+	B/C
Finlinson 2000	Qualitative and Quantitative study Survey Focus group(s) Extended interview Observation (Participant) Structured interview	East Harlem New York/ USA, Bayamon/ Puerto Rico 165 New York, 115 Bayamon 94 Puerto Ricans (qualitative) men who have sex with men/Gay men IDUs, Male IDUs, Female crack users, Community Health promoters/outreach workers and drug users in recovery (qualitative)	Clogging was a commonly encountered problem especially with re-used syringes. Can lead to borrowing of used syringe and use of discarded needles. Syringes obtained from gallery managers are obtained by them from NSPs and re-sold to gallery clients, or used syringes left by IDUs and rinsed with water and loaned out to clients. IDUs in NY obtain syringes from diabetics and colleagues who primarily use NSPs Ease of purchase of syringes from the syringe sellers: faster and always there for purchase. Price inhibits some IDUs from obtaining as many new syringes as needed.	++	C
Larkins 2000	Descriptive study with evaluation (qualitative study) Survey Extended interview Appraisal of attitudes, beliefs and values	14 NSP workers 29 NSP clients Additional 48 NSP clients completed survey Drugs professionals and IDUs	Needle exchange contact provided significant physical and modest emotional health benefits to clients. All participants claimed to receive physical benefits beyond disease prevention: increased access to supplies, information and services was health promoting.	-	C
Miller 2001	Quantitative and qualitative study Before and after study Semi-structured interview	Geelong, Australia Needle and syringe programme sites 60 injecting drug users	Females and younger heroin users were less likely to access NSPs directly, preferring to have an older friend (male or female) to get their needles for them (secondary exchange). Some respondents reported that the need to pay for needles and syringes after hours and at weekends when NSPs were closed often resulted into risky behaviour. The presence of needle disposal bins were highly welcomed by the respondents. The issue of discarded needles was identified as a major concern for majority of the respondents	+	C
Moore 1995	Ethnographic Study Descriptive study with evaluation (qualitative)	San Francisco/ United States Needle and syringe programme site	Injecting drug users felt a sense of ownership and involvement in their participation in needle and syringe programme as evidenced by out-reaches, education efforts and sourcing of sites for the programme.	+	C

	study) Extended interview (open ended) Observation (Passive/Participant) Literature review	20 respondents (10 clients and 10 providers of NSPs)	The injecting drug users also provided a source of information and encouragement to their friends and associates about the needle and syringe programme, they were also a source of secondary needle exchange of syringes, condoms and bleach within their social networks.		
Murphy 2004	A process evaluation of a large needle and syringe programme. Extended interview Observation (Participant)	San Francisco, US Needle and Syringe Programme 244 IDUs	Three general routes of syringe distribution were identified between primary and secondary exchangers: exchanges took place between close friends and lovers; for people living nearby; and as part of a drug deal. Barriers to attendance at the NSP included fear of public exposure, including being seen by the police, co-workers and family members. Secondary exchange is able to respond to all barriers to attendance cited, except for those related to alternative sources of provision.	+	C
Porter 2002	Qualitative: Semi-structured interview; Appraisal of attitudes, beliefs and values; Appraisal of knowledge, skills and behaviour	Philadelphia/United States 46 IDUs: 20 exchangers, 26 non-exchangers	Four category codes from statements made by respondents were created. Category 1 (active involvement – personal use and experience of service; used NSPs for services other than needle exchange, 39% of sample; Category 2 (Stepping stone – specific knowledge of services other than needle and syringe programmes but use only of needle and syringe programme, 28% of sample in this category); Category 3: Vague awareness; Category 4: Unaware (13% of sample in this category)	++	C
Snead 2003	A formative qualitative study to inform development of a peer HIV prevention initiative. Semi-structured interview	Oakland and Richmond, California, US Needle and Syringe Programmes IDUs engaging in SSE as either provider or recipient n=47, providers = 26, recipients =21	Secondary syringe exchange predominantly takes place within existing social networks, providers supplying their friends and family rather than strangers. In some cases new recipients may be introduced by a trusted friend. Many providers reported highly organised NSP operations, particularly among those who had a lot of recipients. Most NSP was conducted in the providers' home. Nearly half of providers allowed recipients to inject in their home, in some cases the primary activity was drug use, in others it was syringe exchange. All providers reported distributing other harm reduction materials alongside syringes. None reported having difficulty accessing supplies from the NSP.	+	C
Somlai 1999	A case study of the	Milwaukee, Wisconsin, US	In relation to NSPs, there was an 'overwhelming' amount of	-	C

	<p>implementation of an intervention based upon social science and community assessment research.</p> <p>Semi-structured interview Observation (Passive/Participant)</p>	<p>The following participated in the development of the NSP: IDUs Outreach workers Researchers Alcohol/drug treatment professionals Physicians and other key stakeholders</p> <p>300 individuals were recruited to the study. It is unclear whether the whole sample was interviewed</p>	<p>support from IDUs, with some hoping that it may lead to greater community acceptance of their drug use as a medical rather than criminal behaviour. However many of the respondents were sceptical about the amount of political/community support for the service.</p> <p>While possession of injecting equipment is not prohibited in the study area, IDUs were regularly arrested under drug possession laws if a syringe had a trace of illegal substances, it is suggested that this acts as a barrier to access to sterile equipment. The legal purchase of syringes from pharmacies was also shown to be problematic.</p> <p>Concerns were expressed at community meetings about a fixed site NSP encouraging violent and criminal behaviour. A mobile facility was more acceptable.</p>		
Springer 1999	<p>Qualitative study Extended interview Appraisal of attitudes, beliefs and values</p>	<p>Atlanta/USA: area of high drug sales and drug use.</p> <p>Street outreach: interviews conducted in 2 offices centrally located in the community</p> <p>32 non injecting community members 26 injecting drug user community members</p>	<p>The injecting drug users preferred using NSPs to the other disposal methods and community members' opinion about NSPs were generally positive.</p> <p>Both IDUs and community members believed that access to new syringes will be beneficial largely because it would reduce the reuse of syringes and thus reduce the risk of HIV transmission in the long run.</p> <p>IDUs major concern was the risk of getting arrested for possession of a syringe</p> <p>IDUs were more willing to take the risk of getting caught and arrested for syringe possession if they were receiving a new syringe for an old one disposed</p> <p>Disadvantages mentioned by community members centred on moral issues of providing new syringes to IDUs, it is believed that stopping drugs altogether is better than giving new syringes.</p>	++	C
Voytek 2003	<p>Qualitative interviews exploring the motivations of participants</p> <p>Semi-structured interview</p>	<p>Baltimore, US Needle and Syringe Programme</p> <p>Providers of secondary syringe exchange (n=20) Recipients of secondary syringe exchange who had never used the NSP in 1997 (n=10).</p>	<p>Providers reported motivations centred around altruism and economic gain. The specific circumstances of the transaction often influenced whether the syringe was sold or given away. Influential factors included: relationship to recipient, current wealth, and desperation. Among those that regularly sold syringes a quarter reported collecting discarded needles from public places to exchange at the NSP. While recipients of SSE generally believed the NSP to be a valuable service, they felt it was not suitable for them for a range of reasons including; not convenient, location, not wanting to carry equipment, queues and lack of privacy. The most common sources of needles distributed through SSE were: NSP, diabetic, pharmacy, hospitals, clinics and street sales.</p>	+	C

<p>Junge 2000</p>	<p>Evaluation Cohort study</p>	<p>Baltimore, Maryland/USA Field sites 413 Injecting drug users and previous injecting drug users</p>	<p>21.9% reported sharing one's own equipments with others, while 9.1% said they used other injectors used syringes. 7.7% reported having met at least 1 person at the NSP van site since enrolment and mean number of contact was 3.3. People who met at least 1 person were more likely to trade sex for drug or money during the previous 2 weeks. People who met someone were less likely to have injected at least daily (70.4 versus 85.2%, P=0.047) and more likely to have used other used injection syringes (22.2 versus 8%, P=0.026).</p>	<p>-</p>	<p>D</p>
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3.5 Key question (4)

How are opiate substitution therapy (OST) and NSPs (perceived to be) used together by IDUs?

OST is defined as the prescription of substitute drugs for drug dependence, such as methadone and buprenorphine⁷ for a sustained period (maintenance therapy).

3.5.1 Narrative summary

Two UK studies were found relating to key question 4 (Clarke 2001, Matheson 1998).

Quality assessment

Matheson 1998 was graded ++ (good quality) because a good account was given of sampling strategy, how data were collected and analysed, the role of the researcher, consent and ethics procedures, and the data presented were rich and in context. Clarke 2001 was graded + (moderate quality) because details of sampling strategy, data collection and analysis methods, the role of the researcher were poorly reported, and the sources for the data presented could not be traced in all cases, which will limit the generalisability of the findings.

There was very little information reported in either study about how OST and NSPs are used together. In Clarke 2001 A+ of those receiving a methadone prescription approximately half collected it from the same NSP pharmacy in which they were interviewed and from which they had collected injecting equipment for their own use. Just over two thirds collected the methadone daily. Details of current drug use of the sample were not reported. Both studies mentioned the need for privacy and one study also mentioned not being kept waiting when taking supervised oral methadone. There were also preferences expressed for different types of methadone (Matheson 1998 A++). IDUs reported that a “total service” from the pharmacy would include both dispensing methadone and providing needles (Matheson 1998 A++).

3.5.2 Evidence statement 3.5

a. In two UK studies (one good quality ++ rating, one moderate quality + rating), IDUs obtained oral methadone prescriptions from the same pharmacy they used for needle

⁷ See NICE technology assessment 114

and syringe exchange. A need for privacy when collecting needles and taking oral methadone was expressed.

Clarke 2001; Matheson 1998

Summary table: evidence for key question 4

Author (Year)	Design	Population	Outcomes	Quality	Applicability
Clarke 2001	Qualitative semi-structured and structured interviews	South London, UK 155 needle and syringe programme clients and 9 community pharmacists	90% of IDUs had never asked pharmacists for advice about drug use. Clients rated pharmacies higher for being open when needed and easy to get to, but drug agencies were rated higher for receiving advice and information. . Most pharmacists reported poor or non-existent links with local drug agencies. Just over half had received training from the local drug and alcohol team	+	A
Matheson 1998	Descriptive study with evaluation (qualitative study) Semi-structured interview Observation (Passive/Participant) Appraisal of attitudes, beliefs and values	Aberdeen, Dundee, Edinburgh, Glasgow and adjacent rural areas/ Scotland 124 illicit drug users interviewed in 23 pharmacies and 8 drug agencies	Most frequently mentioned feature of a good pharmacy is the characteristics and attitude of the pharmacists or staff at the pharmacy. Many of the respondents did not want to enter a prolonged conversation with the staff. A good process was seen as one which was discreet, flexible, strict or if advice was offered. The need for privacy was mentioned by 6 respondents to reduce embarrassment faced by them and other customers, particularly with regards to supervised methadone.	++	A

3.6 Key question (5)

How do the general public perceive the effectiveness and acceptability of NSPs?

This question considers the perceptions of NSPs of groups including local community representatives; schools; local councils and local councillors; local and national media; voluntary sector.

3.6.1 Narrative summary

Nine studies were found relating to key question 5 (Barnard 1993, Downing 2005, Korner 2003, Lawrie 2003, Shaw 2006, Somlai 1999, Springer 1999, Strike 2004, Tempalski 2007). Two of these were from the UK (Barnard 1993, Lawrie 2003), five from the USA (Downing 2005, Shaw 2006, Somlai 1999, Springer 1999, Tempalski 2007), one from Australia (Korner 2003) and one from Canada (Strike 2004).

Two US and one Canadian study interviewed stakeholders and providers (Downing 2005, Tempalski 2007, Strike 2004), one UK study interviewed IDUs (Barnard 1993), one UK study and 3 US studies interviewed or observed community members (Lawrie 2003, Shaw 2006, Somlai 1999, Springer 1999) and one Australian study documented newspaper reporting of the closure of a NSP (Körner 2003).

Quality assessment

Eight of the nine included studies were rated + (moderate quality) and one (Somlai 1999) was rated – (poor quality). In all nine the research objective was clear, but in five (Downing 2005, Shaw 2006, Somlai 1999, Strike 2004, Tempalski 2007), methods of data collection were poorly described or it was unclear whether the methods used were reliable. In all nine, details of data analysis were poorly described. The role of the researcher was unclear in all except Tempalski 2007, where it was clearly described, and Körner 2003, where it was not applicable. The data reported was rich in all but one study (Somlai 1999) although context was poorly described in three studies (Downing 2005, Shaw 2006, Somlai 1999). In seven of the included studies the findings were judged to be credible but in Somlai 1999 they were judged to be not credible and in Shaw 2006 the reviewers could not decide due to missing data. Conclusions were judged to be plausible in all but Somlai 1999.

One US study (Downing 2005 C+) identified three models of NSP implementation: community coalitions; community activists and top down from government

authorities. A strong NSP would move from one model to another as required. The community coalition model was most likely to lead to broad based support while the top down model was vulnerable to community criticism. A strong model would also include research, strong leadership, coalition and community building. A need was identified to stage debate with sensitivity to political and cultural norms.

Körner 2003 B+ analysed Australian media reporting of the closure of a NSP. The analysis showed alignment of newspapers with positive or negative positions relating to NSPs, although there was an absence of overt judgments and sensationalist reporting. There were however no descriptions of the benefits of NSPs or public health messages in any of the newspaper reports.

Customers in UK pharmacies (non-IDUs) were interviewed in Lawrie 2003 A+. Most were supportive of pharmacies offering NSPs and believed they would lead to a reduction in risk of discarded needles and reduction in risk of disease transmission. A small minority were not supportive, these interviewees did not want the service to be visible to non-IDU customers or saw the service as condoning drug injection.

Shaw 2006 C+ (USA) documents community opposition from diverse quarters in response to a proposed NSP. Arguments were advanced about addiction, personal responsibility, HIV and community. The first protests came from a predominantly white neighbourhood far from areas of high drug prevalence. It was felt by some interviewees that these community members were better at using the political system to initiate change and also had high representation on the council and as voters, so were more likely to be listened to. Non-white citizens were less likely to vote and felt marginalised from governmental decisions, including decisions about whether and how to implement NSPs. Also mentioned was the stigma of drug use and HIV in the African-American Muslim population, and the tendency of the community to exclude 'deviants' from public spaces.

In Somlai 1999 C- (USA) concerns were expressed at community meetings that a fixed site NSP would encourage violent and criminal behaviour; mobile sites were felt to be more acceptable.

Tempalski 2007 C+ (USA) reported that critics of NSPs frequently use language about the immorality of drug use. There were two main sources of opposition: political and institutional; and neighbours and businesses. Political and institutional

opposition included drug paraphernalia laws, harassment of IDUs and NSP providers by politicians and police, state and local government (in)action or opposition (this can be the strongest factor). Local opposition by neighbours and businesses can include stigmatisation of IDUs and resistance to NSPs. Resistance does not exist in isolation and different players can generate opposition, e.g. by putting pressure on politicians and service providers to relocate.

Strike 2004 B+ (Canada) reported that the operation of NSPs requires a delicate balance of the interests of clients, workers, service organisations and the wider community. Approaches to dealing with opposition include involving community partners in planning, keeping a low profile and relocating.

In Springer 1999 C++ (USA) community members were generally positive about NSPs, believing that access to new syringes would be beneficial due to reducing the reuse of syringes and transmission of HIV. There was some concern however over moral issues of providing new syringes to IDUs, with some community members favouring an abstinence rather than a harm reduction approach.

Barnard 1993 A+ (UK study) points to a perceived negative connotation and stigmatisation towards female IDUs by the general public and by male IDU counterparts, which in turn inhibits female IDUs from accessing services.

3.6.2 Evidence statement 3.6

a. There is evidence from one good quality (++) rating) US study ^a and two moderate quality (+ rating)^b studies, one of which was from the UK that the general public, particularly religious groups, had concerns about the ethics or morality of providing syringes and needles to injecting drug users, with some stating that it was helping them (IDUs) to harm themselves; others were more concerned that it discouraged IDUs from taking personal responsibility for their drug use.

b. There is evidence from three moderate quality (+ rating) ^c studies, one of which was from the UK, that the general public and IDUs themselves had some concerns about the environmental and health consequences (e.g. discarded needles,

increased crime) of fixed site NSPs. In some cases direct opposition came from a vocal, more affluent, minority.

a Springer 1999

b Lawrie 2005, Shaw 2006

c Lawrie 2005, Shaw 2006, Tempalski 2007

Summary table: Evidence for key question 5

Author (Year)	Design	Population	Outcomes	Quality	Applicability
Barnard 1993	Qualitative: Ethnographic study Extended interview Observation (Passive/Participant) Short standard schedule(structured) : variable depending on time and willingness of participants	Glasgow, Scotland. Drug injectors in two treatment centres, a needle and syringe programme centre and a local pharmacy providing sterile injecting equipment. Injectors and non injectors around the streets (community) 122 men and women	Availability does not have an important part to play in the creation of some of the situations where needle sharing takes place, but it thus can only constitute a part of the explanation as instances of sharing was shown to be highly situationally variable. Patterns of sharing between injectors highlighted sharing as rarely being an indiscriminate activity but one which frequently follows a pattern of sociability quite closely. So also author critically commented on gender distinct nature of the social activity which suggests that the risks of HIV infection are differently focussed for men and women	+	A
Lawrie 2005	Semi-structured interview; Appraisal of attitudes, beliefs and values	80 (non-IDU) customers in pharmacies in Aberdeen and Glasgow (Scotland) 8 Pharmacies in city centre, suburban and rural locations. Only 2 of the pharmacies ran a NSP. General public	Most were supportive of pharmacies offering NSPs. Two main reasons: reduction in risk of finding discarded needles in public places especially by children and the reduction in transmission of diseases. A small minority was not supportive either because they did not want such services to be too visible or because it was seen to condone drug injecting.	+	A
Korner 2003	Document analysis founded in Critical Discourse Analysis and Systemic Functional Linguistics. Case study Document Analysis	Sydney, Australia Case study was selected as a 'critical case sample'. Four newspapers were examined:	Seven texts in three newspapers dealt with the NSP closure, including four news reports and one editorial. While there is an absence of overt judgements and sensationalist reporting the texts are not value free. The intertextual analysis shows an alignment of the papers with positive or negative positions relating to NSPs and this case in particular. Reporters are able to choose which speaking subjects are included and which are foregrounded/backgrounded. Politicians and their media officers are the most privileged, while drug educators are the least represented. No comments from staff or clients at the service involved are included in any of the texts. Also absent are any public health messages or descriptions of the benefits of NSPs.	+	B
Strike 2004	Qualitative: Local practice report ; Semi-structured interview	Ontario, Canada 59 Coordinators, managers and workers at 15 NSPs in Ontario Medical Officers of Health,	The operation of an NSP is likely to require delicate balancing of interests of the clients, workers, organisations overseeing the service and the wider community. Workers respond to the stigmatisation of their clients by contesting the differentness of their clients from the wider community. Approaches developed to	+	B

		Executive Directors and key informants from Ontario Ministry of Health and Long Term Care	contend with opposition are described including, the involvement of community partners in the planning process, keeping a low profile and locating to less contentious locations.		
Downing 2005	Qualitative interviews with key informants. Extended interview Semi-structured interview	US 17 interviews with Public health officials, HIV prevention and drug treatment providers, researchers, policy makers, staff of community based organisations and activists	Three implementation models were identified: 1. NSPs established by community coalitions. 2. NSPs established by community activists. 3. NSPs established top down by govt. authorities. Successful implementation sometimes involved movement from one model to another as appropriate. Six strategies and resources were identified as characterising successful implementation of an NSP.	+	C
Shaw 2006	participant-observation, public records and in-depth interviews, ethnographic interviews	Springfield, Massachusetts. The number of participants in the research was not made explicit. Local opinion leaders and front-line harm-reduction workers plus needle and syringe programme opponents and African-American citizens.	The paper outlines the debate of a needle and syringe programme in Springfield. It highlights the marginalization of African-Americans in the political system. The paper shows the divergent views of various stakeholders and demonstrates how these views impact on the implementation of the programme.	+	C
Somlai 1999	A case study of the implementation of an intervention based upon social science and community assessment research. Semi-structured interview Observation (Passive/Participant)	Milwaukee, Wisconsin, US The following participated in the development of the NSP: IDUs Outreach workers Researchers Alcohol/drug treatment professionals Physicians and other key stakeholders 300 individuals were recruited to the study. It is unclear whether the whole sample was interviewed	In relation to NSPs, there was an 'overwhelming' amount of support from IDUs, with some hoping that it may lead to greater community acceptance of their drug use as a medical rather than criminal behaviour. However many of the respondents were sceptical about the amount of political/community support for the service. While possession of injecting equipment is not prohibited in the study area, IDUs were regularly arrested under drug possession laws if a syringe had a trace of illegal substances, it is suggested that this acts as a barrier to access to sterile equipment. The legal purchase of syringes from pharmacies was also shown to be problematic. Concerns were expressed at community meetings about a fixed site NSP encouraging violent and criminal behaviour. A mobile facility was more acceptable.	-	C
Springer 1999	Qualitative study Extended interview Appraisal of attitudes, beliefs and values	Atlanta/USA: area of high drug sales and drug use. Street outreach: interviews	The injecting drug users preferred using NSPs to the other disposal methods and community members' opinion about NSPs were generally positive. Both IDUs and community members believed that access to new	++	C

		<p>conducted in 2 offices centrally located in the community</p> <p>32 non injecting community members 26 injecting drug user community members</p>	<p>syringes will be beneficial largely because it would reduce the reuse of syringes and thus reduce the risk of HIV transmission in the long run.</p> <p>IDUs major concern was the risk of getting arrested for possession of a syringe</p> <p>IDUs were more willing to take the risk of getting caught and arrested for syringe possession if they were receiving a new syringe for an old one disposed</p> <p>Disadvantages mentioned by community members centred on moral issues of providing new syringes to IDUs, it is believed that stopping drugs altogether is better than giving new syringes.</p>		
Tempalski 2007	<p>Descriptive study with evaluation (qualitative study)</p> <p>Semi-structured interview</p> <p>Appraisal of attitudes, beliefs and values</p>	<p>32 metropolitan statistical areas in the USA</p> <p>93 interviewees in 32 MSAs</p> <p>24 NSP directors 14 drug treatment providers 13 outreach workers 28 researchers 14 public health administrators</p>	<p>Themes were:</p> <ol style="list-style-type: none"> 1. institutional and/ or political opposition based on <ol style="list-style-type: none"> (a) political and law enforcement issues associated with state drug paraphernalia laws and local syringe laws; (b) harassment of drug users and resistance to services for drug users by local politicians and police; and (c) state and local government (in)action or opposition; and 2. Stigmatisation of drug users and NSP resistance from neighbours and businesses. 	+	C

3.7 Key question (6)

What are the views, experiences and attitudes of carers and families of IDUs to NSPs?

This question considers the views of families and carers with regard to effectiveness of NSPs, acceptability of NSPs; and information and advice needs (for themselves).

No qualitative studies were found that contained information relating to this question. None of the studies retrieved after title and abstract screening had sought the views of families and carers of IDUs, so there was no evidence available to answer this question.

Discussion

Forty qualitative studies were included in this review, covering a diverse range of participants, settings, countries and themes. There was strong representation from the UK, where NSPs have been established for many years, with many included UK studies interviewing and observing IDUs. Despite this, we did not find any evidence pertaining to key question 6, about the views of families and carers. This is perhaps not surprising given that a prominent theme across the other key questions was the IDU's fear of being publicly exposed to families and neighbours, as well as to the police, which suggests that families and carers may not know about the drug use and therefore would not know about the use of related services. There was also very little qualitative information about combined use of NSPs and oral methadone.

IDUs are a hidden population that is hard to reach for the purposes of providing services and undertaking research, so it is again not very surprising that the majority of the included qualitative studies lacked detail of the sample demographics, as it is understandable that many IDUs, while willing to take part in interviews, do not want to provide any potentially identifying details about themselves. It was surprising, however, that included studies often did not report details of qualitative research methodology such as data collection, sampling strategy, data analysis, consent and ethics procedures and the roles of the researchers in collecting and analysing data. This could be due in part, as for quantitative research, to word limits in journal publications, but may also reflect a more general tendency for qualitative research methodology to be poorly understood and reported in the scientific literature. These methodological flaws combine to limit the generalisability of the findings of this review, as we cannot tell how representative the samples in the included studies are of the IDU population as a whole.

This review included only qualitative studies that were internally coherent in their methodology, therefore questionnaire-based surveys, whether administered verbally or not, were excluded, as there was no provision for recording responses other than yes/ no, and furthermore the analysis of such surveys tended to be quantitative. It is possible however that the excluded surveys may still contain useful data that could add to what was found in the qualitative studies.

Despite the above caveats, some strong themes emerged, namely:

- embarrassment and fear of public exposure,
- preferences for secondary syringe exchange and (in some cases) pharmacy based NSPs due to fear of exposure, convenience of opening hours and location
- gender differences in injecting risk behaviour and syringe acquisition
- heterogeneity of IDUs as a group, largely related to socioeconomic status/ stability of living arrangements
- awareness and use of a range of additional harm reduction interventions (though little detail of what these were)
- objections from the general public were based on morality (not wanting to help IDUs harm themselves, or concepts of personal responsibility) or fear of increased crime or injury from discarded needles

Conclusions

The qualitative literature on NSPs for IDUs lacks methodological detail, which limits its generalisability.

There was no qualitative literature on the attitudes of families and carers of IDUs to NSPs, and very little on combined use of NSP and oral methadone services.

A strong theme among IDUs in the included studies was fear of public exposure, which influenced their choices over where to obtain injecting equipment from. Secondary syringe exchange was popular for this reason.

Convenience was important to IDUs. Pharmacies were rated higher than drug agency based NSPs for accessibility due to opening hours and location. Secondary syringe exchange and buying syringes were also felt to be more convenient than using a fixed site NSP. Beyond convenience, however, agency based NSPs were rated more highly than pharmacies for the advice and information they provided.

Women were more vulnerable than men to unsafe injecting practices, due to incorrect beliefs about risk of sharing with a sexual partner, and increased fear of exposure.

APPENDIX A: LIST OF INCLUDED STUDIES

Barnard, M. A. (1993) Needle sharing in context: patterns of sharing among men and women injectors and HIV risks. *Addiction.* , 88, 805-812

Buchanan, D., Shaw, S., Teng, W., Hiser, P. & Singer, M. (2003) Neighborhood differences in patterns of syringe access, use, and discard among injection drug users: implications for HIV outreach and prevention education. *Journal of urban health : bulletin of the New York Academy of Medicine*, 80, 438-54.

Clarke K, Sheridan J, Griffiths P et al. Pharmacy needle exchange: do clients and community pharmacists have matching perceptions? *The Pharmaceutical Journal* 2001;266:553-6

Cooper H, Moore L, Gruskin S, Krieger N, Cooper H, Moore L, et al. The impact of a police drug crackdown on drug injectors' ability to practice harm reduction: a qualitative study. *Social Science & Medicine* 2005;61(3):673-84.

Downing M, Riess TH, Vernon K, Mulia N, Hollinquest M, McKnight C, Des Jarlais DC, Edlin BR 2005 What's Community got to do with it? Implementation Models of Syringe Exchange Programs. *AIDS Education and Prevention* 17 (1).

Finlinson, H. A., Oliver-Velez, D., Colon, H. M., Deren, S., Robles, R. R., Beardsley, M., Cant, J. G. H., Andia, J. & Lopez, M. S. (2000) Syringe acquisition and use of syringe exchange programs by Puerto Rican drug injectors in New York and Puerto Rico: comparisons based on quantitative and qualitative methods. *AIDS and Behavior.*, 4, 341-51. (32 ref).

Grund JPC, Blanken P, Adriaans NFP et al. Reaching the unreached: targeting hidden IDU populations with clean needles via known user groups. *J Psychoactive Drugs* 1992;24(1):41-47

Hay G, McKeganey N, The attendance pattern of clients at a Scottish needle exchange. *Addiction* 2001; 96: 259-66

Kelley MS, Lune H, Murphy S 2005 Doing Syringe Exchange: Organisational Transformation and Volunteer Commitment. *Nonprofit and Voluntary Sector Quarterly* 34 (3).

Körner H and Treloar C 2003 Needle and syringe programmes in the local media: 'needle anger' versus 'effective education in the community'. *International Journal of Drug Policy* 15

Jacob J, Stover H. The transfer of harm-reduction strategies into prisons: needle exchange programmes in two German prisons. *Int J Drug Policy* 2000; 11: 325-335

Junge, B., Valente, T., Latkin, C., Riley, E. & Vlahov, D. (2000) Syringe exchange not associated with social network formation: results from Baltimore. *AIDS*, 14, 423-6.

Larkins SA. The role of social support in the physical and emotional health of injection-drug users utilising needle exchange. *Dissertation Abstracts International* 2000; 60 (7): 2697-A

Lawrie, T., Matheson, C., Bond, C. & Roberts, K. (2003) Pharmacy customers' views and experiences of using pharmacies which provide needle exchange services in Aberdeen and Glasgow, Scotland. *International Journal of Drug Policy.*, 14, 445-7.

Lewis, B. A., Koester, S. K. & Bush, T. W. (1996) Pharmacists' attitudes and concerns regarding syringe sales to injection drug users in Denver, Colorado. *Journal of the American Pharmaceutical Association*, 42, s46-51.

Long J, Allwright S, Begley C 2004 Prisoners' view of injecting drug use and harm reduction in Irish prisons. *International Journal of Drug Policy*. Vol 15 (2).

Matheson, C. (1998) Illicit drug users' views of a 'good' and 'bad' pharmacy service. *Journal of Social and Administrative Pharmacy*, 15, 1998.

Matheson, C. B. (1999) Motivations for and barriers to community pharmacy services for drug misusers. *International Journal of Pharmacy Practice*, 7, Dec.

Miller, P. G. (2001) Needle and syringe provision and disposal in an Australian regional centre. 20, 431-438.

Moore, L. D. & Wenger, L. D. (1995) The social context of needle exchange and user-self-organization in San Francisco: Possibilities and pitfalls. *Journal of Drug Issues* Vol 25 (3).

Murphy S, Kelley MS, Lune H 2004 The Health Benefits of Secondary Exchange. *The Journal of Drug Issues*.

Neale J 1998 Reducing risks: Drug users views of accessing and disposing of injecting equipment. *Addiction Research* 6 (2).

Phillips KT, Rosenberg H and Sanikop A 2007 English and American Drug Clients' Views of the Acceptability, Advantages, and Disadvantages of Treatment and Harm Reduction Interventions. *Journal of Drug Issues* Vol: 37 (2).

Porter, J., Metzger, D. & Scotti, R. (2002) Bridge to services: drug injectors' awareness and utilization of drug user treatment and social service referrals, medical care, and HIV testing provided by needle exchange programs. *Substance use & misuse*, 37, 1305-30.

Power, R., Jones, S., Kearns, G. & Ward, J. (1996) An Ethnography of Risk Management amongst Illicit Drug Injectors and Its Implications for the Development of Community-Based Interventions. *Sociology of Health and Illness*, 18, 86-106.

Rhodes T, Watts L, Davies S et al. 2007 Risk, shame and the public injector: A qualitative study of drug injecting in South Wales. *Social Science & Medicine* 65

Shaw, S. J. (2006) Public citizens, marginalized communities: the struggle for syringe exchange in Springfield, Massachusetts. *Medical Anthropology*, 25, 31-63.

Singer M, Romero-Daza N, Weeks M, Pelia P, Singer M, Romero-Daza N, et al. Ethnography and the evaluation of needle exchange in the prevention of HIV transmission. *NIDA Research Monograph* 1995;157:231-257

Snead J, Downing M, Lorvick J, Garcia B, Thawley R, Kegeles S, Edlin BR 2003 Secondary Syringe Exchange Among Injection Drug Users. *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 80 (2).

Somlai AM, Kelly JA, Otto-Salaj L, Nelson D 1999 "Lifepoint": A Case Study in Using Social Science Community Identification Data to Guide the Implementation of a Needle Exchange Program. *AIDS Education and Prevention* 11 (3).

Spittal PM, Small W, Wood E, Johnston C, Charette J, Laliberté N, O' Shaughnessy MV and Schechter MT 2003 How otherwise dedicated AIDS prevention workers come to support state sponsored shortage of clean needles in Vancouver, Canada. *International Journal of Drug Policy* 15.

Springer, K. W., Sterk, C. E., Jones, T. S. & Friedman, L. (1999) Syringe disposal options for injection drug users: a community-based perspective. *Substance use & misuse*, 34, 1917-34.

Strenski, T. A., Marshall, P. A., Gacki, J. K. & Sanchez, C. W. (2000) The emergent impact of syringe exchange programs on shooting galleries and injection behaviors in three ethnically diverse Chicago neighborhoods.

Strike CJ, Challacombe L, Myers T, Millson M. Needle exchange programs: Delivery and access issues. *Can J Pub Health* 2002a;93(5):339-343

Strike CJ, Myers T and Millson M 2002 Needle Exchange: How the meanings ascribed to needles impact exchange practices and policies. *AIDS Education and Prevention* 2002b;14 (2).

C. J. Strike, T. Myers and M. Millson 2004 Finding a Place for Needle Exchange Programs. *Critical Public Health* Vol 14 (3)

C. Strike, W. Cavalieri, R. Bright, T. Myers, L. Calzavara and M. Millson 2005 Syringe acquisition, peer exchange and HIV risk. *Contemporary Drug Problems* 32

Tempalski B, Friedman R, Keem M et al. NIMBY localism and national inequitable exclusion alliances: the case of syringe exchange programs in the United States. *Geoforum* 2007;38:1250-63

Voytek C, Sherman SG, Junge B 2003 A matter of convenience: factors influencing secondary syringe exchange in Baltimore, Maryland, USA. *International Journal of Drug Policy* 14.

Weiker R, Edgington R and Kipke MD 1999 A Collaborative Evaluation of a Needle Exchange Program for Youth. *Health Education and Behavior*, April.

APPENDIX B – Excluded studies (including reasons for exclusion)

Methodology Not appropriate

1. ANDERSON W, ANDERSON W (1991). The New York Needle Trial: the politics of public health in the age of AIDS. *American Journal of Public Health*; 81(11):1506-1517.
2. ANONYMOUS (2002) Needle-exchange programs are slowly finding greater acceptance. *AIDS Alert*, 17, 69.
3. ANONYMOUS (1999) HIV prevention clashes with politics over needle-exchange programs. *AIDS alert*, 14, 61-3.
4. ANONYMOUS (1997) Update: syringe-exchange programs -- United States, 1996. *MMWR: Morbidity and Mortality Weekly Report*, 46, 565-8. (6 ref).
5. ANONYMOUS (1998) Syringe exchanges expand despite government ban. *AIDS alert*, 13, 115-7.
6. ANONYMOUS (1995) Coming clean about needle exchange. *Lancet*, 346, 1377. (9 ref).
7. ANONYMOUS (1997) How to run a successful needle exchange program. *AIDS alert*, 12, 129-31.
8. AMUNDSEN EJ (2006). Measuring effectiveness of needle and syringe exchange programmes for prevention of HIV among injecting drug users. 101(7):911-912.
9. BEDELL R (2007). The art and the science of scaling-up needle and syringe programmes. *Addiction*, 102(8):1179-80. (12 ref).
10. BENNINGHOFF F, MORENCY P, GEENSE R, HUISSOUD T, DUBOIS-ARBER F (2006). Health Trends among Drug Users Attending Needle Exchange Programmes in Switzerland (1994-2000). *AIDS care*, 18(4):371-375.
11. BETTERIDGE G (2006). Vancouver safe injection facility: more positive results. *HIV/AIDS policy & law review / Canadian HIV/AIDS Legal Network*, 11(1):19-20.
12. BLUTHENTHAL RN (1998). Syringe exchange as a social movement: a case study of harm reduction in Oakland, California. *Substance Use and Misuse*, 33(5):1147-71.
13. BLUTHENTHAL RN, MALIK MR, GRAU LE, SINGER M, MARSHALL P, HEIMER R, ET AL (2004). Sterile syringe access conditions and variations in HIV risk among drug injectors in three cities. *Addiction*; 99(9):1136-46.
14. BLUTHENTHAL RN, GOGINENI A, LONGSHORE D, STEIN M, BLUTHENTHAL RN, GOGINENI A, ET AL (2001). Factors associated with readiness to change drug use among needle-exchange users. *Drug & Alcohol Dependence*, 62(3):225-30.
15. BRAINE N, DES JARLAIS DC, AHMAD S, PURCHASE D, TURNER C (2004). Long-term effects of syringe exchange on risk behavior and HIV prevention. *AIDS education*

- and prevention: official publication of the International Society for AIDS Education, 16(3):264-75.*
16. BROADHEAD RS, VAN HULST Y, HECKATHORN DD (1999). Termination of an Established Needle-Exchange: A Study of Claims and Their Impact. *Social Problems, 46(1):48-66.*
 17. BRYANT J, TRELOAR C (2006). Risk Practices and Other Characteristics of Injecting Drug Users Who Obtain Injecting Equipment from Pharmacies and Personal Networks. *International Journal of Drug Policy, 17(5):418-424.*
 18. CAIAFFA WT, PROIETTI FA (2003). Ecological analyses and the evaluation of needle and syringe programmes. *International Journal of Drug Policy, 14(5-6):359-360.*
 19. CAREY J, PERLMAN DC, FRIEDMANN P, KAPLAN WM, NUGENT A, DEUTSCHER M, ET AL (2005). Knowledge of Hepatitis among Active Drug Injectors at a Syringe Exchange Program. *Journal of substance abuse treatment, 29(1):47-53.*
 20. CASE P, BECKETT GA, JONES TS, CASE P, BECKETT GA, JONES TS (1998). Access to sterile syringes in Maine: pharmacy practice after the 1993 repeal of the syringe prescription law. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology, 18 Suppl 1:S94-101.*
 21. CENTERS FOR DISEASE C, PREVENTION (2005). Update: syringe exchange programs--United States, 2002. *MMWR. Morbidity and mortality weekly report, 54(27):673-6.*
 22. CHRISTENSSON B, LJUNGBERG B, CHRISTENSSON B, LJUNGBERG B (1991). Syringe exchange for prevention of HIV infection in Sweden: practical experiences and community reactions. *International Journal of the Addictions, 26(12):1293-302.*
 23. CLARKE K, ET AL (1998) Consumer preferences among pharmacy needle exchange attenders. *Pharmaceutical Journal, 261 (7022): 64*
 24. COFFIN PO, AHERN J, DORRIS S, STEVENSON L, FULLER C, VLAHOV D, ET AL (2002). More pharmacists in high-risk neighbourhoods of New York City support selling syringes to injection drug users. *Journal of the American Pharmaceutical Association, 42(6 Suppl 2):S62-7.*
 25. COFFIN PO, LINAS BP, FACTOR SH, VLAHOV D (2000). New York City pharmacists' attitudes toward sale of needles/syringes to injection drug users before implementation of law expanding syringe access. *Journal of urban health: bulletin of the New York Academy of Medicine, 77(4):781-93.*
 26. COHEN J (2003). New report profiles syringe access in California. *Canadian HIV/AIDS policy & law review / Canadian HIV/AIDS Legal Network, 8(3):43-4.*
 27. DEIBERT, R. J., GOLDBAUM, G., PARKER, T. R., HAGAN, H., MARKS, R., HANRAHAN, M. & THIEDE, H. (2006) Increased access to unrestricted pharmacy sales of syringes in Seattle-King County, Washington: structural and individual-level changes, 1996 versus 2003. *American journal of public health, 96, 1347-53.*
 28. DELGADO C (2004). Evaluation of needle exchange programs. *Public health nursing, 21(2):171-8.*

29. DES JARLAIS C, PERLIS T, FRIEDMAN SR, CHAPMAN T, KWOK J, ROCKWELL R, ET AL (2000). Behavioural risk reduction in a declining HIV epidemic: injection drug users in New York City, 1990-1997. *American journal of public health*, 90(7):1112-6.
30. DES JARLAIS DC, BRAINE N, YI H, TURNER C, DES JARLAIS DC, BRAINE N, ET AL (2007). Residual injection risk behaviour, HIV infection, and the evaluation of syringe exchange programs. *AIDS Education & Prevention*, 19(2):111-23.
31. DES JARLAIS DC, FRIEDMANN P, GRUND J, MILLIKEN J, TITUS S, ZADORETZKY C, ET AL (2002). HIV risk behaviour among participants of syringe exchange programmes in central/eastern Europe and Russia. *International Journal of Drug Policy*, 13(3):165-70. (25 ref).
32. DONOGHOE, M. C., STIMSON, G. V., DOLAN, K., ALLDRITT, L. & ET AL. (1989) Changes in HIV risk behaviour in clients of syringe-exchange schemes in England and Scotland.
33. EICHER AD, CROFTS N, BENJAMIN S, DEUTSCHMANN P, RODGER AJ (2000). A certain fate: spread of HIV among young injecting drug users in Manipur, north-east India. *AIDS care*, 12(4):497-504.
34. FARLEY TA, NICCOLAI LM, BILLETER M, KISSINGER PJ, GRACE M, FARLEY TA, ET AL (1999). Attitudes and practices of pharmacy managers regarding needle sales to injection drug users. *Journal of the American Pharmaceutical Association*, 39(1):23-6.
35. FERNANDO D (1991). Fundamental Limitations of Needle-Exchange Programs as a Strategy for HIV Prevention among IVDUs in the US: The Experience and Policy Implications of the Needle-Exchange Pilot Program in New York City. *AIDS & public policy journal*, 6(3):116-120.
36. FLEMING GF, MCELNAY JC, HUGHES CM, SHERIDAN J, STRANG J (2001). The role of the community pharmacist in drug abuse: a comparison of service provision between Northern Ireland and England/Wales. *Pharmacy world & science: PWS*; 23(1):13-6.
37. FRIEDMAN SR, CURTIS R, JOSE B, FLOM PL, NEAIGUS A, DES JDC, ET AL (1999). The message not heard: myth and reality in discussions about syringe exchange. *AIDS*, 13(6):738-739.
38. FULLER, C. M., GALEA, S., CACERES, W., BLANEY, S., SISCO, S. & VLAHOV, D. (2007) Multilevel community-based intervention to increase access to sterile syringes among injection drug users through pharmacy sales in New York City. *American journal of public health*, 97, 117-24.
39. GLANZ, A., BYRNE, C., JACKSON, P., GLANZ, A., BYRNE, C. & JACKSON, P. (1989) Role of community pharmacies in prevention of AIDS among injecting drug misusers: findings of a survey in England and Wales. *BMJ*, 299, 1076-9.
40. GLEGHORN AA, GEE G, VLAHOV D (1998). Pharmacists' attitudes about pharmacy sale of needles/syringes and needle exchange programs in a city without needle/syringe prescription laws. *Journal of acquired immune deficiency syndromes and human retrovirology: official publication of the International Retrovirology Association*, 18(1):s89-93.

41. GLEGHORN AA, WRIGHT-DE AGAÑO L, FLYNN C (1998). Feasibility of one-time use of sterile syringes: a study of active injection drug users in seven United States metropolitan areas. *Journal of acquired immune deficiency syndromes and human retrovirology: official publication of the International Retrovirology Association*, 18(1):s30-6.
42. GOSTIN LO, GOSTIN LO (1998). The legal environment impeding access to sterile syringes and needles: the conflict between law enforcement and public health. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology*, 18 Suppl 1:S60-70.
43. GROSECLOSE SL, WEINSTEIN B, JONES TS, VALLEROY LA, FEHRS LJ, KASSLER WJ, ET AL (1995). Impact of increased legal access to needles and syringes on practices of injecting-drug users and police officers--Connecticut, 1992-1993.[see comment]. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology*, 10(1):82-9.
44. GUYDISH J, BROWN C, EDINGTON R, EDNEY H, GARCIA D (2000). What are the impacts of needle exchange on young injectors? *AIDS and Behaviour*, 4(2):137-46. (56 ref).
45. HAGAN H, DES JARLAIS DC, REID T, FRIEDMAN SR (1991). The Tacoma Syringe Exchange. *Journal of Addictive Diseases*, 10(4):81-88.
46. HAGAN H, DES JARLAIS DC, PURCHASE D, FRIEDMAN SR, REID T, BELL TA, ET AL (1993). An interview study of participants in the Tacoma, Washington, syringe exchange. *Addiction*; 88(12):1691-7.
47. HARTGERS C, BUNING EC, VAN SANTEN GW, VERSTER AD, COUTINHO RA, HARTGERS C, ET AL (1989). The impact of the needle and syringe-exchange programme in Amsterdam on injecting risk behaviour. *AIDS*, 3(9):571-6.
48. HEIMER R, CLAIR S, GRAU LE, BLUTHENTHAL RN, MARSHALL PA, SINGER M (2002). Hepatitis-Associated Knowledge Is Low and Risks are high among HIV Aware Injection Drug Users in Three US Cities. *Addiction*, 97(10):1277-1287.
49. HEIMER R, CLAIR S, TENG W, GRAU LE, KHOSHNOOD K, SINGER M (2002). Effects of increasing syringe availability on syringe-exchange use and HIV risk: Connecticut, 1990-2001. *Journal of urban health: bulletin of the New York Academy of Medicine*, 79(4):556-70.
50. HEIMER R, KHOSHNOOD K, BIGG D, GUYDISH J, JUNGE B, HEIMER R, ET AL (1998). Syringe use and reuse: effects of syringe exchange programs in four cities. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology*, 18 Suppl 1:S37-44.
51. HEINZERLING, K. G., KRAL, A. H., FLYNN, N. M., ANDERSON, R. L., SCOTT, A., GILBERT, M. L., ASCH, S. M. & BLUTHENTHAL, R. N. (2007) Human immunodeficiency virus and hepatitis C virus testing services at syringe exchange programs: Availability and outcomes. 32, 423-429.
52. HENMAN AR, PAONE D, DES JARLAIS DC, KOCHERS LM, FRIEDMAN SR (1998). From ideology to logistics: the organizational aspects of syringe exchange in a period of institutional consolidation. *Substance Use and Misuse*, 33(5):1213-30.

53. HUDOBA M, GRENYER B, O'TOOLE M (2004). Development of an enhanced needle and syringe programme: the First Step programme pilot. *Drug and alcohol review*, 23(3):295-7.
54. HUGHES, R. A. (2000) Lost opportunities? Prison needle and syringe exchange schemes. 7, 75-86.
55. HUO D, BAILEY SL, GARFEIN RS, OUELLET LJ (2005). Changes in the Sharing of Drug Injection Equipment among Street-Recruited Injection Drug Users in Chicago, Illinois, 1994-1996. *Substance use & misuse*, 40(1):63-76.
56. JACOBS P, CALDER P, TAYLOR M, HOUSTON S, SAUNDERS LD, ALBERT T (1999). Cost effectiveness of Streetworks' needle exchange program of Edmonton. *Canadian journal of public health. Revue canadienne de sante publique*, 90(3):168-71.
57. JAMES JS (1997). ADAP, research, and prevention funding, and needle exchange, facing decisions now: your calls important. *AIDS treatment news*, 3(No 280):5.
58. JONES TS, TAUSSIG J (1996). Should pharmacists sell sterile syringes to injection drug users? *Journal of the American Pharmaceutical Association*, 39(1):8-10.
59. KEENE, J., STIMSON, G. V., JONES, S. & PARRY-LANGDON, N. (1993) Evaluation of syringe-exchange for HIV prevention among injecting drug users in rural and urban areas of Wales.
60. KERMODE M, HARRIS A, GOSPODAREVSKAYA E (2003). Introducing retractable needles into needle and syringe programmes: A review of the issues. *International Journal of Drug Policy*, 233-239
61. KERR T, OLESON M, TYNDALL MW, MONTANER J, WOOD E (2005). A description of a peer-run supervised injection site for injection drug users. *Journal of urban health: bulletin of the New York Academy of Medicine*, 82(2):267-75.
62. KEYL PM, GRUSKIN L, CASANO K, MONTAG H, JUNGE B, VLAHOV D, ET AL (1998). Community support for needle exchange programs and pharmacy sale of syringes: a household survey in Baltimore, Maryland. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology*, 18 Suppl 1:S82-8.
63. KIPKE MD, UNGER JB, PALMER R, EDGINGTON R (1997) Drug-injecting street youth: a comparison of HIV-risk injection behaviors between needle exchange users and nonusers. *AIDS and Behavior*, 1(4), 225-232.
64. KHOSHNOOD K, BLANKENSHIP KM, POLLACK HA, ROAN CT, ALTICE FL (2000). Syringe source, use, and discard among injection-drug users in New Haven, Connecticut. *AIDS & public policy journal*, 15(3-4):88-94.
65. KLEE, H., FAUGIER, J., HAYES, C., MORRIS, J., KLEE, H., FAUGIER, J., HAYES, C. & MORRIS, J. (1991) The sharing of injecting equipment among drug users attending prescribing clinics and those using needle-exchanges. *British Journal of Addiction*, 86, 217-23.
66. KLEIN SJ, HARRIS-VALENTE K, CANDELAS AR, RADIGAN M, NARCISSE-PEAN M, TESORIERO JM, ET AL (2001). What do pharmacists think about New York State's

- new non-prescription syringe sale program? Results of a survey. *Journal of urban health: bulletin of the New York Academy of Medicine*, 78(4):679-89.
67. KLEINIG J, KLEINIG J (2006). Thinking ethically about needle and syringe programs. *Substance Use & Misuse*, 41(6-7):815-25.
68. KRAL, A. H. & BLUTHENTHAL, R. N. (2003) What is it about needle and syringe programmes that make them effective for preventing HIV transmission? [References].
69. KSOBIECH K, KSOBIECH K (2006). Beyond needle sharing: meta-analyses of social context risk behaviours of injection drug users attending needle exchange programs. *Substance Use & Misuse*, 41(10-12):1379-94.
70. LART, R., STIMSON, G. V., LART, R. & STIMSON, G. V. (1990) National survey of syringe exchange schemes in England. *British Journal of Addiction*, 85, 1433-43.
71. LATKIN CA, DAVEY MA, HUA W (2006). Needle Exchange Program Utilization and Entry into Drug User Treatment: Is There a Long-Term Connection in Baltimore, Maryland? *Substance use & misuse*, 41(14):1991-2001.
72. LATKIN CA, FORMAN VL (2001). Patterns of needle acquisition and sociobehavioral correlates of needle exchange program attendance in Baltimore, Maryland, U.S.A. *Journal of acquired immune deficiency syndromes*, 27(4):398-404.
73. LAURIE ML, GREEN KL (2000). Health risks and opportunities for harm reduction among injection-drug-using clients of Saskatoon's needle exchange program. *Canadian journal of public health. Revue canadienne de sante publique*, 91(5):350-2.
74. LAZZARINI Z (1991). An analysis of ethical issues in prescribing and dispensing syringes to injection drug users. *Health matrix*; 11(1):85-128.
75. LENTON S, BEVAN J, LAMOND T (2006). Threat or opportunity? Secondary exchange in a setting with widespread availability of needles. *Substance use & misuse*, 41(6-7):845-64.
76. LORVICK J, BLUTHENTHAL RN, SCOTT A, GILBERT ML, RIEHMAN KS, ANDERSON RL, ET AL (2006). Secondary Syringe Exchange among Users of 23 California Syringe Exchange Programs. *Substance use & misuse*, 41(6-7):865-882.
77. LUM PJ, SEARS C, GUYDISH J (2005). Injection Risk Behaviour among Women Syringe Exchangers in San Francisco. *Substance use & misuse*, 40(11):1681-1696.
78. MACALINO GE, SPRINGER KW, RAHMAN ZS, VLAHOV D, JONES TS, MACALINO GE, ET AL (1998). Community-based programs for safe disposal of used needles and syringes. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology*, 18 Suppl 1:S111-9.
79. MACALINO GE, WESTON RS, WOLF FA, SANFORD-COLBY SL, MCKENZIE MM, RICH JD (2003) Research note: Acceptability and utility of a hand-held syringe disposal device for active injection drug users. *Journal of Drug Issues*, 33(2), 519-532.
80. MACGOWAN RJ, STERK CE, LONG A, CHENEY R, SEEMAN M, ANDERSON JE ET AL (1998) New needle and syringe use, and use of needle exchange programmes by street recruited injection drug users in 1993. *International Journal of Epidemiology*, 27(2), 302-308.

81. MACMASTER SA, VAIL KA (2002). Demystifying the injection drug user: willingness to participate in traditional drug treatment services among participants in a needle exchange program. *Journal of psychoactive drugs*, 34(3):289-94.
82. MACMASTER SA, VAIL KA, NEFF JA (2002). Practice forum. The Xchange Point: a drop-in centre for African American active injection drug users. *Health and Social Work*, 27(3):227-9. (15 ref).
83. MACMASTER SA, VAIL KA, NEFF JA (2002). The Xchange Point: A Drop-In Centre for African American Active Injection Drug Users. *Health and Social Work*, 27(3):227-229.
84. MATHESON, C., BOND, C. M. & PITCAIRN, J. (2002) Community pharmacy services for drug misusers in Scotland: what difference does 5 years make? 97, 1405-1411.
85. NAIRN K, MCDONALD N, SHEATHER-REID R (2003). Testing the waters: A pilot programme to enhance the opportunities of risk reduction in Needle Syringe Program clients. [References]. *International Journal of Drug Policy*, 14(4):293-295.
86. NEAIGUS, A., FRIEDMAN, S. R., CURTIS, R., DES JARLAIS, D. C., FURST, R. T., JOSE, B., MOTA, P., STEPHERSON, B., SUFIAN, M., WARD, T. & WRIGHT, J. W. (1994) The relevance of drug injectors' social and risk networks for understanding and preventing HIV infection. *Social Science & Medicine*, 38, 67-78. (47 ref).
87. OBADIA Y, FERONI I, PERRIN V, VLAHOV D, MOATTI JP, OBADIA Y, ET AL (1999). Syringe vending machines for injection drug users: an experiment in Marseille, France. *American Journal of Public Health*, 89(12):1852-4.
88. PANDA S, SHARMA M (2006). Needle Syringe Acquisition and HIV Prevention among Injecting Drug Users: A Treatise on the "Good" and "Not So Good" Public Health Practices in South Asia. *Substance use & misuse*, 41(6-7):953-977
89. PAONE D, COOPER H, ALPEREN J, SHI Q, DES JARLAIS DC (1999) HIV risk behaviours of current sex workers attending syringe exchange: the experiences of women in five US cities. *AIDS care*, 11(3), 269-280.
90. PAONE D, DES JARLAIS DC, CALOIR S, CLARK J, JOSE B, PAONE D, ET AL (1995). Operational issues in syringe exchanges: the New York City tagging alternative study. *Journal of Community Health*, 20(2):111-23.
91. REES L (1997). Supplying injecting equipment to drug misusers: a survey of community pharmacists' attitudes, beliefs and practices. *International Journal of Pharmacy Practice*, 5(4):1997-175.
92. RHODES T, KIMBER J, SMALL W, FITZGERALD J, KERR T, HICKMAN M, ET AL (2006). Public Injecting and the Need for 'Safer Environment Interventions' in the Reduction of Drug-Related Harm. *Addiction*, 101(10):1384-1393.
93. RICH JD, MACALINO GE, MCKENZIE M, TAYLOR LE, BURRIS S (2001). Field action report. Syringe prescription to prevent HIV infection in Rhode Island: a case study. *American Journal of Public Health*, 91(5):699-700. (1 ref).

94. POWER, R., KHALFIN, R., NOZHKINA, N. & KANARSKY, I. A. (2004) An evaluation of harm reduction interventions targeting injecting drug users in Sverdlovsk Oblast, Russia. *International Journal of Drug Policy*, 15, 305-10. (22 ref).
95. SCHWARTZ RH, SCHWARTZ RH (1993). Syringe and needle exchange programs: Part I. *Southern Medical Journal*, 86(3):318-22.
96. SCOTT J, DAVY C, DODRIDGE E, KHAN K, MILLIGAN Z (2007) South West England needle exchange pharmacists' knowledge of the updated UK 'paraphernalia laws.' [References]. *Journal of Substance Use.*, 12(5), 359-364.
97. SERVEGEV B, OPARINA T, RUMYANTSEVA TP, VOLKANEVSKII VL, BROADHEAD RS, HECKATHORN DD, ET AL (1999). HIV prevention in Yaroslavl, Russia: A peer-driven intervention and needle exchange.
98. SHERIDAN, J. & BARBER, N. (1997) Drug misuse and HIV prevention: Attitudes and practices of community pharmacists with respect to two London family health service authorities.
99. SHERIDAN, J., LOVELL, S., TURNBULL, P., PARSONS, J., STIMSON, G. & STRANG, J. (2000) Pharmacy-based needle exchange (PBNX) schemes in South East England: a survey of service providers. 95, 1551-1560.
100. SMALL W (2005). Examining barriers to syringe access among injection drug users. 16(5):291-292.
101. STIMSON GV (1989). Syringe-exchange programmes for injecting drug users *AID*, 3: 253-260.
102. STIMSON, G., ALLDRITT, L., DOLAN, K., DONOGHOE, M., STIMSON, G., ALLDRITT, L., DOLAN, K. & DONOGHOE, M. (1988) Preventing the spread of HIV in injecting drug users--the experience of syringe-exchange schemes in England and Scotland. *NIDA Research Monograph*, 90, 302-10.
103. STOPKA T (2006). Editor's Introduction to This Special Issue on Syringe Access and Secondary Syringe Exchange: International Perspectives and Future Directions.
104. STOPKA TJ, SINGER M, TENG W, HORTON J, COMPTON W (2002). Pharmacy access to over-the-counter syringes in Connecticut: Implications for HIV and hepatitis prevention among injection-drug users.; 17(4):115-126.
105. STOVER H, NELLES J (2003). Ten years of experience with needle and syringe exchange programmes in European prisons. *International Journal of Drug Policy*, 14(5-6):437-44. (32 ref).
106. STRATHDEE, S. A AND BASTOS, F. I (2003). Sterile syringe access for injection drug users in the 21st century: progress and prospects. *International Journal of Drug Policy*, 14; 351-352.
107. TAUSSIG, J. A., WEINSTEIN, B., BURRIS, S., JONES, T. S., TAUSSIG, J. A., WEINSTEIN, B., BURRIS, S. & JONES, T. S. (2000) Syringe laws and pharmacy regulations are structural constraints on HIV prevention in the US. *AIDS*, 14 Suppl 1, S47-51.

108. TAYLOR LE, RUNARSDOTTIR V, ZAMPI A, OSEI A, SANFORD S, MACALINO G, ET AL (2003). Would you consider prescribing syringes to injection drug users? *Addiction medicine conference survey*, 22(1):67-78.
109. TEMPALSKI B, TEMPALSKI B (2007). Placing the dynamics of syringe exchange programs in the United States. *Health & Place*, 13(2):417-31.
110. TEMPALSKI, B., FRIEDMAN, S. R., DES JARLAIS, D. C., MCKNIGHT, C., KEEM, M. & FRIEDMAN, R. (2003) What predicts which metropolitan areas in the USA have syringe exchanges? *International Journal of Drug Policy*, 14, 417-24. (73 ref).
111. TRELOAR C, CAO W (2005). Barriers to Use of Needle and Syringe Programmes in a High Drug Use Area of Sydney, New South Wales. *International Journal of Drug Policy*, 16(5):308-315.
112. TRELOAR C, FRASER S (2007). Public opinion on needle and syringe programmes: avoiding assumptions for policy and Practice. 26(4):355-361.
113. TRUBNIKOV MN, KHODAKEVICH LN, BARKOV DA, BLAGOVO DV (2003). Sources of injecting equipment for drug users in Moscow, Russia. *International Journal of Drug Policy*, 14(5-6):453-5. (14 ref).
114. TSAI R, GOH EH, WEBECK P, MULLINS J, TSAI R, GOH EH, ET AL (1988). Prevention of human immunodeficiency virus infection among intravenous drug users in New South Wales, Australia: the needles and syringes distribution programme through retail pharmacies. *Asia-Pacific Journal of Public Health*, 2(4):245-51.
115. TURNBERG WL, JONES TS, TURNBERG WL, JONES TS (2002). Community syringe collection and disposal policies in 16 states. *Journal of the American Pharmaceutical Association*, 42(6 Suppl 2):S99-104.
116. TYNDALL, M. W., BRUNEAU, J., BROGLY, S., SPITTAL, P., O'SHAUGHNESSY, M. V. & SCHECHTER, M. T. (2002) Satellite needle distribution among injection drug users: policy and practice in two Canadian cities. *Journal of acquired immune deficiency syndromes*, 31, 98-105.
117. VALENCIANO M, EMMANUELLI J, LERT F (2001). Unsafe injecting practices among attendees of syringe exchange programmes in France.; 96(4):597-606.
118. VALENTE TW, VLAHOV D (2001). Selective risk taking among needle exchange participants: implications for supplemental interventions. *American journal of public health*, 91(3):406-11.
119. VALENTE TW, FOREMAN RK, JUNGE B, VLAHOV D, VALENTE TW, FOREMAN RK, ET AL (1998). Satellite exchange in the Baltimore Needle Exchange Program. *Public Health Reports*, 113 Suppl 1:90-6.
120. VALLEROY LA, WEINSTEIN B, JONES TS, GROSECLOSE SL, ROLFS RT, KASSLER WJ, ET AL (1995). Impact of increased legal access to needles and syringes on community pharmacies' needle and syringe sales--Connecticut, 1992-1993. [See comment]. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology*, 10(1):73-81.

121. VASSILEV ZP, HAGAN H, LYUBENOVA A, TOMOV N, VASILEV G, KRASTEVA D, ET AL (2006). Needle exchange use, sexual risk behaviour, and the prevalence of HIV, hepatitis B virus, and hepatitis C virus infections among Bulgarian injection drug users. *International journal of STD & AIDS*, 17(9):621-6.
122. VERNICK JS, BURRIS S, STRATHDEE SA (2003). Public opinion about syringe exchange programmes in the USA: An analysis of national surveys.
123. VILLARREAL H, FOGG C (2006). Syringe-exchange programs and HIV prevention. 106(5):58-63.
124. VLAHOV D, JUNGE B, BROOKMEYER R, COHN S, RILEY E, ARMENIAN H, ET AL (1997). Reductions in high-risk drug use behaviours among participants in the Baltimore needle exchange program. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology*, 16(5):400-6.
125. WODAK A (2007). Health exchange and prevention of HIV: the evidence for effectiveness is beyond dispute. *Addiction*, 102(1):161-2. (17 ref).
126. WODAK A, COONEY A (2005). Effectiveness of sterile needle and syringe programmes. 16:S31-S44.
127. WOOD E, KERR T (2006). Needle exchange and the HIV outbreak among injection drug users in Vancouver, Canada. 41(6-7):841-843.
128. WOOD E, TYNDALL MW, SPITTAL PA, LI K, KERR T, HOGG RS, ET AL (2001). Unsafe injection practices in a cohort of injection drug users in Vancouver: Could safer injecting rooms help?; 165(4):405-410.
129. WOOD E, TYNDALL MW, SPITTAL PM, LI K, HOGG RS, O'SHAUGHNESSY MV, ET AL (2002). Needle exchange and difficulty with needle exchange during an ongoing HIV epidemic. *International Journal of Drug Policy*, 13(2):95-102.
130. WOOD E, TYNDALL MW, SPITTAL PM, LI K, HOGG RS, MONTANER JSG, ET AL (2002). Factors associated with persistent high-risk syringe sharing in the presence of an established needle exchange programme. *AIDS*, 16(6):941-3.
131. WOOD E, KERR T, SMALL W, JONES J, SCHECHTER MT, TYNDALL MW (2003). The impact of a police presence on access to needle exchange programs. *Journal of acquired immune deficiency syndromes*, 34(1):116-8.
132. WU ZY, LUO W, SULLIVAN SG, ROU KM, LIN P, LIU W, ET AL (2007). Evaluation of a needle social marketing strategy to control HIV among injecting drug users in China. 21:S115-S122.
133. ZELLMER WA, ZELLMER WA (1994). Pharmacist involvement in needle exchange programs. *American Pharmacy*, NS34 (9):48-51.

Not specific to NSP

1. BELETSKY LM (2005). Attitudes of police officers towards syringe access, occupational needle-sticks, and drug use: A qualitative study of one city police department in the United States. *International Journal of Drug Policy*, 16(4): Aug.

2. BROADHEAD, R. S., BORCH, C. A., VAN HULST, Y., FARRELL, J., VILLEMEZ, W. J. & ALTICE, F. L. (2003) Safer Injection Sites in New York City: A Utilization Survey of Injection Drug Users. *Journal of Drug Issues*, 33, 733-750.
3. BURRIS S, BLANKENSHIP KM, DONOGHOE M, SHERMAN S, VERNICK JS, CASE P, ET AL (2004). Addressing the "Risk Environment" for Injection Drug Users: The Mysterious Case of the Missing Cop. *The Milbank Quarterly*, 82(1):126-156.
4. CLELAND CM, DEREN S, FULLER CM, BLANEY S, MCMAHON JM, TORTU S, ET AL (2007). Syringe Disposal Among Injection Drug Users in Harlem and the Bronx During the New York State Expanded Syringe Access Demonstration Program. *Health Education & Behaviour*, 34(2):390-403.
5. COTTEN-OLDENBURG NU, CARR P, DEBOER JM, COLLISON EK, NOVOTNY G (2001). Impact of pharmacy-based syringe access on injection practices among injecting drug users in Minnesota, 1998 to 1999. *Journal of acquired immune deficiency syndromes*, 27(2):183-92.
6. CRUZ MF, PATRA J, FISCHER B, REHM J, KALOUSEK K (2007). Public opinion towards supervised injection facilities and heroin-assisted treatment in Ontario, Canada. *International Journal of Drug Policy*, 18(1):54-61.
7. DE, P., JOLLY, A., COX, J. & BOIVIN, J.-F. O. (2006) Characterizing the drug-injecting networks of cocaine and heroin injectors in Montreal. *Canadian journal of public health. Revue canadienne de sante publique*, 97, 207-9.
8. DES JARLAIS DC, DES JARLAIS DC (1998). "Single-use" needles and syringes for the prevention of HIV infection among injection drug users. *Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology*, 18 Suppl 1:S52-6.
9. DODDING J, GAUGHWIN M, DODDING J, GAUGHWIN M (1995). The syringe in the machine. *Australian Journal of Public Health*, 19(4):406-409.
10. DRAUS PJ, CARLSON RG (2006). Needles in the Haystacks: The Social Context of Initiation to Heroin Injection in Rural Ohio. *Substance use & misuse*, 41(8):1111-1124.
11. FULLER CM, AHERN J, VADNAI L, COFFIN PO, GALEA S, FACTOR SH, ET AL (1996). Impact of increased syringe access: preliminary findings on injection drug user syringe source, disposal, and pharmacy sales in Harlem, New York. *Journal of the American Pharmaceutical Association*, 42(6 Suppl 2):s77-82.
12. GOSSOP, M., MARSDEN, J., STEWART, D. & KIDD, T. (2003) Reduction or cessation of injecting risk behaviours? Treatment outcomes at 1-year follow-up. *Addictive behaviours*, 28, 785-93.
13. GRUND JPC, FRIEDMAN SR, STERN LS, JOSE B. Syringe-mediated drug sharing among injecting drug users: patterns, social context and implications for transmission of blood-borne pathogens. *Social Science and Medicine*, 42(5):691-703.
14. HALL W, KIMBER J (2005). Being realistic about benefits of supervised injecting facilities. *Lancet*, 366(9482):271-2. (10 ref).
15. HILTON A, THOMPSON R, MOORE-DEMPSEY L (2000). Evaluation of the AIDS Prevention Street Nurse Program: one step at a time. *Canadian Journal of Nursing Research*, 32(1):17-38. (32 ref).

16. HUGHES RA (2000). Drug injectors and the cleaning of needles and syringes. *European addiction research*, 6(1):20-30.
17. KERR T, WOOD E, PALEPU A, WILSON D, SCHECHTER MT, TYNDALL MW (2003). Responding to an Explosive HIV Epidemic Driven by Frequent Cocaine Injection: Is There a Role for Safe Injecting Facilities? *Journal of Drug Issues*, 33(3):579-608.
18. KERR, T., STOLTZ, J., TYNDALL, M., LI, K., ZHANG, R., MONTANER, J. & WOOD, E. (2006) Impact of a medically supervised safer injection facility on community drug use patterns: a before and after study. *BMJ*, 332, 220-2. (22 ref).
19. KERR, T., SMALL, W., MOORE, D. & WOOD, E. (2007) A micro-environmental intervention to reduce the harms associated with drug-related overdose: evidence from the evaluation of Vancouver's safer injection facility. *The International journal on drug policy*, 18, 37-45.
20. LATKIN C, MANDELL W, VLAHOV D, KNOWLTON A, OZIEMKOWSKA M, CELENTANO D (1995). Personal Network Characteristics as Antecedents to Needle-Sharing and Shooting Gallery Attendance. *Social Networks*; 17(3-4):219-228.
21. LATKIN, C. A., DAVEY, M. A. & HUA, W. (2006) Social Context of Needle Selling in Baltimore, Maryland. [References]. *Substance Use & Misuse*, 41, 901-913.
22. METSCH LR, MCCOY CB, SCHULTZ JM, PAGE JB, PHILIPPE E, MCKAY C (1999). Gender Comparisons of Injection Drug Use Practices in Shooting Galleries. *Population Research and Policy Review*, 18(1-2):101-117.
23. MISCHEWSKI A, SMITH AMA, WYLDBORE J, STEWART-STEVENSON H (2000). Structures of prevention: a safe-sex/safe-injecting audit of Mount Alexander Shire, a methodological pilot. *Australian Journal of Rural Health*, 8(4):201-7. (21 ref).
24. MYERS T, COCKERILL R, WORTHINGTON C, MILLSON M, RANKIN J (1998). Community pharmacist perspectives on HIV/AIDS and interventions for injection drug users in Canada. *AIDS care*, 10(6):689-700.
25. NELLES J, BERNASCONI S, DOBLER-MIKOLA A, KAUFMANN B (1997). Provision of syringes and prescription of heroin in prison: the Swiss experience in the prisons of Hindelbank and Oberschongrun. *International Journal of Drug Policy*, 8(1):40-52.
26. O'SHEA, M. (2007) Introducing safer injecting facilities (SIFs) in the Republic of Ireland: 'chipping away' at policy change. 14, 75-88.
27. PAGE JB, SALAZAR FRAILE J (1999). Use of needles and syringes in Miami and Valencia: observations of high and low availability. *Medical anthropology quarterly*, 13(4):413-35.
28. PETRAR, S., KERR, T., TYNDALL, M. W., ZHANG, R., MONTANER, J. S. G. & WOOD, E. (2007) Injection drug users' perceptions regarding use of a medically supervised safer injecting facility. *Addictive behaviours*, 32, 1088-93.
29. RÁJCSZ J, GYARMATHY VA, NEAIGUS A, UJHELYI E (2007). Injecting equipment sharing and perception of HIV and hepatitis risk among injecting drug users in Budapest. *AIDS care*, 19(1):59-66.

30. RHODES, T., DAVIS, M. & JUDD, A. (2004) Hepatitis C and its risk management among drug injectors in London: renewing harm reduction in the context of uncertainty. *Addiction*, 99, 621-33.
31. RILEY E, BEILENSON P, VLAHOV D, SMITH L, KOENIG M, JONES TS, ET AL (1998). Operation Red Box: a pilot project of needle and syringe drop boxes for injection drug users in East Baltimore. *Journal of acquired immune deficiency syndromes and human retrovirology: official publication of the International Retrovirology Association*, 18(1):s120-5.
32. SHAW SY, SHAH L, JOLLY AM, WYLIE JL (2007). Determinants of injection drug user (IDU) syringe sharing: the relationship between availability of syringes and risk network member characteristics in Winnipeg, Canada. *Addiction*, 102(10):1626-35.
33. SHERMAN SG, LATKIN CA, GIELEN AC (2001). Social Factors Related to Syringe Sharing among Injecting Partners: A Focus on Gender. *Substance use & misuse*, 36(14):2113-2136.
34. SHEWAN, D., REID, M., MACPHERSON, S., DAVIES, J. B. & GREENWOOD, J. (2001) Injecting risk behaviour among recently released prisoners in Edinburgh: the impact of in-prison and community drug treatment services. *Legal and Criminological Psychology*, 6, 19-28.
35. SINGER M, STOPKA T, SIANO C, SPRINGER K, BARTON G, KHOSHNOOD K, ET AL (2000). The social geography of AIDS and hepatitis risk: qualitative approaches for assessing local differences in sterile-syringe access among injection drug users. *American Journal of Public Health*, 90(7):1049-1056.
36. SKRETTING A (2006). The Nordic countries and public drug-injection facilities. 13(1):5-16.
37. SMALL W, KERR T, CHARETTE J, SCHECHTER MT, SPITTAL PM (2006). Impacts of intensified police activity on injection drug users: Evidence from an ethnographic investigation. [References]. *International Journal of Drug Policy*, 17(2):85-95.
38. SMALL W, RHODES T, WOOD E, KERR T, SMALL W, RHODES T, ET AL (2007). Public injection settings in Vancouver: physical environment, social context and risk. *International Journal of Drug Policy*, 18(1):27-36.
39. SMITH LR (1998). A focus group evaluation of drop boxes for safe syringe disposal. *Journal of Drug Issues*, 28(4): Sep.
40. STEIN MD, CHARUVASTRA A, ANDERSON BJ (2002). Social Support and Zero Sharing Risk among Hazardously Drinking Injection Drug Users. *Journal of substance abuse treatment*, 23(3):225-230.
41. STOLTZ JA, WOOD E, SMALL W, LI K, TYNDALL M, MONTANER J, ET AL (2007). Changes in injecting practices associated with the use of a medically supervised safer injection facility.; 29(1):35-39.
42. STOLTZ JAM, WOOD E, MILLER C, SMALL W, LI K, TYNDALL M, ET AL (2007). Characteristics of young illicit drug injectors who use North America's first medically supervised safer injecting facility.; 15(1):63-69.

43. STOPKA TJ, SINGER M, SANTELICES C, EISERMAN J, STOPKA TJ, SINGER M, ET AL (2003). Public health interventionists, penny capitalists, or sources of risk?: assessing street syringe sellers in Hartford, Connecticut. *Substance Use & Misuse*, 38(9):1345-77.
44. TAUSSIG J, JUNGE B, BURRIS S, JONES TS, STERK CE, TAUSSIG J, ET AL (2002). Individual and structural influences shaping pharmacists' decisions to sell syringes to injection drug users in Atlanta, Georgia. *Journal of the American Pharmaceutical Association*, 42(6 Suppl 2):S40-5.
45. WRIGHT, N. M. J., TOMPKINS, C. N. E. & JONES, L. (2005) Exploring risk perception and behaviour of homeless injecting drug users diagnosed with hepatitis C. *Health & social care in the community*, 13, 75-83.
46. YAP L, WU Z, LIU W, MING Z, LIANG S (2002). A rapid assessment and its implications for a needle social marketing intervention among injecting drug users in China. *International Journal of Drug Policy*, 13(1):57-68. (20 ref).

Not first world Country

1. ANDRADE T, LURIE P, MEDINA MG, ANDERSON K, DOURADO I (2001). The opening of South America's first needle exchange program and an epidemic of crack use in Salvador, Bahia-Brazil. *AIDS and Behaviour*, 5(1):51-64. (41 ref).
2. BASTOS, F. I., MALTA, M., HACKER, M. A., PETERSEN, M., SUDBRACK, M., COLOMBO, M. & CAIAFFA, W. T. (2006) Assessing Needle Exchange Operations in a Poor Brazilian Community. *Substance use & misuse*, 41, 937-951.
3. CAIAFFA WT, BASTOS FI, PROIETTI FA, REIS ACM, MINGOTI SA, GANDOLFI D, ET AL (2003). Practices surrounding syringe acquisition and disposal: effects of Syringe Exchange Programmes from different Brazilian regions -- the AJUDE-Brasil II Project. *International Journal of Drug Policy*, 14(5-6):365-71. (21 ref).
4. FONSECA EM, RIBIERO JM, BERTONI N, BASTOS FI, FONSECA EM, ET AL (2006) Syringe exchange programs in Brazil: preliminary assessment of 45 programs. *Cadernos de Saude Publica*, 22(4), 761-770.
5. GRAY J (1998). Harm reduction in the hills of northern Thailand. *Substance use & misuse*; 33(5):1075-91.
6. HACKER, M. A., FRIEDMAN, S. R., TELLES, P. R., TEIXEIRA, S. L., BONGERTZ, V., MORGADO, M. G., BASTOS, F. I., HACKER, M. A., FRIEDMAN, S. R., TELLES, P. R., TEIXEIRA, S. L., BONGERTZ, V., MORGADO, M. G. & BASTOS, F. I. (2005) The role of "long-term" and "new" injectors in a declining HIV/AIDS epidemic in Rio de Janeiro, Brazil. *Substance Use & Misuse*, 40, 99-123.
7. HAMMETT TM, DES JARLAIS DC, LIU W, NGU D, TUNG ND, HOANG TV, ET AL (2003). Development and implementation of a cross-border HIV prevention intervention for injection drug users in Ning Ming County (Guangxi Province), China and Lang Son Province, Vietnam. *International Journal of Drug Policy*, 14(5-6):389-98. (25 ref).
8. HAMMETT TM, WU Z, DUC TT, STEPHENS D, SULLIVAN S, LIU W, ET AL (2008). 'Social evils' and harm reduction: the evolving policy environment for human

immunodeficiency virus prevention among injection drug users in China and Vietnam. *Addiction*, 103(1):137-45.

9. PRIYA KR, SINGH S, DORABJEE J, VARMA S, SAMSON L (2005). How effective are harm reduction programmes for drug users? Some insights from an evaluation of the programme at Sharan in Delhi. *Journal of Health Management*, 7(2):219-36. (37 ref).
10. RHODES T, SARANG A, BOBRIK A, BOBKOV E, PLATT L (2004) HIV transmission and HIV prevention associated with injecting drug use in the Russian Federation. *International Journal of Drug Policy*., 15(1), 1-16
11. VU MQ, CHUNG A, BDUL-QUADER AS. The feasibility of a syringe-needle exchange program in Vietnam. *Substance Use and Misuse*, 33 (5) 1998 1998:67.

Non English language

1. DISETH TH, DISETH TH (1989) [The syringe dispenser project in Larvik. Experiences after one year]. *Tidsskrift for Den Norske Laegeforening*, 109(32), 3345-3348.
2. HEINEMANN A, GROSS U (2001) [Prevention of Bloodborne Virus Infections among Drug Users in an Open Prison by Syringe Vending Machines]. *Zeitschrift fur Wissenschaft und Praxis*. Vol 47(41) Feb 2001, 2057-2065
3. PARTANEN A, HOLMSTROM P (2004) [Control of drug abusers' epidemics of infectious diseases]. *Sairaanhoitaja*., 77(1), 13-15.
4. SVENDSEN RN, KOFOD S (1993) [Distribution of free equipment to intravenous drug addicts in Copenhagen]. *Ugeskrift for Laeger*, 155(4), 227-231.

APPENDIX C: Evidence tables

Data extraction tables

PROGRESS: Place of residence (e.g. homeless); **Race/ ethnicity;** **Occupation;** **Gender;** **Religion;** **Education;** **Socioeconomic status;** **Social capital**

Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Barnard 1993</p> <p>Country: UK</p> <p>Research question: What are the social contexts within which needle sharing takes place amongst injecting drug users in Glasgow.</p>	<p>Design: Qualitative: Ethnographic study Extended interview Observation (Passive/Participant) Short standard schedule(structured) : variable depending on time willingness of the participants</p> <p>Quality: + Data analysis methods poorly reported</p>	<p>Glasgow, Scotland.</p> <p>Drug injectors in two treatment centres, a needle exchange centre and a local pharmacy providing sterile injecting equipment. Injectors and non injectors around the streets (community)</p> <p>122 men and women</p> <p>PROGRESS data: None reported</p>	<p>General awareness of HIV associated risks of needle sharing.</p> <p>Majority had shared within one month of the interview despite knowledge of associated risk factors</p> <p>Barriers noted to use of NEP or reasons given for sharing were opening hours of the programme or pharmacy and the distance to the services (access was judged to be difficult).</p> <p>Sharing behaviour was brought about as a result of the desire to inject as soon as a hit was available and most IDU prioritized injecting drugs ASAP, even if it meant sharing equipment, over sterility irrespective of if an NEP was open or not.</p> <p>Sharing as a social behaviour was implied as an expression of social ties between people. Difficulties in refusal to share equipment.</p> <p>There was gender imbalance to access of NEP, reasons being that more women than men found it very embarrassing to use the services for fear of revealing their drug use to the shop assistants and other customers, being seen entering or leaving such services led to an obvious interpretation.</p> <p>Mothers were particularly sceptical because of official notification which may identify them as been unfit to parent their child properly. Men by contrast rarely claimed such difficulties and would collect injection equipment for women who cannot attend. Overall women are more socially inhibited from securing independent access to NEP (rather acquisition is through a sexual partner or an acquaintance... a third party) Giving the context of reliance by women on a third party the</p>	<p>A</p> <p>Why: The concepts of stigma, NIMBY and place and the legal basis of the NEP are comparable in the UK.</p>	<p>Generally, the research has shown strong evidence that needle sharing is clearly an activity differentiated by gender.</p>

			<p>concept of sharing becomes likely. Reinforcements by perceived negative connotation and stigmatization towards female IDU by public and male counterparts.</p> <p>Incidence of sharing with friends was most marked among male injectors.</p> <p>Environmental, personal, financial and social factors all play a role in the motivation of risky behaviour despite the availability of NEP.</p> <p>Conclusions: The author clearly pointed out that availability does not have an important part to play in the creation of some of the situations where needle sharing takes place, but it thus can only constitute a part of the explanation as instances of sharing was shown to be highly situationally variable.</p> <p>Patterns of sharing between injectors highlighted sharing as rarely being an indiscriminate activity but one which frequently follows a pattern of sociability quite closely. So also author critically commented on gender distinct nature of the social activity which suggests that the risks of HIV infection are differently focussed for men and women.</p>		
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Buchanan 2003</p> <p>Country: USA</p> <p>Research question: What factors affect syringe access, use and discard in different neighbourhoods in Springfield USA? Are there differences in the micro-contextual factors influencing syringe access, use and discard that are associated with distinct socio-demographic characteristics of different neighbourhoods in</p>	<p>Design: Quantitative and Qualitative</p> <p>Brief interview Document Analysis Observation (Participant)</p> <p>Quality: + Sampling criteria and details of data analysis not reported</p>	<p>Springfield/USA Field sites</p> <p>332 Injecting drug users</p> <p>Place of residence: <i>Mason Square: Property owner (40%), relative's place (33.8%), renting (6.3%), others (17.5%)</i> <i>North End: Property owner (47.6%), relative's place (8.3%), renting (25%), others (16.7%)</i> Race/ ethnicity: <i>North End: 94% Latino, 5% African American, 1% white</i> <i>Mason Square: 64% African American, 31% Latino, 4% whites</i> Occupation: <i>Mason Square: full time worker</i></p>	<p>IDUs in more economically advantaged neighbourhood were more likely to obtain syringes from a single source rather than from multiple sources, were more likely to inject alone in their private residence rather than in public places, also are more likely to dispose of syringes in private garbage cans rather than alleys or dumpsters.</p>	<p>C</p> <p>Why: While clearly not representative of the full range of neighbourhood, the neighbourhoods selected are largely representative of those poor and largely minority neighbourhoods most severely affected, similar sorts of differences between neighbourhoods and racial segregation and relatively homogenous in their demographic composition which can be found in most cities in the States, but unlikely in the UK, however data collected from the different socio-economic background can reflect similar scenario/context in UK.</p>	

Springfield?		(21.3%) North End: full time worker (8.3%) Gender: Mason Square< 34years (20%), 35-44 years (40%), >45 (40%); North End: <34 (26.7%), 35-44 (67.9%), >45 (6%). Socioeconomic status: Mason square: <1000\$/month (66.7%), >1000\$/month (33.8%) North End: <1000\$/mth (89.3%), >1000\$/mth (8.3%)			
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Clarke 2001</p> <p>Country: UK</p> <p>Research question: To assess client's use and perceptions of pharmacy needle and syringe exchange services and to see how well they matched the perceptions, experiences and attitudes of community pharmacists operating needle exchanges.</p> <p>All interviews were conducted in 1996</p>	<p>Design: Qualitative: semi-structured interview; Appraisal of attitudes, beliefs and values; Appraisal of knowledge, skills behaviour; Structured Interview</p> <p>Quality: + Data collection with IDUs was very structured; few details of analysis reported; data presented are mostly quantitative.</p>	<p>One health authority area in inner city south London, UK</p> <p>Sample of 9 pharmacies selected from the 19 in the area offering NEPs</p> <p>155 needle exchange clients and 9 community pharmacists</p> <p>For the vast majority of IDUs, the pharmacy in which they were interviewed was their primary source of clean injecting equipment.</p> <p>Age (range or mean): <i>mean 31, range 19-52</i></p> <p>Place of residence: <i>59% lived in rented accommodation and 25% were in temporary accommodation or were homeless</i></p> <p>Race/ ethnicity: <i>96% white</i></p> <p>Occupation: <i>Not reported</i></p> <p>Gender: <i>67% male</i></p>	<p>90% had never asked pharmacist for advice regarding their drug use.</p> <p>Just under half of the client sample "always" picked up clean syringes for themselves, just over one third reported usually collecting equipment for partners, and one fifth reported collecting equipment for friends. For the vast majority, the pharmacy in which they were interviewed was their primary source of clean injecting equipment. Given the choice of collecting equipment from a pharmacy or a drug agency exchange, just under half preferred pharmacy, just over half had no preference and a small proportion preferred the drug agency exchange.</p> <p>Positive features about pharmacy NEP were reported to be that it was "easy", "good staff", "free works", "close by", "convenient" and "new clean works".</p> <p>When asked about the worst features of the pharmacy NEP, over half of the clients reported there were no worst features. One fifth of responses indicated that "other people in the pharmacy" (lack of privacy?) was the worst feature, along with associated concerns such as being embarrassed and meeting people they knew.</p> <p>The overwhelming majority were satisfied or very satisfied with the scheme.</p>	<p>A</p> <p>Why: Pharmacy based NEPs operate throughout the UK and this sample was randomly selected, with a 93.4% response rate, so should be representative of the UK IDU population (those who use pharmacy based NEPs)</p>	

		<p>Religion: <i>Not reported</i> Education: <i>Not reported</i> Socioeconomic status: <i>Not reported</i> Social capital: <i>Not reported</i></p> <p><i>91% had been in drug treatment in the past and 60% were currently part of a drug treatment programme. 56% currently receiving methadone prescription.</i></p>	<p>Most knew which drug agencies ran a NEP and over half had used a drug agency based NEP. The main reason given for not using drug agency NEPs was that there was no need. Clients rated pharmacies higher for being open when needed and easy to get to, but drug agencies were rated higher for receiving advice and information.</p> <p>Pharmacists: Mean length of time they had been involved with NEPs was 2.8 years. Most encouraged clients to return used needles and syringes. Just over half had received training from the local drug and alcohol team. Most reported poor or non-existent links with local drug agencies.</p> <p>Most were fully committed to operating the scheme.</p> <p>Pharmacists were asked about positive and negative features of pharmacy based NEPs. In positive aspects, they largely agreed with client sample: top two answers were “good rapport/ easy going staff” and “convenient/ easy to access”. Just under half did not report any negative attributes, other responses were “it puts off non-drug using customers”, users “may have to wait to be served” and “registering of clients”.</p>		
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Cooper 2005</p> <p>Country: USA</p> <p>Research question: To explore the interrelationships of a police drug crackdown, participants' sense of their bodies' geography and the precincts' public spaces, and their ability to practice harm reduction.</p> <p>Date of study: August – December 2000</p>	<p>Design: Open ended interviews plus a short survey.</p> <p>Quality: ++ Very well conducted study</p>	<p>New York City, USA</p> <p>The study was conducted in the 46th precinct of New York City. This was located in the Bronx area and used in this study because the Deputy Inspector of Narcotics at the NY police department noted that the crackdown in this area was particularly active when the study commenced.</p> <p>40 participants took part in the research</p> <p>Injecting drug users aged over</p>	<p>Overall, the analysis suggests that particular crackdown tactics, notably frequent police searches of participants' bodies and elevated surveillance of the precinct's public spaces, reconfigured participants' experiences of their bodies and the public spaces comprising the precinct in ways that adversely affected their capacity to engage in harm reduction. Frequent police searches, for example, discouraged participants from carrying the injection equipment they needed to ensure that they could inject with a sterile syringe. Constant monitoring of local public spaces made it difficult for homeless women and men to inject safely. Simultaneously, participants expressed support for police actions that reduced public drug activity.</p>	<p>C</p> <p>Why: Drug crackdowns also take place in the UK, these methods could feasibly be replicated in densely urban areas of the UK and are likely to mirror the findings from this study.</p>	<p>All data was collected a number of months (even years) after the police crackdowns. The study did not interview individuals with less frequent drug injecting patterns and also did not speak to those who may have been</p>

		<p>18 years residing in the 46th precinct for at least 1 year prior to interview, able to speak English and reported injecting illicit drugs at least three times a week during the past year.</p> <p>Age (range or mean): Median: 41 Range: 24-59</p> <p>Place of residence: One-third were homeless</p> <p>Race/ ethnicity: Hispanic/Latino n=24 (60%), <i>Hispanic/Latino (Black) n=4 (10%)</i> <i>Hispanic/Latino (other) n=20 (50%)</i> Non-Hispanic/Latino n=16 (40%) <i>Non-Hispanic/Latino (Black) n=14 (35%)</i> <i>Non-Hispanic/Latino (White) n=2 (5%)</i> <i>Non-Hispanic/Latino (Other) n=0 (0%)</i></p> <p>Gender: Men n=21 (53%), Women n=19 (48%)</p> <p>Education < High-school graduate n=24 (60%) High-school graduate n=9 (23%) >High-school graduate n=7 (18%)</p> <p>Social capital: Most participants had deep roots in the community, reporting that they had resided in the area for 12 years on average.</p>			<p>incarcerated from dug offences at this period of time.</p>
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
Downing 2005	Design: Qualitative	US	Three implementation models were identified:	C	inability to

NSP: Review of qualitative evidence – Full revised report

August 2008

<p>Country: USA</p> <p>Research question: To identify factors and conditions that facilitated or deterred the adoption of SEPs.</p> <p>Date of study June 2000-Sep 2001</p>	<p>interviews with key informants. Extended interview Semi-structured interview</p> <p>Quality: + Limited detail provided on sampling, data collection or analysis</p>	<p>17 interviews with Public health officials, HIV prevention and drug treatment providers, researchers, policy makers, staff of community based organisations and activists</p> <p>Nine cities were selected from thirteen involved in a larger IDU study, a lack of SEP data prevented all thirteen being used. Selected cities were: Baltimore, Boston, Detroit, Honolulu, Nashville, Oakland, Seattle, Miami and Newark. The first seven cities listed here had successfully implemented SEP, the latter two had not.</p> <p>Method of recruitment/enrolment and response rate: Selection criteria: No selection criteria for individuals is reported.</p> <p>Of 49 interviews conducted as part of a larger study, 17 interviews were analysed for this study as they focused substantively on syringe exchange.</p>	<p>1. SEPs established by community coalitions. Strengths identified as broad based support leading to community approval and improved sustainability. Weaknesses – original plans may be diluted by compromises needed to establish coalition.</p> <p>2. SEPs established by community activists. Strengths – willing to take action when no-one else will. Weaknesses – Lack of resources, power and legitimacy.</p> <p>3. SEPs established top down by govt. authorities. Strengths – access to political power and financial resources. Weaknesses – slow to react due to bureaucracy and vulnerability to community criticism. Successful implementation sometimes involved movement from one model to another as appropriate. Six strategies and resources were identified as characterising successful implementation of an SEP. Knowledge and effective use of these in combination with an ability to move between models contributed to successful implantation of the SEPs investigated. Staging the debate with sensitivity to political and cultural norms Coalition building and community involvement Leadership – strong leadership with access to local power and resources. Access to resources Researchers and research findings – used to gain support and defend the service. Overcoming fear of repercussions and political hostility</p>	<p>Why: The different legal basis for needle exchange in the UK compared to US</p>	<p>identify key informants roles/professions and how they were selected may limit usefulness of paper</p>
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Finlinson 2000</p> <p>Country: USA</p>	<p>Design: Qualitative and Quantitative study Descriptive study with</p>	<p>East Harlem New York/ USA, Bayamon/ Puerto Rico</p>	<p>Participant Observation Clogging was a commonly encountered problem especially with re-used syringes.</p>	<p>C Why:</p>	

NSP: Review of qualitative evidence – Full revised report

August 2008

<p>Research question: Are there any differences in drug related HIV risk behaviour of Puerto Rican IDUs living in New York and Puerto Rico? What alternative sources are there for the acquisition of syringes including SEPs</p> <p>Date of study: January to August 1998</p>	<p>evaluation (qualitative study) Survey Focus group(s) Extended interview Observation (Participant) Structured interview</p> <p>Quality: ++ Well conducted mixed methods study</p>	<p>Project study sites 280 Puerto Ricans (quantitative study) 165 New York, 115 Bayamon 94 Puerto Ricans (qualitative)</p> <p>Injecting drug users, Crack cocaine users (quantitative)</p> <p>men who have sex with men/Gay men IDUs, Male IDUs, Female crack users, Community Health promoters/outreach workers and drug users in recovery (qualitative)</p> <p>Sex (%): Female 21.7% (Puerto Rico); 20.6% (New York) Male 78.3 (PR); Male 79.4% (NY)</p> <p>Age - (range or mean): PR 34.2 years: NY 38.8 years</p> <p>Group All Puerto Ricans. 42.6% and 43% had completed high school in Puerto Rico and New York respectively. Similar proportions are homeless in both groups. IDUs in NY were more likely to inject Heroin or cocaine only than PR. The majority of PR injects a combination of drugs.</p>	<p>Clogging of needles is usually caused by adulterants used to cut drugs and remnants of blood in improperly cleaned syringes. Clogging is usually identified when injecting or preparing drugs This is particularly distressing (clogging) to the severely addicted. Can lead to borrowing of used syringe and use of discarded needles. Strategies to deal with clogging by the Puerto Ricans are heating and insertion of thin plant materials into needles. Syringes obtained from gallery managers are obtained by them from SEP and re-sold to gallery clients, or used syringes left by IDUs and rinsed with water and loaned out to clients. Varieties of individuals are in the business of sale of syringes. IDUs in NY obtain syringes from diabetics and colleagues who primarily use SEPs</p> <p>Focus Groups Connection between clogging of syringes and risky injection practices. Ease of purchase of syringes from the syringe sellers which are the single most important source of syringes in PR because it is faster and always there for purchase. Price inhibits some IDUs from obtaining as many new syringes as needed.</p> <p>Quantitative survey Puerto Ricans in PR inject twice as much many times a day than Puerto Ricans in New York. IDUs in PR use each syringe 5.9 times on average while IDUs in NY do so 2.9 times. Clogging more reported by IDUs in PR (67.5%), NY (31.5%) (P<.001)</p> <p><u>Sources of syringe:</u> Drug dealer: No significant differences in proportion of obtained syringes in both sites. <5% use. Shooting Gallery manager: <5% syringes obtained Syringe sellers: Single most important source of syringes in PR, considerable source 22.9% in NY. Pharmacy: IDUs in PR more likely to obtain Needles from this source. SEPs: Single most important source in NY, only 17.6% IDU obtain from this source in PR</p>	<p>Good evidence and study well carried out but not same context as UK.</p>	
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Study details	Study design and quality	Study population	Main results	Applicability	Comments
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				to UK populations and settings	
<p>Grund 1992</p> <p>Country: Netherlands</p> <p>Research question: To evaluate needle exchange patterns of IDUs participating in a collective exchange scheme (to target unknown IDUs) and compare them to needle exchange patterns on IDUs exchanging on an individual basis.</p> <p>Date of study: May 1998 to June 1999</p>	<p>Design: Audit/Evaluation Semi-structured interview Observation (Passive/Participant) Appraisal of knowledge, skills and behaviour Ethnographic fieldwork</p> <p>Quality: + Limited details of methods provided in this report</p>	<p>Rotterdam, The Netherlands</p> <p>HADON: community based information program providing outreach, prevention and referral services to active out of treatment IDUs Program started before implications of AIDS epidemic among IDUs were known; priorities have shifted towards prevention of HIV transmission, including needle exchange.</p> <p>104 exchangers in quantitative part of research (25 collective and 79 individual exchangers). The authors do not report how many people took part in the qualitative part of the research.</p> <p>PROGRESS data: none reported</p>	<p>Findings from fieldwork: Users who engaged in collective exchange seemed more aware of high risk behaviours and made more effort to maintain health and hygiene than individual exchangers. Needles distributed through collective exchange have an impact beyond the user collective (e.g. friends who visit a collective exchanger's house to inject). Nonetheless, there is often pressure on IDUs to share needles.</p> <p>There is some evidence that results were negatively influenced by increased police activity during the study.</p>	<p>B/C</p> <p>Why: I'm not sure how similar policy is to the UK</p>	<p>The conclusion about effects of police activity did not come from the research findings but was part of the discussion.</p> <p>Data presented are largely quantitative; details of qualitative methods are in another paper.</p>

Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Hay 2001</p> <p>Country: UK</p> <p>Research question: How good are needle and syringe exchange services at maintaining contact with their clients?</p> <p>Date of study (to/from): 1995-1998</p>	<p>Design: Qualitative: <i>Mixed methods:</i></p> <ol style="list-style-type: none"> 1. Descriptive study with evaluation (qualitative study) Semi-structured interview ('interview' is all that is stated in the paper) 2. Survey (Questionnaire) Appraisal of knowledge, skills and behaviour: aspects of drug use and risk behaviour 	<p>Scottish city-centre needle exchange which covers the whole of the city (limited needle exchange provision by retail pharmacies)</p> <p>10 clients of needle exchange clinic 5 staff of needle exchange clinic</p> <p>Sex (%): 77% male (in whole study, n=1556). Not given for interviewees</p> <p>Age (range or mean): "Average"</p>	<p>Attendance pattern audit found that a significant minority of clients only attend once or twice a year. Interviews explored potential reasons for this, including:</p> <p>Whether clients were providing false identifying details. This was thought by clients and staff to not be a problem "<i>at first you worry a bit but once you get to know them you know it's confidential and nobody can trace you</i>", although clients who did have concerns about confidentiality were probably unlikely to agree to be interviewed, those who were interviewed did believe that their details were confidential. The lengthy questionnaire that first time attendees were required to fill in was also thought to be a barrier to providing multiple false identifiers.</p>	<p>A</p> <p>Why: no other UK data from needle exchanges to compare with this one. Poor reporting of qualitative part of study. However, similar research in a US needle exchange</p>	<p>The qualitative element of the study was very small and no details are given of methodology, however the authors do not draw conclusions from the interviews, other than to point out that currently we lack data on</p>

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	<p>3. Audit/Evaluation Case study Local practice report Attendance pattern of needle exchange clients over one calendar year</p> <p>Quality: - Very little detail given of data collection, analysis or findings from qualitative part of research. Data that are reported are not rich.</p>	<p>= 25 years (in whole study, n=1556). Not given for interviewees.</p>	<p>Injecting on an infrequent basis. Staff thought that this could be a potential explanation for infrequent attendance, either because people only used drugs occasionally on a recreational basis, or because they are using prescription replacements and do not need needles very often. There was also a suggestion that not needing to use the needle exchange would be seen as a positive thing by clients who did not use needles very often, and that perhaps they would prefer to use the pharmacy. These views were from staff, not clients.</p> <p>Use of alternative sources of accessing sterile injecting equipment. Staff mentioned that they routinely provided clients with information on pharmacies that supplied injecting equipment in that area. Each of the five clients interviewed confirmed that they did obtain sterile injecting equipment on occasions from pharmacists.</p> <p>Opening hours. Staff noted that they would be concerned if the reason for clients not returning to the needle exchange after an initial visit was to do with failure to meet their needs. It was noted that the needle exchange normally closed at 5pm and was open until 8pm only one day per week.</p>	<p>indicated 34% of injectors attending only once (similar to this study)</p>	<p>staff-client relationships within needle exchanges and about factors that may facilitate or hamper the retention of clients within needle exchange clinics.</p>
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Jacob 2000</p> <p>Country: Germany</p> <p>Research question: How feasible, useful and efficacious is the provision of needle exchange for the provision of sterile injection equipment and the provision of communicative methods of prevention to drug addicted inmates of a</p>	<p>Design: Audit/Evaluation Local practice report Appraisal of knowledge, skills and behaviour Half standardized longitudinal examination Qualitative examination</p> <p>Quality: + Mixed methods approach; details of sampling and data analysis not reported.</p>	<p>Lower Saxony/Germany</p> <p>Male and female prison</p> <p>224 male and female prison inmates, 153 staff of drug counselling service and health care unit, 75 members of external organizations (AIDS-Help-Groups)</p> <p>Female prison project: 169 women took part out of 183 prisoners</p>	<ol style="list-style-type: none"> 1. The level of acceptance among prisoners largely depends on whether anonymity is maintained during needle exchange which can largely be affected by the mode of delivery. 2. The level of acceptance among prison staff depends on whether staff members could identify with the goals of the project, whether they could actively participate in the planning and decision making processes and in setting the implementation modalities. 3. Needle exchange programmes are feasible, i.e. organizationally they can be incorporated into everyday routine prison work. The project may cause some changes in the social structures in the prison: initially, the inter-relationships can be affected. 	<p>B</p> <p>Why: The positive experiences gained from 2 similar pilot projects in Switzerland informed the decision by policy makers in Germany to implement such</p>	<p>The Author pointed out that there is no official rules regulating NEPs, they are usually institution specific. Not every prison NEP need a dispensing machine for exchanging,</p>

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<p>male and female prison in Germany? How acceptable are the above measures by the staffs, medical service and management? Are there changes in the drug user's behaviour and knowledge (development of needle sharing, changes in drug use patterns)? Are there changes in inmates' knowledge of health and health-related behaviour (including harm prevention measure)?</p> <p>Female prison project from 15/04/1996 to 14/04/1998 Male prison project from 15/07/1996 to 14/07/1998</p>		<p>Male prison project: 83 men took part out of 267 prisoners</p> <p>Age (range or mean): not reported</p>	<p>4. Threats such as attacks on fellow inmates and staff with un-sterile syringes did not occur and the implementation of NEP as part of the general health service did not have a negative effect on the onward referral of drug users to follow-up treatment, on the contrary there was an increase in referral treatments.</p> <p>5. Needle sharing was not of ritual importance to drug-addicted inmates, but rather a spontaneous response to the non-availability of sterile injecting equipment.</p> <p>6. Needle exchange brought to light the discrepancies in the drug-users because drug use although officially prohibited is accepted as a fact; hence the contrast between a prison's control function and the need to health oriented help becomes clear.</p> <p>7. There was no increase in drug consumption observed.</p> <p>8. Accompanying preventive measures and educational programmes for prison staff and information meetings for prisoners helped to achieve the overall goal of the projects.</p> <p>9. The health-related knowledge of hepatitis infection was very limited compared to that on HIV and AIDS where NE projects were set up.</p>	<p>measures, this was drawn from the similarity of the context of which the UK is no exception, where the number of prisoners using illegal drugs continues to rise and where drug users make up a large proportion of the prison population.</p>	<p>however, every prison should have discussions on the risks involved in drug-use taking place.</p>
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<p>Junge 2000</p> <p>Country: USA</p> <p>Research question: <i>To examine possible formation of new social contacts at Baltimore syringe Exchange program.</i> <i>Are there possible associations between network formation and demographic and behavioural variables?</i></p>	<p>Design: Evaluation Cohort study</p> <p>Quality: - Analysis mainly quantitative</p>	<p>Baltimore, Maryland/USA</p> <p>Field sites</p> <p>413 Injecting drug users and previous injecting drug users</p> <p>Race/ ethnicity African-Americans 91.5%, Caucasians 1%, Asian/Pacific Islander 0.2%, others 7.3%</p> <p>Occupation 90.3% unemployed</p> <p>Gender 67% Male</p>	<p><i>Return rate of 51.8%, 29.8% of whom were HIV+ and 85% active injectors.</i> <i>Amongst active injectors, 84% reported injection at least daily during the previous 6months with mean daily injection frequency of 4.4 times.</i> <i>21.9% reported sharing one's own equipments with others, while 9.1% said they used other injectors used syringes.</i> <i>7.7% reported having met at least 1 person at the SEP van site since enrolment and mean number of contact was 3.3.</i> <i>People who met at least 1 person were more likely to trade sex for drug or money during the previous 2 weeks.</i> <i>People who met someone were less likely to have injected at least daily (70.4 versus 85.2%, P=0.047) and more likely to have used other used injection syringes (22.2 versus 8%, P=0.026).</i></p>	<p>D</p> <p>Not clear</p> <p>Why: <i>Different context, not much relevant data</i></p>	<p><i>Quantitative analysis.</i></p>

Date of study: <i>February 1995- February 1997</i>		Age - (range or mean): 39.1 average 68.5% are single			
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Kelley 2005</p> <p>Country: USA</p> <p>Research question: To examine the role of volunteers and volunteer commitment in relation to the organisational transition of a syringe exchange programme from underground to legitimate modes of operation.</p> <p>Date of study: 1993-1995</p>	<p>Design: Descriptive study with evaluation (qualitative study)</p> <p>Survey Evaluation Case study Extended interview Observation (Participant) Appraisal of attitudes, beliefs and values</p> <p>Quality: + Limited detail provided about data collection and analysis</p>	<p>San Francisco, US</p> <p>Needle Exchange Programme</p> <p>56 Service providers at the syringe exchange</p> <p>At time of interview only seven(13%) respondents had been with the programme for less than a year, sixteen (28%) had been with the organisation for 10 years or more.</p> <p>Race/ ethnicity <i>White 68%</i> <i>African American 14%</i> <i>Latino 13%</i> <i>Pacific Islander 4%</i></p> <p>Occupation Gender Religion</p> <p>Education <i><High school 4%</i> <i>High school 7%</i> <i>Some college 18%</i> <i>College 41%</i> <i>More than college 30%</i></p> <p>Socioeconomic status Social capital</p> <p>IDU status</p>	<p>Prevention Point's founders were researchers and public health employees. Several volunteer providers were community health outreach workers, others had employment in advocacy or community organisation and some were in school.</p> <p>Reasons cited for volunteering in the organisation were most commonly the desire to participate in AIDS politics, requirements of a class/programme and relationships with other volunteers.</p> <p>Continuing involvement with the programme was related to a range of factors including an underlying commitment to the harm reduction philosophy and solidarity with other providers and service clients. Decisions related to the programme were made by consensus and providers operated with a level of autonomy this resulted in them feeling an active part of the programme</p> <p>The illegal nature of the operations was an attractive element of the experience for many and enhanced identification with the clients they were serving. The clandestine nature of the work also served to strengthen bonds among the providers.</p> <p>Volunteers' expectations of the transition to legal status mostly related to increased effectiveness of existing operations. A reliable source of supplies, development of ancillary services i.e. on-site medical care, expansion of programme services and training for providers were all desired outcomes.</p> <p>Institutionalised funding prompted both positive and negative responses from volunteers. While some felt this would legitimise the programme, ensure adequate supplies and increase organisation, others feared an increase in</p>	<p>D</p> <p>Why: The very different political and legal contexts within which programmes operate in the UK, data generated thirteen years ago and may now be out of date, little methodological detail presented.</p>	<p>As syringe exchange operations in the UK do not face the same legal problems as this case study, there is perhaps little of relevance to the review</p>

		<p><i>Never injected 75%</i> <i>Active user 18%</i> <i>Ex-user 21%</i></p>	<p>bureaucracy, a loss of autonomy and less emphasis on the political ideology of the programme.</p> <p>While the organisational transition fulfilled many of the positive practical expectations of the volunteers many of the motivating factors or 'ideational rewards' such as participant management, personal responsibility to the needs of the clients and even the deviant status of the group were removed. This reduced the volunteers' sense of belonging. Many volunteers continued to participate however.</p>		
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<p>Korner 2003</p> <p>Country: Australia</p> <p>Research question: To examine the reporting, in local print media, of syringes found near a primary school in Sydney, within the context of Australian National Council on Drugs (ANCD) recommendations of "balance and accuracy" in reporting.</p> <p>Date of study: Feb-March 2002</p>	<p>Design: Document analysis founded in Critical Discourse Analysis and Systemic Functional Linguistics.</p> <p>Case study Document Analysis</p> <p>Quality: + The study was well conducted, but the focus was local media reporting rather than NSPs as such</p>	<p>Sydney, Australia</p> <p>Case study was selected as a 'critical case sample'.</p> <p>Four newspapers were examined: Northern District Times and The Weekly Times were selected as they are the weekly papers that cover the local area. The Sydney Morning Herald is the metropolitan broadsheet and the Daily Telegraph is a national tabloid.</p>	<p>Seven texts in three newspapers dealt with the NSP closure, including four news reports and one editorial. While there is an absence of overt judgements and sensationalist reporting the texts are not value free. The intertextual analysis shows an alignment of the papers with positive or negative positions relating to NSPs and this case in particular. Reporters are able to choose which speaking subjects are included and which are foregrounded/backgrounded. Politicians and their media officers are the most privileged, while drug educators are the least represented. No comments from staff or clients at the service involved are included in any of the texts. Also absent are any public health messages or descriptions of the benefits of NSPs.</p>	B	

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<p>Larkins 2000</p> <p>Country: USA</p> <p>Research question:</p>	<p>Design: Descriptive study with evaluation (qualitative study)</p> <p>Survey Extended interview</p>	<p>14 NEP workers 29 NEP clients</p> <p>Additional 48 NEP clients completed survey</p>	<p>Needle exchange contact provided significant physical and modest emotional health benefits to clients. All participants claimed to received physical benefits beyond disease prevention: increased access to supplies, information and services was health promoting.</p>	C Why: Abstract only; USA	Abstract only: hard to comment.

To examine the impact of social support on the lives of injection drug users who utilise needle exchange	Appraisal of attitudes, beliefs and values Quality: - Only reported as abstract so no methodological details are reported	Drugs professionals and IDUs			
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Lawrie 2005</p> <p>Country: UK</p> <p>Research question: What are the views and attitudes of the general customers towards the provision of needle exchange services in the community pharmacies in Aberdeen and Glasgow, Scotland</p>	<p>Design: Semi-structured interview; Appraisal of attitudes, beliefs and values</p> <p>Quality: + Some details of data analysis are missing</p>	<p>80 (non-IDU) customers in pharmacies in Aberdeen and Glasgow (Scotland)</p> <p>8 Pharmacies in city centre, suburban and rural locations. Only 2 of the pharmacies ran a NEP.</p> <p>General public</p> <p>PROGRESS data: none reported</p> <p>Purposive and quota sampling. Predetermined mix of age, sex, prescription collection or over the counter purchase customers.</p>	<p>Although the vast majority of participants were unaware that a NEP was provided at their pharmacy most of them were supportive of pharmacies offering NEPs.</p> <p>Two main reasons for their support are the reduction in risk of finding discarded needles in public places especially by children and the reduction in transmission of diseases.</p> <p>A small minority was not supportive either because they did not want such services to be too visible or because it was seen to condone drug injecting.</p> <p>Age, gender, reason for attending pharmacy and pharmacy location did not seem to relate to customers' views</p> <p>Majority of participants did not understand the concept of methadone services, though those who did showed more support for NEP than for methadone services</p>	<p>A</p> <p>Why: Both cities used for the study have very high prevalence's of injecting drug abusers and both are in need of or have high demand for Needle exchange services, for other parts of the UK with high prevalence of this same problem the results can seem applicable given that Scotland is within context of the UK</p>	<p>Evidence of strengths and weaknesses of the research were not pointed out by the authors, however it does provide some evidence that some of the perceived barriers for pharmacists to this area of service provision may not be an accurate reflection of actual attitudes held.</p>

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<p>Lewis 1996</p> <p>Country: USA</p> <p>Research question: What factors influence pharmacists decision to sell syringes to injecting drug users without a prescription in Denver, Colorado?</p>	<p>Design: Qualitative study Semi-structured interview Appraisal of attitudes, beliefs and values</p> <p>Quality: + Good methodological quality but do not report how many researchers analysed the data.</p>	<p>Denver, Colorado/USA</p> <p>Workplace (pharmacy), social place (coffee shop); interviews took place in a convenient location</p> <p>32 pharmacists at 24 pharmacies</p> <p>PROGRESS data: none reported</p>	<p>16 pharmacists willingly sold syringes, 11 refused and 5 were undecided. Emerging themes</p> <ul style="list-style-type: none"> <p>Concerns about disease transmission and increased drug use</p> <p>The pro-sellers stated primary motivation to be that of preventing blood-borne disease transmission, they did not believe that providing sterile equipment would encourage drug use and did not believe that making sterile injection equipment scarce will deter IDUs from injecting whom instead would find other means such as picking up a needle off the streets or sharing. Their emphasis is on providing sterile injections so that IDUs don't use contaminated needles.</p> <p>The non sellers concerns were on implications of selling, some indicated their role as one to prevent drug abuse, most stated their dis-interest in supporting a behaviour that was detrimental to a person's health. Some suggested that by restricting sales IDU's will be encouraged to seek substance abuse treatment instead of injecting drugs, or that denying syringe sales might lead to decreased drug injection and thus decreased potential for BBV transmission..</p> <p>The undecided showed equal concern about drug addiction and blood-borne disease transmission. There was acknowledgement of the public health benefits of sterile syringe sales and skepticism that this will increase injecting drug use.</p> <p>Business concerns</p> <p>Fear of effect on business and their customers. Majority of Pro-sellers indicated that this was not a problem; one indicated that it actually helped alleviate previous problems encountered when there were no sales to IDUs. Most indicated that IDUs didn't want too much attention on them and as such caused few troubles. The few reporting trouble indicated that the health benefits far outweighed the business concerns.</p> <p>No sellers had varying reasons, some was primarily business, others felt this was an important secondary motivation for not selling. The same concerns were also cited for the undecided sellers</p> <p>Uncertainty about legality</p> <p>5 of the 16 pro sellers stated that the law was not a</p> 	<p>C</p> <p>Why: Small sample which makes findings difficult to generalize, also legal differences in the UK.</p>	

			<p>deterrent to sale; the no sellers who knew the law used it as a reinforcement on their decision not to sell. The Undecided indicated that the lack of prescription requirements by the Colorado Pharmacy Board reinforced their decision to sell.</p> <ul style="list-style-type: none"> • Views on Syringe exchange programs. All respondents indicated their support for needle exchange programme, this was because they felt it will be more acceptable to IDUs and will be better equipped to provide other services than most pharmacies. Some indicated that this would reduce the burden on them as the only reliable and legal sources. Other saw NEP as more safe and should be coupled with substance abuse treatments. 		
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<p>Long 2004</p> <p>Country: Ireland</p> <p>Research question: To examine prisoners' views of drug injecting practices and harm reduction interventions in Irish prisons.</p> <p>Study carried out over 5 weeks during 2000</p>	<p>Design: Qualitative: Semi-structured interview; Appraisal of attitudes, beliefs and values</p> <p>Quality: ++ Good quality, though it is unclear how sample were recruited</p>	<p>Dublin, Ireland: 31 male prisoners. 16 were injecting drug users and 15 were non injectors.</p> <p>Age: median 26 (18-37)</p> <p>Education Only two respondents (6%) had completed second level education</p> <p>Drug use All of the respondents reported taking illicit drugs at some time in their lives, three quarters of the respondents said that they had taken heroin (24/31) or ecstasy (24/31) at least once. Five (16%) participants said that they were using heroin at the time of the interview.</p> <p>Over two thirds (21/31) of the participants said that they had spent at least 3 of the last 10 years in prison. Three quarters (23/31) of the prisoners</p>	<p>Two key themes are identified: injectors take risks inside prison that they would not if they were outside; and there is support among prisoners for interventions to address drug misuse.</p> <p>Opinions on the provision of needle exchange in prison are divided, with some support coming from both injectors and non-injectors, and an equal number of each rejecting the idea. The potential to reduce infection is acknowledged and concerns relate to safety and the possibility of increased consumption.</p>	<p>B</p> <p>Why:</p> <p>Relevant to prison population only, and unsure about the similarities/differences between drug treatment /harm reduction provision in the UK and Irish prisons.</p>	<p>Use may be limited as not relating to an existing needle exchange scheme.</p>

		described their crime as drug or alcohol related.			
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<p>Matheson 1998</p> <p>Country: UK</p> <p>Research question: What are the views and experiences of illicit drug users on pharmacists and current pharmacy services in Scotland? What makes a bad or good pharmacy and how can current services be improved?</p>	<p>Design: Descriptive study with evaluation (qualitative study)</p> <p>Semi-structured interview Observation (Passive/Participant) Appraisal of attitudes, beliefs and values</p> <p>Quality: ++ High methodological quality</p>	<p>Aberdeen, Dundee, Edinburgh, Glasgow and adjacent rural areas/ Scotland</p> <p>Sex (%): 77 (62%) male, 47 (38%) female</p> <p>Age - (range or mean): 16-56 years, majority 20-35 years.</p> <p>Work place (pharmacies, Drug agencies (NSP) Cafes and pubs.</p> <p>Interviews conducted in a variety of settings in a private room of the work places (NEPs in pharmacies or drug agencies) and public places (e.g. cafes and pubs) depending on comfort and location of interviewee.</p> <p>124 illicit drug users interviewed in 23 pharmacies and 8 drug agencies</p>	<p><u>People factors relating to characteristics of staff</u> Most frequently mentioned feature of a good pharmacy is the characteristics of the pharmacists or staff at the pharmacy: the way they treat IDUs and their general attitude towards them. Some respondents felt staff attitude was not important. A higher proportion of females than males mentioned the importance of being treated like any other customers Some indicated the essence of having a good rapport and relationship with the staff which helped to reduce the stigma and any negative connotations perceived. Familiarity appeared to differentiate between a drug user and a regular customer.</p> <p><u>Process factors relating to pharmacy services</u> Many of the respondents did not want to enter a prolonged conversation with the staff. Many expressed favouritism to other customers over them. A good process was seen as one which was discreet, flexible, strict or if advice was offered.</p> <p><u>Structural factor about the pharmacy</u> This was the least mentioned category. The need for privacy was mentioned by 6 respondents to reduce embarrassment faced by them and other customers, particularly w.r.t. supervised methadone. A good pharmacy was seen as one which provided needle exchange or one for ordering toiletries, a total service would incorporate both dispensing methadone and providing needles.</p> <p><u>Improvements to current services</u> 45 expressed satisfaction with current services, others indicated expectations were low. A more flexible service More supervised consumption to prevent selling of prescription Mixed views on whether information should be provided at the pharmacies. Leaflets on drug use prevention, information can be provided elsewhere e.g. General Practitioners, drug workers. Having greater availability of needles and syringes through more exchange services.</p>	<p>A</p> <p>Why: Study done in different settings (city and rural) of Scotland.</p>	<p>not specifically talking about needle exchange programmes but gathers evidence on what works well or otherwise for Pharmacies which are also service providers for the programme.</p>

			Having more positive attitudes towards drug users.		
Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Matheson 1999</p> <p>Country: UK</p> <p>Research question: What motivates Pharmacists to provide drug misuse services? What are the obstacles if any?</p> <p>Date of study: February – April 1996.</p>	<p>Design: Descriptive study with evaluation (qualitative study) Extended interview Semi-structured interview Appraisal of attitudes, beliefs and values</p> <p>Quality: ++ High methodological quality</p>	<p>Scotland</p> <p>45 Pharmacists. Interviewed at work place through telephone interviews</p> <p>A purposive sampling from 222 pharmacists volunteering to take part to include a range of involvement, location of pharmacists, attitude, health board area and type of pharmacy.</p> <p>PROGRESS data: none reported</p>	<p><u>Motivation to sell needle/syringes</u> Two thirds of the participants sold or will sell needles and syringes and main reason for this was that they will be confident that IDUs will use receive clean equipment and thus reduce risk of sharing and spreading BB diseases and HIV.</p> <p><u>Barriers to selling needles/syringes</u> Among those not willing to sell, the reason often given was from concerns about the negative effect on other customers and the encouragement of other drug users to indulge even more.</p> <p><u>Motivation to provide a Needle/Syringe exchange</u> Several participants considered that this was an appropriate service and the reducing of injecting equipment sharing and communicable diseases was a motivating factor.</p> <p><u>Barriers to providing needle/syringe exchange services</u> There was some overlap in reasons given for not providing NEP and not selling, issues specific to NEP were the perceived issues such as needle stick injuries</p> <p><u>Motivation to dispense controlled drugs</u> It was seen as a sense of obligation to the community to provide such services. Many reported that there were difficulties in providing the services but financial incentives often motivated them to continue.</p> <p><u>Barriers to dispensing controlled drugs</u> Majority because of geographical location which limits demand especially in rural areas. Concerns for other customers were also noted. Violence and theft/burglary if people knew that methadone was provided. Lack of privacy brought about by the physical limitation of the many pharmacies and its resulting effects on the other customers was also noted. Ethics was also noted</p> <p><u>Health promotion information</u> All were willing to keep leaflets on drug misuse yet few did so. Some felt they had insufficient knowledge to give drug misuse specific advice, while some did not see it as their role or felt that such advice would not be welcomed.</p>	<p>A</p> <p>Why: Context specific.</p>	

Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Miller 2001</p> <p>Country: Australia</p> <p>Research question: 1. What is the proportion of needle and syringes disposed and discarded in comparison to those provided through needle syringe programmes. 2. What are the users' perspectives on needle syringe programme, needle disposal and what factors are responsible for discarding of these needles</p> <p>Study dates: 18/04/2000 – 11/05/2000</p>	<p>Design: Quantitative and qualitative study Before and after study Semi-structured interview</p> <p>Quality: + Some details of data analysis are not reported</p>	<p>Geelong Victoria/Australia</p> <p>Needle syringe programme sites</p> <p>60 injecting drug users</p> <p>Sex (%): Male 60%, Female 40%</p> <p>Age - of young people (range or mean): 15-51 years. Average 28.1</p>	<p>Results shows that from time of previous studies 1996, there has been a two fold increase in the both the number of needles distributed and returned through needle and syringe programmes. Most of the respondents reported returning needles to either a needle exchange, public disposal unit or disposal container.</p> <p>Qualitative data showed that females and younger heroin users were less likely to access NSPs directly, preferring to have an older friend (male or female) to get their needles for them (secondary exchange).</p> <p>Some respondents reported that the need to pay for needles and syringes after hours and at weekends when NSPs were closed often resulted into risky behaviour such as re-use of needles, needle sharing and use of discarded needles. Other narrative findings illustrate how the lack of available needles can significantly affect the Blood Borne Virus risk behaviour of IDUs.</p> <p>The presence of needle disposal bins were highly welcomed by the respondents who reported that there has been a largely reduced number of discarded needles have reduced in areas where needle disposal bins were placed.</p> <p>The issue of discarded needles was identified as a major concern for majority of the respondents. Some pointed out that disposing of a used needle signifies how tidy such a person, some pointed out that respect was another factor that could lead to persons either discarding needles properly or not. Others expressed how ugly and dirty a sight of an improperly discarded needle is to passer-bys.</p> <p>Interviewees pointed out that current laws surrounding injecting equipment and law enforcement practices where factors which influences discarding of needles. Some indicated that they got charged for possession of an opened syringe and as such there should be little wonder why IDU's discard needles on the streets.</p>	<p>C</p> <p>Why: study conducted in a regional centre with a relatively small population, the characteristics of the study coupled with behavioural pattern of users from such context will definitely be different to not only the UK but most major cities.</p>	<p>Hard to reconcile the conclusion that a vast majority of the used needles and syringes are not been discarded inappropriately and the response from interviewee that current legislation promotes improper disposal of needles</p>

Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Moore 1995</p> <p>Country: USA</p> <p>Research question: How feasible/possible is the establishment of user-self organizations as a means to reducing the spread of HIV among injecting drug users in San Francisco</p> <p>participant observation was undertaken for 3 years</p>	<p>Design: Ethnographic Study Descriptive study with evaluation (qualitative study) Extended interview (open ended) Observation (Passive/Participant) Literature review</p> <p>Quality: +</p>	<p>San Francisco/ United States</p> <p>an illegal multi-ethnic needle exchange service provider which is street based.</p> <p>20 respondents (10 clients and 10 providers of NEPs)</p> <p>PROGRESS data: none reported</p>	<ol style="list-style-type: none"> 1. Injecting drug users felt a sense of ownership and involvement in their participation in needle exchange services as evidenced by out-reaches, education efforts and sourcing of sites for the programme. 2. The injecting drug users also provided a source of information and encouragement to their friends and associates about the needle exchange services, they were also a source of secondary needle exchange of syringes, condoms and bleach within their social networks. 3. Through secondary distribution of sterile syringes the Injecting drug users were able to create informal syringe exchange sites and thus increasing the numbers of IDU's receiving sterile equipments from the exchange. 4. There was huge interest by many of the clients in becoming further involved with the needle exchange in different areas that can be beneficial to the services. This served as a means of giving back something to a programme that they all benefited from. 5. There was also a sense of achievement with the willingness to continue helping the programme irrespective of the consequences. 6. Some stressed the importance that doing drugs is a choice thing and if a person decides to continue doing drug, they should be able to have access to clean needles. 7. The participation of clients in needle exchange services had resulted in changes in social norms with respect to needle use and hygiene. There is more awareness and a huge difference was been made. 8. the responses given served to demonstrate that clients of the needle exchange feel and act upon a sense of both individual and community responsibility which prompts them to support injecting drug users to reduce harm associated injecting drug use and to support syringe exchange in it role as focus of harm reduction. 9. Despite the commitment of individuals or groups, this had not resulted into broader based organizing on the parts of the IDUs in the city due to dire social living conditions faced. 	<p>C</p> <p>Why: Given the context of the study in San Francisco which has varying economic and legal disparities from the UK, cannot necessarily generalize the results. There are stark differences in the social status of illicit drug users in UK and in San Francisco, In the states the safety net for unemployed people often does not cover basic needs such as housing, food and health care in contrast to UK which at least ensures that most people attain a minimal standard of living. Small sample size.</p>	

Study details	Study design and quality	Study population	Main results	Applicability	Comments
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				to UK populations and settings	
<p>Murphy 2004</p> <p>Country: USA</p> <p>Research question: To examine the ability of an SEP to meet the HIV prevention needs of IDUs, barriers to programme use and the potential for participants to overcome these barriers for themselves and others.</p> <p>Date of study: Data collection completed September 1995</p>	<p>Design: A process evaluation of a large needle exchange programme.</p> <p>Evaluation Extended interview Observation (Participant)</p> <p>Quality: + No detail reported of data analysis</p>	<p>San Francisco, US</p> <p>Needle Exchange Programme</p> <p>Date of study (to/from): Data collection completed September 1995</p> <p>244 IDUs</p> <p>Race/ ethnicity <i>Latino 12%</i> <i>Native American 3%</i> <i>African American 31%</i> <i>Asian 3%</i> <i>White 51%</i></p> <p>Education <i><High school 30%</i> <i>High school 40%</i> <i>Some college 23%</i> <i>College or more 7%</i></p> <p>Sex (%): <i>39% women, 61% men</i></p> <p>Age - (range or mean): <i>mean = 38</i></p> <p>Group Describe: <i>Three groups were recruited: primary exchangers (n=82), secondary exchangers (n=82) and non-exchangers (n=80).</i></p>	<p>There were no significant differences in race, age, gender and level of education between the groups.</p> <p>Three general routes of syringe distribution were identified between primary and secondary exchangers: exchanges took place between close friends and lovers; for people living nearby; and as part of a drug deal. Consequently networks varied in size.</p> <p>Barriers to attendance at the SEP included fear of public exposure, including being seen by the police, co-workers and family members. This was the most commonly cited barrier for both secondary and non-exchangers. The legal status of some participants in particular meant that they perceived it to be too risky to attend in case the police identified them.</p> <p>Other barriers included physical and mental illness, problems associated with location of services and intoxicification.</p> <p>Drug lifestyles also impacted on attendance, with some respondents not needing to exchange, due to other sources of syringes (commonly, diabetics) or infrequent injecting. If needed, primary exchangers would then be approached. Secondary exchange is able to respond to all barriers to attendance cited, except for those related to alternative sources of provision.</p> <p>An analysis of HIV high-risk behaviours, reveals that secondary exchangers more closely resemble primary exchangers than non-exchangers, showing some awareness of harm reduction messages.</p>	<p>C</p> <p>Why: The social and legal context in which the service operates differs from that in the UK.</p>	

Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Neale 1998</p> <p>Country: UK</p>	<p>Design: Qualitative study examining drug users attitudes and behaviour</p>	<p>Scotland, UK</p> <p>Pharmacies and drug agencies</p>	<p>There was broad support for increased availability of sterile injecting equipment. While the situation was perceived to have improved, problems of accessibility persist in relation</p>	<p>A</p> <p>Why: While</p>	<p>use may be limited by lack of methodological</p>

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<p>Research question: To examine drug users views on accessing and disposing of injecting equipment.</p> <p>Data generated as part of a wider study regarding drug users views of pharmacy services, funded by the Scottish Office.</p>	<p>Descriptive study with evaluation (qualitative study) Semi-structured interview Appraisal of attitudes, beliefs and values Appraisal of knowledge, skills and behaviour</p> <p>Quality: + Details of sampling, data collection and analysis were limited. Data presented were not rich.</p>	<p>124 illicit drug users</p> <p>White 98%</p> <p>Drug use 73% of the sample had injected drugs and 80% of sample were currently receiving substitute drugs on prescription</p> <p>Sex (%): 62% male</p> <p>Age: range = 16-56</p>	<p>to geographical location of services and opening hours.</p> <p>A need for improved publicity about services offered in pharmacies was highlighted, both in relation to accessing sterile equipment and provisions for safe disposal.</p> <p>Most reported that pharmacists did not discuss safe disposal with IDU clients. There was no consensus on to what extent pharmacists should provide such a service.</p> <p>The sample of injectors described a variety of sources of injecting equipment.</p> <p>Over half of the interviewees reported having shared a needle although increased knowledge and access to sterile equipment was reported to have resulted in less frequent sharing. Motivations for sharing were mostly situational.</p> <p>Female respondents were disproportionately more likely to experience negative feelings regarding using a pharmacy to access/dispose of injecting equipment.</p> <p>Secondary syringe exchange was described by some respondents both in relation to getting equipment to people who cannot physically access services, i.e. living in rural locations, and for those that prefer not to, i.e. through embarrassment.</p> <p>Almost all users stressed that they disposed of their needles safely, however a range of strategies were employed.</p> <p>There was no consensus among respondents regarding preference for accessing services at a pharmacy or dedicated needle exchange. NEPs were described as having a greater range of services and more approachable staff, however pharmacies were seen as sometimes more convenient and less stigmatising.</p>	<p>study is UK based, it is 10 years old and may no longer be relevant, there is also limited detail regarding sampling so it's difficult to assess how representative the sample is.</p>	<p>detail particularly related to sampling.</p>
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Phillips 2007</p> <p>Country: UK; USA</p>	<p>Design: Qualitative: Appraisal of attitudes, beliefs and values Structured interview with</p>	<p>Two samples: Nottingham, England; Northwest Ohio, USA.</p>	<p>Large proportion reported acceptance of various abstinence-oriented treatments and harm reduction interventions. Differences existed in acceptance and experience of the interventions between the samples.</p>	<p>A</p> <p>Although the sample is small,</p>	<p>The authors identify efforts to avoid response bias as a</p>

<p>Research question: To assess the perceptions of drug users regarding a broad range of detoxification, relapse prevention, and harm reduction interventions. Not stated explicitly.</p> <p>Samples recruited between Sep 2002-July 2003. Unclear when study was completed.</p>	<p>open ended questions</p> <p>Quality: + Limited details given of methodology; considerable proportion of qualitative data reported as counts.</p>	<p>UK sample: Recruited from an outpatient drug clinic or inpatient detoxification ward of the Nottingham Alcohol and Drug Team or The Health Shop, a publicly-supported drop-in center offering services to both drug users and sex workers.</p> <p>US sample: Recruited from an inpatient residential program for women</p> <p>Sample 1: 48 clients (35 men / 13 women) Sample 2: 40 female clients.</p> <p>Race/ ethnicity <i>Ethnicity data not collected for UK sample. US sample 77.5% White/Caucasian, 15.% black/African American, 5.% native American and 2.5% other.</i></p> <p>Education <i>Sample 1: 54% of sample left school prior to O level/GCSE, 25% attained O levels/GCSEs, 20% went on to further education.</i> <i>Sample 2: 15% did not graduate from high school, 35% graduated from high school and 50% went on to further education.</i></p> <p>Drug use <i>Self described substance use</i> <i>Sample 1: 94% addicted user, 6% regular moderate user.</i> <i>Sample 2: 80% addicted user, 7.5% regular heavy user, 12.5% regular moderate user.</i></p>	<p>Only 15% of US sample found safer injection facilities acceptable</p> <p>Needle exchange Rated as acceptable by more than two thirds of both samples, the English sample had much greater experience of it). Most frequently reported advantage was disease prevention. Among the UK sample the most frequently reported disadvantage was harm to the larger community (from inappropriate disposal of syringes); also encouraging a shift from smoking to injecting.</p>	<p>Nottingham may be considered a fairly typical English city</p>	<p>strength. But recognise that there were differences between the two samples in terms of geographic location, gender balance, drug histories, type of treatment setting, and interviewers that made comparison problematic.</p>
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Study details	Study design and quality	Study population	Main results	Applicability	Comments
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				to UK populations and settings	
<p>Porter 2002</p> <p>Country: USA</p> <p>Research question: How do Drug Users perceive and use services provided by Needle exchange programmes?</p> <p>Data collected in 1999</p>	<p>Design: Qualitative: Semi-structured interview; Appraisal of attitudes, beliefs and values; Appraisal of knowledge, skills and behaviour</p> <p>Quality: ++ High methodological quality</p>	<p>Philadelphia/United States</p> <p>46 IDUs: 20 exchangers, 26 non-exchangers</p> <p>Race/ ethnicity <i>African-Americans, Whites, Latinos</i></p> <p>Occupation <i>Both legal and illegal jobs (prostitution, primary drug dealer), Government benefit recipients.</i></p> <p>Gender <i>Female Exchangers: 46% (12)</i> <i>Female Non-exchangers: 46% (9)</i> <i>Male Exchangers: 55% (14)</i> <i>Male Non-exchangers: 55% (11)</i></p> <p>Age: <i>24-64 years (Exchangers), 25-64 (non-exchangers)</i></p> <p>Education <i>High school or less</i></p> <p>Socioeconomic status <i>Low socio-economic status (low income)</i></p>	<p>Four category codes from statements made by respondents were created.</p> <p>1. Category 1 (active involvement): Most respondents in this category generally knew about NEP services and used full range of services including medical services delivered at the exchange and did not require any follow-up outside the site. Some exchangers assumed that the staff at the needle exchange were very helpful and could help in terms of referrals for non drug related care/ treatments. Majority of respondents expressed positive feelings about their experiences.</p> <p>2. Category 2 (Stepping stone): Majority in this category were aware that referrals for drug use treatment was provided at the NEP and viewed the exchange as a stepping stone or potential bridge to help for others or for themselves, should they decide to get help. However, the NEP was viewed primarily a “work truck” which functioned as a source of clean syringes, sterile injection supplies and condoms. Respondents were also aware of the other services such as medical and HIV testing at the NEP but had not used such services. Reasons given for non-use of exchange services were:</p> <ul style="list-style-type: none"> - Access to a range of services through other agencies such as regular physicians, methadone programme etc - Unwillingness to expend time needed to or wait for a service that was offered. - Unreadiness or lack of interest in drug user treatment. <p>Most of the exchangers in this category had little previous experience with drug user treatment programmes, were not currently in treatment and were heavily into street drug culture.</p> <p>The non exchangers in this category knew they could obtain clean needles from the NEP but chose to get clean needle from peers via secondary exchange who used NEP, there was no difference in knowledge about services available at the sites between those who used NEP (the secondary exchangers) and their non-exchangers indicating that although peers exchanging for them informed them about clean needles availability, they did not give them information about availability of services.</p> <p>3. Category 3: Vague awareness: Respondents in this category tended to either know about at least on specific services or to be unaware that the sites provided anything but needle exchange.</p> <p>4. Category 4: Unaware: There was the perception of NEP as been a “work truck” where one could get clean needles,</p>	<p>C</p> <p>Why: USA: Some of the participants for the intervention are made up of Latinos which are not a very large group in the UK; most of them fell under the unaware category.</p>	

			but there was no awareness of the other services provided there. There was also a misconception about what was provided as other services there. Most Latino fell under this category of lack of knowledge of services, most felt embarrassed at the prospect of been identified by friends and families if they were seen using the sites or its other services. Female non exchangers also expressed similar concerns about embarrassment at being identified as a drug injector.		
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Power 1996</p> <p>Country: UK</p> <p>Research question: How have the IDUs in England who are not in close contact with services been able to respond to risk of HIV infection?</p> <p>Date of study: between 1991 and 1993</p>	<p>Design: Descriptive study with evaluation (qualitative study) Survey Semi-structured interview Observation (Participant) Ethnographic study</p> <p>Quality: ++ Good methodological quality, although not specifically about SEP</p>	<p>London, semi-rural area and Midlands town /UK</p> <p>Field sites, research centres (work place), semi-public venues (pubs and cafes) and private homes.</p> <p>70 Injecting drug users</p> <p>Place of residence London, rural area and midland town Race/ ethnicity Mainly white British Occupation 82% unemployed</p> <p>Sex (%): M:F=2:1 Age - (range or mean): 29 years for both sexes, 18-47 years range.</p> <p>Less than 50% indicated state benefits as their main source of income, with 33% into drug deal or petty crime. Most used drug was heroin and amphetamine use a distant second. There is also the tendency of poly-drug use in the group.</p>	<p>IDUs adopted a variety of multiple strategies to avoid the risks associated with injecting. Most would either buy a needle from the pharmacy or buy or be given by a fellow user to ensure a consistent supply of needle equipment to reduce the incidence of others re-using their personal equipments. Respondents would rather buy a syringe from fellow colleagues who are in direct contact with SEPs thus taking advantage of the secondary and complementary distribution of such over fixed site SEPs. Respondents preferred to use pharmacies because of the distance unlike the SEP which are very far off, took too long and did not like the idea of carry a full bag of syringes. The awareness of the use of the individual risk of sharing needles was high and strategies employed to reduce this is to ensure a supply of new injecting equipment or to re-use their own syringes. Re-used syringes are often stored in a secured place at home to avoid others from using them. Some indicated that they re-use until they replenish their stock, while some stated they re-use only for a limited number of time. An extra strategy used to ensure re-used syringes are theirs is by marking such needles to personalize it. Cleaning was another strategy mostly by flushing with water, if sharing more rigorous methods of cleaning such as bleaching will be used. Another strategy was selecting of potential sharing partners. Respondent believed that no additional risk was involved if you shared your needle with your sex partner, some were prepared to share the risk of HIV infection with their intimate partner, syringe availability was also a factor in determining risk management. Other situations were risks were taken include drug</p>	<p>A</p> <p>Why: Done in different settings in the UK. (rural, city and town)</p>	

			<p>intoxication and withdrawal or under the influence of drugs, high risk venues such street scenes where drugs are bought and imprisonment.</p> <p>It was common to share drug paraphernalia used in preparation of drugs because they felt there was no risk in doing so, is a practical aspect of drug preparation and forms part of the ritual and social etiquette of drug use and drug networks.</p>		
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Rhodes 2007</p> <p>Country: UK</p> <p>Research question: To explore the interplay of public injecting environments, risk practices and social marginalisation</p> <p>Study conducted mid 2005</p>	<p>Design: Descriptive study with evaluation Semi-structured interview Appraisal of attitudes, beliefs and values</p> <p>Quality: + Limited detail provided of data collection methods</p>	<p>South Wales, UK</p> <p>The interviews were conducted in six locations. This enabled data to be collected from urban, semi-rural and rural settings.</p> <p>49 active IDUs</p> <p>Age: 31 (range 18-47)</p> <p>Place of residence 26% No fixed abode 9% Living in a hostel</p> <p>Gender 69% male</p> <p>Drug use 80% of respondents injected daily, 92% identified heroin as most frequently injected drug. Recent primary source of injecting equipment was non-pharmacy syringe exchange projects for 58%, pharmacy-based syringe exchanges 16% and 22% either friends or sexual partners. A fifth (22%) of the sample reported injecting with a needle or syringe previously used by someone else in the last 4 weeks.</p>	<p>Findings presented are primarily related to perceptions of public injecting and their implications for identity, including reoccurring themes of privacy and shame.</p> <p>Injecting in a non-public environment was the preferred option for respondents. Public injecting was characterised as a situational necessity, influenced by factors such as opportunity, immediacy and craving.</p> <p>The lived experience of public injecting is shown to increase social marginalisation, contributing to a pervasive sense of risk and 'otherness' among street injectors.</p> <p>Findings of potential relevance to the review:</p> <p>Respondents made a distinction between themselves as responsible, more hygienic drug users and irresponsible 'smackheads', with responsible users safely disposing of not only their needles, but sometimes those discarded in public spaces as well.</p> <p>Accessing dedicated syringe exchange programmes was preferred to pharmacy based exchanges. Using pharmacy based services risked public exposure as an IDU and was also linked to shaming, both in being overheard when being served and in the way IDUs are treated by the staff, "when you go into the exchanges you can see they try to be alright but it's not a genuine thing".</p>	<p>A</p> <p>Why: May be generalisable as study conducted in the UK, however non-random sampling methods may bias results</p>	

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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Shaw 2006</p> <p>Country: USA</p> <p>Research question: To describe community opposition that emerged in response to a syringe exchange program in Springfield, Massachusetts</p>	<p>Design: Data was gathered through participant-observation, public records and in-depth interviews with local opinion leaders and front-line harm-reduction workers. In addition, ethnographic interviews were conducted with syringe exchange programme opponents and African-American citizens.</p> <p>Quality: + Very little detail of sampling, data collection or analysis</p>	<p>Springfield, Massachusetts.</p> <p>We are informed that Springfield has significantly more people infected with HIV through injection drug use than is the case in both the state and the US as a whole. AIDS is more prevalent in Springfield in people of colour than is the case for the rest of the state.</p> <p>The number of participants in the research was not made explicit.</p> <p>Local opinion leaders and front-line harm-reduction workers plus syringe exchange programme opponents and African-American citizens.</p>	<p>The paper outlines the debate of a syringe exchange program in Springfield. It highlights the marginalization of African-Americans in the political system. The paper shows the divergent views of various stakeholders and demonstrates how these views impact on the implementation of the programme.</p>	<p>C</p> <p>Why: This is essentially a case study which highlights the problems going on in Springfield; the generalisability to the UK would have to be taken cautiously.</p>	

Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Singer 1995</p> <p>Country: USA</p> <p>Research question: What role does ethnography play in evaluation of needle exchange project? (to address the ethnographic gap in needle exchange evaluation by describing the role of ethnography in</p>	<p>Design: Ethnographic study Descriptive study with evaluation (qualitative study) Survey Brief interview Observation (Participant)</p> <p>Quality: + Focus of paper is on methodology rather than</p>	<p>Hartford/USA</p> <p>Injecting drug users of Hartford NEP</p> <p>Hartford NEP authorized by public Act 92-3 of Connecticut General Assembly operated by Community Alliance for AIDS, it operates as a voluntary organization through a mobile van clearly marked for identification. It operates 5</p>	<p>The observations of outward appearances, cleanliness etc often reveal the overlooked heterogeneity found among IDUs</p> <p>With continuous use of NEP, the social interaction between the staffs and clients become more cordial and informal creating room for discussion of more personal topics such as emotional, health, family and money.</p> <p>NEP can come to be an important part of a client's social network by providing a safe and friendly site for accessing needed social support.</p> <p>An important product of the relationship is the significant level of program recruitment by satisfied users.</p> <p>Informal conversations provide foundation for the collection</p>	<p>C</p> <p>Why: ? Article is more of methodology based evidence; same can be applied in the UK.</p>	

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<p>the evaluation of Hartford needle exchange project) What is the nature and effect of staff and client relationships What differences are there in what people report (structured interview versus informal, relaxed conversation or during observation in natural context.</p>	<p>findings</p>	<p>hours per day for 3 days a week PROGRESS data: none reported</p>	<p>of attitudinal and life history data on IDU which provides detailed answers provided in structured interviews. Ethnography allows for collection of data on behaviour that can have an impact on the spread of HIV. Clients have been observed to carry used and un-capped needles in their pockets, sneakers, purses, underwear's and in various containers. IDUs have special attitudes towards their needles and stylized ways of handling and referring to them. A fair number of needles are brought in by clients picked up from the streets. Ethnography help to identify the problems faced by the NEP and the revealing of effects of external factors on the ability of the project to reach clients e.g. police harassments, social environment of location of NEP which are perceived to be dangerous, creating opposition to local commercial businesses. Ethnography can help identify client's values or preferences that influence their use and can contribute to staff training. Client perceived barriers to using NEP can often be picked up e.g. time wasting, hours of van operation</p>		
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Snead 2003 Country: USA Research question: To understand why and how IDUs engage in Secondary Syringe Exchange (SSE) to aid in the development of a large-scale peer HIV prevention intervention. Date of study : Data June to December 2000.</p>	<p>Design: A formative qualitative study to inform development of a peer HIV prevention initiative. Semi-structured interview Quality: + No details on selection criteria for recipient sample</p>	<p>Oakland and Richmond, California, US Syringe Exchange Programmes IDUs engaging in SSE as either provider or recipient n=47, providers = 26, recipients =21 SEPs are located in three deprived neighbourhoods, across two cities, and operate for 2 hours one night a week. The services are now legal and county funded as part of a community based harm reduction centre. Sex (%): 30% women, 70%</p>	<p>Secondary syringe exchange predominantly takes place within existing social networks, providers supplying their friends and family rather than strangers. In some cases new recipients may be introduced by a trusted friend. Most recipients reported having one provider; some also had other providers they used for backup. Many providers reported highly organised SSE operations, particularly among those who had a lot of recipients. Most SSE was conducted in the providers' home. Nearly half of providers allowed recipients to inject in their home, in some cases the primary activity was drug use, in others it was syringe exchange. All providers reported distributing other harm reduction materials alongside syringes. None reported having difficulty accessing supplies from the SEP. Most providers cited altruistic motivations for providing syringes, however there was often also an expectation of generalised reciprocity. Many providers also saw their role as providing a community service and some displayed pride in their status</p>	<p>C Why: The small sample size and the different socio-political and legal context.</p>	

		<p>men (4% also identified themselves as transgender)</p> <p>Age: provider mean age = 52 recipient mean age = 47</p> <p>Race/ ethnicity Latino 4% Native American 4% African American 65% Other 4% White 23%</p> <p>Employment status Unemployed 67% Part time 24% Full time 9%</p> <p>Education <High school 40% High school 34% Some college 21% Bachelor's degree 5%</p> <p>Drug use Majority of participants injected heroin exclusively, some injected speedballs and/or cocaine in addition to heroin use.</p>	<p>as a role model.</p> <p>The findings suggest that there are many natural opportunities for SSE providers to educate recipients in risk reduction. Most providers reported sharing harm reduction information with recipients, particularly around safer injection practices.</p> <p>Recipients reported convenience of SSE and logistical difficulties in accessing SEP as primary motivations for accessing SSE.</p> <p>Most providers expressed enthusiasm for the idea of being trained as a peer educator.</p> <p>Topics suggested for peer education included: safer injection practices; prevention, diagnosis and treatment of HIV and HepC; and abscess prevention and treatment.</p>		
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Somlai 1999</p> <p>Country: USA</p> <p>Research question: To describe the use of the community identification process to produce data to inform the planning of an NEP; and to describe the implementation and operation of the resultant intervention.</p>	<p>Design: A case study of the implementation of an intervention based upon social science and community assessment research.</p> <p>Descriptive study with evaluation (qualitative study)</p> <p>Case study</p> <p>Semi-structured interview</p> <p>Observation (Passive/Participant)</p>	<p>Milwaukee, Wisconsin, US</p> <p>The following participated in the development of the NEP, either as part of the community identification research or as part of NEP task force: IDUs Outreach workers Researchers Alcohol/drug treatment professionals Physicians</p>	<p>The community identification process showed different IDU sub cultures within the city that would require services tailored to their specific needs.</p> <p>In relation to NEPs, there was an 'overwhelming' amount of support from IDUs, with some hoping that it may lead to greater community acceptance of their drug use as a medical rather than criminal behaviour. However many of the respondents were sceptical about the amount of political/community support for the service.</p> <p>While possession of injecting equipment is not prohibited in the study area, IDUs were regularly arrested under drug possession laws if a syringe had a trace of illegal substances, it is suggested that this acts as a barrier to</p>	<p>C</p> <p>Why: Actual sample size is unclear, focus is on a specific local area not designed to be representative, differences in legal and socio-political climates in US</p>	

	<p>Quality: - Research design unclear. Little detail about methodology.</p>	<p>and representatives from: Advocacy and activist groups Community based services providing for IDUs Religious community Public school systems Local health departments Local universities Mental health services AIDS organisations Law enforcement</p> <p>300 individuals were recruited to the study It is unclear whether the whole sample was interviewed</p> <p>PROGRESS data: none reported</p>	<p>access to sterile equipment. The legal purchase of syringes from pharmacies was also shown to be problematic. Key findings of the research were reflected in the features of the planned NEP: a mobile facility was planned to respond to the geographically distinct areas of IDU concentration; outreach workers reflecting the demographic diversity of the IDU population were needed as injection-related and sexual risk behaviour were shown to be influenced by gender, race and age; and marketing messages reflected the finding that primary motivations for needle sharing involved economics and comfort. The NEP encountered less resistance to its establishment than expected, partly as a result of efforts to engage potential opposition in planning stages. In particular community groups were presented with the findings of the community research along with research evidence supporting NEPs. Neighbourhood meetings were also held and were considered 'instrumental' in obtaining community support. Concerns were expressed at community meetings about a fixed site NEP encouraging violent and criminal behaviour. A mobile facility was more acceptable.</p>	and UK	
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Spittal 2003</p> <p>Country: Canada</p> <p>Research question: To investigate the role of needle exchange personnel in attempting to provide access to sterile equipment and the critical role that 'point-for-point' policy and 'loaner policy' may have played in the Vancouver epidemic</p> <p>Date of study (to/from): May 2000-March 2001</p>	<p>Design: Ethnographic 'ride along'/'walk along' study Extended interview Observation (Passive/Participant)</p> <p>Quality: + Limited detail of sampling strategy and data analysis</p>	<p>Vancouver, Canada</p> <p>Needle Exchange Programme</p> <p>Downtown Eastside area of Vancouver is an inner city neighbourhood well known for its public drug use scene and incidence of HIV and Hepatitis C are high.</p> <p>Research focused on one needle exchange organisation – Downtown Eastside Youth Activities Society (DEYAS)</p> <p>DEYAS staff members – exchange agents.</p>	<p>Discrepancies between policy and practice are described. While one-for-one exchange is still the dominant policy, evidence suggests that there is a large demand for needles from clients with none to exchange. As a result an informal 'loaner' system has developed based on agreements and relationships between exchange agents and their clients. The decision to 'loan' equipment is made on a client-by-client basis and the need for clients to return the equipment is stressed. This system has become unofficially condoned and on any given mobile exchange route it is accepted practice that 'loaners' make up 5-10% of the syringes distributed. The findings suggest that not only is this a small proportion of the total volume but that often this equipment reaches those who are most at risk. Unofficial limits on the amount of 'loaners' distributed in one shift may result in some clients being refused. Observations from the fixed site show discarded equipment being collected and returned to the exchange by clients and other members of the community.</p>	<p>B/C</p> <p>Why: The strict Provincial policy context within which the service operates. The specific issues of the study area, for example high rates of HIV and high prevalence of cocaine injection.</p>	<p>Good insight into grey area between policy and practice, not sure how far the results can be generalised though</p>

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<p>Springer 1999</p> <p>Country: USA</p> <p>Research question: What are the perceptions of IDU and non IDU community members on syringe disposal interventions in Atlanta Georgia?</p> <p>What are the benefits and obstacles if any? How feasible are these disposal methods?</p> <p>What are the community members perception of and experiences with injecting drug users within their community</p> <p>Study dates: September 1996 to March 1997</p>	<p>Design: Qualitative study Extended interview Appraisal of attitudes, beliefs and values</p> <p>Quality: ++ High methodological quality</p>	<p>Atlanta/USA: area of high drug sales and drug use.</p> <p>Street outreach: interviews conducted in 2 offices centrally located in the community</p> <p>32 non injecting community members 26 injecting drug user community members</p> <p>Sex (%): Community member : 50% male, 50% female IDUs : 77% male, 23% female</p> <p>Age: Community members: 22-64 years, mean: 40 IDUs : 23-55 years, mean: 40</p> <p>Race/ ethnicity: Community non IDU members: African Americans 100% Community IDU members: African-Americans 96%, Caucasians 4%</p> <p>Occupation Community non IDU members: Legal employment 50%, non legal employment 50%. Not reported for IDUs</p> <p>Education: Community non IDU members: <high school graduate 41% High school graduate 44% Some college 16%</p>	<p>3 disposal methods were discussed. <u>Syringe exchange programme</u> The injecting drug users preferred using SEPs to the other disposal methods and community members' opinion about SEPs were generally positive. Both IDUs and community members believed that access to new syringes will be beneficial largely because it would reduce the reuse of syringes and thus reduce the risk of HIV transmission in the long run. IDUs major concern was the risk of getting arrested for possession of a syringe IDUs were more willing to take the risk of getting caught and arrested for syringe possession if they were receiving a new syringe for an old one disposed The incentive of a new syringe was not a motivating factor for 2 IDUs who had legal access to free syringes but both were still willing to dispose of their syringes at a SEP. Both IDUs and community members believed that the incentive of receiving new syringes would motivate people to pick up discarded syringes and return them to an SEP thus helping to clean the community and reduce accidental needlestick pricks. 2 main disadvantages mentioned by IDU was fear of arrest and being identified as an IDU. Disadvantages mentioned by community members centred on moral issues of providing new syringes to IDUs, it is believed that stopping drugs altogether is better than giving new syringes. <u>Syringe Collection Program</u> Most of the IDUs and community members were not in support of this method as a means of disposal General concern was for fear of being arrested for possession of syringes which will be easily detected once stored in their homes in the containers. Another concern expressed was safety of syringes placed in trash cans which could injure people while emptying or rummaging through. There was concern about the impracticalities of this method for the homeless. Results show that though this method was not generally accepted for disposal of multiple syringes, it was a</p>	<p>C</p> <p>Research was conducted in an area where drug paraphernalia laws exists which prevents/restricts people from using the disposal methods for fear of being arrested. In the UK such laws are less strict, for this reason the results may not reflect the true picture and may vary in the UK.</p>	

		<p>Community IDU members: <High school 31% High school 46% Some college 23%</p> <p>Social capital: 94% of non-IDUs have children and 53% had spent 10 years or more in the community. 69% of IDUs had been in prison in the last 5 years</p>	<p>reasonable alternative for disposal of individual syringes which is already being used by many IDUs. <u>One-Way Drop Box</u> Community members favoured this method much more than the IDUs who support this method but with caution. Both groups believed that this could reduce reuse by IDU as well as reducing risk of children being stuck by a discarded needle. Though there were concerns that boxes can be opened by children who gets curious about its contents, desperate people who want to sell them or by IDUs who need a syringe. Other notable disadvantage by the IDUs is the fear of being identified as a drug user by people other than the police and harassment and possibly arrest while carrying needles to the drop box.</p>		
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Strenski 2000</p> <p>Country: USA</p> <p>Research question: What influences do syringe exchange programme have on injection practices How do they influence the settings in which drug injection occurs? How have shooting galleries evolved in response to SEP and what additional factors affect the use of shooting gallery? What barriers are experienced in SEP?</p>	<p>Design: Ethnographic study Brief interview Extended interview Semi-structured interview Appraisal of attitudes, beliefs and values</p> <p>Quality: ++ Generally well conducted, though small sample size and predominantly male participants</p>	<p>Chicago/USA</p> <p>Work place/Syringe exchange sites</p> <p>14 Injecting drug users using Needle exchange services provided by Chicago Recovery Alliance.</p> <p>Sex (%): Female IDUs: 7%(1) Male IDUs: 93% (13)</p> <p>Age: 36-57 years, mean age 47</p> <p>Race/ ethnicity 2 Caucasians, 7 African-Americans and 4 Hispanics.</p> <p>Occupation 4 had no source of income, 4 relied on government benefit, 1 was fully employed, 1 was partly employed and 4 illegal hustling.</p>	<p>Impact of SEPs on Shooting Galleries In all 3 settings there has been a trend away from the large traditional cash or free shooting galleries housed in neighbourhood apartments to much smaller cash or taste galleries as a result of the presence of SEPs and personal reserve of sterile needles. Reason given for using shooting galleries prior to SEP was that users found it difficult to get syringes from elsewhere, but that is not a usual occurrence anymore. Sharing of needles was very popular in the shooting galleries, although they aware of the risks involved with recycled needles, Users actually valued not sharing and needle re-use was partly resulting from lack of access to a legal supply of sterile syringes. Residual blood in the needles did not always serve as an inhibition not to re-use a needle often times when IDU had to make judgements about the health of others who had used a syringe before them. Withdraw symptoms of drug often times puts the IDUs in desperate position where the hazardous risks of sharing often overcomes their judgement of making a healthy decision even after the AIDS epidemic, more often than not used syringes are now cleaned with bleach. Problems of dull, broken and regularly malfunctioning needles at the galleries had led users to get involved with crime following frustrations from these problems and</p>	<p>C</p> <p>Why: Though the study was conducted in 3 settings with variable socio-economic predisposition which can reflect different settings here in the UK and thus give credibility, I don't see how results can be generalized; the author has made conclusions from a small sample from less than 8% of actual</p>	

		<p>Education: 2 high school graduates, 2 some college, 10 less than 12 years education.</p> <p>Socioeconomic status Low socio-economic status (low income)</p> <p>Social capital: All participants were career drug users (use of injection Heroin/cocaine twice daily for 20 years or more), all had homes and 12 had served jail terms</p>	<p>unhygienic conditions at galleries. Acknowledgement of shooting galleries as very dangerous places was well recognised by respondents. Large free or cash galleries are not accepted by respondents only used in cases of desperation. SEPs, Increasing community policing programme and government intervention has lead to a decrease in number of large galleries. Networks serve as a safe alternative to free or cash galleries whose stability depends on nature and duration of relationship, health status, trouble with the law and living arrangements. Also scarcity and high cost of heroin has caused networks to be more important where principle of reciprocity applies re-enforcing the group as a safety net. Other positive outcomes of SEP are the less need to share, loan or sell used syringes between one another and many are adopting the one-shot one syringe policy. Risk behaviour associated with injection practices Routing sharing of cookers which respondents did not consider as sharing as long as each had their own needle. Backloading and the use of common cup of water to draw up drug mixing liquid still commonly practiced. Cleaning of wound site prior to injecting was not commonly practiced even after been preached by SEPs. Often times an IDU felt all other harm reduction methods were unnecessary so long as a sterile needle is being used. IDUs associated HIV only with dirty needles and not with other risk behaviour such as unprotected sex, sharing of other paraphernalia and using bleach to clean a used needle. IDUs believe that you could re-use your personal needle several times before exchanging so long as it's not dull. Desperation often times causes reverting to risky behaviour even in the most careful of users. Barriers to SEP use Concerns about privacy, fear of being seen exchanging and been exposed as a user, this is more popular amongst business professionals, health workers and bus drivers who sends some else on their behalf. Problems with Law enforcement such as police harassments, confiscation of possessed needles and arrest. Personal safety issues and fear of being robbed by fellow addicts who don't want to go to the sites themselves.</p>	<p>respondents. Also the racial make-up is also one for concern???, gender bias of results</p>	
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations	Comments
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<p>Strike 2002a</p> <p>Country: Canada</p> <p>Research question: To examine the strengths and challenges of four service delivery models: fixed site, mobile, satellite sites and home visits, from the points of view of NEP staff and managers, and how service delivery may impact on NEP HIV prevention efforts</p> <p>Date of study: November 1998 to April 1999</p>	<p>Design: Descriptive study with evaluation (qualitative study)</p> <p>Semi-structured interview Observation (Passive/Participant)</p> <p>Quality: + Some methodological details missing</p>	<p>Ontario, Canada Needle exchange programs</p> <p>59 participating individuals from 15 NEPs</p> <p>NEP staff and managers at all Ontario NEPs and government officials involved with the Ontario provincial needle exchange program.</p> <p>66% worked for a public health unit, 22% for an AIDS service organisation, 12% for another agency type.</p> <p>61% were frontline NEP staff/ coordinators.</p>	<p>Fixed sites: NEPs try to ensure sites are geographically accessible to clients, have a non-clinical appearance and a friendly atmosphere. Location, adequate space and opening hours are seen as constraints that can negatively impact on client development and retention. Negative attitudes from non-NEP staff within parent organisations and client perceptions of sites as being too clinical or 'gay-oriented'/ HIV-related can reduce program attendance. Fixed sites can also attract local opposition.</p> <p>Mobile NEP services: Mobile service is believed to increase accessibility for clients who prefer to exchange in evening hours, do not have a vehicle or money to travel and/ or cannot travel. Older NEP services tend to have agency-owned vehicles but newer services use worker's personal vehicles which can lead to additional expense and safety hazards for workers. Human resources shortages (e.g. sickness or holidays) can severely impact on operation of mobile services. Mobile service is viewed as insufficient for incorporating other harm reduction interventions.</p> <p>Satellite NEP site model: Perceived benefits of satellite sites include offsetting human resource and space costs and increasing accessibility: agencies who serve a different type of clientele, are open at different times or situated in a different place are invited to be satellite sites. Perceived problems include satellite agency staff not following NEP service guidelines, and refusal to act as satellite sites due to rejection of harm reduction principles.</p> <p>Home visit model: Perceived benefits include accessibility and credibility of the NEP. Workers who are former IDUs are more accepting and comfortable with this mode of delivery than other workers. This is a contentious issue with some interviewees opposing home visits for reasons of worker safety and intrusiveness into clients' personal lives.</p>	<p>and settings</p> <p>B</p> <p>Why: Legislation and policy in Canada is similar to the UK but urban geography can be very different so issues of accessibility may not all be generalisable.</p>	<p>Same study as Strike 2004; Strike 2002a</p>
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Strike 2002b</p> <p>Country: Canada</p> <p>Research question: To</p>	<p>Design: A qualitative study using a modified ethnographic approach.</p> <p>Extended interview; Semi-structured interview</p>	<p>Medical and Executive directors, Coordinators and workers at NEPs in Ontario, and Provincial government officials</p>	<p>Exchange policies within the NEPs vary from a one-for-one exchange to a distribution policy. The flexibility with which these are applied also varies. The findings suggest that exchange practices are linked to the definition of needles as objects of 'risk' or 'prevention'. Where needles are ascribed</p>	<p>B</p>	<p>Strength- in depth examination of day to day issues within the</p>

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<p>analyse the consistency among needle exchange practices, HIV prevention, harm reduction goals and potential programme effectiveness.</p>	<p>Quality: + Little detail provided about data collection or data analysis framework. The analysis procedure is explicit, however it is unclear how the programmes were ascribed to the 'risk' or 'prevention' categories, whether this was developed through attitudinal questions or an assessment of the NEPs policies.</p>	<p>(n=59) from/ related to 15 Needle Exchange Programmes in Ontario, Canada</p>	<p>a 'risk' meaning by an NEP, a strict one-for-one policy is likely to be implemented with clients encouraged to take fewer needles and penalties applied to those who do not adhere to the rules. Two thirds of the programmes place more emphasis on needles as prevention objects. Exchange rate policies are more lenient as increased access to and distribution of needles is the main focus. Younger programmes are more likely than older programmes to conceptualise needles as objects of risk and have strict exchange policies.</p>		<p>NEPs. Weakness-views of the NEP clients are not assessed</p>
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Strike 2004 Country: Canada Research question: To explore how NEPs establish, define and defend their existence within their communities</p>	<p>Design: Qualitative: Local practice report ; Semi-structured interview Quality: + Little detail given of sample recruitment, data collection or analysis. Limitations not discussed.</p>	<p>Ontario, Canada 59 Coordinators, managers and workers at 15 NEPs in Ontario Medical Officers of Health, Executive Directors and key informants from Ontario Ministry of Health and Long Term Care Sex (%): 56% women, 44% men 39% of participants were involved with the NEP when it opened</p>	<p>The operation of an NEP is likely to require delicate balancing of interests of the clients, workers, organisations overseeing the service and the wider community. Even as the number of NEPs has increased programmes still face difficulties finding a place, both financial and spatial, within the parent organisation as activities are sometimes seen as 'non-core' and clients as 'undesirable'. From the perspective of the clients the stigma of some parent organisations may affect acceptability of a service. Within communities public opposition is linked to concerns about dangerousness and contamination of the area by undesirable individuals and paraphernalia. Residents may not perceive that there is a need for a programme or may be concerned that it will undermine attempts to redefine the neighbourhood. Workers respond to the stigmatisation of their clients by contesting the differentness of their clients from the wider community. Approaches developed to contend with opposition are described including, the involvement of community partners in the planning process, keeping a low profile and locating to less contentious locations.</p>	<p>B Why: The concepts of stigma, NIMBY and place and the legal basis of the NEP are comparable in the UK.</p>	<p>Same study as Strike 2002 (different outcomes, same people)</p>

Study details	Study design and quality	Study population	Main results	Applicability to UK populations	Comments
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<p>Strike 2005</p> <p>Country: Canada</p> <p>Research question: To explore syringe access patterns and implications for HIV prevention programming. From where or whom and in what quantities to IDUs obtain syringes? What programmatic, social or economic factors influence these acquisition patterns? What is the relationship, if any, with HIV risk behaviours?</p> <p>Study conducted 2000-2001</p>	<p>Design: Qualitative: Audit/Evaluation</p> <p>Brief interview Extended interview Semi-structured interview</p> <p>Quality: + Some methodological details of data collection and analysis are not reported</p>	<p>Toronto, Canada</p> <p>Some participants recruited/interviewed at Syringe Exchange Programme, others from the wider drug using community</p> <p>80 IDUs were interviewed. Other key informants were also interviewed as part of the evaluation of the SEP.</p> <p>PROGRESS data: None reported</p>	<p>The data suggests that IDUs are able to determine from where they get their injecting equipment and in what quantities. It is shown that some prefer the free syringes available from SEPs while others prefer to pay for OTC equipment for convenience and anonymity. Three behavioural patterns were identified related to syringe access: those who stockpile large numbers of sterile syringes (typically over 100), often for secondary distribution to friends and acquaintances as well as for personal use; those who plan ahead and maintain a 1-2 week supply often from a range of sources, based on convenience; and IDUs who obtain equipment as needed, either through a conscious decision to not be in possession of syringes (for example for fear of police harassment) or through a lack of organisation. The first two behavioural patterns are associated with more stable housing, relationships and drug using behaviours, whereas the last group were likely to have more chaotic lives and unstable housing. Syringe access is an issue for all three of these categories as exchange policies at some SEPs may limit the amount of equipment distributed and OTC sales are at the discretion of the pharmacist. Most stockpilers and planners are shown to be willing to give away, rather than sell, sterile syringes and some have informal peer exchanger agreements with the SEP. The evaluation of the peer run SEP shows benefits to the formal involvement of peers in the programme including providing a user-friendly environment, developing employment skills, sending a positive message to other IDUs and foster community development.</p>	<p>and settings</p> <p>B</p> <p>Why: The legal and social context within which syringes are acquired in the study area is similar to that in the UK.</p>	<p>They compare their findings to those from studies in Montreal and Vancouver: the findings are not similar to the Vancouver study. They suggest this is because data on risk behaviour in this study is more detailed (strength).</p>
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Tempalski 2007</p> <p>Country: USA</p> <p>Research question: To determine existence, size, timing and sources of opposition, support and controversy regarding drug abuse treatment, outreach, syringe exchange and other</p>	<p>Design: Descriptive study with evaluation (qualitative study)</p> <p>Semi-structured interview Appraisal of attitudes, beliefs and values</p> <p>Quality: + Limited detail of data collection and analysis</p>	<p>32 metropolitan statistical areas in the USA</p> <p>workplace</p> <p>Interviews took place between August 2001 and February 2004</p> <p>93 interviewees in 32 MSAs</p> <p>24 SEP directors 14 drug treatment providers</p>	<p>Respondents cited that critics to SEPs frequently used language regarding the immorality of drug use. Respondents reported that they tried to focus debate on questions of public health and the importance of safe injection.</p> <p>Themes were:</p> <ol style="list-style-type: none"> institutional and/ or political opposition based on <ol style="list-style-type: none"> political and law enforcement issues associated with state drug paraphernalia laws and local syringe laws; harassment of drug users and resistance to services for drug users by local politicians and police; and 	<p>C</p> <p>Why: The paper is about US policies which stigmatise SEPs and drug users. It would be relevant to the UK if similar policies were</p>	

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<p>responses to HIV/ AIDS among IDUs, and whether any of these programs became foci of controversy in the media or in political campaigns.</p>		<p>13 outreach workers 28 researchers 14 public health administrators</p> <p>PROGRESS data: None reported</p>	<p>(c) state and local government (in)action or opposition; and</p> <p>2. stigmatisation of drug users and SEP resistance from neighbours and businesses.</p> <p>1a. Government structural constraints, which differ by state and locality, can significantly reduce the ability of IDUs to purchase and possess sterile syringes. Both clients and service providers have been arrested for carrying or exchanging syringes.</p> <p>1b. Types of harassment and prejudice by politicians and police mentioned by respondents included city council members opposing syringe exchange to maintain their constituents' support, and scapegoating of drug users as a result of an increase in crime, leading to police cracking down on drug users. One respondent also described physical abuse of SEP workers by the police which led to the program shutting down.</p> <p>Anti-SEP advocates agree with legal policy and law enforcement efforts, that SEPs work against the goals of abstinence-based treatment programs and the 'war on drugs' by enabling drug use.</p> <p>1c. Political (in)action. Fear of adopting or discussing SEPs because of perceived political opposition can be some of the biggest barriers to implementing programs in some localities. Political opposition can occur at difference government levels and can paralyse attempts by community members to start a SEP. In other areas respondents reported that government inaction created a political opportunity structure that enabled harm reduction activists to set up SEPs in some localities.</p> <p>2. There was wide variation reported in opposition to SEPs from neighbours and businesses. Stigma and prejudice attached to drug users and drug use contribute to local arguments against SEPs in areas where SEPs are located. In some cases local organised resistance to SEPs came from religious or minority communities; other reasons for opposition included the belief that distributing clean needles encourages drug use or is morally wrong. Resistance to SEPs did not exist in isolation and different players can generate opposition to SEPs, e.g. neighbours and businesses putting pressure on local politicians or client providers to make a program relocate, which could lead to fewer people accessing those services.</p>	<p>adopted here but at the moment the UK government supports SEPs</p>	
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Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Voytek 2003</p> <p>Country: USA</p> <p>Research question: To examine the motivations for people who provide secondary syringe exchange to other IDUs and why some IDUs do not use the Baltimore Syringe Exchange Programme.</p> <p>Date of study: 1997</p>	<p>Design: Qualitative interviews exploring the motivations of participants Semi-structured interview</p> <p>Quality: + Short report so reporting of many details limited; difficult to assess validity</p>	<p>Baltimore, US</p> <p>Needle Exchange Programme</p> <p>Providers of secondary syringe exchange (n=20) Recipients of secondary syringe exchange who had never used the BNEP in 1997 (n=10).</p> <p>All African American Sex (%): 37% <i>female</i>, 63% <i>male</i></p>	<p>SSE providers reported motivations centred around altruism and economic gain. The specific circumstances of the transaction often influenced whether the syringe was sold or given away. Influential factors included: relationship to recipient, current wealth, and desperation. Among those that regularly sold syringes a quarter reported collecting discarded needles from public places to exchange at BNEP. While recipients of SSE generally believed the NEP to be a valuable service, they felt it was not suitable for them for a range of reasons including; not convenient, location, not wanting to carry equipment, queues and lack of privacy. The most common sources of needles distributed through SSE were: NEP, diabetic, pharmacy, hospitals, clinics and street sales.</p>	<p>C</p> <p>Why: Motivations reported by both the providers and recipients would be applicable in the UK</p>	<p>Short report only</p>
Study details	Study design and quality	Study population	Main results	Applicability to UK populations and settings	Comments
<p>Weiker 1999</p> <p>Country: USA</p> <p>Research question: To describe how a community-based agency's service delivery philosophy can affect the design and implementation of an evaluation.</p>	<p>Design: Survey Evaluation Focus group(s) Observation (Passive/Participant) Ethnographic interview</p> <p>Quality: - Data reported focused on evaluation methods; as such there was very little on qualitative sampling, data collection or analysis and data reported were not rich</p>	<p>Los Angeles, US</p> <p>A community based needle exchange and harm reduction programme for young people.</p> <p>Staff and clients of Harm Reduction Central (drop in centre run by Clean Needles Now)</p> <p>N not reported PROGRESS data: none reported</p>	<p>The focus of the article is the lessons to be learned from a collaborative evaluation. The benefit of incorporating harm reduction principles into research methods is the main finding. The research cannot remain separate from the intervention and therefore harm reduction must be considered at all stages of the evaluation. Recommendations are made as to how this can be achieved.</p> <p>Some findings from the qualitative data are also presented. Engagement is seen as the primary aim for CNN/HRC. The core intervention provided by the programme is needle exchange, almost 3 times as many youth using this service as any other activity offered. It was observed that youth who initially engaged with the service to use the needle exchange became more involved over time. Peer staff are also found to be important in encouraging engagement with many young people describing their relationship with peer staff as the source of their engagement. While the peer staff are seen as a crucial component of the service, training and</p>	<p>D</p> <p>Why: While the findings related to the design and implementation of an evaluation are likely to be generalisable to the UK, there is no data provided regarding sample size, diversity and recruitment to put the findings from the qualitative data</p>	<p>Lack of data provided about sample means this paper is of little use</p>

			supervision is time consuming. The CNN/HRC is portrayed by the clients as a safe, non-judgemental place to seek services related to drug use.	in context.	
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Results of validity assessment

1. Is a qualitative approach appropriate?

- Does the research seek to understand processes or structures, or illuminate subjective experiences or meanings?
- Could a quantitative approach better have addressed the question ?

Appropriate/ Inappropriate/ Unsure

2. Is the study clear in what it seeks to do?

- Is the purpose of the research discussed – aims/objectives/research question ?
- Is there adequate reference to the literature ?
- Are underpinning values/assumptions/theory discussed?

Clear/ Unclear

3. How defensible is the research design?

- Is the design appropriate to the question?
- Are there clear accounts of the criteria used for sampling, data collection, data analysis?
- Is the selection of cases/sampling strategy theoretically justified?
- Is a rationale given for the choice of method?

Defensible/ Indefensible/ Not sure

4. How well was the data collection carried out?

- Were the data collected in a way which addressed the research question
- Was the data collection and record keeping systematic?

Appropriately/ Inappropriately/ Not sure

5. Is the role of the researcher clearly described?

- Has the relationship between the researcher and the participants been adequately considered?
- Is there evidence about how the research was explained and presented to the participants?

Clear/ Unclear/ Not sure

6. Is the context clearly described?

- Are the characteristics of the participants and settings clearly defined?

- Were observations made in a sufficient variety of circumstances?
- Was context bias considered?

Clear/ Unclear/ Not sure

7. Were the methods reliable?

- Was data collected by more than one method?
- Is there triangulation, or justification for not triangulating?
- Do the methods investigate what they claim to?

Reliable/ Unreliable/ Not sure

8. Is the data analysis sufficiently rigorous?

- Is the procedure explicit – i.e. is it clear how the data was processed to arrive at the results?
- How systematic is the analysis, is the procedure reliable/dependable?
- Is it clear how the themes and concepts were derived from the data?

Rigorous/ Not rigorous/ Not sure

9. Is the data rich?

- How well are the contexts of the data preserved?
- Has the diversity of perspective and content been explored?
- How well has the detail and depth been preserved?
- Are responses compared and contrasted across groups/sites?

Rich/ Poor/ Not sure

10. Is the analysis reliable?

- Did more than one researcher theme and code transcripts?
- If so, how were differences resolved?
- Did participants feed back on the data if possible and relevant?
- Were negative/ discrepant results addressed or ignored?

Reliable/ Unreliable/ Not sure

11. Are the findings credible?

- Is there a clear statement of the findings?
- Are the findings internally coherent?
- Are elements from the original data included?

- Can the data sources be traced?
- Is the reporting clear and coherent?

Credible/ Not credible/ Not sure

12. Are the findings relevant?

Relevant/ Irrelevant/ Not sure

13. Conclusions

- How clear are the links between data, interpretation and conclusions?
- Are the conclusions plausible and coherent?
- Have alternative explanations been explored and discounted?
- Does this enhance understanding of the research topic?
- Are the implications clearly defined?
- Is there adequate discussion of limitations?

Adequate/ Inadequate/ Not sure

14. How clear and coherent is the reporting of ethics?

- Have ethical issues been taken into consideration?
- Are they adequately discussed e.g. do they address consent and anonymity?
- Have the consequences of the research been considered i.e. raising expectations, changing behaviour etc?
- Was the study approved by an ethics committee?

Appropriate/ Inappropriate/ Not sure

Reference(s)	Question														Rating
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Barnard 1993	Appropriate	Clear	Not sure	Appropriate	Unclear	Clear	Reliable	Not sure	Rich	Not sure	Credible	Relevant	Adequate	Not sure	+
Buchanan 2003	Appropriate	Clear	Defensible	Appropriate	Not sure	Clear	Reliable	Not sure	Rich	Not sure	Credible	Relevant	Adequate	Appropriate	+
Clarke 2001	Appropriate	Clear	Not sure	Not sure	Not sure	Clear	Reliable	Not sure	Poor	Not sure	Not sure	Relevant	Adequate	Appropriate	+
Cooper 2005	Appropriate	Clear	Defensible	Not sure	Unclear	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Appropriate	++
Downing 2005	Appropriate	Clear	Not sure	Not sure	Not sure	Unclear	Not sure	Rigorous	Rich	Not sure	Credible	Relevant	Adequate	Appropriate	+
Finlinson 2000	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Appropriate	++
Grund 1992	Appropriate	Unclear	Not sure	Not sure	Clear	Clear	Not sure	Not sure	Not sure	Not sure	Not sure	Relevant	Not sure	Not sure	+
Hay 2001	Appropriate	Clear	Not sure	Not sure	Unclear	Not sure	Not sure	Not sure	Poor	Not sure	Not sure	Relevant	Inadequate	Not sure	-
Jacob 2000	Appropriate	Clear	Not sure	Appropriate	Clear	Clear	Reliable	Not sure	Rich	Not sure	Credible	Relevant	Adequate	Appropriate	+
Junge 2000	Inappropriate	Clear	Defensible	Appropriate	Clear	Clear	Unreliable	Not sure	Not sure	Not sure	Credible	Relevant	Adequate	Not sure	-
Kelley 2005	Appropriate	Clear	Defensible	Not sure	Unclear	Clear	Reliable	Not sure	Rich	Not sure	Credible	Relevant	Adequate	Not sure	+
Korner 2003	Appropriate	Clear	Defensible	Appropriate	N/A	Clear	Not sure	Rigorous	Rich	Not sure	Credible	Relevant	Adequate	N/A	+
Larkins 2000	Appropriate	Unclear	Defensible	Not sure	Not sure	Not sure	Not sure	Not sure	Not sure	Not sure	Not sure	Not sure	Not sure	Not sure	-
Lawrie 2005	Appropriate	Clear	Defensible	Appropriate	Not sure	Clear	Reliable	Not rigorous	Rich	Reliable	Credible	Relevant	Adequate	Not sure	+
Lewis 1996	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Not sure	Rigorous	Not sure	Not sure	Credible	Relevant	Adequate	Appropriate	+
Long 2004	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Appropriate	++
Matheson 1998	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Appropriate	++
Matheson 1999	Appropriate	Clear	Defensible	Appropriate	Not sure	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Not sure	++
Miller 2001	Appropriate	Clear	Defensible	Appropriate	Unclear	Clear	Reliable	Rigorous	Rich	Not sure	Credible	Relevant	Adequate	Not sure	+
Moore 1995	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Appropriate	++
Murphy 2004	Appropriate	Unclear	Defensible	Appropriate	Clear	Not sure	Not sure	Not sure	Rich	Not sure	Credible	Relevant	Adequate	Appropriate	+

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Neale 1998	Appropriate	Clear	Not sure	Not sure	Unclear	Unclear	Not sure	Rigorous	Poor	Not sure	Credible	Relevant	Adequate	Not sure	+
Phillips 2007	Not sure	Clear	Not sure	Appropriate	Not sure	Clear	Reliable	Rigorous	Not sure	Reliable	Credible	Relevant	Adequate	Appropriate	+
Porter 2002	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Not sure	++
Power 1996	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Appropriate	++
Rhodes 2007	Appropriate	Clear	Defensible	Not sure	Clear	Not sure	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Appropriate	+
Shaw 2006	Appropriate	Clear	Indefensible	Not sure	Unclear	Unclear	Not sure	Not rigorous	Rich	Not sure	Not sure	Relevant	Adequate	Not sure	+
Singer 1995	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Not sure	Rich	Not sure	Credible	Relevant	Adequate	Appropriate	+
Somlai 1999	Appropriate	Clear	Indefensible	Not sure	Not sure	Not sure	Not sure	Not sure	Poor	Not sure	Not credible	Relevant	Not sure	Inappropriate	-
Snead 2003	Appropriate	Clear	Not sure	Appropriate	Clear	Clear	Not sure	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Not sure	+
Spittal 2003	Appropriate	Clear	Defensible	Appropriate	Not sure	Clear	Reliable	Rigorous	Rich	Not sure	Credible	Relevant	Adequate	Appropriate	+
Springer 1999	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Rich	Not sure	Credible	Relevant	Adequate	Not sure	++
Strenski 2000	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Appropriate	++
Strike 2002a	Appropriate	Clear	Defensible	Appropriate	Clear	Clear	Reliable	Rigorous	Poor	Reliable	Credible	Relevant	Adequate	Appropriate	+
Strike 2002b	Appropriate	Clear	Defensible	Not sure	Not sure	Clear	Not sure	Not sure	Rich	Not sure	Not sure	Relevant	Not sure	Not sure	+
Strike 2004	Appropriate	Clear	Defensible	Not sure	Not sure	Clear	Reliable	Rigorous	Rich	Not sure	Credible	Relevant	Adequate	Not sure	+
Strike 2005	Appropriate	Clear	Defensible	Not sure	Not sure	Not sure	Reliable	Rigorous	Rich	Reliable	Credible	Relevant	Adequate	Not sure	+
Tempalski 2007	Appropriate	Clear	Defensible	Not sure	Clear	Clear	Reliable	Not sure	Rich	Not sure	Credible	Relevant	Adequate	Not sure	+
Voytek 2003	Appropriate	Clear	Not sure	Not sure	Not sure	Clear	Not sure	Rigorous	Rich	Not sure	Credible	Relevant	Adequate	Not sure	+
Weiker 1999	Appropriate	Clear	Not sure	Not sure	Clear	Not sure	Reliable	Not sure	Poor	Not sure	Not sure	Relevant	Inadequate	Not sure	-

APPENDIX D: Search Strategies

Databases and search strategies CSA interface

1. **MEDLINE** (171,423), **ERIC** (1152), **ASSIA** (4967), **Sociological Abstracts** (2944) from (1990-2008) **180, 486** including duplicates (English only) date searched 31/01/2008
((incidence or prevalence or low* or reduc* or prevent* or decreas*) within 5 (HIV or hepatitis or HCV or HBV or blood-borne or BBV or transmission or infection* or virus* or bacteria* or viral or morbidity or mortality or death* or overdose* or seroconversion or seroprevalence))
2. **MEDLINE** (385,710), **ERIC** (709), **ASSIA** (5549), **Sociological Abstracts** (2368) from (1990-2008) **394,336** including duplicates (English only) date searched 31/01/2008
DE=HIV or DE=hepatitis C or DE=hepatitis B or DE=morbidity or DE=mortality or DE=blood-borne pathogen* or DE=infect* or DE=bacterial infect* or DE=virus disease*
3. **MEDLINE** (657,456), **ERIC** (3183), **ASSIA** (16036), **Sociological Abstracts** (7595) from (1990-2008) **684,270** including duplicates (English only) date searched 31/01/2008
KW=HIV or KW=hepatitis C or KW=hepatitis B or KW=morbidity or KW=mortality or KW=blood-borne pathogen* or KW=infect* or KW=bacterial infect* or KW=virus disease*
4. **MEDLINE** (22,952), **ERIC** (128), **ASSIA** (1167), **Sociological Abstracts** (460) from (1990-2008) **24,707** including duplicates (English only) date searched 31/01/2008
((low* or reduc* or prevent* or decreas* or chang*) within 5 inject*) or ((high* or increas* or improve* or encourag* or promot*) within 5 safe* inject*) or (risk reduction behavi*r or risk reduction behavi*rs) or ((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (behavi*r or behavi*rs or practic* or pattern*)) or ((needle* or syringe* or inject*) within 3 (frequenc* or cessation)) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) within 3 shar*) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) within 3 (reusing or reuse* or return*)) or (DE=needle sharing or DE=risk-taking)
5. **MEDLINE** (182), **ERIC** (6), **ASSIA** (25), **Sociological Abstracts** (14) from (1990-2008) **227** including duplicates (English only) date 31/01/2008
((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) within 3 (less or more or incidence* or prevalence* or low* or increase* or decreas* or number* or percentage* or proportion* or frequenc* or rate*))
6. **MEDLINE** (8012), **ERIC** (1230), **ASSIA** (979), **Sociological Abstracts** (575) from (1990-2008) **10798** including duplicates (English only) date 31/01/2008
KW=(needle sharing) or KW=(risk-taking)
7. **Combination of #6 and new terms**
MEDLINE (24650), **ERIC** (6502), **ASSIA** (3395), **Sociological Abstracts** (2064) from (1990-2008) **36611** including duplicates (English only) date 31/01/2008
((utili?ation or attend* or visit*) within 5 (service* or program* or facilit* or cent??? or site* or number* or frequenc* or percent* or proportion* or low* or more* or increase* or decrease*)) or (rate within 2 (relaps* or stop* or cessation)) or (inject* others) or

((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) within 3 (less or more or incidence* or prevalence* or low* or increase* or decreas* or number* or percentage* or proportion* or frequenc* or rate*)) or (KW=risk-taking or KW=needle sharing)

Combination of #1 or #3

8. **MEDLINE** (683,621), **ERIC** (3344), **ASSIA** (16609), **Sociological Abstracts** (8254) from (1990-2008) **711,828** including duplicates (English only) date 01/02/2008 (KW=HIV or KW=hepatitis C or KW=hepatitis B or KW=morbidity or KW=mortality or KW=blood-borne pathogen* or KW=infect* or KW=bacterial infect* or KW=virus disease*) or ((incidence or prevalence or low* or reduc* or prevent* or decreas*) within 5 (HIV or hepatitis or HCV or HBV or blood-borne or BBV or transmission or infection* or virus* or bacteria* or viral or morbidity or mortality or death* or overdose* or seroconversion or seroprevalence))

Combination of #4, #5, #7 or #8

9. **MEDLINE** (713,068), **ERIC** (9716), **ASSIA** (19652), **Sociological Abstracts** (10109) from (1990-2008) **752,545** including duplicates (English only) date 01/02/2008 (((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) within 3 (less or more or incidence* or prevalence* or low* or increase* or decreas* or number* or percentage* or proportion* or frequenc* or rate*)) or (((low* or reduc* or prevent* or decreas* or chang*) within 5 inject*) or ((high* or increas* or improve* or encourag* or promot*) within 5 safe* inject*) or (risk reduction behavi*r or risk reduction behavi*rs) or ((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (behavi*r or behavi*rs or practic* or pattern*)) or ((needle* or syringe* or inject*) within 3 (frequenc* or cessation)) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) within 3 shar*) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) within 3 (reusing or reuse* or return*)) or (DE=needle sharing or DE=risk-taking))) or (((utili?ation or attend* or visit*) within 5 (service* or program* or facilit* or cent??? or site* or number* or frequenc* or percent* or proportion* or low* or more* or increase* or decrease*)) or (rate within 2 (relaps* or stop* or cessation)) or (inject* others) or ((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) within 3 (less or more or incidence* or prevalence* or low* or increase* or decreas* or number* or percentage* or proportion* or frequenc* or rate*)) or (KW=risk-taking or KW=needle sharing)) or ((KW=HIV or KW=hepatitis C or KW=hepatitis B or KW=morbidity or KW=mortality or KW=blood-borne pathogen* or KW=infect* or KW=bacterial infect* or KW=virus disease*) or ((incidence or prevalence or low* or reduc* or prevent* or decreas*) within 5 (HIV or hepatitis or HCV or HBV or blood-borne or BBV or transmission or infection* or virus* or bacteria* or viral or morbidity or mortality or death* or overdose* or seroconversion or seroprevalence))))
10. **MEDLINE** (77403), **ERIC** (6695), **ASSIA** (1423), **Sociological Abstracts** (757) from (1990-2008) **86278** including duplicates (English only) date 01/02/2008 (((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 (suppl* or access* or provision* or provid* or distribut* or dispens* or program* or service* or cent??? or cent?? or scheme* or area* or prison* or site* or facilities or facility or pharmacy or pharmacies or unit or units)) or ((needle* or syring* or inject* or paraphernalia* or equipment*) within 3 (steril* or equipment* or bleach* or disinfectant* or disinfect* or citric acid*)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 exchang*)) or (((NSEP or NEP or NEPs or NSP or NSPs or NSEPs or needle exchange scheme*) or (KW=needle-exchange program*)) or (KW=syringe exchange program*))

11. **MEDLINE** (8831), **ERIC** (591), **ASSIA** (974), **Sociological Abstracts** (587) from (1990-2008) **10983** including duplicates (English only) date searched 04/02/2008
 (((((KW=dispensing machine* or KW=vending machine* or substance abuse treatment center* or substance abuse treatment centre*) or ((needle* or syringe* or injections* or paraphernalia* or equipment*) within 3 (pack? or packet* or package*))) or (shooting galler* or harm reduc* or KW=harm reduction)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 (safe* or steril*))) or (drug-use within 5 (room* or facility or facilities or center* or centre* or service* or program* or scheme* or site* or area* or place or places))) or ((needle* or syringe* or injections* or paraphernalia* or equipment*) within 3 (pack? or packet* or package*)))
12. **Combination of #10 or #11**
MEDLINE (80912), **ERIC** (7017), **ASSIA** (2126), **Sociological Abstracts** (1227) from (1990-2008) **91282** including duplicates (English only) date searched 04/02/2008
 ((((((KW=dispensing machine* or KW=vending machine* or substance abuse treatment center* or substance abuse treatment centre*) or ((needle* or syringe* or injections* or paraphernalia* or equipment*) within 3 (pack? or packet* or package*))) or (shooting galler* or harm reduc* or KW=harm reduction)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 (safe* or steril*))) or (drug-use within 5 (room* or facility or facilities or center* or centre* or service* or program* or scheme* or site* or area* or place or places))) or ((needle* or syringe* or injections* or paraphernalia* or equipment*) within 3 (pack? or packet* or package*))) or (((((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 (suppl* or access* or provision* or provid* or distribut* or dispens* or program* or service* or cent??? or cent?? or scheme* or area* or prison* or site* or facilities or facility or pharmacy or pharmacies or unit or units)) or ((needle* or syring* or inject* or paraphernalia* or equipment*) within 3 (steril* or equipment* or bleach* or disinfectant* or disinfect* or citric acid*))) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 exchang*)) or (((NSEP or NEP or NEPs or NSP or NSPs or NSEPs or needle exchange scheme*) or (KW=needle-exchange program*)) or (KW=syringe exchange program*)))
13. **MEDLINE** (28697), **ERIC** (329), **ASSIA** (2373), **Sociological Abstracts** (1208) from (1990-2008) **32607** including duplicates (English only) date searched 04/02/2008
 ((needle* or syring* or inject* or paraphernalia* or equipment*) within 3 (sharer* or sharing)) or ((opioid* or morphine or heroin or opiate or cocaine or steroid* or PIED* or methadone) within 3 (abuse or misuse or dependen* or use* or usage or addict* or inject* or intravenous*))
14. **MEDLINE** (254,600), **ERIC** (7542), **ASSIA** (14721), **Sociological Abstracts** (10611) from (1990-2008) **287474** including duplicates (English only) date searched 04/02/2008
 (KW=substance abuse or KW=heroin dependence or KW=morphine dependence or KW=substance-related disorder* or KW=street drug* or KW=opioid-related disorder* or KW=cocaine-related disorder* or KW=anabolic agent* or KW=steroid* or KW=illicit drug* or KW=illicit substance*) or ((substance* or drug* or stimulant*) within 3 (abuse or misuse or dependen* or use* or usage or addict* or inject* or intravenous*))
15. **Combination of #13 or #14**
MEDLINE (258,719), **ERIC** (7568), **ASSIA** (15086), **Sociological Abstracts** (10686) from (1990-2008) **292,059** including duplicates (English only) date searched 04/02/2008
 ((KW=substance abuse or KW=heroin dependence or KW=morphine dependence or KW=substance-related disorder* or KW=street drug* or KW=opioid-related disorder* or KW=cocaine-related disorder* or KW=anabolic agent* or KW=steroid* or KW=illicit

drug* or KW=illicit substance*) or ((substance* or drug* or stimulant*) within 3 (abuse or misuse or dependen* or use* or usage or addict* or inject* or intravenous*)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 (sharer* or sharing)) or ((opioid* or morphine or heroin or opiate or cocaine or steroid* or PIED* or methadone) within 3 (abuse or misuse or dependen* or use* or usage or addict* or inject* or intravenous*))

16. **MEDLINE** (27497), **ERIC** (3768), **ASSIA** (1504), **Sociological Abstracts** (1658) from (1990-2008) **34429** including duplicates (English only) date searched 04/02/2008 ((needle exchange program* or syringe exchange or needle syringe program*) within 5 (experience* or understand* or participat* or user* or involv* or motivat* or accept* or access*)) or (knowledge within 3 (attitude* or behavi*r or belief*))
17. **MEDLINE** (890,877), **ERIC** (312,954), **ASSIA** (129,367), **Sociological Abstracts** (142,315) from (1990-2008) **1,475,513** including duplicates (English only) date searched 04/02/2008
KW=perception or KW=experience* or KW=understand* or KW=neighbourhood* or KW=family or KW=carer* or KW=communit* or KW=school* or KW=comission* or KW=network* or KW=participat*
18. **MEDLINE** (47623), **ERIC** (39096), **ASSIA** (5771), **Sociological Abstracts** (7890) from (1990-2008) **100,380** including duplicates (English only) date searched 05/02/2008 ((percept* or effect* or accept* or access* or collabor*) within 3 (NSP* or needle exchange scheme* or NEP* or NSEP* opiate substitution therap*) near (communit* or local council* or school* or local media or national media or voluntary sector*)) or ((percept* or effect* or accept* or access* or collabor*) near (NSP* or needle exchange scheme* or OST* or opiate substitution therap* or communit* or local council* or school* or voluntary sector*))

Combination of #16 or #17 or #18

19. **MEDLINE** (928,259), **ERIC** (313,745), **ASSIA** (130,217), **Sociological Abstracts** (143,429) from (1990-2008) **1,515,640** including duplicates (English only) date searched 05/02/2008
(KW=perception or KW=experience* or KW=understand* or KW=neighbourhood* or KW=family or KW=carer* or KW=communit* or KW=school* or KW=comission* or KW=network* or KW=participat*) or (((needle exchange program* or syringe exchange or needle syringe program*) within 5 (experience* or understand* or participat* or user* or involv* or motivat* or accept* or access*)) or (knowledge within 3 (attitude* or behavi*r or belief*)) or (((percept* or effect* or accept* or access* or collabor*) within 3 (NSP* or needle exchange scheme* or NEP* or NSEP* opiate substitution therap*) near (communit* or local council* or school* or local media or national media or voluntary sector*)) or ((percept* or effect* or accept* or access* or collabor*) near (NSP* or needle exchange scheme* or OST* or opiate substitution therap* or communit* or local council* or school* or voluntary sector*))))
20. **MEDLINE** (859,460), **ERIC** (93021), **ASSIA** (52684), **Sociological Abstracts** (64440) from (1990-2008) **1,069,605** including duplicates (English only) date searched 05/02/2008
KW=phenomenon* or KW=grounded theor* or KW=constructionist* or KW=thematic analysis or KW=observation study or KW=survey* or KW=demonstration project* or KW=stakeholder* or KW=contribution or KW=consultation or KW=value* or KW=distribution

21. Combination of #19 or #20

MEDLINE (1,595,473), **ERIC** (341,251), **ASSIA** (160,765), **Sociological Abstracts** (173,097) from (1990-2008) **2,270,586** including duplicates (English only) date searched 05/02/2008

((KW=perception or KW=experience* or KW=understand* or KW=neighbourhood* or KW=family or KW=carer* or KW=communit* or KW=school* or KW=comission* or KW=network* or KW=participat*) or (((needle exchange program* or syringe exchange or needle syringe program*) within 5 (experience* or understand* or participat* or user* or involv* or motivat* or accept* or access*)) or (knowledge within 3 (attitude* or behavi*r or belief*))) or (((percept* or effect* or accept* or access* or collabor*) within 3 (NSP* or needle exchange scheme* or NEP* or NSEP* opiate substitution therap*) near (communit* or local council* or school* or local media or national media or voluntary sector*)) or ((percept* or effect* or accept* or access* or collabor*) near (NSP* or needle exchange scheme* or OST* or opiate substitution therap* or communit* or local council* or school* or voluntary sector*)))) or (KW=phenomenon* or KW=grounded theor* or KW=constructionist* or KW=thematic analysis or KW=observation study or KW=survey* or KW=demonstration project* or KW=stakeholder* or KW=contribution or KW=consultation or KW=value* or KW=distribution)

22. Combination of #21 and #15 and #12 and #9

MEDLINE (1355), **ERIC** (35), **ASSIA** (306), **Sociological Abstracts** (214) from (1990-2008) **1910** including duplicates (English only) date searched 18/02/2008

((((KW=substance abuse or KW=heroin dependence or KW=morphine dependence or KW=substance-related disorder* or KW=street drug* or KW=opioid-related disorder* or KW=cocaine-related disorder* or KW=anabolic agent* or KW=steroid* or KW=illicit drug* or KW=illicit substance*) or ((substance* or drug* or stimulant*) within 3 (abuse or misuse or dependen* or use* or usage or addict* or inject* or intravenous*)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 (sharer* or sharing)) or ((opioid* or morphine or heroin or opiate or cocaine or steroid* or PIED* or methadone) within 3 (abuse or misuse or dependen* or use* or usage or addict* or inject* or intravenous*)))) and (((KW=perception or KW=experience* or KW=understand* or KW=neighbourhood* or KW=family or KW=carer* or KW=communit* or KW=school* or KW=comission* or KW=network* or KW=participat*) or (((needle exchange program* or syringe exchange or needle syringe program*) within 5 (experience* or understand* or participat* or user* or involv* or motivat* or accept* or access*)) or (knowledge within 3 (attitude* or behavi*r or belief*))) or (((percept* or effect* or accept* or access* or collabor*) within 3 (NSP* or needle exchange scheme* or NEP* or NSEP* opiate substitution therap*) near (communit* or local council* or school* or local media or national media or voluntary sector*)) or ((percept* or effect* or accept* or access* or collabor*) near (NSP* or needle exchange scheme* or OST* or opiate substitution therap* or communit* or local council* or school* or voluntary sector*)))) or (KW=phenomenon* or KW=grounded theor* or KW=constructionist* or KW=thematic analysis or KW=observation study or KW=survey* or KW=demonstration project* or KW=stakeholder* or KW=contribution or KW=consultation or KW=value* or KW=distribution))) and (((((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) within 3 (less or more or incidence* or prevalence* or low* or increase* or decreas* or number* or percentage* or proportion* or frequenc* or rate*)) or (((low* or reduc* or prevent* or decreas* or chang*) within 5 inject*) or ((high* or increas* or improve* or encourag* or promot*) within 5 safe* inject*) or (risk reduction behavi*r or risk reduction behavi*rs) or ((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (behavi*r or behavi*rs or practic* or pattern*)) or ((needle* or syringe* or inject*) within 3 (frequenc* or cessation)) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) within 3 shar*) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) within 3 (reusing or

reuse* or return*) or (DE=needle sharing or DE=risk-taking))) or (((utili?ation or attend* or visit*) within 5 (service* or program* or facilit* or cent??? or site* or number* or frequenc* or percent* or proportion* or low* or more* or increase* or decrease*)) or (rate within 2 (relaps* or stop* or cessation)) or (inject* others) or ((needle* or syringe* or inject* or paraphernalia or equipment*) within 3 (exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) within 3 (less or more or incidence* or prevalence* or low* or increase* or decreas* or number* or percentage* or proportion* or frequenc* or rate*)) or (KW=risk-taking or KW=needle sharing)) or ((KW=HIV or KW=hepatitis C or KW=hepatitis B or KW=morbidity or KW=mortality or KW=blood-borne pathogen* or KW=infect* or KW=bacterial infect* or KW=virus disease*) or ((incidence or prevalence or low* or reduc* or prevent* or decreas*) within 5 (HIV or hepatitis or HCV or HBV or blood-borne or BBV or transmission or infection* or virus* or bacteria* or viral or morbidity or mortality or death* or overdose* or seroconversion or seroprevalence)))) and ((((((KW=dispensing machine* or KW=vending machine* or substance abuse treatment center* or substance abuse treatment centre*) or ((needle* or syringe* or injections* or paraphernalia* or equipment*) within 3 (pack? or packet* or package*)) or (shooting galler* or harm reduc* or KW=harm reduction)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 (safe* or steril*)) or (drug-use within 5 (room* or facility or facilities or center* or centre* or service* or program* or scheme* or site* or area* or place or places)) or ((needle* or syringe* or injections* or paraphernalia* or equipment*) within 3 (pack? or packet* or package*)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 (suppl* or access* or provision* or provid* or distribut* or dispens* or program* or service* or cent??? or cent?? or scheme* or area* or prison* or site* or facilities or facility or pharmacy or pharmacies or unit or units)) or ((needle* or syring* or inject* or paraphernalia* or equipment*) within 3 (steril* or equipment* or bleach* or disinfectant* or disinfect* or citric acid*)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) within 3 exchang*)) or (((NSEP or NEP or NEPs or NSP or NSPs or NSEPs or needle exchange scheme*) or (KW=needle-exchange program*)) or (KW=syringe exchange program*)))))

Web of Knowledge/SSCI

1. TS=HIV or TS=hepatitis C or TS=hepatitis B or TS=morbidity or TS=mortality or TS=blood-borne pathogen* or TS=infect* or TS=bacterial infect* or TS=virus disease*
Databases=SCI-EXPANDED, SSCI Time span=1990-2008
2. TS=((incidence or prevalence or low* or reduc* or prevent* or decreas*) SAME TS=(HIV or hepatitis or HCV or HBV or blood-borne or BBV or transmission or infection* or virus* or bacteria* or viral or morbidity or mortality or death* or overdose* or seroconversion or seroprevalence))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008
3. TS=((low* or reduc* or prevent* or decreas* or chang*) SAME inject*) or TS=((high* or increas* or improve* or encourag* or promot*) SAME safe* inject*) or TS=(risk reduction behavi*r or risk reduction behavi*rs) or TS=((needle* or syringe* or inject* or paraphernalia or equipment*) SAME TS=(behavi*r or behavi*rs or practic* or pattern*)) or TS=((needle* or syringe* or inject*) SAME (frequenc* or cessation)) or TS=((needle* or Syringe* or inject* or paraphernalia or equipment*) SAME shar*) or TS=((needle* or Syringe* or inject* or paraphernalia or equipment*) SAME (reusing or reuse* or return*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 78,833
4. TS=risk-taking or TS=needle sharing
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results >100000

5. TS=(rate SAME (relapse* or stop* or cessation))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 7738
6. TS=inject* others
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 2830
7. TS=((utili?ation* or attendanc* or attending or visit*) SAME TS=(service* or program* or facility or facilities or centre* or center* or site* or number* or frequenc* or percentage* or proportion* or low* or more* or increas* or decreas*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 51130
8. TS=((needle* or syringe* or inject* or paraphernalia or equipment) SAME TS=(exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) SAME TS=(less or more or incidence* or prevalence* or low* or increase* or decreas* or number* NOT numbering or percentage* or proportion* or frequency or rate*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 4050
9. #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results >100000
10. TS=Needle-Exchange Program* or TS=(NSP or NEP or NSEP or NSPs or NEPs or NSEPs)
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 3803
11. TS=((needle* or syringe* or inject* or paraphernalia or equipment) SAME exchang*)
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 2602
12. TS=((needle* or syringe* or inject* or paraphernalia* or equipment*) SAME TS=(supply* or access* or provision or provid* or distribut* or dispens* or program* or service* or centre* or scheme* or center* or site* or facilities or facility or scheme* or area* or prison* or pharmacy or pharmacies or unit or units))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 52135
13. TS=((needle* or syringe* or inject* or paraphernalia* or equipment*) SAME TS=(steril* or equipment* or bleach* or disinfectant* or disinfect* or citric acid*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 60848
14. TS=((needle* or syringe* or injection* or paraphernalia or equipment*) SAME pack*)
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 1643
15. TS=(dispensing machine* or vending machine* or "Substance Abuse Treatment Center*")
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 295
16. TS=(drug consumption SAME TS=(room* or facility or facilities or centre* or center* or service* or area* or site*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 273
17. TS=(drug-use SAME TS=(room* or facility or facilities or centre* or center* or service* or program* or scheme* or site* or area*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 1643
18. TS=((needle* or syringe* or inject* or paraphernalia* or equipment*) SAME TS=(safe* or steril*))

Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 7702

19. TS=(shooting galler* or harm reduc* or "harm reduction")
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 3391
20. #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results >100000
21. TS=((substance* or drug* or stimulant*) SAME TS=(abuse or misuse or dependen* or use or usage or addict* or inject* or intravenous*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results >100000
22. TS=((opioid* or morphine or heroin or opiate or cocaine or steroid* or PIED* or methadone) SAME TS=(abuse or misuse or dependen* or use or uses or usage or addict* or inject* or intravenous*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 40283
23. TS=((needle* or syringe* or inject* or paraphernalia* or equipment*) SAME sharer*)
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 17
24. TS=("Heroin Dependence" or "Morphine Dependence" or "Substance-Related Disorder*" or "Street Drug*" or "illicit drug*" or "Opioid-Related Disorder*" or "Cocaine-Related Disorder*" or "anabolic agent*" or "steroid*" or "substance abuse")
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results >100000
25. #21 or #22 or #23 or #24
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results >100000
26. TS=(phenomenon* or grounded theor* or constructionist* or "thematic analysis" or "observation study" or survey* or "demonstration project*" or stakeholder* or contribution or consultation or value* or distribution or ethnograph* or user* or belief or network* or attitude* or Family or families or school* or commission* or collaboration* or knowledge or experience* or motivation or access or behavior* or communit* or involvement or "qualitative studies" or "qualitative research" or Interview* NOT interviewer or perception or understanding or neighbourhood* or participat* or media)
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results >100000
27. TS=((needle exchange program* or syringe exchange or needle syringe program*) SAME TS=(experience* or understand* or participat* or user* or involv* or motivat* or accept* or access*)) or TS=(knowledge SAME TS=(attitude* or behavior* or belief*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 16065
28. TS=((percept* or effect* or accept* or access* or collabor*) SAME TS=(NSP* or needle exchange scheme* or NEP* or NSEP* opiate substitution therap*) SAME TS=(communit* or local council* or school* or local media or national media or voluntary sector*)) or TS=((percept* or effect* or accept* or access* or collabor*) SAME TS=(NSP* or needle exchange scheme* or OST* or opiate substitution therap* or communit* or local council* or school* or voluntary sector*))
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 62045
29. #26 OR #27 OR #28
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results >100000
30. #9 AND #20 AND #25
Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 results 4910

31. #29 AND #30 AND LANGUAGE= ENGLISH

Databases=SCI-EXPANDED, SSCI Timespan=1990-2008 limited to English 3690

**Web SPIRS OVID
IBSS**

1. (incidence or prevalence or low* or reduc* or prevent* or decreas*) near5 (HIV or hepatitis or HCV or HBV or blood-borne or BBV or transmission or infection* or virus* or bacteria* or viral or morbidity or mortality or death* or overdose* or seroconversion or seroprevalence) **date searched 18/02/08 results 1610**
2. ((HIV) in DE)or((Hepatitis C or Hepatitis B) in DE)or((Morbidity or mortality) in DE) **Date searched 18/02/08 results 9510**
3. ((Infect*) in DE)or((Bacterial infection*) in DE)or((virus disease*) in DE) **Date searched 18/02/08 results 3**
4. (((low* or reduc* or prevent* or decreas* or chang*) near5 inject*) or ((high* or increas* or improve* or encourag* or promot*) near5 safe* inject*) or (risk reduction behavi*r or risk reduction behavi*rs) or ((needle* or syringe* or inject* or paraphernalia or equipment*) near3 (behavi*r or behavi*rs or practic* or pattern*)) or ((needle* or syringe* or inject*) near3 (frequenc* or cessation)) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) near3 shar*) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) near3 (reusing or reuse* or return*)))or((needle sharing) in DE)or((risk taking) in DE) **Date 18/02/08 results 236**
5. (needle* or syringe* or inject* or paraphernalia or equipment*) near3 (exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) near3 (less or more or incidence* or prevalence* or low* or increase* or decreas* or number* or percentage* or proportion* or frequenc* or rate*) **Date 18/02/08 results 5**
6. ((utili?ation or attend* or visit*) near5 (service* or program* or facilit* or cent??? or site* or number* or frequenc* or percent* or proportion* or low* or more* or increase* or decrease*)) or (rate near2 (relaps* or stop* or cessation)) or (inject* others) or ((needle* or syringe* or inject* or paraphernalia or equipment*) near3 (exchange* or suppl* or provide* or distrib* or provision or access* or dispens*) near3 (less or more or incidence* or prevalence* or low* or increase* or decreas* or number* or percentage* or proportion* or frequenc* or rate*)) **Date 18/02/08 results 1279**
7. (#1 or #2 or #3 or #4 or #5 or #6) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008) **Date 19/02/08 results 9746**
 ((((Infect*) in DE)or((Bacterial infection*) in DE)or((virus disease*) in DE)) or ((((HIV) in DE)or((Hepatitis C or Hepatitis B) in DE)or((Morbidity or mortality) in DE)) or ((incidence or prevalence or low* or reduc* or prevent* or decreas*) near5 (HIV or hepatitis or HCV or HBV or blood-borne or BBV or transmission or infection* or virus* or bacteria* or viral or morbidity or mortality or death* or overdose* or seroconversion or seroprevalence)))) or ((((low* or reduc* or prevent* or decreas* or chang*) near5 inject*) or ((high* or increas* or improve* or encourag* or promot*) near5 safe* inject*) or (risk reduction behavi*r or risk reduction behavi*rs) or ((needle* or syringe* or inject* or paraphernalia or equipment*) near3 (behavi*r or behavi*rs or practic* or pattern*)) or ((needle* or syringe* or inject*) near3 (frequenc* or cessation)) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) near3 shar*) or ((needle* or Syringe* or inject* or paraphernalia or equipment*) near3 (reusing or reuse* or return*)))or((needle sharing) in DE)or((risk taking) in DE))

8. (NSEP or NEP or NEPs or NSP or NSPs or NSEPs or needle exchange scheme*) or ((((needle-exchange program*) in DE)or((syringe exchange program*) in DE)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 exchange*) or (((needle* or syring* or inject* or paraphernalia* or equipment*) near3 (steril* or equipment* or bleach* or disinfectant* or disinfect* or citric acid*)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 (suppl* or access* or provision* or provid* or distribut* or dispens* or program* or service* or cent??? or cent?? or scheme* or area* or prison* or site* or facilities or facility or pharmacy or pharmacies or unit or units)))))) **Date 19/02/08 results 1764**
9. (drug consumption near5 (room* or facility or facilities or center* or centre* or service* or area* or site*)) or ((((substance abuse treatment center* or substance abuse treatment centre*) in DE)or((harm reduction) in DE)or(shooting galler* or harm reduc* or dispensing machine* or vending machine*)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 (safe* or steril*)) or ((drug-use near5 (room* or facility or facilities or center* or centre* or service* or program* or scheme* or site* or area* or place or places)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 (pack? or packet* or package*)))))) **Date 19/02/08 results 227**
10. ((((((needle* or syring* or inject* or paraphernalia* or equipment*) near3 (sharer* or sharing)) or ((opioid* or morphine or heroin or opiate or cocaine or steroid* or PIED* or methadone) near3 (abuse or misuse or dependen* or use* or usage or addict* or inject* or intravenous*))) or (((substance abuse or drug abuse) in DE)or((heroin dependence or morphine dependence) in DE)or((substance-related disorder* or opioid-related disorder* or cocaine-related disorder* or street drug* or anabolic agent* or steroid*) in DE))) or ((substance* or drug* or stimulant*) near3 (abuse or misuse or dependen* or use* or usage or addict* or inject* or intravenous*))) or ((illicit drug* or illicit substance* or intravenous abuse) in DE)) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008) **Date 19/02/08 results 5129**
11. ((((perception* or experience* or understand* or neighbourhood* or family) in DE)or((Carer* or communit* or school* or comission* or network* or participat*) in DE)or((attitude* or access* or accept* or knowledge or behavio?r or user* or involv*) in DE)) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008)) or (((needle exchange program* or syringe exchange or needle syringe program*) near5 (experience* or understand* or participat* or user* or involv* or motivat* or accept* or access*)) or (knowledge near3 (attitude* or behavio?r or belief*))) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008))) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008) **Date 19/02/08 results 122662**
12. (((percept* or effect* or accept* or access* or collabor*) near3 (NSP* or needle exchange scheme* or NEP* or NSEP* opiate substitution therap*) near9 (communit* or local council* or school* or local media or national media or voluntary sector*)) or ((percept* or effect* or accept* or access* or collabor*) near9 (NSP* or needle exchange scheme* or OST* or opiate substitution therap* or communit* or local council* or school* or voluntary sector*))) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008) **Date 19/02/08 results 2518**
13. (((phenomenon* or grounded theor* or constructionist* or thematic analysis or observation study) in DE)or((survey* or demonstration project* or stakeholder*) in DE)or((contribut* or consult* or value* or distribut*) in DE)) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008) **date 19/02/08 results 25679**
14. #11 or #12 or #13

((((((perception* or experience* or understand* or neighbourhood* or family) in DE)or((Carer* or communit* or school* or comission* or network* or participat*) in DE)or((attitude* or access* or accept* or knowledge or behavio?r or user* or involv*) in DE)) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008)) or (((needle exchange program* or syringe exchange or needle syringe program*) near5 (experience* or understand* or participat* or user* or involv* or motivat* or accept* or access*)) or (knowledge near3 (attitude* or behavio?r or belief*)) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008))) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008)) or ((((phenomenon* or grounded theor* or constructionist* or thematic analysis or observation study) in DE)or((survey* or demonstration project* or stakeholder*) in DE)or((contribut* or consult* or value* or distribut*) in DE)) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008)) or (((percept* or effect* or accept* or access* or collabor*) near3 (NSP* or needle exchange scheme* or NEP* or NSEP* opiate substitution therap*) near9 (communit* or local council* or school* or local media or national media or voluntary sector*)) or ((percept* or effect* or accept* or access* or collabor*) near9 (NSP* or needle exchange scheme* or OST* or opiate substitution therap* or communit* or local council* or school* or voluntary sector*))) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008))) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008))) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008) **Date 19/02/08 results 144729**

15. #14 and #10 and (LA:IBSS = ENGLISH) and (PY:IBSS = 1990-2008) Date 19/02/08 results 1211

16. #15 and #9

((drug consumption near5 (room* or facility or facilities or center* or centre* or service* or area* or site*)) or ((((substance abuse treatment center* or substance abuse treatment centre*) in DE)or((harm reduction) in DE)or(shooting galler* or harm reduc* or dispensing machine* or vending machine*)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 (safe* or steril*)) or ((drug-use near5 (room* or facility or facilities or center* or centre* or service* or program* or scheme* or site* or area* or place or places)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 (pack? or packet* or package*)))))) and (#14 and #10) **Date 19/02/08 results 56.**

17. #15 and #8

((NSEP or NEP or NEPs or NSP or NSPs or NSEPs or needle exchange scheme*) or ((((needle-exchange program*) in DE)or((syringe exchange program*) in DE)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 exchang*) or (((needle* or syring* or inject* or paraphernalia* or equipment*) near3 (steril* or equipment* or bleach* or disinfectant* or disinfect* or citric acid*)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 (suppl* or access* or provision* or provid* or distribut* or dispens* or program* or service* or cent??? or cent?? or scheme* or area* or prison* or site* or facilities or facility or pharmacy or pharmacies or unit or units)))))) and (#14 and #10) **Date 19/02/08 results 70**

18. #16 and #7

((drug consumption near5 (room* or facility or facilities or center* or centre* or service* or area* or site*)) or ((((substance abuse treatment center* or substance abuse treatment centre*) in DE)or((harm reduction) in DE)or(shooting galler* or harm reduc* or dispensing machine* or vending machine*)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 (safe* or steril*)) or ((drug-use near5 (room* or facility or facilities or center* or centre* or service* or program* or scheme* or site* or area* or place or places)) or ((needle* or syringe* or inject* or paraphernalia* or

equipment*) near3 (pack? or packet* or package*)))))) and (#10 and #14)) and ((#7) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1900-2008)) **Date 19/02/08 results 38**

19. #17 and #7

((#7) and (LA:IBSS = ENGLISH) and (PY:IBSS = 1900-2008)) and (((NSEP or NEP or NEPs or NSP or NSPs or NSEPs or needle exchange scheme*) or ((((needle-exchange program*) in DE)or((syringe exchange program*) in DE)) or (((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 exchange*) or (((needle* or syring* or inject* or paraphernalia* or equipment*) near3 (steril* or equipment* or bleach* or disinfectant* or disinfect* or citric acid*)) or ((needle* or syringe* or inject* or paraphernalia* or equipment*) near3 (suppl* or access* or provision* or provid* or distribut* or dispens* or program* or service* or cent??? or cent?? or scheme* or area* or prison* or site* or facilities or facility or pharmacy or pharmacies or unit or units)))))) and (#10 and #14)) **Date 19/02/08 results 58**

CINAHL, International Bibliography of the Social Sciences, Ovid MEDLINE(R), PsycINFO

- 1 ((incidence or prevalence or low\$ or reduc\$ or prevent\$ or decreas\$) adj5 (HIV or hepatitis or HCV or HBV or blood-borne or blood borne or BBV or transmission or infection\$ or virus\$ or bacteria\$ or viral or morbidity or mortality or death\$ or overdose\$ or seroconversion or seroprevalence)).tw. (273807)
- 2 HIV/ (32582)
- 3 Hepatitis C/ or Hepatitis B/ (51970)
- 4 Morbidity/ or mortality/ (66411)
- 5 Blood-Borne Pathogens/ or bacterial infection/ or infection/ (83712)
- 6 HIV infections/ep, pc (35294)
- 7 virus diseases/ or viral diseases/ (28543)
- 8 ((low\$ or reduc\$ or prevent\$ or decreas\$ or chang\$) adj5 inject\$).tw. (27485)
- 9 ((high\$ or increas\$ or improve\$ or encourag\$ or promot\$) adj5 safe\$ inject\$).tw. (31)
- 10 "Risk Reduction Behavior"/ (1937)
- 11 (risk reduction behaviour\$ or risk reduction behavior\$).tw. (293)
- 12 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 (behaviour\$ or behavior\$ or practic\$ or pattern\$)).tw. (4976)
- 13 Risk-Taking/ or needle sharing/ (21889)
- 14 ((needle\$ or syringe\$ or inject\$) adj3 (frequenc\$ or cessation)).tw. (1270)
- 15 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 (sharing or share\$1)).tw. (2693)
- 16 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 (reusing or reuse\$ or return\$)).tw. (847)
- 17 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 (exchange\$ or suppl\$ or provide\$ or distrib\$ or provision or access\$ or dispens\$) adj3 (less or more or incidence\$ or prevalence\$ or low\$ or increas\$ or decreas\$ or number\$1 or percentage\$ or proportion\$ or frequency\$ or rate\$)).tw. (417)
- 18 inject\$ others.tw. (13)
- 19 (rate adj2 (relapse\$ or stop\$ or cessation)).tw. (5701)
- 20 ((utilisation or utilization or attendance\$ or attending or visit\$) adj5 (service\$ or program\$ or facility or facilities or centre\$ or center\$ or site\$ or number\$ or frequenc\$ or percentage\$ or proportion\$ or low\$ or more\$ or increas\$ or decreas\$)).tw. (55451)
- 21 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 (615207)
- 22 Needle-Exchange Programs/ (1572)
- 23 (NSP or NEP or NSEP or NSPs or NEPs or NSEPs or needle exchange scheme or syringe exchange program\$).tw. (3332)

- 24 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 exchange\$.tw. (1867)
- 25 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 (supply\$ or access\$ or provision or provid\$ or distribut\$ or dispens\$ or program\$ or service\$ or centre\$ or scheme\$ or center\$ or site\$1 or facilities or facility or scheme\$ or area\$ or prison\$ or pharmacy or pharmacies or unit or units)).tw. (22205)
- 26 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 (steril\$ or equipment\$ or bleach\$ or disinfectant\$ or disinfect\$1 or citric acid\$)).tw. (50761)
- 27 ((needle\$ or syringe\$ or injection\$ or paraphernalia\$ or equipment\$) adj3 pack\$1).tw. (17)
- 28 dispensing machine\$.tw. (51)
- 29 vending machine\$.tw. (351)
- 30 Substance Abuse Treatment Centers/ (2977)
- 31 (drug consumption adj5 (room\$ or facility or facilities or centre\$ or center\$ or service\$ or area\$ or site\$)).tw. (67)
- 32 (drug-use adj5 (room\$ or facility or facilities or centre\$ or center\$ or service\$ or program\$ or scheme\$ or site\$ or area\$)).tw. (1795)
- 33 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 (safe\$ or steril\$)).tw. (4258)
- 34 shooting galler\$.mp. or harm reduc\$.tw. [mp=ti, hw, ab, it, bt, ot, sh, gh, nm, tc, id] (2738)
- 35 harm reduction/ (1392)
- 36 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 (81486)
- 37 Substance Abuse, Intravenous/ (10130)
- 38 ((substance\$1 or drug\$1 or stimulant\$) adj3 (abuse or misuse or dependen\$ or use\$2 or usage or addict\$ or inject\$ or intravenous\$)).tw. (196637)
- 39 ((opiod\$ or morphine or heroin or opiate or cocaine or steroid\$ or PIED\$ or methadone) adj3 (abuse or misuse or dependen\$ or use\$2 or usage or addict\$ or inject\$ or intravenous\$)).tw. (47936)
- 40 Heroin Dependence/ or morphine dependence/ (9172)
- 41 Substance-Related Disorders/ (63026)
- 42 Street Drugs/ or anabolic agents/ (10695)
- 43 Opioid-Related Disorders/ or Cocaine-Related Disorders/ (8801)
- 44 steroids/ (25623)
- 45 illicit drugs/ (6155)
- 46 ((needle\$ or syringe\$ or inject\$ or paraphernalia\$ or equipment\$) adj3 sharer\$1).tw. (15)
- 47 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 (296639)
- 48 21 and 36 and 47 (4386)
- 49 ((needle exchange program* or syringe exchange or needle syringe program*) adj5 (experience* or understand* or participat* or user* or involv* or motivat* or accept* or access*)).mp. or (knowledge adj3 (attitude* or behavi*r or belief*)).tw. [mp=ti, hw, ab, it, bt, ot, sh, gh, nm, tc, id] (21300)
- 50 (((percept* or effect* or accept* or access* or collabor*) adj3 (NSP* or needle exchange scheme* or NEP* or NSEP* opiate substitution therap*) adj9 (communit* or local council* or school* or local media or national media or voluntary sector*)) or ((percept* or effect* or accept* or access* or collabor*) adj9 (NSP* or needle exchange scheme* or OST* or opiate substitution therap* or communit* or local council* or school* or voluntary sector*))).mp. [mp=ti, hw, ab, it, bt, ot, sh, gh, nm, tc, id] (80600)
- 51 (perception or experience\$ or understand\$ or neighbourhood\$ or family or families or carer\$ or communit\$ or school\$ or comission\$ or network\$ or participat\$).tw. (2699753)
- 52 (phenomeno\$ or grounded theor\$ or constructionist\$ or thematic analysis or observation study or observation studies or survey\$1 or demonstration project\$1 or stakeholder\$ or contribution or consultation or value\$ or distribution).tw. (2014057)

- 53 observation study/ or observation studies/ (0)
- 54 qualitative studies/ (22430)
- 55 grounded theory/ (5276)
- 56 thematic analysis/ (10856)
- 57 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 (4308836)
- 58 48 and 57 (2349)
- 59 limit 58 to english (2275)
- 60 limit 59 to yr="1900 - 2008" (2275)
- 61 from 60 keep 1-2000 (2000)

SOCIAL CARE ONLINE

1. @k=("HIV/AIDS ") or @k=("blood-borne pathogens ") or @k=("morbidity ") or @k=("mortality ") or @k=("bacterial infection* ") or @k=("virus disease* ") or @k=("hepatitis B ") or @k=("hepatitis C ") results 166
2. @k=("risk reduction behavior ") or @k=("risk taking ") or @k=("needle sharing ") or @p=("risk reduction behaviour* or risk reduction behavior* ") or @p=("inject* others ") or @p=("rate of relapse* or rate of stop* or rate of cessation ") results 0
3. @p=("needle* frequenc* or needle* cessation or syringe* frequenc* or syringe* cessation or inject* frequenc* or injection cessation ") results 0
4. @p=("needle* shar* or syringe* shar* or inject* shar* or paraphernalia* shar* or equipment* shar* ") results 0
5. @p=("needle* reusing or needle* return or syringe* reusing or syringe* return or inject* reusing or inject* return or paraphernalia* reusing or paraphernalia* return or equipment* reusing or equipment* return") results 0
6. @p=("needle* practic* or needle* pattern* or needle* behaviour* or needle* behavior or syringe* pattern* or syringe* practic* or syringe* behaviour* or syringe* behavior or inject* practic* or inject* pattern* or inject* behaviour* or inject* behavior* or paraphernalia* pattern* or paraphernalia* practic* or paraphernalia behavior* or equipment pattern* or equipment* practic*") results 0
7. @k=("needle exchange program* or needle syringe program* or syringe exchange program* or needle exchange scheme* or syringe exchange scheme* or needle syringe exchange program*") results 0
8. @p=("syringe exchange ") or @p=("needle exchange ") or @p.title=("syringe exchange ") or @p.title=("needle exchange ") or @p.title=("needle exchange program* ") or @p.title=("syringe exchange program* ") results 24
9. @p=("NSP or NSPs or NSEP or NSEPs or NEP or NEPs ") results 0
10. @p=("dispensing machine*") and @p=("vending machine*") and @k=("substance abuse treatment centers") results 0
11. @p=("needle* exchang* or syring* exchang* or inject* exchang* or paraphernalia* exchang* or equipment* exchang* ") results 0
12. @p=("drug consumption room* ") or @p=("drug consumption facilit* ") or @p=("drug consumption service* ") or @p=("drug consumption area* ") or @p=("drug consumption site* ") or @p=("drug consumption center* ") or @p=("drug consumption center* ") results 3
13. @p=("needle pack* ") or @p=("syringe pack* ") or @p=("injection pack* ") or @p=("equipment pack* ") or @p=("paraphernalia pack* ") results 0
14. @p=("needle* supply* or needle access* or needle distribut* or needle* or needle provid* or needle provision or needle* service* or needle* program* or needle scheme* or needle* center* or needle* centre* or needle pharmacy or needle pharmacies ") or @p=("syringe* supply* or syringe* access* or syringe* distribut* or syringe* provid* or syringe* provision* or syringe program* or syringe* service* or syringe* scheme* or syringe* pharmacy or syringe* pharmacies ") or @p=("inject* supply* or inject* access* or inject* provid* or inject* scheme* or inject* center* or inject* distribut* ") results 0

15. @p=("prison* or pharmacies or pharmacy ") results 0
16. @p=("drug-use room* or drug-use facility or drug-use facilities or drug-use center* or drug-use centre* or drug-use program* or drug-use service* or drug-use scheme* or drug-use site* or drug-use area* ") results 0
17. @p=("shooting galler* or harm reduc* ") or @k=("harm reduction ") results 0
18. (freetext="shooting galler*" or freetext="harm reduc*") or topic="harm reduction" or @p=("vending machine*") results 91
19. @p=("needle bleach*") or @p=("needle disinfect*") or @p=("needle steril*") or @p=("inject* bleach*") or @p=("inject* steril*") and @p=("inject* disinfect*") or @p=("equipment* bleach*") or @p=("equipment* disinfect*") or @p=("syringe* bleach*") or @p=("syringe* disinfect*") or @p=("syringe* steril*") results 0
20. @k=("heroin dependence ") or @k=("morphine dependence ") or @k=("street drugs ") or @k=("steroids ") or @k=("anabolic agents ") or @k=("substance related disorder ") or @k=("opioid related disorder ") or @k=("cocaine related disorder ") or @k=("substance abuse ") or @k=("intravenous drug abuse ") or @k=("injecting drug abuse ") results 0
21. (((title="heroin dependence " or title="substance abuse ") or title="cocaine related disorder ") or title="opioid related disorder ") or title="substance related disorder " results 243
22. @p.title=("substance misuse ") or @p.title=("substance abuse ") or @p.title=("drug abuse ") or @p.title=("drug misuse ") or @p.title=("drug dependen* ") or @p.title=("drug addict* ") or @p.title=("drug inject* ") or @p.title=("stimulant inject* ") or @p.title=("stimulant abuse ") or @p.title=("stimulant misuse ") 673
23. @p.title=("needle exchange program* ") or @p.title=("syringe exchange program* ") or @p.title=("needle exchange scheme* ") or @p.title=("needle syringe exchange program* ") or @p.title=("needle syringe program* ") results 5
24. @p.title=("ethnograph* or grounded theor* or survey* or demonstration project* or thematic analysis or constructionist* or qualitative study or qualitative studies or qualitative research* ") results 0
25. @p=("ethnograph* or grounded theor* or survey* or demonstration project* or thematic analysis or constructionist* or qualitative study or qualitative studies or qualitative research* ") results 0
26. @k=("ethnograph* or grounded theor* or survey* or demonstration project* or thematic analysis or constructionist* or qualitative study or qualitative studies or qualitative research*") results 0
27. @p.title=("family or families or attitude* or knowledge* or value* or experience* or behaviour* or behavior* or perception* or understanding ") results 0
28. @p=("family or families or attitude* or knowledge* or value* or experience* or behaviour* or behavior* or perception* or understanding ") results 0
29. @k=("family or families or attitude* or knowledge* or value* or experience* or behaviour* or behavior* or perception* or understanding ") results 0
30. @p.title=("motivation or commission* or network* or participation* or consultation* or user* or stakeholder* or collaboration* or contribution* ") results 0
31. @p=("motivation or commission* or network* or participation* or consultation* or user* or stakeholder* or collaboration* or contribution* ") results 0
32. @p=("shooting galler* or harm reduc* ") or @k=("harm reduction ") and @k=("HIV/AIDS ") or @k=("blood-borne pathogens ") or @k=("morbidity ") or @k=("mortality ") or @k=("bacterial infection* ") or @k=("virus disease* ") or @k=("hepatitis B ") or @k=("hepatitis C ") and @p.title=("needle exchange program* ") or @p.title=("syringe exchange program* ") or @p.title=("needle exchange scheme* ") or @p.title=("needle syringe exchange program* ") or @p.title=("needle syringe program* ") and @p.title=("substance misuse ") or @p.title=("substance abuse ") or @p.title=("drug abuse ") or @p.title=("drug misuse ") or @p.title=("drug dependen* ") or @p.title=("drug addict* ") or @p.title=("drug inject* ") or @p.title=("stimulant inject* ") or @p.title=("stimulant abuse ") or @p.title=("stimulant misuse ") results 0

WHO 05/03/08

PHASE 1

1. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" *results 20300 including irrelevant or similar results*
2. "heroin dependence" OR "morphine dependence" OR "methadone dependence" OR "street drugs" OR "illicit drugs" *results 1760*
3. "opioid related disorders" OR "cocaine related disorder" OR "street drugs" OR "anabolic agents" OR "steroids" *results 1500*
4. "methadone abuse" OR "opiate abuse" OR "PIED abuse" OR "PIED dependence" OR "cocaine abuse" OR "cocaine misuse" OR "stimulant usage" *results 0*
5. cocaine OR opiates OR methadone OR morphine OR heroin *results 3520*
6. HIV OR "hepatitis C" OR "hepatitis B" OR "virus diseases" OR "viral diseases" OR mortality OR morbidity *results 2540*
7. "risk taking" OR "risk reduction behaviour" OR "risk reduction behavior" OR "needle sharing" *results 2440*
8. injecting others *results 3750*
9. rate of relapse OR rate of stopping OR rate of cessation OR rate of stoppage *results 107*

PHASE 2

1. "needle exchange programs" OR "syringe exchange" OR NSP OR NEP OR NSEP OR NSPs OR NEPs OR NSEPs *results 1580*
2. needle exchange OR syringe exchange OR injection exchange OR paraphernalia exchange *results 2920*
3. needle supply OR needle distribution OR needle access OR needle facilities OR needle centers OR needle schemes *results 921*
4. Syringe supply OR syringe access OR syringe provision Or syringe distribution OR syringe services OR syringe schemes OR syringe centres OR syringe centers OR syringe facilities OR syringe sites *results 1220*
5. Injection supply OR injection units OR injection facilities OR injection facility OR injection pharmacy OR injection pharmacies *results 1300*
6. needle sterilization OR needle sterilisation OR needle disinfection OR needle equipment OR syringe disinfection OR syringe bleaching OR needle bleaching OR syringe sterilization OR syringe sterilisation *results 108*
7. injection disinfection OR injection disinfecting OR injection sterilization OR sterile injection OR equipment disinfection OR equipment sterilization OR equipment bleaching *results 129*
8. needle packs OR needle packets OR injection packs OR injection packs OR paraphernalia packs *results 527*
9. "substance abuse treatment centres" OR vending machine OR dispensing machine OR "harm reduction" OR harm reduction OR shooting gallery OR shooting galleries *results 0*
10. "harm reduction" OR "substance abuse treatment centres" *results 4150*
11. shooting gallery OR shooting galleries OR harm reduction *results 265*
12. "shooting gallery" OR "shooting galleries" *results 100*
13. "vending machine" OR "dispensing machines" OR "dispensing machines" OR "vending machines" *results 1580*
14. drug consumption room OR drug consumption facility's OR drug consumption centers OR drug consumption centres OR drug consumption site's OR drug consumption area *results 8030*

15. drug use room OR drug use facilities OR drug use facility OR drug use services OR drug use centers OR drug use centres OR drug use schemes OR drug use sites OR drug use areas *results 23400*
16. "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" *results 18*

PHASE 3

1. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and qualitative studies *results 2080*
2. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and qualitative research *results 2180*
3. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and "grounded theory" and "thematic analysis" *results 11*
4. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and "observation studies" *results 5*
5. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and evaluation *results 7030*
6. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 5430*
7. ethnography OR ethnographic OR demonstration project OR survey OR surveys OR Constructionist OR constructionists *results 239*
8. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" AND demonstration project *results 280*
9. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" AND survey *results 6647*
10. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and ("ethnography" OR ethnographic) *results 297*
11. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and (constructionist OR constructionists) *results 5*
12. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" AND (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 6740*
13. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and (carers OR family OR families) *results 7460*
14. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and (attitude OR knowledge OR belief OR perception OR behaviour OR values) *results 8400*
15. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and (experience OR understanding) *results 7000*
16. carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding *results 166000*

17. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 9670*
18. "heroin dependence" OR "morphine dependence" OR "methadone dependence" OR "street drugs" OR "illicit drugs" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 912*
19. "heroin dependence" OR "morphine dependence" OR "methadone dependence" OR "street drugs" OR "illicit drugs" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 1480*
20. motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution *results 175000*
21. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 9360*
22. "heroin dependence" OR "morphine dependence" OR "methadone dependence" OR "street drugs" OR "illicit drugs" and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 1440*
23. "opioid related disorders" OR "cocaine related disorder" OR "street drugs" OR "anabolic agents" OR "steroids" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 862*
24. "opioid related disorders" OR "cocaine related disorder" OR "street drugs" OR "anabolic agents" OR "steroids" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 1210*
25. "opioid related disorders" OR "cocaine related disorder" OR "street drugs" OR "anabolic agents" OR "steroids" and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 1310*
26. HIV OR "hepatitis C" OR "hepatitis B" OR "virus diseases" OR "viral diseases" OR mortality OR morbidity and (evaluation OR "observation studies" OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 0*
27. HIV OR "hepatitis C" OR "hepatitis B" OR "virus diseases" OR "viral diseases" OR mortality OR morbidity and (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 0*
28. "risk taking" OR "risk reduction behaviour" OR "risk reduction behavior" OR "needle sharing" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 1550*
29. "risk taking" OR "risk reduction behaviour" OR "risk reduction behavior" OR "needle sharing" and (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 1650*
30. "risk taking" OR "risk reduction behaviour" OR "risk reduction behavior" OR "needle sharing" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 2420*
31. injecting others and (evaluation OR "observation studies" OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 0*
32. "needle exchange programs" OR "syringe exchange" OR NSP OR NEP OR NSEP OR NSPs OR NEPs OR NSEPs and (evaluation OR "observation studies" OR "grounded

- theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 879*
33. "needle exchange programs" OR "syringe exchange" OR NSP OR NEP OR NSEP OR NSPs OR NEPs OR NSEPs AND (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 959*
 34. "needle exchange programs" OR "syringe exchange" OR NSP OR NEP OR NSEP OR NSPs OR NEPs OR NSEPs and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 1320*
 35. "needle exchange programs" OR "syringe exchange" OR NSP OR NEP OR NSEP OR NSPs OR NEPs OR NSEPs and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 1350*
 36. needle supply OR needle distribution OR needle access OR needle facilities OR needle centers OR needle schemes OR needle exchange OR syringe exchange OR injection exchange OR paraphernalia exchange and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 2790*
 37. needle supply OR needle distribution OR needle access OR needle facilities OR needle centers OR needle schemes OR needle exchange OR syringe exchange OR injection exchange OR paraphernalia exchange and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 2740*
 38. needle supply OR needle distribution OR needle access OR needle facilities OR needle centers OR needle schemes OR needle exchange OR syringe exchange OR injection exchange OR paraphernalia exchange and (evaluation OR observation studies OR *results 2270*
 39. Syringe supply OR syringe access OR syringe provision Or syringe distribution OR syringe services OR syringe schemes OR syringe centres OR syringe centers OR syringe facilities OR syringe sites OR Injection supply OR injection units OR injection facilities OR injection facility OR injection pharmacy OR injection pharmacies and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 352*
 40. Syringe supply OR syringe access OR syringe provision Or syringe distribution OR syringe services OR syringe schemes OR syringe centres OR syringe centers OR syringe facilities OR syringe sites OR Injection supply OR injection units OR injection facilities OR injection facility OR injection pharmacy OR injection pharmacies AND (ethnography OR ethnographic OR demonstration project OR survey OR surveys OR Constructionist OR constructionists) *results 134*
 41. Syringe supply OR syringe access OR syringe provision Or syringe distribution OR syringe services OR syringe schemes OR syringe centres OR syringe centers OR syringe facilities OR syringe sites OR Injection supply OR injection units OR injection facilities OR injection facility OR injection pharmacy OR injection pharmacies and (evaluation OR observation studies OR qualitative studies OR qualitative research OR "thematic analysis" OR "grounded theory") *results 323*
 42. needle sterilization OR needle sterilisation OR needle disinfection OR needle equipment OR syringe disinfection OR syringe bleaching OR needle bleaching OR syringe sterilization OR syringe sterilisation OR injection disinfection OR injection disinfecting OR injection sterilization OR sterile injection OR equipment disinfection OR equipment sterilization OR equipment bleaching OR needle packs OR needle packets OR injection packs OR injection packs OR paraphernalia packs and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 312*

43. needle sterilization OR needle sterilisation OR needle disinfection OR needle equipment OR syringe disinfection OR syringe bleaching OR needle bleaching OR syringe sterilization OR syringe sterilisation OR injection disinfection OR injection disinfecting OR injection sterilization OR sterile injection OR equipment disinfection OR equipment sterilization OR equipment bleaching OR needle packs OR needle packets OR injection packs OR injection packs OR paraphernalia packs and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 252*
44. "harm reduction" OR "substance abuse treatment centres" OR "shooting gallery" OR "shooting galleries" OR "vending machine" OR "dispensing machines" OR "dispensing machines" OR "vending machines" OR "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 2380*
45. "harm reduction" OR "substance abuse treatment centres" OR "shooting gallery" OR "shooting galleries" OR "vending machine" OR "dispensing machines" OR "dispensing machines" OR "vending machines" OR "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 3750*
46. "harm reduction" OR "substance abuse treatment centres" OR "shooting gallery" OR "shooting galleries" OR "vending machine" OR "dispensing machines" OR "dispensing machines" OR "vending machines" OR "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" and (ethnography OR ethnographic OR demonstration project OR survey OR surveys OR Constructionist OR constructionists) *results 542*
47. "harm reduction" OR "substance abuse treatment centres" OR "shooting gallery" OR "shooting galleries" OR "vending machine" OR "dispensing machines" OR "dispensing machines" OR "vending machines" OR "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 2630*
48. drug consumption rooms OR drug consumption facility's OR drug consumption centers OR drug consumption centres OR drug consumption site's OR drug consumption areas OR drug use room OR drug use facilities OR drug use facility OR drug use services OR drug use centers OR drug use centres OR drug use schemes OR drug use sites OR drug use areas and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 0*
49. drug consumption rooms OR drug consumption facility's OR drug consumption centers OR drug consumption centres OR drug consumption site's OR drug consumption areas OR drug use room OR drug use facilities OR drug use facility OR drug use services OR drug use centers OR drug use centres OR drug use schemes OR drug use sites OR drug use areas and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 0*
50. "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" AND (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 0*

51. "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 514*

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PHASE 1

10. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" *results 156*
11. "heroin dependence" OR "morphine dependence" OR "methadone dependence" OR "street drugs" OR "illicit drugs" *results 45*
12. "opioid related disorders" OR "cocaine related disorder" OR "street drugs" OR "illicit drugs" OR "anabolic agents" OR "steroids" *results 17*
13. methadone abuse OR opiate abuse OR PIED abuse OR PIED dependence OR cocaine abuse OR cocaine misuse OR stimulant usage *results 12*
14. cocaine OR opiates OR methadone OR morphine OR heroin *results 83*
15. HIV OR "hepatitis C" OR "hepatitis B" OR "virus diseases" OR "viral diseases" OR mortality OR morbidity *results 132*
16. "risk taking" OR "risk reduction behaviour" OR "risk reduction behavior" OR "needle sharing" *results 68*
17. injecting others *results 32*
18. rate of relapse OR rate of stopping OR rate of cessation OR rate of stoppage *results 1*

PHASE 2

17. "needle exchange programs" OR "syringe exchange" OR NSP OR NEP OR NSEP OR NSPs OR NEPs OR NSEPs *results 7*
18. needle exchange OR syringe exchange OR injection exchange OR paraphernalia exchange *results 8*
19. needle supply OR needle distribution OR needle access OR needle facilities OR needle centers OR needle schemes *results 11*
20. Syringe supply OR syringe access OR syringe provision Or syringe distribution OR syringe services OR syringe schemes OR syringe centres OR syringe centers OR syringe facilities OR syringe sites *results 6*
21. Injection supply OR injection units OR injection facilities OR injection facility OR injection pharmacy OR injection pharmacies *results 5*
22. Injection supply OR injection units OR injection facilities OR injection facility *results 18*
23. needle sterilization OR needle sterilisation OR needle disinfection OR needle equipment OR syringe disinfection OR syringe bleaching OR needle bleaching OR syringe sterilization OR syringe sterilisation *results 0*
24. injection disinfection OR injection disinfecting OR injection sterilization OR sterile injection OR equipment disinfection OR equipment sterilization OR equipment bleaching *results 0*
25. injection sterilization OR sterile injection *results 4*
26. needle packs OR needle packets OR injection packs OR injection packs OR paraphernalia packs *results 1*
27. "substance abuse treatment centres" OR vending machine OR dispensing machine OR "harm reduction" OR harm reduction OR shooting gallery OR shooting galleries *results 0*
28. "harm reduction" OR "substance abuse treatment centres" *results 43*
29. shooting gallery OR shooting galleries *results 4*
30. vending machine OR dispensing machines OR vending machines *results 3*
31. drug consumption room OR drug consumption facilities OR drug consumption centers OR drug consumption centres OR drug consumption sites OR drug consumption area *results 58*

32. drug use room OR drug use facilities OR drug use facility OR drug use services OR drug use centers OR drug use centres OR drug use schemes OR drug use sites OR drug use areas *results 254*

PHASE 3

52. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and qualitative studies and qualitative research *results 54*
53. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and "grounded theory" and "thematic analysis" *results 1*
54. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and observation studies *results 35*
55. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and evaluation *results 96*
56. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis" *results 71*
57. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" AND (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 105*
58. "heroin dependence" OR "morphine dependence" OR "methadone dependence" OR "street drugs" OR "illicit drugs" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 14*
59. "heroin dependence" OR "morphine dependence" OR "methadone dependence" OR "street drugs" OR "illicit drugs" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 44*
60. "substance abuse" OR "substance misuse" OR "drug abuse" OR "drug misuse" OR "drug dependence" OR "drug addiction" OR "drug Addict" and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 146*
61. "heroin dependence" OR "morphine dependence" OR "methadone dependence" OR "street drugs" OR "illicit drugs" and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 41*
62. "opioid related disorders" OR "cocaine related disorder" OR "street drugs" OR "anabolic agents" OR "steroids" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 1*
63. "opioid related disorders" OR "cocaine related disorder" OR "street drugs" OR "anabolic agents" OR "steroids" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 3*
64. "opioid related disorders" OR "cocaine related disorder" OR "street drugs" OR "anabolic agents" OR "steroids" and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 2*
65. HIV OR "hepatitis C" OR "hepatitis B" OR "virus diseases" OR "viral diseases" OR mortality OR morbidity and (evaluation OR "observation studies" OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 63*

66. HIV OR "hepatitis C" OR "hepatitis B" OR "virus diseases" OR "viral diseases" OR mortality OR morbidity and (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 106*
67. "risk taking" OR "risk reduction behaviour" OR "risk reduction behavior" OR "needle sharing" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 20*
68. "risk taking" OR "risk reduction behaviour" OR "risk reduction behavior" OR "needle sharing" and (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 40*
69. "risk taking" OR "risk reduction behaviour" OR "risk reduction behavior" OR "needle sharing" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 68*
70. "needle exchange programs" OR "syringe exchange" OR NPS OR NEP OR NSEP OR NSPs OR NSEPs and (evaluation OR "observation studies" OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 4*
71. "needle exchange programs" OR "syringe exchange" OR NSP OR NEP OR NSEP OR NSPs OR NEPs OR NSEPs AND (ethnography OR ethnographic OR "demonstration project" OR survey OR surveys OR Constructionist OR constructionists) *results 7*
72. "needle exchange programs" OR "syringe exchange" OR NSP OR NEP OR NSEP OR NSPs OR NEPs OR NSEPs and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 8*
73. needle supply OR needle distribution OR needle access OR needle facilities OR needle centers OR needle schemes OR needle exchange OR syringe exchange OR injection exchange OR paraphernalia exchange and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 8*
74. needle supply OR needle distribution OR needle access OR needle facilities OR needle centers OR needle schemes OR needle exchange OR syringe exchange OR injection exchange OR paraphernalia exchange and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 8*
75. Syringe supply OR syringe access OR syringe provision OR syringe distribution OR syringe services OR syringe schemes OR syringe centres OR syringe centers OR syringe facilities OR syringe sites OR Injection supply OR injection units OR injection facilities OR injection facility OR injection pharmacy OR injection pharmacies and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding)
76. drug use room OR drug use facilities OR drug use facility OR drug use services OR drug use centers OR drug use centres OR drug use schemes OR drug use sites OR drug use areas and (family OR carers OR attitudes OR knowledge) *results 330*
77. "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" AND (ethnography OR ethnographic OR "demonstration project") *results 0*
78. "drug use room" OR "drug use facilities" OR "drug use facility" OR "drug use services" OR "drug use centers" OR "drug use centres" OR "drug use schemes" OR "drug use sites" OR "drug use areas" AND (OR survey OR surveys OR Constructionist OR constructionists) *results 0*
79. drug consumption room OR drug consumption facility's OR drug consumption centers OR drug consumption centres OR drug consumption site's OR drug consumption area and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 30*

80. drug consumption room OR drug consumption facility's OR drug consumption centers OR drug consumption centres OR drug consumption site's OR drug consumption area and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 30*
81. "harm reduction" OR "substance abuse treatment centres" and (motivation OR commissioning OR commission OR network OR network OR participation OR stakeholder OR user OR consultation OR collaboration OR contribution) *results 38*
82. "harm reduction" OR "substance abuse treatment centres" and (evaluation OR observation studies OR "grounded theory" OR qualitative studies OR qualitative research OR "thematic analysis") *results 7*
83. "harm reduction" OR "substance abuse treatment centres" and (carers OR family OR families OR attitude OR knowledge OR belief OR perception OR behaviour OR values OR experience OR understanding) *results 40*

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1. subject "heroin dependence or morphine dependence or substance related disorder or street drugs" OR subject "opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steroids" OR subject "Substance abuse or intravenous abuse" search found 149 titles.
2. words or phrase "(opioid\$ or morphine or heroin or opiate or cocaine or steroid\$ or PIED\$ or methadone) ADJ abuse or misuses or dependen\$ or use\$2 or usage or addict\$ or inject\$ or intravenous\$" OR words or phrase "(Substance\$1 or drug\$1 or stimulant\$) ADJ addict\$ or use\$2 or dependen\$" OR words or phrase "(Substance\$1 or drug\$1 or stimulant\$) ADJ inject\$ or intravenous\$ or abuse or misuse" search found 14022 titles.
3. words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment\$) ADJ safe\$ or steril\$" OR words or phrase "(needle\$ or syringe\$ or injection\$ or paraphernalia or equipment\$) ADJ pack\$1" search found 28 titles.
4. words or phrase "shooting galler\$ or harm reduc\$ or dispencing machine\$ or vending machine\$" OR subject "harm reduction or substance abuse treatment center\$ or needle exchange programme\$" OR words or phrase "NSP or NEP or NSEP or NSPs or NEPs or NSEPs" OR words or phrase "(needle\$ or Syringe\$ or inject\$ or paraphernalia or equipment\$) ADJ exchange\$" search found 95 titles.
5. drug-use ADJ (room\$ or facility or facilities or centre\$ or center\$ or service\$ or program\$ or scheme\$ or site\$ or area\$) no results.
6. drug consumption ADJ (room\$ or facilities or facility or centre\$ or center\$ or service\$ or area\$ or site\$) no results
7. words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj steril\$ or equipment or bleach\$ or disinfectant\$ or disinfect\$1 or citric acid\$" OR words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj supply\$ or access\$ or provision or provid\$ or distribut\$ or dispens\$ or program\$ or service\$ or centre\$ or scheme\$ or center\$ or site\$1 or facilities or facility or scheme\$ or area\$" search found 51150 titles.
8. words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj prison\$ or pharmacy or pharmacies or unit or units" search found 4882 titles.
9. words or phrase "risk reduction behavio?r" OR subject "risk reduction behavio?r or risk taking or needle sharing" OR subject "HIV or hepatitis C or hepatitis B or mortality or morbidity or bacterial infection or viral diseases or virus diseases or infection or blood-borne pathogens" search found 1917 titles.
10. words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj reusing or reuse\$ or return\$" OR words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj sharing or share\$1" OR words or phrase "(needle\$ or syringe\$ or inject\$) adj frequenc\$ or cessation" OR words or phrase "inject\$ others"

- OR words or phrase "rate of adj (relapse\$ or stop\$ or cessation)" search found 2226 titles.
11. (high\$ or increas\$ or improve\$ or encourag\$ or promot\$) adj safe\$ inject\$. No results
 12. (low\$ or reduc\$ or prevent\$ or decreas\$ or chang\$) adj inject\$ no results.
 13. subject "qualitative studies or qualitative research or grounded theor\$ or thematic analysis or observation stud\$2" OR words or phrase "knowledge or attitude or belief or motivation or value\$ or access or involvement or participation or patient interview\$ or opinion or network\$" OR words or phrase "demonstration project or perception or experience\$ or understanding or family or families or carer\$ or evaluation or ethnograph\$" search found 27954 titles.
 14. words or phrase "constructionist\$ or commission\$ or distribution or motivation or access or user\$ or stakeholder\$" OR words or phrase "collaboration or consultation or behavio?r or contribution or school\$ or media" search found 22113 titles.
 15. #1 and #14
words or phrase "constructionist\$ or commission\$ or distribution or motivation or access or user\$ or stakeholder\$" OR words or phrase "collaboration or consultation or behavio?r or contribution or school\$ or media" AND subject "heroin dependence or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steroids OR Substance abuse or intravenous abuse" search found 15884 titles.
 16. #1 and #13
words or phrase "knowledge or attitude or belief or motivation or value\$ or access or involvement or participation or patient interview\$ or opinion or network\$" AND subject "heroin dependence or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steroids OR Substance abuse or intravenous abuse" search found 34 titles.
words or phrase "demonstration project or perception or experience\$ or understanding or family or families or carer\$ or evaluation or ethnograph\$" AND subject "heroin dependence or morphine dependence or substance related disorder or street drugs Or opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steroids OR Substance abuse or intravenous abuse" search found 21 titles.
 17. #1 and #10
words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj reusing or reuse\$ or return\$ OR (needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj sharing or share\$1" OR words or phrase "(needle\$ or syringe\$ or inject\$) adj frequenc\$ or cessation" OR words or phrase "inject\$ others" OR words or phrase "rate of adj (relapse\$ or stop\$ or cessation)" AND subject "heroin dependence or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steriods OR Substance abuse or intravenous abuse" search found 2 titles.
 18. #1 and #9
subject "risk reduction behavio?r or risk taking or needle sharing OR HIV or hepatitis C or hepatitis B or mortality or morbidity" AND subject "heroin dependence or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steriods OR Substance abuse or intravenous abuse" search found 5 titles.
subject "bacterial infection or viral diseases or virus diseases or infection or blood-borne pathogens" AND subject "heroin dependence or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steriods OR Substance abuse or intravenous abuse" OR words or phrase "risk reduction behavio?r" search found 9 titles.
 19. #1 and #8
words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj prison\$ or pharmacy or pharmacies or unit or units" AND subject "heroin dependence

or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steroids OR Substance abuse or intravenous abuse" search found 3 titles.

20. #1 and #7
words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj steril\$ or equipment or bleach\$ or disinfectant\$ or disinfect\$1 or citric acid\$" OR words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment) adj supply\$ or access\$ or provision or provid\$ or distribut\$ or dispens\$ or program\$ or service\$ or centre\$ or scheme\$ or center\$ or site\$1 or facilities or facility or scheme\$ or area\$" AND subject "heroin dependence or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steroids OR Substance abuse or intravenous abuse" search found 112 titles.
21. #1 and #4
subject "heroin dependence or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steroids OR Substance abuse or intravenous abuse" AND words or phrase "NSP or NEP or NSEP or NSPs or NEPs or NSEPs OR (needle\$ or Syringe\$ or inject\$ or paraphernalia or equipment\$) ADJ exchange\$" search found 1 title.
subject "heroin dependence or morphine dependence or substance related disorder or street drugs OR opioid related disorder or cocaine related disorder or illicit drugs or anabolic agents or steroids OR Substance abuse or intravenous abuse" AND subject "harm reduction or substance abuse treatment center\$ or needle exchange programme\$" OR words or phrase "shooting galler\$ or harm reduc\$ or dispensing machine\$ or vending machine\$" search found 71 titles.
22. #1 and #3 no results found.
23. #2 and #3
words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment\$) ADJ safe\$ or steril\$ OR (needle\$ or syringe\$ or injection\$ or paraphernalia or equipment\$) ADJ pack\$1" AND words or phrase "(opioid\$ or morphine or heroin or opiate or cocaine or steroid\$ or PIED\$ or methadone) ADJ abuse or misuses or dependen\$ or use\$2 or usage or addict\$ or inject\$ or intravenous\$" search found 8 titles.
words or phrase "(needle\$ or syringe\$ or inject\$ or paraphernalia or equipment\$) ADJ safe\$ or steril\$ OR (needle\$ or syringe\$ or injection\$ or paraphernalia or equipment\$) ADJ pack\$1" AND words or phrase "(Substance\$1 or drug\$1 or stimulant\$) ADJ addict\$ or use\$2 or dependen\$ OR (Substance\$1 or drug\$1 or stimulant\$) ADJ inject\$ or intravenous\$ or abuse or misuse" search found 8 titles.

APPENDIX E: Studies awaiting assessment

1. ANON. N.J. convicts volunteers for distributing free syringes. (1997). *AIDS policy & law*, 12(16), 11.
2. ASHTON, M. (2004). Needle exchange: The Vancouver experience. *Addict. Res. Theory*, 12(5), 445-460.
3. BLUMENTHALI, WJ, SPRINGER, KW, JONES, TS, & STERK, CE (1996). Pharmacy student knowledge, attitudes, and beliefs about selling syringes to injection drug users. *Journal of the American Pharmaceutical Association*, 42(6 Suppl 2), s34-39.
4. Bluthenthal, RN, Kral, AH, Lorvick, J, & Watters, JK (1997). Impact of law enforcement on syringe exchange programs: A look at Oakland and San Francisco.
5. CLARK PA (1998). The ethics of needle-exchange programs. *Aids Public Policy J.*, 13(4), 131-139.
6. DE, P, COX, J, BOIVIN, JF, PLATT, RW, & JOLLY, AM (2008). Social network-related risk factors for bloodborne virus infections among injection drug users receiving syringes through secondary exchange. *J. Urban Health*, 85(1), 77-89.
7. FINLINSON, HA, COLON, HM, ROBLES, RR, DEREN, S, LOPEZ, MS, & MUNOZ, A (1999). Access to sterile syringes by injection drug users in Puerto Rico. *Hum. Organ.*, 58(2), 201-211.
8. GIBSON, DR, FLYNN, NM, & PERALES, D (2001). Effectiveness of syringe exchange programs in reducing HIV risk behavior and HIV seroconversion among injecting drug users. *Aids Public Policy J.*, 15(11), 1329-1341.
9. GLASER, V, & STRATHDEE, S (2004). Needle-exchange programs and the prevention of HIV infection. *Aids Patient Care STDS*, 18(7), 373-378.
10. HART, GJ (1990). HIV infection and injecting drug users--needle exchange schemes. *Health Education Journal*(1), 24-26.
11. HEINZERLING, KG, FLYNN, NM, KRAL, AH, ANDERSON, R, ASCH, SM, & BLUTHENTHAL, RN (2004). The role of syringe exchange programs in the delivery of preventive health services to injection drug users: Results from the California syringe exchange program study. *J. Gen. Intern. Med.*, 19, 225-225.
12. HENMAN, AR, PAONE, D, DES JARLAIS, DC, KOCHEMS, LM, & FRIEDMAN, SR (1998). Injection drug users as social actors: a stigmatized community's participation in the syringe exchange programmes of New York City. *AIDS care*, 10(4), 397-408.
13. HOLMSTROM, R (2000). The fruits of fear. *Druglink*, 22(5), 10-12.

14. HUGHES, R (2003). Illicit Drug and Injecting Equipment Markets inside English Prisons: A Qualitative Study. *Journal of Offender Rehabilitation*, 37(3-4), 47-64.
15. JARLAIS, DCD, BRAINE, N, & FRIEDMANN, P (2007). Unstable housing as a factor for increased injection risk behavior at US syringe exchange programs. *AIDS behav.*, 11(6), S78-S84.
16. JONES, TS, COFFIN, PO, JONES, TS, & COFFIN, PO (2002). Preventing blood-borne infections through pharmacy syringe sales and safe community syringe disposal. *Journal of the American Pharmaceutical Association*, 42(6 Suppl 2), S6-9.
17. KEENE, JM, STIMSON, GV, KEENE, JM, & STIMSON, GV (1997). Professional ideologies and the development of syringe exchange: Wales as a case study. *Medical Anthropology*, 18(1), 85-105.
18. NOVOYNY, GA, COTTON-OLDENBURG, NU, BOND, B, & TRACY, B (1996). The Minnesota Pharmacy Syringe Access Initiative: a successful statewide program to increase injection drug user access to sterile syringes. *Journal of the American Pharmaceutical Association*, 42(6 Suppl 2), s21-22.
19. OLIVER, KJ (1995). Behavioral and Community Impacts of the Portland Needle Exchange Program. *Dissertation Abstracts International, A: The Humanities and Social Sciences*, 56(5), 2005-a.
20. PAONE, D, CALOIR, S, SHI, Q, DES JARLAIS, DC, PAONE, D, CALOIR, S, ET AL. (1995). Sex, drugs, and syringe exchange in New York City: women's experiences. *Journal of the American Medical Womens Association*, 50(3-4), 109-114.
21. REICH, W, COMPTON, WM, HORTON, JC, COTTLER, LB, CUNNINGHAM-WILLIAMS, RM, BOOTH, R, ET AL. (2002). Pharmacist ambivalence about sale of syringes to injection drug users. *Journal of the American Pharmaceutical Association*, 42(6 Suppl 2), S52-57.
22. REICH, W, COMPTON, WM, HORTON, JC, COTTLER, LB, CUNNINGHAM-WILLIAMS, RM, BOOTH, R, ET AL. (1996). Injection drug users report good access to pharmacy sale of syringes. *Journal of the American Pharmaceutical Association*, 42(6 Suppl 2), s68-72.
23. SCOTT, J, KENNEDY, EJ, WINFIELD, A, & BOND, CM (1998). *Investigation into the training needs of an information pharmacist at a drug counselling and needle exchange agency* (No. 261).
24. WEINSTEIN, B, TOCE, P, KATZ, D, & RYAN, LL (1998). Peer education of pharmacists and supplying pharmacies with IDU packets to increase injection drug users' access to sterile syringes in Connecticut. *Journal of acquired immune deficiency syndromes and human retrovirology : official publication of the International Retrovirology Association*, 18(1), s146-14

