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Glut of information, dearth of knowledge? A consideration of the information needs of practitioners identified during the FAME project

Pat Gannon-Leary

University Secretary's Office, Northumbria University, Newcastle on Tyne, UK

Abstract

Purpose – This paper emanates from work carried out in the learning and evaluation strand of the UK e-government initiative Framework for MultiAgency Environments (FAME) and focuses on a research question raised during research on the FAME project. When considering the best ways in which to disseminate the results of such initiatives, it became apparent that it would be useful to examine how the professionals and practitioners to be targeted currently accessed and used information.

Design/methodology/approach – The paper combined a literature review with an analysis of data from a pre-implementation FAME questionnaire and a post-implementation questionnaire and analysis of data on attendance at project board meetings for the FAME strands.

Findings – There are IT and training implications with respect to social care professionals' and practitioners' access to information. With respect to IT, there are issues of access and skills levels which may explain a preference displayed among the professionals and practitioners to derive information from colleagues rather than via information and communications technologies (ICTs). With respect to training, there are needs with regard to IT upskilling and, in addition, for those professionals and practitioners who have been in practice a number of years there is a need for updating of knowledge of developments such as evidence-based practice.

Research limitations/implications – The research stemmed from another project (i.e. FAME) so the questionnaires were not tailored to answer fully the research question posed. However, analysis of FAME-generated data provides useful pointers for further exploration of the issues raised.

Practical implications – There is an indication that further ICT training, more ICT resources and improved access are needed by many professionals and practitioners in a social care setting. Consideration should be given to means of delivering such training and to the provision of opportunities for continuous professional development to ensure that they are familiar with newer developments such as evidence-based practice.

Originality/value – From the literature review this would appear to be an under-researched area. It is hoped that this work will provide a springboard for further research.

Keywords Continuous improvement, Evidence-based practice, Information

Paper type Research paper

Background

This article had its origins in work conducted on the FAME project for the UK Government's Office of the Deputy Prime Minister (ODPM) an ambitious UK government project (£6m) designed to develop innovative ways of joining up services that are the responsibility of local authorities and underpinning their co-ordination with new ICT solutions that facilitate the sharing of client information across organisational and professional boundaries. The project had several strands dealing with ISA (Information Sharing and Assessment), child protection, mental health,

vulnerable old people and housing benefits. In all these areas there was a plethora of policy documents and information being produced in respect of social welfare. It also became apparent, during fieldwork on FAME, that there were limited ICT facilities available to practitioners working in these areas.

Professionals and practitioners in the Health and Social Services are required to keep up to date with policy and other information. In this process they also need to make informed choices about what is important in their working lives and what is of less significance. In examining the best ways in which to disseminate the results of projects such as FAME it is useful to examine how professionals and practitioners access and use information.

Research context

Health and social care professionals need access to information. The increase in the rate and volume of published information has made it more difficult for them to keep up with new developments. Reinforced by key policy documents, the importance of information in delivering the government's e-government and modernisation programmes highlights practitioners' information needs supporting the information agenda of the UK government's National Health Service (NHS) in areas such as:

- continuous professional development (CPD);
- recruitment and retention;
- modernisation agenda;
- e-government;
- quality;
- clinical and care governance;
- evidence based practice (EBP); and
- national service frameworks (NSF).

One of the responsibilities of any professional is to maintain expertise and this responsibility is particularly critical and difficult in the social care environment. Information needs of such practitioners are extremely varied, encompassing a wide variety of professions and specialisms.

Practical guides for policy makers and practitioners on the identification and assessment of evidence – especially from research – continue to appear. However, the degree to which these are used in the workplace can be limited by a host of practical hurdles including lack of time and the failure of employers to provide resources for identifying and acquiring the primary literature. More fundamental barriers may include deep-seated objections to the 'scientific' nature of evidence-based practice and the lack of a reading culture in some professions.

Reading is an essential component of evidence-based social work practice as currently perceived, but can often be difficult in the workplace setting. Horder (2004) suggests that social work practice in the UK is imbued with a strong oral culture, and that practitioners are unsure what to read and face problems in accessing material. Although the growth of electronic media offers the possibility of overcoming these barriers, their use requires skills that are underdeveloped.

The integration of health and social care services, coupled with the move towards a professionalised social care workforce, has stimulated interest in evidence-based social

care. However, Booth *et al.*'s (2003) literature review reveals a workforce, poorly equipped by professional education, relying heavily on personal communication and "gut instinct" to deliver packages of care. Booth *et al.* (2003) and Moseley and Tierney (2005) describe the social care workplace as one in which action is valued over reflection. Practitioners feel uneasy taking time out to search out evidence or read research during working hours.

The feeling that searching out evidence or reading research is not 'real work' may be compounded if staff shortages exist. Staff shortages in some UK local authorities were reported during the FAME learning and evaluation fieldwork. Social services had some particular staffing problems. For example, 20–50 per cent of staff positions on some teams were currently not filled by employees; they were either not filled at all or filled by agency staff (including some management positions). It is hardly surprising that staff faced with such shortages do not find time to access information and temporary staff, hired from agencies, may not feel integrated into a learning culture.

Evidence based practice: making better use of research-based knowledge in making practice decisions

Calder (2004) points out that the field of social care is relatively new and as such there are huge gaps in the available evidence base. While practice wisdom may be used to offset any research and conceptual limitations, this is problematic because it is the lowest acceptable form on the evidence-base continuum (Ramchandani *et al.*, 2001) and workers lack the opportunity for reflective practice or time to read and digest the emerging materials. Agencies are falling short of equipping workers with the time and the materials to discharge this aspect of their responsibilities appropriately.

Results of the study by Harrison *et al.* (2004) of the information needs of social workers in a multidisciplinary team based in an acute NHS trust suggest that the practitioners were information poor in terms of access to information sources and yet information to assist their role was required on a wide range of subjects. Also, information skills among the sample population needed updating and developing. Lack of Internet access was a significant barrier to obtaining information. Little evidence of a research culture was found; information seeking tended to be verbal via face-to-face contact. Conclusions emerging from the research included a requirement for a robust IT infrastructure to enable easy and rapid access to the knowledge base from the desktop, augmented by the provision of information skills training.

There are IT and training issues in respect of social care staff. For example, staff access to networked PCs may be limited, with many staff currently sharing PCs. A pre-implementation survey for the FAME project examined the information literacy of practitioners. Results indicated that only 56.5 per cent of respondents had PC access on their desktop, 8.3 per cent shared with one other person, 19.4 per cent shared with between 2 and 5 others, 10.2 per cent shared with more than five others and 3.7 per cent reported no access to a PC (Table I).

There may be few staff PCs dedicated to such activities as CPD, education and information seeking. Staff PCs may be dedicated to social services management systems such as SWIFT.

Respondents to the FAME pre-implementation survey were asked to rank themselves in term of their use of PCs. Only 2 per cent of practitioners considered themselves expert users. The majority (77 per cent) said they were regular PC users. Nineteen per cent were occasional PC users while 2 per cent were non-users (Table II).

Getting evidence into practice

There is now a substantial literature on the utilisation of evidence, a complex process for which a range of strategies is needed to ensure that useful information reaches – and is taken up – by policy makers and practitioners.

Evidence-based policy and practice demands the increasing use of research as a key tool to improve practice. However, there is little point in simply increasing the rate at which research flows to the social care workforce: little research can be directly applied to practice, many practitioners are not equipped to digest research and appropriate support systems are lacking. What is needed is a better understanding of the relationship between social care research and the work of social care practitioners, including what organisational structures are needed to realise the aim of using research to improve practice.

Research by Walter *et al.* (2004) highlighted a wide range of applications for research, from using it to develop policy and practice, to using it to acquire knowledge and new ideas. There are pockets of research-aware individuals who can be found at any level within an organisation. One of Walter *et al.*'s (2004) three models of ways of thinking about and developing the use of research in social care is the research-based practitioner model which is about the individual having a personal commitment to using research, believing it is their role and responsibility to keep up to date with research and apply it to practice. With respect to this model, there may be issues here in terms of the age and experience of practitioners. EBP is now included in the curricula of many health and social care study programmes but this has not always been the case. FAME respondents had indicated their ages but it was not safe to assume that younger respondents were the most recently educated, given the level of mature entrants to social care and health related courses. Therefore an analysis was conducted of the ages and length of service of respondents to the FAME pre-implementation questionnaire. In fact the highest percentage of respondents (32 per cent) had been in practice for less than six years, although 43 per cent of this group were in the 40–49 age band. Unsurprisingly, the second highest percentage (18 per cent) had been in practice for <11 years, with an even spread of these respondents

	Frequency	Per cent
Desktop	61	56.5
Shared with one person	9	8.3
Shared with 2–5 people	21	19.4
Shared with >5 people	11	10.2
No access	4	3.7
Total	106	

Age	Expert	Regular user	Occasional user	Non-user	Total
24–29	–	5	3	–	8
30–39	–	19	2	–	21
40–49	1	27	9	1	38
50–59	1	21	4	1	27
60+	–	2	–	–	2
Total	2	74	18	2	96

between the ages of 24 and 59. It cannot therefore be assumed that older practitioners have been away from formal education for some time and may not be aware of developments in EBP (Table III).

Proctor (2004) identifies four leverage points for the implementation of EBP. It is the first of these, the process of identifying and accessing information about EBP which is of concern here and is recognised as a challenge. The organisational culture required for the successful identification and access of EBP includes electronic or on-site materials, evidence-informed supervisors and interpersonal linkages to research. Until recently, the social and behavioural science literatures have been virtually silent about effective methods of disseminating evidence-based practices. The behavioural health professions rely on traditional methods – publication of articles in journals, which few practitioners access, read or view as helpful to their work. Some directors and managers have placed the onus for accessing EBP on practitioners (Gambrill, 2003). However, such expectations are often unrealistic, given such barriers as time constraints and lack of computer access in agencies (Proctor and Rosen, 2004). Agencies must work to make EBPs accessible (Backer, 1993) to frontline practitioners, whether through subscriptions to journals and newsletters, internet access to literature searches or guideline collections or in-service training.

As Calder says,

The field of social care is relatively new and as such there are huge gaps in the available evidence base....workers lack the opportunity for reflective practice or time to read and digest the emerging materials. Agencies are falling short of equipping workers with the time and the materials to discharge this aspect of their responsibilities appropriately (2004, p. 233).

The implications for social care practitioners of not having up-to-date, appropriate information and adequate skills to cope with the blizzard of policy documentation include accountability issues, risks of litigation and the concomitant stress of participating in a digital age and in a modernisation agenda. As Brown and Duguid (2000) point out, in order for the users to be empowered, practitioners need to be empowered and that power is derived from the information, not the technology that delivers it.

Colleagues as information providers

Analysis of the use of information sources by practitioners is important for both practical and theoretical reasons. First, analysis of the ways in which practitioners handle information may point to opportunities for improvement. Second, such efforts may lead to improvements in the methodology of literature research in general.

Spath's (1996) study revealed that nurses seek information from colleagues more than from any other source, supporting the findings of Corcoran-Perry and Graves

Age	1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	31-35 years	36-40 years	Total
24-29	4	4	—	—	—	—	—	—	8
30-39	7	5	5	2	1	—	—	—	20
40-49	13	4	5	5	8	2	—	—	37
50-59	6	4	2	2	2	5	4	2	27
60+			1	1			—	—	2
Total	30	17	13	10	11	7	4	2	94

(1990). Survey by Verhoeven *et al.* (1995) of the literature on information use by family physicians showed that family physicians used colleagues most often as information sources, followed by journals and books. This outcome corresponded with results in other professions. Stinson and Mueller (1980) similarly found that the typical respondent spent one to five hours each week in discussions with colleagues. Ely *et al.*'s (1992) study of the information-seeking process in the office practices of practitioners also found that most questions were rapidly answered using colleagues and books, not journals or computers. Smith (1996) comments that textbooks are out of date, and "the signal to noise" ratio of journals is too low for them to be useful in daily practice. Computer systems are not widely used and practitioners are most likely to seek answers to questions that arise during practice from other practitioners.

The pre-implementation survey of FAME practitioners asked whether they currently shared information with practitioners in other services and agencies on an informal basis. Nearly half (46.9 per cent) of practitioners agreed that they shared information informally, while one-third (33.3 per cent) said they did not (Table IV).

These findings, that practitioners often prefer to talk to fellow professionals rather than consult ICTs for information, were corroborated by the qualitative research. During fieldwork for the learning and evaluation strand of FAME a housing manager observed:

People we employ as Housing Officers are "people" people. We are not necessarily IT-literate or au fait. Everybody has the skills but people still prefer to have a conversation and you have to recognise that.

Information sources used

Gorman (1995) discusses the fact that the heavy reliance of practitioners on human sources of information has implications for the nature of information needs, including the narrative structure of their knowledge and the need for more than information alone when solving, e.g. clinical problems. Increase in such resources as "validated reviews" or "expert networks" might help to meet these needs. Information from Muellenbach *et al.* (2003) needs assessment of an expert network [the Northern Academic Health Sciences Network (NAHSN) in Ontario] found that, in order to use such facilities effectively, practitioners needed:

- an improved Internet technology infrastructure;
- Internet access and training;
- ongoing skilled training in searching electronic information sources;
- a seamless, integrated and user-friendly search interface;

	Frequency	Per cent
Strongly disagree	6	5.7
Disagree	29	27.6
Neutral	20	19
Agree	47	44
Strongly agree	3	2.9
Total	105	100

- access to full text, “best” practice digital resources; and
- improved access to information/IT professional.

As Timpka *et al.* (1989) point out, practitioners cannot depend on conventional libraries for day-to-day information. Writing in the late 1980s, Timpka *et al.* advocating the improvement and updating of personal libraries and also recommended that consideration be given to IT for communication between practitioners. Fifteen years later Booker *et al.* (2002) discuss how the Internet has made the transfer of knowledge of successful community development programs and processes possible by allowing practitioners to connect through computer-mediated-communications such as Web pages, email, chat rooms and groupware...

Electronic networking facilitates communication between organisations and between sectors in multi-agency working and www community networks afford opportunities to share information through online databases more efficiently updated than printed sources. Smith (1996) points out that the best information sources provide relevant, valid material that can be accessed quickly and with minimal effort. New information tools are needed: they are likely to be electronic, portable, fast, easy to use, connected to both a large valid database of knowledge and the client record, and a servant of clients as well as practitioners.

A post-implementation survey of FAME practitioners asked what sources of information they used when trying to find out about, e.g. e-government initiatives such as FAME. The most popular source of information (41.7 per cent) was managers. The next most popular source was meetings (13.9 per cent) with circulars and e-mails being equally the third most popular source (11.1 per cent). As indicated above, colleagues had been cited as a popular source of information exchanged informally and this was reflected in their fourth ranking (8.3 per cent) (Table V).

During the FAME project an analysis was conducted of the project board meetings for some of the strand partners. The following tables show attendance patterns at meetings by project personnel, most of whom perform managerial roles. If practitioners are using managers and meetings as sources of information, these attendance patterns could be critical.

It is clear from Table VI that while some managers regularly attend project meetings, the attendance of others is erratic or non-existent. While information given at these meetings will be minuted, the resultant minutes may not be circulated widely,

	Frequency	Per cent
Managers	15	41.7
Meetings	5	13.9
Circulars	4	11.1
E-mail	4	11.1
Colleagues	3	8.3
KIE	2	5.6
Team briefs	2	5.6
IT section	1	2.7
Total	36	100

Note: KIE – key issues exchange, a scheduled review meeting between a member of staff and their manager to discuss progress, training needs, issues etc., held at least once a year which provided a forum for a discussion about FAME

so staff relying on their managers and meetings as sources of information may not be kept in the loop in respect of project developments.

In some cases, in the example above, the higher numbered attendees have not been co-opted onto the project board until some time into the project. In Table VI it looks as if this is the case with attendees 17, 18 and 19 who do not figure in the chart until half way through project A.

Training needs

Tomison (2002) states that training programs are required that can teach workers the value of using research to inform practice. The absence of information resources and skills makes social care practitioners less likely to consult research to improve their practice. Less than 50 per cent of the respondents in the study by Booth *et al.* (2003) had received training in using research findings or the Internet while ~75 per cent had had no instruction on searching literature databases.

Hallam and Murray (1998) found a range of different levels of IT skills and facilities among practitioners in local voluntary sector organisations, and a reticence among some organisations to get involved in recent IT developments was also detected. Facilitation, in the form of training, IT support and facilities, was therefore identified as important to effective voluntary sector information provision.

Among social care staff there is a disparity of ICT skills. For example, 43 per cent of respondents in the FAME survey of practitioners agreed that they needed more general IT training in order to benefit from FAME while 42 per cent disagreed (Table VII).

34.6 per cent of respondents believed the general IT skill level in the workplace was appropriate for FAME. 37.4 per cent were uncertain and 28 per cent believed the level to be inappropriate (Table VIII).

Attendee	5 June	8 July	8 Sept.	7 Oct.	5 Nov.	13 Jan.	23 Feb.	22 Mar.	24 May	22 June	20 July
1	P	P	A	P	P	P	P	–	P	P	–
2	P	P	P	P	P	A	A	A	A	P	P
3	P	P	P	P	P	–	–	–	–	–	–
4	P	–	–	A	–	P	P	P	P	P	P
5	P	P	P	A	P	P	P	A	A	–	A
6	P	P	A	A	A	–	–	–	–	A	A
7	P	P	A	P	A	–	–	–	–	–	–
8	A	–	P	A	–	–	–	–	–	–	–
9	A	P	P	P	P	S	S	S	S	S	S
10	A	P	A	A	P	A	A	A	–	P	A
11	A	–	–	–	–	–	–	A	A	–	–
12	–	–	–	P	P	–	–	–	–	–	–
13	–	–	–	P	–	–	–	–	–	–	–
14	–	–	–	P	–	–	–	–	–	–	–
15	–	–	–	–	–	–	–	–	–	–	A
16	–	P	P	A	P	P	A	A	P	–	P
17	–	–	–	–	–	P	P	P	P	P	P
18	–	–	–	–	–	P	P	P	A	P	P
19	–	–	–	–	–	P	P	P	A	P	P
20	–	P	–	–	–	–	–	–	–	–	–

Note: A – apologies for absence given; P – attendee present; S – substitute sent

Nothing should be assumed about practitioners' IT skills and confidence, or about the availability of technology to them. Many need better access, more training and a high level of ongoing support in order to become ICT users. An audit of skills and attitudes could help to identify training needs and counteract the effects of some individuals' low levels of skill and limited inclination to learn.

Comments made by practitioners in the workshops observed by the FAME learning and evaluation team confirmed the questionnaire evidence for shortfall in IT resources and skills. For example, school nurses reported that they have one PC between 15. Nurses said that six of them shared a PC which crashes at least once a day. One nurse commented, "My IT skills are improving every day. I now use two fingers!"

The disparity of ICT skills may involve IT literacy, information retrieval skills or critical and evaluative skills in respect of retrievals from the Internet. Those ICTs within the workplace setting may not incorporate CPD needs. Social care staff may not be given protected staff training time.

Concluding remarks

While CPD and EBP are commonplace within the NHS, this does not appear to be the case within social care. There is not the same expectation that staff will have ready access to resources or that they will use journals, databases and libraries to obtain information. The concept of a learning culture is not familiar to many social care staff who will have to adapt to an information culture and become comfortable using online resources. Tomison (2002) comments that, while practice wisdom is a vital component of an agency's knowledge, at times some sectors appear to operate under the assumption that their views and experience, in isolation, provide an accurate, comprehensive assessment of practice that can adequately inform changes to service delivery. Overcoming agency defensiveness and developing an agency culture where research and evidence-based practice is valued should be key features of corporate planning. Harrison *et al.*'s (2004) research also suggests that a cultural shift is required if social care decisions are to be based on the best available evidence.

Information needs are numerous and exist in many forms and a variety of care settings. A brief review of the literature on information needs underscores the persistence of the problem and implies that evolving information resources have not

	Frequency	Per cent
More general IT training needed	46	43
More general IT training NOT needed	45	42
Unsure	16	15
Total	107	

	Frequency	Per cent
General IT skill level in workplace is appropriate	37	34.6
General IT skill level in workplace is NOT appropriate	30	28
Unsure	40	37.4
Total	107	

yet succeeded in meeting the information needs of practitioners adequately. Continuing advances in IT combined with increased multi-agency working provide fertile ground for the development of more sophisticated and complete information systems.

The Internet offers potentially great benefits to practitioners, such as emergency duty teams (EDTs), because it is a medium that can provide 24/7 quality information resources. Rubin (2003) focuses on the need for the development of digital, online resources for practitioners and educators and for e-learning (or distance learning) in the near future, identifying some of the unmet information needs of such groups as the EDTs.

Web-based continuing professional development (CPD) may have the potential to make up for shortcomings in traditional lifelong learning of practitioners. Dickmann *et al.*'s (2000) evaluation of a German CPD Web site for practitioners concluded that the practitioners' self-directed individual learning mainly needs high-quality information and well-structured collections of existing relevant web-based resources. Web-based CPD can complement existing CPD activities, especially regarding individual information seeking on focused problems.

In order to take advantage of the developments in ICTs, e-learning, distance learning and web-based CPD, social care staffs need to be afforded training, access and time. The development of lifelong learning and the concept of a learning organisation and a learning culture would assist in this. Findings from FAME indicate the extreme importance of engaging and enthusing practitioners during such a process of change. A "change champion" can animate interest and help to avoid people drifting back to their old practices.

References

- Backer, T.E. (1993), "Information alchemy: transforming information through knowledge utilization", *Journal of the American Society for Information Science*, Vol. 44 No. 2, pp. 217–21.
- Baines, S., Gannon-Leary, P. and Walsh, S. (2004), "Framework for Multi-Agency Environments (FAME): final report of the learning & evaluation", available at: www.fame-uk.org/about/strand/ (accessed August 2005), .
- Booker, Q., Farrar, S., McQuaid, M. and Lopez, A. (2002), "Advanced question and answering systems for community development", *Proceedings of the 35th Annual Hawaii International Conference on System Sciences*, Big Island, HI, 7–10 January, pp. 91–5.
- Booth, S H., Booth, A. and Falzon, L.J. (2003), "The need for information and research skills training to support evidence-based social care: a literature review and survey", *Learning in Health and Social Care*, Vol. 2 No. 4, pp. 191–201.
- Brown, J.S. and Duguid, P. (2000), *The Social Life of Information*, Harvard Business School Press, Cambridge, MA.
- Calder, M.C. (2004), "Out of the frying pan into the fire? a critical analysis of the integrated children's system", *Child Care in Practice*, Vol. 10 No. 3, pp. 225–40.
- Connelly, D.P., Rich, E.C., Curley, S.P. and Kelly, J.T. (1990), "Knowledge resource preferences of family physicians", *Journal of Family Practice*, Vol. 30, pp. 353–9.
- Corcoran-Perry, S. and Graves, J. (1990), "Supplemental-information- seeking behavior of cardiovascular nurses", *Research in Nursing and Health*, Vol. 13, pp. 119–27.

- Cullen. (1997), "The medical specialist: information gateway or gatekeeper for the family practitioner", *Bulletin of the Medical Library Association*, Vol. 85 No. 4, pp. 348–55.
- Dickmann, C., Habermeyer, E. and Spitzer, K. (2000), "WWW-based continuing medical education: how do general practitioners use it?", *Medical Infobahn for European, Proceedings of MIE2000 and GMDS2000*, Hannover, Germany, pp. 588–92.
- Ely, J.W., Burch, R.J. and Vinson, D.C. (1992), "The information needs of family physicians: case-specific clinical questions", *Journal of Family Practice*, Vol. 35 No. 3, pp. 265–69.
- Gambrill, E. (2003), "Evidence-based practice: implications for knowledge development and use in social work", in Rosen, A. and Proctor, E.K. (Eds), *Developing Practice Guidelines for Social Work Intervention: Issues, Methods, and Research Agenda*, Columbia University Press, New York, NY.
- Gorman, P.N. (1995), "Information needs of physicians", *Journal of the American Society for Information Science*, Vol. 46 No. 10, pp. 729–36.
- Hallam, E. and Murray, I.R. (1998), "World wide web community networks and the voluntary sector", *Electronic Library*, Vol. 16 No. 3, pp. 183–90.
- Harrison, J., Hepworth, M. and De Chazal, P. (2004), "NHS and social care interface: a study of social workers' library and information needs", *Journal of Librarianship and Information Science*, Vol. 36 No. 1, pp. 27–35.
- Horder, W. (2004), "Reading and not reading in professional practice", *Qualitative Social Work*, Vol. 3 No. 3, pp. 297–311.
- Jenkins, K.N. (2003), *Problems Encountered in Electronic Health Record Research: National E-Science Centre Talk*, Sowerby Centre for Health Informatics at the University of Newcastle, Newcastle upon Tyne, available at: www.nesc.ac.uk/talks/324/4p.pdf (accessed November 2005), .
- Moseley, A. and Tierney, S. (2005), "Evidence-based practice in the real world", *Evidence and Policy*, Vol. 1 No. 1, pp. 113–19.
- Muellenbach, J., Fitzgerald, D. and Bayley, L. (2003), "Assessing the needs of rural and remote health practitioners in Northern Ontario: process and outcome", *Bibliotheca Medica Canadiana*, Vol. 24 No. 3, pp. 141–5.
- Proctor, E.K. and Rosen, A. (2004), "Concise standards for developing evidence-based practice guidelines", in Roberts, A.R. and Yeager, K.R. (Eds), *Evidence-based Practice Manual: Research and Outcome Measures in Health and Human Services*, Oxford University Press, New York, NY.
- Ramchandani, P., Joughin, C. and Zwi, M. (2001), "Evidence-based child and adolescent mental health services: oxymoron or brave new dawn?", *Child Psychology and Psychiatry Review*, Vol. 6 No. 2, pp. 59–64.
- Rubin, C.B. (2003), "The need for digital educational resources in emergency management", *International Journal of Emergency Management*, Vol. 1 No. 3, pp. 309–16.
- Smith, R. (1996), "What clinical information do doctors need?", *British Medical Journal*, Vol. 313, pp. 1062–68.
- Spath, M. and Buttlar, L. (1996), "Information and research needs of acute-care clinical nurses", *Bulletin of the Medical Library Association*, Vol. 84, pp. 112–16.
- Stinson, E.R. and Mueller, D.A. (1980), "Survey of health professionals' information habits and needs: conducted through personal interviews", *Journal of the American Medical Association*, Vol. 243 No. 2, pp. 140–3.
- Timpka, T., Ekstrom, M. and Bjurulf, P. (1989), "Information needs and information seeking behaviour in primary health care", *Scandinavian Journal of Primary Health Care*, Vol. 7 No. 2, pp. 105–9.

- Tomison, A.M. (2002), "Evidence-based practice in child protection: what do we know and how do we better inform practice", *What Works: Evidence Based Practice in Child and Family Services, Proceedings of ACWA Conference, Sydney, 2–4 September 2002*.
- Verhoeven, A.A.H., Boerma, E.J. and Meyboom-de, J.B. (1995), "Use of information sources by family physicians: a literature survey", *Bulletin of the Medical Library Association*, Vol. 83, pp. 85–90.
- Walter, I., Nutley, S., Percy-Smith, J., McNeish, D. and Frost, S. (2004), *Improving the Use of Research in Social Care Practice*, Social Care Institute for Excellence, London, available at: www.scie.org.uk/publications/knowledge.asp (accessed November 2005), .