The Opportunities and Challenges of Disseminating Healthcare Research

Professor Eleanor Bradley and Professor Wilf McSherry

Introduction

There are a range of reasons why practitioners choose to conduct research projects. They may wish to utilise research in order to challenge, improve or advance practice for individuals and/or services as a whole. There are also personal development opportunities that attract people to research, including educational attainment (as part of degree, masters or doctoral level studies), or the advancement of careers for example towards nurse consultant status. Research projects may be undertaken in order to attract funding to an organisation so that dedicated time for the conduct of a specific piece of work is possible; to support the funding of research posts or to further areas of specialty for example professorial units.

However, despite the opportunities presented by research, there are key difficulties with the dissemination of research findings within organisations. It is the aim of this monograph to outline some of the barriers to effective dissemination of research findings, and to consider how staff working across university and National Health Service (NHS) organisations (particularly those in formal joint posts) could utilise their roles to dismantle these barriers and promote effective dissemination and utilisation of research.

Definition of dissemination

Commonly accepted definitions of dissemination include:-

'to distribute or scatter about' (Collins English Dictionary, 3rd Ed, 1994)

Freemantle and Watt (1994 p) defined dissemination as the 'processes by which target groups become aware of, receive and utilise information'. This definition introduces the

notion of targeting specific groups with information that may be of relevance, but also highlights the necessity of such groups being able to utilise the information once received.

The Importance of Effective Dissemination

In the late 1960s, Lord Rothschild (World Health Organisation) claimed that:-

> "If, for the next 20 years, no further research were to be carried out ... the application of what is already known, of what has already been discovered, would result in widespread improvement in world health"

The concerns of Lord Rothschild signalled caution to the amount of research being carried out worldwide, without effective implementation. More recently, The House of Lords Select Committee on Science and Technology voiced concern at the delay in translating research findings into practice. The failure to translate research with proven benefits into action could result in improvements to patient care being delayed primarily through difficulties with effective dissemination. Furthermore, research in these areas may be being undertaken that is unnecessary, raising concerns about the ethics of including patients in studies which are not required. Despite concerns being raised over 4 decades ago, the dissemination of research findings still remains a challenge for Research and Development (R&D) departments within NHS organisations, and universities. Indeed this challenge is recognised globally (Kajermo, Undén, Gardulf et al, 2008, Brown, Wickline, Ecoff, Glaser, 2009).

Effective dissemination can support staff to share information about developments in healthcare practice, and to help services to adopt and implement innovation. Furthermore, dissemination of research is a key process in evidence-based practice (EBP). It is the purpose of EBP to support healthcare staff to make decisions about care based on quality information regarding the effectiveness, and cost-effectiveness, of

proposed healthcare interventions. In order to support healthcare practitioners to improve the quality of healthcare and health outcomes it is important to satisfy two conditions:-

- High quality research, utilising both qualitative and quantitative methods, into the effects and impact of interventions must be undertaken
- Incorporation of research into health policy and clinical practice

The promotion of high quality, innovative practice does not require all team members to be research active, but it does require all team members to be research aware (McSherry and McSherry, 2001), to be able to access information about service developments, innovations and research findings, but also to be able to interpret this information in a way that enables and supports service development. Indeed, one of the key barriers to EBP has been suggested to be inadequate systems for the dissemination of evidence, including research findings (Newman et al, 1998). Commentators report that there is a lack of expertise to discuss research (Kajermo, Nordstrom, Krusebrant, Björvell, 2000)

As well as ensuring that staff members have access to research findings, and the ability to critique these findings, it is vital that service users and carers also have access to recent research as well as any support needed to interpret the findings of locally conducted research work. If service users and carers are to be supported, and encouraged, to exercise choice about their care, they need good quality, timely information about research and innovation which is contextually relevant and appropriate to their situation.

The Promotion of Dissemination

In 1996, the NHS Research and Development programme introduced 2 mechanisms to promote the dissemination of research to clinicians:-

- The NHS Centre for Reviews and Dissemination, a joint collaboration between the National Institute of Health Research (NIHR) and the University of York
- The UK Cochrane Centre (www.cochrane.org.uk)

The Cochrane group have classified a range of intervention strategies to support the dissemination and implementation of clinical guidelines to clinicians:-

- Distribution of educational materials
- Educational meetings
- Educational outreach visits
- Local opinion leaders
- Audit and feedback
- Reminders (Whitty et al, 2004).

The range of strategies proposed by the Cochrane group highlights for academics the limits of the traditional model for dissemination. Despite this, a primary focus for dissemination of findings remains the publication of written material, particularly high-ranking, academic publications which are targeted at academic audiences, but may not be regularly accessed by practitioners working in clinical settings. This lack of innovation with respect to dissemination may explain why research findings are still not widely applied in practice, despite the efforts of the NIHR and the Cochrane group. The nature of evidence is weighted heavily towards quantitative methods. This requires in-depth knowledge and understanding of complex statistical methods. Therefore, many practitioners will not have the underpinning knowledge to interpret and transfer such findings into their practice (Chummun, Tiran, 2008).

Current Barriers to Effective Dissemination

Hunt (1984) proposed that nurses may experience specific difficulties when attempting to utilise research findings in practice, and that effective methods to encourage the utilisation of research in nursing are required. Nurses have described accessing 3 key sources of information when looking at updating clinical practice:-

- Human sources – clinical credibility may be judged as carrying more weight than research credibility

- Local information – not necessarily research based or quality assessed, but locally relevant
- Information Technology – a range of resources accessed via the internet (Hunt, 1984).

Different professional groups across the NHS receive different levels of research education during their training, and so the ability of these professional groups to utilise research findings will differ in practice. For example, nurses and occupational therapists have traditionally received little information about research methods during their pre-registration training, as Veeramah (2007) indicates this situation has been addressed over recent years. Emerging publications reveal that a range of different teaching methods are being used to engage and develop research awareness in pre-registration education (Irvine, Gracey, Jones et al, 2008). Undergraduate psychology degrees, on the other hand, have always had high research content, often necessitating the completion of a research-based dissertation. The move towards multi-disciplinary team working, and the expectation that all team members will understand and respond to research information in the same way, is undermined by the different levels of research awareness and experiences inherent within these teams and suggests a need for further, individualised research support.

Publication in academic journals is a key activity for academic researchers and the primary way by which research findings are disseminated. However, scientific journals are not effective in influencing practice (Watt, 1996). One of the consequences of academics focussing on academic publications as a means of disseminating research findings is that research is regarded by some clinicians as an activity to be conducted by university departments, or research units, and not by key NHS staff. Indeed, Newman et al (1998) found that the closer NHS staff were to the provision of care, the less aware they were of developments in their specialty areas, including research findings and other innovation. Within the university setting, the reverse can be a challenge for academics who are required to stay in touch with innovative practice within the NHS, in order to implement into teaching or supervision sessions.

Despite a range of research being conducted across NHS organisations, researchers themselves may provide only limited guidance as to the application of findings in practice. Although all researchers are required to provide their plans for dissemination prior to being granted ethical permission to proceed with any research work, not all researchers engage actively in the dissemination of their research findings to participating NHS organisations / services on completion of the work. It is common practice for written summaries of research findings, or final reports, to be circulated to participating R&D departments of NHS organisations, but there is not always the opportunity for researchers to re-enter the organisation to support the interpretation of findings, or to explore opportunities for dissemination and implementation where appropriate. Research assistants, commonly responsible for data collection, are often employed on short-term contracts related to specific research projects. As such, they move on to other contracts on completion of project work, and are not available to support services in the application of their findings. These research assistants may have been the 'face' of the research project, and would be the most helpful to clinicians interpreting findings, and applying results to the context of their own services.

Although the NHS is keen to promote the role of the academic clinician, research conducted within the NHS may be led by researchers based in universities, or Trust-based, academic units. This may result in a perception of the researcher as an 'outsider' which can promote compliance with research protocols and data collection, but could have a more negative impact on the uptake or 'internalising' of research findings by clinicians.

The barriers that clinicians experience in accessing, and applying research findings may be responsible for research and development activities failing to be prioritised alongside other clinical activities. The clinical workload of many practitioners can mean that R&D activities are marginalised. The difficulty prioritising R&D activity within busy clinical settings may be further aggravated by the poor dissemination of research findings, with limited uptake of findings, particularly from regional research or project work.

Governance processes within organisations may limit the opportunities for individual clinicians to initiate changes to practice, with complex processes necessary to instigate service developments. For these reasons, clinicians may experience a lack of incentive to engage with research, leading to a lack of experience and confidence when any opportunities arise.

Addressing the Challenges of Dissemination

In July 2009, a letter was circulated from Professor Dame Sally Davies, Director General of Research and Development at the Department of Health to all Chief Executives of NHS Trusts, mental health trusts, foundation trusts, ambulance trusts, primary care trusts and strategic health authorities, to draw their attention to their requirement to support research in the NHS, as laid out in various policy statements and operational requirements. The DH supports research in the NHS via the National Institute of Health Research, and funding is available from a wide range of schemes, including the Research for Patient Benefit Scheme (RfPB) which offers 3 annual competitions of 'open calls' for research ideas initiated from practice. Senior managers are being encouraged to support the R&D agenda by building research activity into job plans for clinicians, to include discussion of R&D activity at senior meetings, and to have executive representatives of R&D sitting on Trust Boards. Support at this senior level is important to promote R&D activity, but support for R&D at all levels will only be promoted with effective dissemination of findings, and promotion of R&D activity as a clinically relevant activity which enhances patient satisfaction, patient care, and also provider satisfaction. Dissemination needs to be considered at the earliest stage of project planning, with bids for funding including a period of time specifically for dissemination at the end of project work. Links with audit committees / departments are required to strengthen the implementation of any research findings, and any evaluation of successful implementation into practice, utilising appropriate outcome measures.

The Utilisation of Joint Posts To Strengthen Dissemination

There is a role for academics holding joint posts in clinical settings to dismantle some of the barriers to effective dissemination across NHS organisations. The location of an academic, with experience of conducting and applying research, within a Trust introduces the potential for an 'advisory' link to support change and provide the academic support required for clinicians to interpret findings and consider how to implement any changes to practice. Where researchers are no longer available to disseminate information about completed research, an academic in a joint post could fulfil this role, and disseminate information in a range of creative, individualised ways appropriate to the context of the practice environment. Where staff are conducting small scale project work, academic support to promote publication in professional journals, and the preparation of seminars / presentations for local delivery, can be very helpful to encourage the dissemination of local work. Examples of publications that have arisen from such support include Foster Gordon, McSherry (2009); Couchman, McDermott McSherry (2008) and Hall, Bradley, Nolan (2007). Although the findings of a research project remain static, the presentation of them in a variety of ways, depending on the local audience and their needs, can make the findings more fluid and applicable to practice. Those in joint posts have the opportunity to work directly with those in clinical practice, to understand the environments within which research findings are proposed to be applied, and to appreciate the different support required to disseminate information in these various settings. There is less likelihood of someone holding a joint post, clinical and academic of being seen as an 'outsider', enhancing the likelihood that research work can be internalised.

It is important for local trusts to be conducting research which is contextually relevant, rather than having to rely solely on national findings which may be difficult to apply in practice. Joint academic posts provide expert advice, and sensitivity to local context, and can support staff members to develop research projects which utilise methods more likely to be applicable in practice. For example, an Action Research (Lewin, 1946) project

stands a greater chance of application in practice as it permits change during the process of project work, in line with service needs /issues, encourages full involvement of all participants (including staff members), and findings are implemented throughout the life of the project.

Academics may have an awareness of different theoretical models from a range of clinical fields that could support dissemination in practice. For example, the Rogers' diffusion of innovation model (1983) challenges a 'top down' approach to change, encourages a diffusion approach and the full involvement of all participants in research. Business models, particularly those stemming from organisational development theorists, may be helpful, as may some of the behavioural models of change stemming from health psychology (e.g Protection Motivation Theory designed to address change, and the vulnerability that may stem from a refusal to change).

As well as disseminating research work in clinical settings, it is important that all teaching contains recent research and findings from innovative practice, particularly that being conducted locally. The joint post may be the key to the sharing of current, timely information between universities and NHS organisations. Research information can be integrated into local teaching programmes, and any learning / support needs identified within the clinical setting should be addressed through course development or other opportunities for support. There is also the opportunity for individuals who show academic promise to be identified and signposted to further development including doctoral work. Formal programmes to support such development could be initiated by joint posts, including secondment opportunities or mentoring relationships.

Conclusions

There are a range of opportunities from joint academic posts between universities and NHS organisations that could impact positively on the dissemination of research and innovation. Close contact between staff working within these organisations can support joint project work, as well as the provision of support to encourage article publication,

presentations and the implementation of recommendations which are contextually relevant, and presented in a way that is individualised and based on the skills of the members of multidisciplinary teams. Project work that is informed by teams which include academic and practitioner members is more likely to be disseminated successfully across academic and NHS organisations. Furthermore, the adoption of action-research, or consensus-building approaches, to project work, underpinned by academic knowledge and theory, could reinforce the likelihood of findings being implemented, and recommendations from project work being contextually appropriate, and of importance to team members. Such an approach could also support practitioners to become research aware and provide opportunities for staff to derive experience of 'live' project work. As well as providing opportunities for staff to become research aware based on locally relevant, well-designed research work.

References

Brown, C, E., Wickline, M, A., Ecoff, L. & Glaser, D. (2008) Nursing practice, knowledge, attitudes and perceived barriers to evidence-based practice at an academic medical center Journal of Advanced Nursing 65 (2) 371 - 381

Chummun, H, Tiran, D. (2008) Increasing research evidence in practice: a possible role for the consultant nurse *Journal of Nursing Management* 16 327 – 333

Couchman, T., McDermott, M., M^{c}Sherry, W. (2008) Using Well-being Champions to Deliver Holistic Care. *Nursing Times.* 104 (2) p37-38

Collins English Dictionary (1994) 3rd Edition, Harper Collins

Freemantle, N., Watt, I. (1994) Dissemination: implementing the findings of research *Health Libr Review* 11(2): 133-137

Foster, S., Gordon, P., M^{c}Sherry, W. (2009) Rolling out Productive Ward foundation modules across a hospital trust. *Nursing Times.* 105 (30) p28-30

Hall, J., Bradley, E,J.,Nolan, P. (2007) Mental Health Staff Attitudes Towards Exercise Programmes *Nursing Times* 103 (30): 30-31

Irvine, F., Gracey C., Jones, O, S., Roberts, J, L., Tamsons, R, E.,Tranter, S. (2008) Research awareness: Making learning relevant for pre-registration nursing students *Nurse Education in Practice* 8 267 - 275

Kajermo, K., Undèn, M., Gardulf, A., Eriksson, L, E., Orton, M, L., Arnetz, B, B. (2008) Predictors of nurses' perceptions of barriers to research utilization *Journal of Nursing Management* 16 305 – 314

Kajermo,K, N., Nordstrom, G., Krusebrant, A., Björvell, H. (2000) Perceptions of research utilisation: comparisons between health care professionals, nursing students and a reference group of nurse clinicians *Journal of Advanced Nursing* 31 (1) 99 – 109

Lewin, K. (1946) Action Research and Minority Problems, *Journal of Social Issues* 2: 34-46

McSherry, R., McSherry, W. (2001) Putting research into practice Nursing Times 97 (23) 36 – 37

Newman M, Papadopoulos L and Sigsworth J. (1998) Barriers to evidence-based practice, *Clinical Effectiveness in Nursing* 2(1): 11-18

Rogers E (1985) *Diffusion of Innovation* 3rd Ed, The Free Press, NewYork

Veeramah, V. (2007) Use of research findings in nursing practice *Nursing Times* 103 (1) 32 – 33

Watt G (1996) All together now: why social deprivation matters to everyone, *British Medical Journal* 312: 1026-1029