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FEATURE ARTICLE

Strategies for introducing evidence-based practice and changing clinician behaviour: A manager's toolbox

Annie McCluskey and Anne Cusick

School of Exercise and Health Sciences, University of Western Sydney, Campbelltown, New South Wales, Australia

Significant behaviour change is required if occupational therapy practice in Australia is to become more evidence-based. Occupational therapy managers, both clinical and academic, are well positioned to be key players in this process. Indeed, we suggest that managers need to drive the change process. The aim of this paper is to help occupational therapy managers better understand and prepare for the change process, and the shift to evidence-based practice. Two models of change are presented and applied to evidence-based practice: (1) the stages of readiness for change; and (2) individual responses to change, according to how quickly a person alters their behaviour and practice when confronted with change. Practical strategies are suggested for managers to use during the change process, including a review of the attitudes and values of staff, identifying barriers to implementation, strategic planning, and the use of SWOT analysis (strengths, weaknesses, opportunities and threats). Recommendations for further research are also discussed. Unfortunately, there are no quick-fix strategies or 'magic bullets'. Evidence-based practice requires a change in attitudes and values, a major change in work behaviours, and a commitment to lifelong, self-directed learning.

KEY WORDS *Change, continuing professional development, occupational therapy*

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INTRODUCTION

Evidence-based practice is a process which involves searching for, appraising, and then using research findings to guide clinical practice (Hamer, 1999). It is about using, rather than doing research (Taylor, 2000). As a process, evidence-based practice aims to increase clinical effectiveness. Interventions which are found to be harmful or ineffective are discouraged, while others with more demonstrable benefits are introduced (Effective Health Care, 1999). The process of evidence-based practice encourages health professionals to identify

client groups most likely to benefit from their services, and interventions most likely to produce positive outcomes (Egan, Dubouloz, von Zweck, & Vallerand, 1998).

The benefits of adopting evidence-based practice have been well documented in the international occupational therapy literature (Alsop, 1997; Eakin, 1997; Law & Baum, 1998; Tickle-Degnan, 1999). However, the process of evidence-based practice does not appear to have been widely adopted by occupational therapists in Australia. For example, it was only recently, in late 2000, that the first articles on evidence-based practice were published in this journal (Bennett & Bennett, 2000; Cusick & McCluskey, 2000; Hayes, 2000; Tse, Blackwood, & Penman, 2000). The 2001 Australian occupational therapy conference program offered a number of sessions on evidence-based practice, including an international symposium, a pre-conference workshop, as well as multiple papers on the topic. This contrasts with the national conference 2 years earlier, when only two papers were presented on evidence-based practice (Bennett, 1999; Strong, 1999).

There are a number of possible reasons why evidence-based practice has not, until recently, been a high priority for Australian occupational therapists. Recent discussions with individual practitioners revealed that many were still unsure what the term 'evidence-based practice' actually meant. Most were aware that they needed to change their practice in some way, but did not know how or where to start. Like their colleagues in Britain (Upton, 1999a), many Australian occupational therapists do not have the technical skills required for searching databases or appraising literature. In addition, many feel that they do not have the necessary time to read literature in the course of their busy week.

Finally, there is nothing to suggest that occupational therapists behave any differently to other health professionals, for example physiotherapists or general practitioners. These two groups of professionals have been shown to rely more on information learned during their undergraduate training, from practical courses and personal experience, and on the opinions of colleagues when making clinical decisions, than on published evidence (Covell, Uman & Manning, 1985; Muir Gray, Haynes, Sackett & Guyatt, 1997; Sackett & Rosenberg, 1995; Turner & Whitfield, 1997). Health professionals who make clinical decisions in this way have been described as being 'experience-based' rather than 'evidence-based' (Redmond, 1997). All of these factors contribute to the research-practice gap, and may explain why occupational therapists in Australia have been relatively slow to adopt evidence-based practice.

AIMS

This paper proposes that managers of occupational therapy departments are in an ideal position to help practitioners bridge the research-practice gap, and make the shift to evidence-based practice. Managers of healthcare facilities, private practices and university departments all have the potential to act as role models for staff within their organisation, by learning about, promoting and using evidence in their work. Managers also oversee the continuing professional development of staff, the policies, procedures and practices used within their organisations, and have a crucial role to play in changing work practices (Alsop, 1997; Eakin, 1997). Our paper aims to help managers better understand and prepare for this change process.

UNDERSTANDING AND PLANNING FOR CHANGE

Change is not new within the health sector. For many years, occupational therapists and other health professionals have been faced with changes which affect their working lives. These changes include the introduction of new technologies, the closure of hospital wards, an increasing focus on primary and community-based healthcare. More than ever, healthcare facilities need skilled managers at all levels, managers who keep a close check on the constantly changing work environment, and who anticipate and plan for change.

Staff often feel threatened by change which is imposed on them without consultation or adequate planning. Careful planning can increase the likelihood of successful change. Nursing professionals have reported that the way in which evidence-based practice is implemented, and the nature of the change process is critical to its success (Johnson, Morris, Agnihotri, Elliott & Crookes, 1998). However, it is likely that in any one department, individual staff will be at different stages of change (Bury, 1998b; Effective Health Care, 1999). Some staff will be enthusiastic and ready to learn more about evidence-based practice, while others will be more resistant to change. The type of education and encouragement needed at each stage, and by different individuals, will vary.

The key to successful change is to plan ahead, to be proactive instead of reactive. Planned change involves a deliberate effort to alter some aspect of an organisation, as opposed to accidental change, or change by drift (Marquis & Huston, 1998). One of the best known change theorists, Lewin (1951) suggested that four rules should be followed when implementing change: (1)

change should only be implemented for good reason; (2) change should be gradual; (3) change should be planned, not sudden; and (4) all individuals who may be affected should participate in planning for the change. This means that managers need to be aware not only of the impact of change on individuals, but also the stages of change, and possible reactions which may accompany change.

Stages of change

Prochaska & DiClemente (1983) described five stages of readiness for change, in relation to giving up addictive substances such as drugs and alcohol. These stages can be applied to evidence-based practice, because of the magnitude of change required. The first stage of readiness for change is *precontemplation*. This stage is where there is no intention to change, no reflection on current practice or active searching for new information. There may also be a lack of awareness of the need for change. Some people have difficulty moving beyond the stage of *precontemplation*. They become anxious and threatened by new developments in practice, often because a change in practice involves new learning. Managers need to be sensitive to staff whose behaviour suggests they are at this stage.

Fortunately, many practitioners are interested in learning about new developments in practice, and move on to the stage of *contemplation*. This is where practitioners begin to think about change. For example, therapists may become interested in evidence-based practice when medical colleagues or other professionals in their team discuss workshops they have attended. Occupational therapists at this stage might show an interest in organising or attending an inservice on evidence-based practice or critical appraisal. Managers need to be ready to respond to

such requests. Information may also be needed about the implications of change on clinical practice and practitioners' workloads. Managers need to consider such issues in advance. Evidence-based practice will require significant changes to practice, such as regular visits to the library, the acquisition of new skills, and a commitment to continuing professional development. If these new work practices are initiated by management, they need to be introduced slowly and explained to staff in a supportive manner. An analysis of the pros and cons of introducing evidence-based practice might be helpful at this stage, to ensure practitioners have an opportunity to think about the change involved.

The stage of *contemplation* is usually followed by the *preparation* stage, where individuals learn specific skills in order to change their practice. In a shift to evidence-based practice, this may involve acquiring skills such as searching for and appraising the evidence, and learning ways to incorporate research into practice or teaching.

Some individuals will proceed to the stage of *action*, where they implement research findings and begin to change work practices themselves. The stage of *action* usually requires a significant behaviour change, which managers will need to encourage and support. Adoption of evidence-based practice often involves discontinuation of treatments which have been accepted practice for decades, and the learning of new treatment techniques. For example, in order to improve client outcomes, occupational therapists may need to develop skills in the use of functional electrical stimulation. This intervention has been shown to improve motor recovery and assist in preventing shoulder subluxation after stroke (Faghri *et al.*, 1994; Linn, Granat, & Lees, 1999)

The final stage of readiness for change has been described as the *maintenance* stage, where there is a permanent change in behaviour. In the case of evidence-based practice, maintenance activities by practitioners might include regular library searches, participating in a journal club (Dingle & Hooper, 2000; Taylor, 2000), or implementing new practice routines. The final two stages of change, *action* and *maintenance* are probably the most difficult to achieve. It is easy for practitioners to slip back into old habits if there are no incentives to maintain and support the new behaviours. Most practitioners will need encouragement to keep visiting the library when caseloads are high, and to search computer databases regularly when new practices appear to work. Role modelling of these behaviours by senior staff and managers will be important for demonstrating a real commitment to change. Managers may also want to introduce rewards for evidence-based initiatives and efforts (Taylor, 2000), such as offering payment to attend conferences or workshops to more active staff members. Encouraging staff to work in pairs, in small groups, or with a mentor may also help to maintain motivation (Conroy, 1997), as will presenting the findings of a search to other staff members.

Awareness of the stages of change will help managers to better anticipate staff needs, and plan strategies which are appropriate to the stage of change. Such an awareness can help to achieve and maintain change. Individuals within one department will also have unique ways of adapting and responding to change. A more practitioner-centred model of change is now explored, to help managers consider this dimension.

Individual response to change

Rogers (1983) described five types of individuals according to how quickly they altered their behaviour in response to a new idea or practice. The five categories include innovators; early adopters; early majority; late majority; and laggards. *Innovators* make up the smallest group, and are often ahead of the majority in terms of their ideas and learning. They may be isolated and distrusted by other staff, because of their uptake of a new idea such as evidence-based practice. Managers need to be aware of this possibility and provide support, encouragement and inclusion to those concerned.

The *early adopters* are the respected opinion leaders within a profession or organisation, who often show an interest in new ideas before everyone else. These opinion leaders can be useful for marketing a new concept such as evidence-based practice to their peers at staff meetings, workshops and conferences (Effective Health Care, 1999). Managers can target the *early adopters* in their department, and seek their help to lead opinion towards an evidence-based culture. Managers can also involve *early adopters* when designing departmental strategies which aim to increase the uptake of evidence-based practice by other staff.

Next are the *early majority*, those people who hold traditional views and values, but are capable of change if it becomes clear that the change is inevitable. Managers may find that clear messages about change to evidence-based practice will get these people on board faster. The *early majority* can be helpful allies when trying to get the *late majority* to embrace change. The latter group include the sceptics within an organisation, who can be reluctant to accept new ideas and practices. Such individuals may need sustained input to

decrease their reluctance. Finally, the *laggards* will usually only accept change when it is forced upon them, and even then, still with some resistance. Managers working with the *laggards* need to feel comfortable with the use of performance appraisals and reviews, to ensure that evidence-based practice approaches are adopted.

PREPARING STAFF FOR CHANGE: A MANAGER'S TOOLBOX

Occupational therapy managers face many challenges when starting to implement evidence-based practice, even with an awareness of the stages of change and the different reactions to change. Other factors which managers will need to consider and plan for include *resistance to change*, the *values* of staff, *perceived and real barriers*, and *strategic planning*.

Resistance to change has already been mentioned, and is a common response to change because change disrupts the balance within an organisation. Most individuals prefer to work in an organisation where attitudes, values, and work practices are predictable and familiar. In most workplaces, staff share a common set of *values* (Whiteley, 1995). For example, clinical contact and occasions of service have traditionally been valued within most healthcare organisations, both public and private. Conversely, time spent reading scientific literature reduces the time spent with clients, and is often seen as a lower priority (Barnitt & Salmond, 2000). Such attitudes and values need to change with the introduction of evidence-based practice.

Managers can also expect to meet some resistance during the change process when staff hold *values* which are incompatible with evidence as a priority. A useful way to overcome this problem is to explicitly identify (and then discuss) the beliefs and

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values which exist within a department (Collison, 1999; Whiteley, 1995). For example, if staff can agree in principle that occupational therapy interventions should (where possible) be based on published evidence and not simply on local customs, this will make a value priority explicit and remove one of the 'hidden' barriers to implementation. It would also be helpful to reach agreement about the behaviours

which demonstrate this new value, such as reading published evidence during work hours, and making this acceptable practice (Barnitt & Salmond, 2000). When conducted in collaboration with staff, the process of identifying and reviewing departmental values may increase commitment to evidence-based practice and the process of change.

Table 1. A SWOT analysis related to the introduction of evidence-based practice

Strengths:

- Organisation already has good library facilities and librarian support
- Several new graduates already employed, who are familiar with computer databases
- Several staff are enthusiastic about research, and are enrolled in masters degrees
- Students may be available to assist with searching and critiquing literature

Weaknesses:

- Very little time allocated by most staff routinely for literature reviews or research related activities
- Lack of skills
- Computers and library located in a separate building
- The organisation relies on income from client services. Time spent away from clients reduces the income and billable hours

Opportunities:

- Training currently being offered by state health department/professional association in literature searching skills
- Hospital management indicating that future departmental funding may be based on evidence of clinical effectiveness (an opportunity to be proactive

Threats:

- Predicted staff freeze – fewer staff may be available to cover existing services
- Large and busy caseloads
- Some staff have a great deal invested in particular interventions, particularly those who have spent many years refining their technical skills
- Perception that research is separate from clinical practice, and something to be conducted in universities. As a result, patient care and occasions of service are given priority over research.
- Proposed change is incompatible with current beliefs and working practices
- Tendency to return to previous practices and patterns without constant motivation and reminders
- Difficulty sustaining change or transferring enthusiasm to new staff – need induction for new staff and ongoing training
- Dependence on habit and patient preference; long held patterns of behaviour and beliefs
- Department may be required to cease interventions which consumers or other health professionals expect
- Private practice may lose clients if they do not offer treatments which clients expect

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In addition to identifying the values which staff share within a department, managers and staff may wish to identify *perceived barriers* to the implementation of evidence-based practice, and strategies to overcome each of these barriers (Bury, 1998a; Haynes, Sackett, Guyatt, Cook, & Muir Gray, 1997; Taylor, 2000). For example, a perceived lack of time for searching and reading during work hours could be addressed by blocking out 'study time', in much the same way that postgraduate students do when attending university classes. Staff who undervalue research findings and quality evidence may be 'converted' through the process of developing a departmental mission statement, and agreeing on new values which will underpin the department in future. Thus, some of the potential (and real) barriers can be changed into opportunities (Bury, 1998a).

Occupational therapy managers may also find it helpful to consider *strategic planning* as an approach to implementing evidence-based practice. This may involve the use of diagnostic analysis (Effective Health Care, 1999), or an analysis of the Strengths, Weaknesses, Opportunities and Threats associated with evidence-based practice (SWOT analysis; Wehrich, 1982 cited in Hunger & Wheelen, 1993; p. 159). Using the SWOT approach, the current strengths and weaknesses of a department can be identified and external threats and opportunities discussed. The use of SWOT analysis will not be new to occupational therapy managers. It is a technique which is traditionally used when change is being considered within an organisation (Hamer, 1999). An example of a SWOT analysis related to evidence-based practice is shown in Table 1.

An important step in any SWOT analysis, and one which is often omitted is matching the strengths and opportunities

with the weaknesses and threats (Wehrich, 1982, cited in Hunger & Wheelen, 1993; p.159). For example, if training is being offered to staff in searching or critical appraisal skills by the state health department or professional association (an opportunity), this targets the lack of skills within a department (a potential weakness). Similarly, experienced librarians and new graduates within an organisation who already possess such skills should be used to advantage (a strength).

IMPLEMENTING EVIDENCE-BASED PRACTICE

When the ground has been prepared for the introduction of evidence-based practice, the process of implementation begins. Evidence-based practice is achieved by following four steps, each requiring new learning. The four steps are (1) formulation of clear clinical questions, preferably from a client's perspective (2) searching the literature for relevant scientific evidence (3) critically appraising the evidence, and (4) integrating the findings into practice and teaching (Bury, 1998a; Rosenberg & Donald, 1995). Evaluation should also be considered as a fifth and final step, to allow monitoring of changes to professional practice and reinforce the desired behaviours (Bury, 1998a; Effective Health Care, 1999).

A major challenge for managers is to coordinate the continuing professional development and skill acquisition which accompanies evidence-based practice (Alsop, 1997). Regular performance appraisal and learning contracts can be used for this purpose. Adequate supervision and mentoring will also be needed, to ensure that individual learning objectives are pursued and do not repeatedly get postponed because of the pressures of work.

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A multi-faceted approach to continuing professional development is recommended, to cater for different learning styles and needs (Hamer, 1999; Oxman, Thomson, Davis, & Haynes, 1995). Such an approach might involve asking a local opinion leader in occupational therapy to talk about evidence-based practice at a meeting; circulating pre-reading beforehand; attending workshops on searching skills and appraisal; arranging outreach visits by a trained support person to assist staff who are learning to search for and appraise literature; and later on, using prompts, audit, and feedback mechanisms to remind practitioners to maintain these new behaviours and practices. These strategies for changing clinical practice have been reviewed elsewhere, and will not be duplicated here (Bury, 1998b; Effective Health Care, 1999; Johnson *et al.*, 1998; Oxman *et al.*, 1995; Thomson O'Brien *et al.*, 1999).

FUTURE RESEARCH

In coming years, there will be a number of fruitful areas for clinical research which involve evidence-based practice and occupational therapy. Some of these research topics will be of particular interest to managers. For example, levels of knowledge, skills and attitudes could be measured before and after evidence-based practice is introduced to an organisation. Studies such as those by Turner & Whitfield (1997) and Upton (1999 a,b) could be replicated, providing a snapshot of occupational therapists' attitudes and practice at different time periods. Turner & Whitfield (1997) investigated physiotherapists' reasons for using particular clinical interventions, in England and in Australia. These authors found that, when deciding on treatment, over 90% of practitioners surveyed relied

on what they had been taught as an undergraduate, in association with personal experience and knowledge from practice-related courses. Research literature ranked least in importance for these physiotherapists when making treatment decisions. In another study, Upton (1999a) found that occupational therapists in Britain had very positive attitudes to evidence-based practice, however they rated their knowledge and skills as low, particularly search and appraisal skills. Either of these studies could be repeated in Australia.

Audits will also provide useful indicators of how often practitioners refer to published evidence in the course of their work, and how many hours per week or month they spend reading research literature, before and after attending skills-based workshops. Qualitative research methods could be used to investigate other questions, for example, 'How do practitioners feel about the change process?'; 'What processes and strategies assist them during the change process?'; and 'What does it mean to be an 'evidence-based' practitioner, as opposed to being 'experience-based' ?'

Research opportunities will be many and varied. Research will be important for monitoring changes in behaviour, and providing feedback to those who have already modified their practice (Thomson O'Brien *et al.*, 1999). More important, however, is to evaluate clinical effectiveness. We need to ensure that interventions which have been shown (through rigorous research) to improve client outcomes are used in preference to those which do not.

CONCLUSION

If occupational therapy in Australia is to remain valued, the profession needs to

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adopt a more evidence-based approach to practice. To achieve this goal, we need a major change in attitudes, values, skills and knowledge at all levels of the profession. Occupational therapy managers are in an ideal position to orchestrate this change process. Managers who wish to be proactive can start by (a) acting as role models to staff within their organisation, by learning about, promoting and using evidence in their work, (b) encouraging and supporting staff who show an interest in evidence-based practice, (c) identifying and discussing the values which exist within their organisation, (d) identifying barriers to the implementation of evidence-based practice, and strategies to overcome these barriers, or (e) conducting a full SWOT analysis with staff, and finally (f) carefully considering and meeting the continuing professional development needs of staff. By following some or all of these recommendations, managers can become the 'early adopters' within their organisation and help staff to bridge the research-practice gap.

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Annie McCluskey MA, Lecturer. **Anne Cusick** PhD; Associate Professor.

Correspondence: Annie McCluskey, School of Exercise & Health Sciences, University of Western Sydney (Campbelltown Campus), Locked Bag 1797, Penrith South DC, NSW 1979, Australia. Email: a.mccluskey@uws.edu.au. **Accepted for publication May 2001**