Editorial — Incorporating research evidence into clinical practice decisions

Physiotherapy journals have a responsibility to encourage reporting on opportunities to improve clinical practice, as there is increasing international expectation that research evidence will be used to inform allied healthcare decisions. The words ‘evidence-based practice’ should now be familiar to most therapists and managers, and they are increasingly familiar to patients. Most allied health practices would consider themselves to be ‘evidence-based’, usually because they run a journal club, audit treatment notes, become accredited or treat some patients using clinical guidelines or pathways. Academic allied health journals around the world publish research articles purporting to add to the body of evidence which informs clinical practice. Journals are placing an increasing emphasis on bringing research closer to clinical practice in terms of user-friendly titles for papers, insisting on better quality reporting, providing key point sections in papers which explain the findings in clinical terms, and providing clinical commentaries to put the research evidence into a clinical context.

However, there is continuing scepticism about the nature of evidence informing clinical decisions, which questions the translation of research evidence into practical, patient-specific care. Two challenging editorials (Miles et al., 2006; Miles and Loughlin, 2006) summarize a range of papers in volume 12 (numbers 3 and 4) of the Journal of Evaluation in Clinical Practice, which debate the evidence-based healthcare movement. These authors disagree that evidence-based medicine has achieved widespread acceptance ‘despite its very clever marketing strategies’ (Miles and Loughlin, 2006, p. 398). They propose a view that it is ‘not evidence-based medicine’ that should underpin clinical decisions, rather ‘knowledge-based medicine’ (Miles and Loughlin, 2006, p. 398). Jones et al. (2006a, 2006b) reflect on the issues facing physiotherapists when integrating different sources of information to make defensible clinical decisions, and argue that evidence from research forms only one element of the process. These reflections concur with those of Tonelli (2006), who queries how clinical decision-making can viably incorporate evidence from published clinical research alongside non-evidence sources such as personal clinical experience, variable pathophysiology of the disease and patient preference. Furthermore, Zwarenstein and Oxman (2006) reminded researchers recently of the importance of pragmatic trials which test interventions in real-life situations, and put an implementation ‘face’ to the findings of randomized controlled trials conducted ‘under ideal circumstances in which the intervention is most likely to show benefit’ (Zwarenstein and Oxman, 2006, p. 1125).

The behavioural processes of embedding research knowledge into individual clinical practice, and the use of research evidence in informing clinical decisions is not well
understood (Schreiber and Stern, 2005). A number of surveys of therapists’ attitudes and knowledge have been published in the last five years (e.g. Metcalfe et al., 2000; Iles and Davidson 2006), which report on consistent barriers to the uptake of evidence into practice (lack of physical resources and time, lack of skills in reading and interpreting research, and lack of incentive to change). However, mechanisms to overcome these barriers are currently not well developed, although I hope that research into this area will start to be published soon.

It seems clear (almost too simplistic) that the quest for evidence-based practice should start with an understanding of ‘usual practice’ (Grol et al., 2002; Donabedian 2003). Therapists usually deliver multiple interventions on a number of occasions of service (constituting an episode of care) (Grimmer et al., 2000). They should not only be familiar with what treatment is most effective for an individual, but also how often it should be delivered, whether an intervention is as effective on its first delivery as on its second or third, and whether one treatment approach is more acceptable to patients than another. They have this knowledge at their fingertips because it should be found in patients’ treatment notes. Their understanding of ‘usual practice’ could therefore be distilled from regular reviewing of these notes, quantifying health and cost outcomes over multiple occasions of service, considering the mix of interventions provided across the episode, and the acceptability to patients of these interventions, identifying patients with risk factors for poor outcome, and questioning whether patients received value for money (Epstein and Blumfield, 2001). Unless there is good knowledge about the structures, processes and outcomes of ‘usual practice’ then elements of care cannot be improved (if indeed they need to be!). This requires not only the incentive to understand and review ‘usual’ practice, but also the skills and incentives to do so. To be useful in such a review, treatment notes need to be coded (and retrievable) by diagnosis, and contain relevant information recorded at each patient contact. A framework of regular review and reporting of ‘usual practice’ for a range of commonly treated conditions should support these investigations, such as is proposed in the quality improvement literature (Grol et al., 2002; Donabedian, 2003). The review should also include comparison or benchmarking, or both, between services (public and private), so that understanding of ‘usual practice’ transcends individual practice boundaries. Once ‘usual practice’ is defined, then decisions can be made on whether it could be improved, and how.

A comparison could theoretically be made between ‘usual practice’ and research evidence to identify opportunities for improvement. However, even if they do know about their ‘usual practice’, therapists are often frustrated by constraints in the external generalizability of much research, which means that few findings immediately translate into patient-specific care management decisions. These constraints often reflect the limitations imposed by the very design of the research providing the evidence (Zwarenstein and Oxman, 2006). The health evidence movement originated from testing individual medical interventions (such as drug therapy) in highly controlled situations, and the continuing and dominant approach to deriving and applying evidence is oriented to single interventions delivered in a single occasion of service (Sackett et al., 2000). The current debate about the usefulness of evidence-based medicine (Miles and Loughlin, 2006; Miles et al., 2006; Zwarenstein and Oxman, 2006) supports the incongruence of this evidence
model with the way many therapy disciplines work. The convergence between therapists’ clinical reasoning, patient choices, availability of, and access to, treatment options, and therapist skills and preferences is being afforded increasing credibility, on the understanding that therapy is not simply a ‘pill’ taken daily; rather, it is a combination of management strategies designed to suit the individual patient in their preferred treatment location at specific points in their recovery process (Jones et al., 2006a, 2006b; Tonelli, 2006).

Information on the process of applying evidenced-based interventions to an episode of care is sparse, and generally relies on consensus opinion, which has the poorest evidence validity (Woolf, 2000). Consensus opinion is usually generated from a group of ‘experts’, and thus it can change, depending on how many, and which, experts are involved (Kane, 1995). Consequently, while there is increasing evidence of the effectiveness of many therapy interventions, their credibility is often diminished by the variable interpretation of the evidence into the reality of clinical practice. As an example, while there is high level research evidence that spinal mobilization is effective for acute low back pain for the first two weeks after onset of pain (Holohan et al., 2006), its interpretation into practice relies on mostly non-evidential and experiential knowledge (the type of mobilization technique chosen, how it is delivered on each occasion of service in the episode of care, how frequently the occasions of service should be, when spinal mobilization should be ceased, and if/when it should be withdrawn in favour of an alternate treatment approach in the rehabilitation phase). Differences of opinion on best practice between therapists, or between a therapist and a funding body, are not readily resolved because of the lack of clear guidance on the best way to treat individual patients, even when there is strong evidence of the effectiveness of a particular intervention. Consequently, urgent investment needs to be made across research, teaching and clinical forums to promote a framework of evidence-based practice that is relevant to, and accepted by, allied health researchers, clinicians and educators. Partnerships need to be developed and nurtured between these groups, to support investigations into best practice that incorporates all elements of decision-making throughout a patient’s journey from ill health to optimal health status. Unbiased experimental research will always be required, to identify the most effective treatment options in controlled situations that support clean comparison of one intervention with another. The outcome measures applied in this type of research need to be valued by patients, clinicians and society in order to put the research findings into context. However, this information needs then to be tested in a knowledge-uptake context, in terms of the role of the intervention within the best individual management approach which can be incorporated into an episode of care. The value of other investigative paradigms needs to be considered so that best practice recommendations can be seen to take account of knowledge credibility, transference, uptake and effectiveness in real-life situations. As a new Deputy Editor for Physiotherapy Research International, I look forward to being part of the move to bring research evidence and clinical practice decisions closer together for physiotherapists.

REFERENCES


Zwarenstein M, Oxman A. Why are so few randomised trials useful, and what can we do about it? Journal of Clinical Epidemiology 2006; 59: 1125–1126.

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