

Summary points

Questions remain about the use of randomised controlled trials to evaluate non-pharmacological interventions such as surgery

An alternative is to use expertise based randomised controlled trials, in which participants are randomised to clinicians with expertise in intervention A or intervention B

Interventions are performed only by clinicians with expertise in the procedure, which reduces both bias and ethical concerns

Expertise based randomised controlled trials may have greater applicability and feasibility than conventional trials

informed that they might be randomised to a procedure in which their surgeon was both inexperienced and sceptical of its effectiveness.

We thank the study to prospectively evaluate reamed intramedullary nails in tibial shaft fractures (SPRINT) investigators for completing our survey and providing data related to their trial. We also thank D Altman, I Boutron, M Gent, C Meinert, K Schulz, and W Van der Linden for helpful comments and Neera Bhamagar for the electronic database search.

Contributors and sources: PJD originated the idea for this paper and brought together all the authors to formulate and debate the points included in the text. PJD, MB, SDW, and GHG conducted the survey presented in this paper, PJD undertook the data analysis, and all authors contributed to the data interpretation. PJD wrote the first draft of the paper and all authors provided critical revisions to the manuscript. All authors have expertise in randomised controlled trial methodology and most have led large international randomised controlled trials, including surgical randomised controlled trials. PJD will act as the guarantor.

Funding: PJD is supported by a Canadian Institutes of Health Research senior research fellowship award, MB holds a Canada research chair in surgical outcomes, DJC holds a Canada research chair, SY holds an endowed chair of the Heart and Stroke Foundation of Ontario and is a senior scientist of the Canadian Institutes of Health Research, GRN holds a Canadian research chair from the Social Sciences and Humanities Research Council. VMM is a Mayo Foundation scholar.

Competing interests: None declared.

- 1 Chalmers I. Unbiased, relevant, and reliable assessments in health care: important progress during the past century, but plenty of scope for doing better. *BMJ* 1998;317:1167-8.
- 2 Altman DG, Schulz KF, Moher D, Egger M, Davidoff F, Elbourne D, et al. The revised CONSORT statement for reporting randomized trials: explanation and elaboration. *Ann Intern Med* 2001;134:663-94.
- 3 Russell R. Surgical research. *Lancet* 1996;347:1480.
- 4 Black N. Why we need observational studies to evaluate the effectiveness of health care. *BMJ* 1996;312:1215-8.
- 5 Wehbe MA. The prospective, randomized, double-blind clinical trial in orthopaedic surgery. *J Bone Joint Surg Am* 1998;80:1395.
- 6 Black N. Evidence-based surgery: A passing fad? *World J Surg* 1999;23:789-93.
- 7 Coronary angioplasty versus coronary artery bypass surgery: the randomized intervention treatment of angina (RITA) trial. *Lancet* 1993;341:573-80.
- 8 CABRI Trial Participants. First-year results of CABRI (coronary angioplasty versus bypass revascularisation investigation). *Lancet* 1995;346:1179-84.
- 9 Bypass Angioplasty Revascularization Investigation (BARI) Investigators. Comparison of coronary bypass surgery with angioplasty in patients with multivessel disease. *N Engl J Med* 1996;335:217-25.
- 10 Van der Linden W. Pitfalls in randomized surgical trials. *Surgery* 1980;87:258-62.
- 11 Rudicel S, Esdaile J. The randomized clinical trial in orthopaedics: obligation or option? *J Bone Joint Surg Am* 1985;67:1284-93.
- 12 Devereaux PJ, Bhandari M, Walter S, Sprague S, Guyatt G. Participating surgeons' experience with and beliefs in the procedures evaluated in a randomized controlled trial. *Clin Trials* 2004;1:225.
- 13 Devereaux PJ, Bhandari M, Montori VM, Manns BJ, Ghali WA, Guyatt GH. Double blind, you are the weakest link—good-bye! *ACP J Club* 2002;136:A11.
- 14 DeTullis SV, Cacchione RN, Mungara A, Pecoraro A, Ferzi GS. Laparoscopic herniorrhaphy: beyond the learning curve. *J Am Coll Surg* 2002;194:65-73.
- 15 Menon VS, Manson JM, Baxter JN. Laparoscopic fundoplication: learning curve and patient satisfaction. *Ann R Coll Surg Engl* 2003;85:10-3.
- 16 Lobato AC, Rodriguez-Lopez J, Diethrich EB. Learning curve for endovascular abdominal aortic aneurysm repair: evaluation of a 277-patient single-center experience. *J Endovasc Ther* 2002;9:262-8.

(Accepted 24 October 2004)

bmjlearning.com

Work based learning

In the past medical students and doctors did much of their learning in lecture halls. They then sat an examination or some other type of formal assessment. Their learning had a specific end point, when they picked up a degree or certificate. Most doctors thought that this was "proper learning" and that all other learning was somehow not up to scratch.

The problem with this type of learning is that it misses out a lot of informal learning. It misses out the learning that takes place when you ask a colleague for advice, or answer a patient's question by looking up a website, or solve a problem by setting up a meeting with colleagues. The concept of work based learning tries to capture and to quantify this learning. Barr defined work based learning as learning that takes place at work or learning that takes place away from work with the objective of improving performance at work.¹ Work based learning fits in closely with how doctors now learn. It involves keeping up to date with new developments, learning to satisfy personal as well as professional goals, learning with and from colleagues from various disciplines, learning about non-clinical as well as clinical topics, and, most importantly, learning in order to directly improve care for patients.

We have based *bmjlearning.com* on the principles of work based learning. Certainly most of our users can and do use the

website at their workplace, and we try to publish material that users say they need on a daily basis in their work. Many users have requested a learning module on how to deal with a patient whom they suspect is a victim of domestic abuse. Traditionally this topic has been the source of much rhetoric and little action, and, although primary care workers have received some training on it, many feel that the training was not tailored to meet their needs.

We have tried to overcome these shortcomings in our new module on how to care for victims of domestic abuse. The module gives specific advice on which patients you should ask about domestic abuse and how you should ask them. It points out how the whole care team can help with such patients' medical and social needs. If you want practical advice on this subject, try our new learning module on *bmjlearning.com*.

Kieran Walsh *editorial registrar, BMJ Learning*
(bmjlearning@bmjgroup.com)

- 1 Barr H. Interprofessional issues and work based learning. In: Burton J, Jackson N, eds. *Work based learning in primary care*. Oxford: Radcliffe Medical, 2003.