

Evidence Based Practice: What is it? Its relevance and consequences for Traditional Chinese Medicine and Complementary Medicine

Stephen JANZ
St Kenmore - AUSTRALIA
stjanz@eis.net.au

ABSTRACT

Evidence Based Practise (EBP) has had a strong influence on health care throughout the world. The Principles of EBP are now being applied to Traditional Chinese Medicine. While there is no doubt that the philosophy behind EBP is sound, i.e. using the best available evidence to justify the treatment used, there are some unexpected consequences for TCM of the EBP model. This paper examines the available evidence regarding the use of the EBP model in medicine and nursing, where it has been pioneered, and identifies the weakness and risks of EBP in TCM. Some negative outcomes of the application of the EBP model to TCM are identified. Researchers are recommended to consider the risks and benefits of the EBP before committing to a Randomised Controlled Trial involving TCM.

Introduction

The utilization of complementary medicine (CM) has grown dramatically. In the year 2000 an estimated 52 per cent of the Australian population used at least one non-medically prescribed complementary medicine and 23 percent visited at least one complementary health practitioner (Expert Committee on Complementary Medicines in the Health System, 2003, p11).

This growth of utilization of CM has occurred at a time when:

- 1) The Evidence Based Practice (EBP) movement continues to evolve (Trinder, 2000).
- 2) Government policy is against the registration of new health professions unless they pose a risk to public health and safety (Bensoussan and Myers, 1996).
- 3) Private health insurers, workers compensation and statutory third party payers are seeking to control costs of acupuncture services (Personal communication with Judy James, Executive Officer, AACMA).

The CM sector faces a potential crisis from the twin risks of:

- 1) An apparent lack of evidence supporting their established practices and
- 2) Poor performance in Randomized Controlled Trials.

This paper will explore just what EBP is, where it has come from and its limitations. This discussion will particularly draw on available literature in medicine and nursing where this debate has been explored, before

considering the relevance and impact of the debate to the CM sector, especially acupuncture.

Part 1: Evidence Based Practice

According to *The Cochrane Collaboration web site* (undated), EBP as we know it today has its roots in the work of the British epidemiologist Archie Cochrane (1909-1988). The international EBP research center, the *Cochrane Collaboration* was named in his honor in 1993. The web site states that:

Cochrane argued that as resources for health care are limited, they should be used effectively to provide care that has been shown, in valid evaluations, to result in desirable outcomes. He emphasized the importance of randomized controlled trials in providing reliable information on the effectiveness of medical interventions.

Several definitions exist of EBP, with more or less emphasis on the clinician's clinical skill and judgment. Professor David Sackett of the University of Oxford has led the Evidence-Based Medicine (EBM) movement (The Joanna Briggs Institute web page, undated). Sackett et al (1996, p71) defines EBM as:

Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.

A simpler definition is found by Marwick (1997) in *Definitions of Evidence Based Medicine*:

A conscientious, explicit, and judicious use of the current best evidence to make decisions about the care of patients.

The *Oxford-Centre for Evidence Based Medicine Glossary* offers a further definition that reveals the extent of the reach of the EBP movement:

Evidence-Based Health Care extends the application of the principles of Evidence-Based Medicine (see above) to all professions associated with health care, including purchasing and management.

Essentially EBM, EBP, Evidence Based Clinical Practice and Evidence Based Healthcare refer to the same process applied in their respective settings. From here on the term EBP will be used as an inclusive term for all of the above.

On the face of it, EBP seems sound and logical. Sackett et al (1996) goes to the trouble of emphasizing the need to integrate the proficiency and judgment acquired through clinical experience and clinical practice. It is hard to fault the definition. He further clarifies that EBP is not about standardised “cook book” treatment or cost cutting. He clarifies that EBP is not restricted to randomised controlled trials and meta-analysis, rather, “tracking down the best external evidence with which to answer our clinical questions”.

The initial intention of EBP to guide the best care for patients has however been identified as a means of managing health costs, as suggested in the last definition. Bias towards funding interventions in the UK National Health Scheme (NHS) that have the support of “evidence” has been identified in several sources including Trinder (2000), Closs and Cheater (1999) and Colyer and Kamath (1999). It follows that this bias can mean a lack of funding for interventions that have not yet been able to produce evidence, irrespective of whether or not they are clinically effective.

Difficulties with the EBP model also arise when looking at just how evidence is gathered and ranked. The literature abounds with reference to the Randomized Controlled Trial (RCT) being the “gold standard” in gathering evidence (Sackett et al, (1996), Bloomfield and Hardy (2000), Baker (1998), Pearson (2003), Johanna Briggs Institute web page, only to be outdone by a systematic review of all relevant RCT’s (National Health & Medical Research Council (NHMRC), 1999).

Qualitative evidence is ignored in the hierarchy of evidence as outlined below from the NHMRC, *A guide to the development, implementation and evaluation of clinical practice guidelines (Appendix B, 1999)*, and is not specifically mentioned at all.

Designation of Levels of Evidence

I evidence obtained from a systematic review of all relevant randomised controlled trials.

II evidence obtained from at least one properly designed randomised controlled trial.

III-1 evidence obtained from well-designed pseudo-randomised controlled trials (alternate allocation or some other method).

III-2 obtained from comparative studies with concurrent controls and allocation not randomised (cohort studies), case control studies, or interrupted time series with a control group.

III-3 evidence obtained from comparative studies with historical control, two or more single-arm studies, or interrupted time series without a parallel control group.

IV evidence obtained from case series, either post-test or pre-test and post-test.

Colyer and Kamath (1999, p192) cite Greenhalgh (1996) criticizing the EBP process for: “failing to recognize the complexities of clinical practice.” They further cite Dowie (1996) who identifies that “Many aspects of clinical practice do not lend themselves to the formulation of single answerable questions or the application of discrete, definitive interventions.”

The Randomised Controlled Trial

The RCT is favored as a source of evidence as by careful design extraneous variables can be selected out, thus optimizing the internal validity of the study (Trinder, 2000). The RCT has its origin in acute medicine, in particular drug trials, and in this context can give clear evidence of effectiveness (Trinder, 2000), (Pearson, 2003). Of course the more carefully the study is controlled the less it resembles an actual clinical situation and the less likely that the results can be replicated in a real clinical setting (Trinder, 2000).

Criticisms of the RCT

It is this pre-occupation with RCT which is the root of conflict among some health professionals. RCT’s are seen as most appropriate for testing biological agents such as drugs, however seem much less reliable when looking at non-biologic agent intervention (Trinder, 2000), patient preferences, or the preferences and prejudices of the practitioner (Closs and Cheater, 1999).

A key criticism of RCT’s and EBP is that it shifts the focus of care to treating populations, not individuals (Closs and Cheater, 1999, p11). A RCT is not interested in what works for any one individual, only in statistically significant outcomes for a population, and yet it has been identified that a study can show no statistical significance and yet still be of clinical

significance (Schneider, 2003). Yip (2003), agrees and continues with:

“Then it is not difficult to appreciate why our patients go more and more towards complementary medicine, even when ‘statistically’, many such therapies are not ‘documented’ to be useful.”

Black (1996, p1218) in Closs and Cheater (1999, p14) states that RCT's provide:

“Information on the value of an intervention shorn of all context, such as patients beliefs and wishes and clinicians attitudes and beliefs, despite the fact that such variables may be crucial to determining the success of the intervention.”

Closs and Cheater (1999) also identify that inclusion and exclusion criteria, socio-economic status of participants, and clinical setting of the RCT can severely limit their generalisability.

The Johanna Briggs Institute (JBI) was established in 1995 and is the coordinating body of the Johanna Briggs Collaboration. Like the Cochrane Collaboration, the JBI is concerned with EBP. The JBI however recognizes that there was a need for:

“...a collaborative approach to the evaluation of evidence derived from a diverse range of sources, including experience, expertise and all forms of rigorous research and the translation, transfer and utilization of the "best available" evidence into health care practice.”

The Johanna Briggs Institute notes that the Cochrane Collaboration's emphasis on meta-analysis of randomized controlled trials means, “...qualitative research is rendered invisible in systematic reviews.” JBI presently is working on ways to conduct systematic reviews of qualitative studies.

Criticisms of the RCT are not only from Nurses. Dunbar (2001) identifies the reluctance of GP's to adhere to the evidence compared to hospital doctors. He attributes this to a number of interesting factors:

- The belief that hospital doctors treat disease and GP's treat people.
- The evidence on primary care is largely absent.
- Holistic care, with a knowing of the patient will often diverge from practice guidelines.
- The inclusion criteria for RCT's often exclude the older age group that GP's treat.
- Classical research studies one variable at a time yet we know that it is multi-faceted interventions tackling different barriers that work best.
- In EBP common sense and experience is ignored as valueless.

Professor Roger Baker, a UK Clinical Psychologist (1998) criticizes attempts to blind the councilor in RCT's, and also criticizes practice guidelines which cannot apply to the complex clinical encounter where clients experience a cluster of symptoms. Baker also identifies the threat to external validity posed by the characteristics of participants who consent to participate in a RCT in the first place.

A systematic review of randomized vs. non-randomized trials was conducted by Britton et al (1998) for the NHS Research & Development Health Technology Assessment Program. Britton's report identified a number of factors already discussed, but in addition:

- How important is patient preference in terms of outcome?
- Blanket exclusions (the elderly, women of childbearing potential) are common in RCT's.
- Participants in studies evaluating preventative interventions were generally more affluent, better educated and generally healthier and therefore had less potential to benefit.

Pages 37-40 discuss patient preference:

- It is possible that a treatment effect could be diminished where a patient does not particularly like the treatment group, which they have been placed in. (Acupuncture and unpleasant tasting herbal remedies can fit these characteristics).
- A patient could have an enhanced treatment effect where they prefer the type of treatment which they will receive. This effect could be very important where new, uncomfortable or unfamiliar treatments are being tested in a trial.

The overall conclusion included the finding that a well-designed non-randomized study is preferable to a small, poorly designed and exclusive RCT.

A Similar criticism is found from Meijel et al (2004, p85) who identifies the limited generalisability of RCT's as they: “do not really allow testing variations in the intervention...”, and often lack adequate subgroup analysis to identify which type of patient might benefit from an intervention which, “...may lead to false positive or, more often, false negative conclusions.”

Trinder (2000, p233) identifies that RCT's emphasize the technical aspects of health care practices rather than the practical work, which makes up most of what many health professions do and which “...is not easily or appropriately standardised, either in the research process or in practice”.

Mason, Tovey and Long (2002) identify the challenges posed by an holistic practice and the tendency of CM

practitioners to focus on promoting wellness rather than necessarily treating disease. They identify many of the issues outlined above but conclude that a carefully crafted RCT has a place in CM research, however RCT's should be accompanied by qualitative studies to "...elicit these more elusive outcomes and aim to take account of experiential outcome criteria, such as increased self reflection."(p384). In contrast Leibovici (1999) has little regard for considering paradigms other than the conventional medical model and suggests that research money should be not be wasted on "anthropocentric magic".

The Art of Health Practices

Health practices consist of varying proportions of art and science.

Warsop (2002, p74) states that the art of medicine:

... consists of listening skills directed at the lived experience of the patient in such a way that knowledge (principally scientific knowledge) can be applied in a therapeutic way.... The art of medicine is prior to and independent of medical science which plays an important but subordinate role.

And further:

...medicine requires making value judgments in particular situations and these judgments cannot be fully explained under the rubric of science.

Trinder (2000) and Smith (1985) as cited by Warsop (2002) also comment on the importance of the art of health practices to match clients needs whereas Kaptchuk (2001, p108), an experienced Traditional Chinese Medicine practitioner and scholar who now works at Harvard Medical School observes "Ultimately, medicine, at its best, can never enumerate or know everything about a person. At best medicine is an art that resonates with an elusive truth."

It appears that it is at the level of the art of health care practices that the above-mentioned failings of the RCT manifest.

To summarize, EBP based on RCT's tend to lead to more standardized, technical practices with little concern for individual skill and judgment, and less consideration of the particular individual which the practitioner is expected to provide care for.

Part 2: Acupuncture

So far EBP has been defined along with a brief critique of the RCT. Nursing, medicine and counseling all recognize that EBP and the RCT have limitations. It is now possible to consider the impact of this discussion on the complementary sector in general, and acupuncture in particular.

The Chinese medical model, with its rich historical and theoretical framework dates back to *The Yellow Emperors Classic of Internal Medicine*. This work is considered the

oldest medical book in existence (Veith, 1949) and is attributed to the legendary yellow emperor of China who lived somewhere between 2697-2597 BC. In this text the concept that it is better to prevent a disease than cure it can be found, with the goal of treatment to restore balance in the body rather than only addressing a specific disease or symptom.

The Chinese diagnostic model utilized by acupuncturists prides itself to this day on meticulous attention to detail, observation of the tongue and pulse in the context of physical, emotional and psychological signs and symptoms, and detailed questioning of the client in order to develop an individual prescription of herbs or acupuncture to match the clients needs. This ancient process is still the cornerstone of contemporary Traditional Chinese Medical (TCM) practice and can be found in numerous contemporary texts such as *Clinical Handbook of Internal Medicine (1998)*, as well as in curriculum guidelines such as *Australian Guidelines for Traditional Chinese Medicine Education in Australia (2001)*.

The *National Competency Standard for Acupuncture (1995)*, identified that most acupuncturists do not restrict their practice to using acupuncture alone, but may combine cupping, moxibustion, massage, herbal or nutritional approaches in their practice.

The process of selecting appropriate treatment for any given client calls upon a combination of the science of Chinese medicine – the systematic technical knowledge based of the location of points, indications and needling techniques and depth, with the listening, questioning, observational skills and clinical experience of the practitioner – the art of acupuncture. It is this individualization of treatment which has led to the observation that acupuncture is harder to practice than it is to learn (Flaws, 1992).

Dunbar (2001) noted earlier that General Practice constituted holistic practice and multi-faceted approaches to complex problems. It is clear that acupuncture practice shares the same holistic and multi-faceted approaches to complex problems that Dunbar has identified.

EBP and Acupuncture

EBP has started to impact on Acupuncture in Australia.

Private health insurers, always seeking ways to control costs have been seeking data on expected duration of courses of treatment for specific conditions, even though acupuncturists rarely treat a discreet condition but more often a complex person. While one use of this data is identified at targeting over-servicing, it is believed that this data may also be used with a view to limit courses of treatment to a standardized norm.

Workcover NSW currently refuses to pay benefits for the treatment of back pain with acupuncture because a recent Cochrane systematic review found it to be of no

benefit (personal communication with Judy James, Executive Officer, Australian Acupuncture & Chinese Medicine Association Ltd. (AACMA)).

A look at the Cochrane review in question (Van Tulder et al, 2004) shows that only randomized controlled trials were used for the review.

Other recent reviews considering Rheumatoid arthritis (Casimiro et al, 2004), and lateral elbow pain (Green et al, 2004) considered RCT's and found acupuncture to be of little or no use, despite anecdotal evidence of people obtaining relief for these conditions with acupuncture.

The holistic, individualization of care in the acupuncture model outlined above makes it difficult to perform well in RCT's for the many reasons already considered.

It is possible that acupuncture will only perform well in RCT's testing acute conditions such as ankle sprains with few concomitant factors where a standardized treatment is likely to be effective, or physiologic processes where a simple standardised point prescription can be used.

It is noteworthy that a Cochrane review of the use of the single point Pericardium 6 for nausea (Lee and Done, 2004) showed a definite benefit as an anti-emetic.

The use of acupuncture for drug and alcohol rehabilitation has been well documented. This practice popularized by Dr Michael Smith of Lincoln Hospital in 1974 is now used in over 700 centres in the United States and over 800 centre internationally is known as the NADA protocol. Interestingly this protocol is not necessarily practiced by acupuncturists but by people who have completed a 70-hour training program (Swedish Medical Centre web page). The key to this protocol is a 4 point standardized treatment regime.

It appears that the EBP movement, which contrary to David Sacketts (1996) protestations is not about cutting costs, standardized treatment protocols or only seeking evidence from RCT's, is just now being sought out as a mechanism to control costs in the complementary sector, in particular acupuncture. That EBP is used to control costs has been well documented in the UK NHS system and considered earlier.

In the traditional acupuncture community standardized technical treatment protocols are often looked down upon and are seen to be the province of the novice practitioner (Deadman, 1992). Indeed both Flaws (1992) and Fruehauf (1999) note the limitations to the richness and scope of practice which followed a standardization of TCM education based upon political and economic factors in China under the influence of Mao's communist regime.

Looking to the future there is an urgent need for acupuncture to catch up with the trends identified in medicine, nursing, counseling and other health practices. Very few existing health practices are currently based upon EBP and supported by the "evidence" (Easthope, 2002), however unlike acupuncture, the conventional

health professionals are secured by the established nature of their roles, often protected by statutory registration or licensing and entrenched in funding models and community expectations.

Acupuncture is the "new kid on the block" of contemporary health care in Australia, where its holistic practice is poorly responsive to the RCT and is a soft target for funding rationalization and marginalisation.

To continue blindly supporting the EBP movement as it stands risks a number of potential outcomes:

- 1) A narrowing of scope of practice to clinical areas supported by evidence.
- 2) A reduction in diversity of education to eliminate areas not supported by evidence.
- 3) The appropriation of the aspects of acupuncture supported by the evidence by other health professionals. This has already occurred with the NADA detox protocol and may extend to the use of P6 in postoperative nausea.

In each case the profession is diminished by homogeneity, and the community is deprived of flexible, individualized care that often helps where conventional, standardized care fails.

Conclusion

In this paper the rise of EBP has been outlined and its main tool to date the RCT. Some shortcomings of the RCT in the real world have been outlined along with considerable criticism of the relevance of the rationalist approach among medicine and nursing. Finally it has been shown that complementary medicine in general and acupuncture in particular have much higher stakes at risk if they do not accumulate a body of relevant evidence to support their practice.

Acupuncture and Complementary medicine are not a special case when it comes to the need to find suitable forms of evidence other than the RCT. In fact it appears that it is the ordinary case that the RCT is often inappropriate wherever the health intervention does not involve the use of drugs.

The RCT, while not redundant is nevertheless an historical artifact of the influence of the dominant health paradigm in the evolution of EBP.

A true "gold standard" would be flexible enough such that the evidence it produced would be in accordance with knowledge and fact, rather than contrary to it as the RCT so often appears to be in many areas of healthcare, and acupuncture in particular.

Acupuncturists and complementary therapists should not support RCT's until significant bodies of appropriate evidence using a suitable methodology have first been established.

All health professions, but especially the CM and acupuncture professions must support new evidence gathering approaches resulting in the use of the “best available” evidence as suggested by the JBI. “Best available” evidence is likely to be consistent with knowledge and fact and allow the EBP movement to live up to the ideals promoted by Sackett at the movement’s inception, and for the CM and acupuncture sectors to secure their place as valid health care choices.

References

- Australian Acupuncture and Chinese Medicine Association Ltd (AACMA), (1995). *National Competency Standard for Acupuncture*. Brisbane: AACMA
- Australian Government Department of Health and Ageing, (2004). *Medicare Benefits Schedule*. Canberra: Department of Health and Ageing.
- Baker, R., (1998). The Mighty RCT – What it means for GP Counselors. *Counseling in Primary Care*, 2(1). Counseling in Primary Care Trust. Available at: <http://www.cpct.co.uk/cpct/CIPISSUE/CIP2.1Sect/cipv2i1/RCT.htm>
- Bensoussan, A., and Myers, S., (1996). *Towards a safer choice. The practice of Traditional Chinese Medicine in Australia*. Campbelltown: University of Western Sydney Macarthur.
- Bloomfield, R., and Hardy, S., (2000). Evidence-based nursing practice. In Trinder, L. and Reynolds, S., (Eds), (2000). *Evidence based practice: a critical appraisal*. 122-137. Oxford: Blackwell Science.
- Casimiro, I., Brosseau, L., Milne, S., Robinson, V., Wells, G., Tugwell, P., (2004). Acupuncture and electroacupuncture for the treatment of RA (Cochrane Review). *Cochrane Library*, 3. Chichester: John Wiley & Sons, Ltd.
- Churchill, W., (1999). Implications of Evidence Based Medicine fro Complementary & Alternative Medicine. *Journal of Chinese Medicine*, 59, 32-35.
- Closs, S. J., and Cheater, F. M., (1999). Evidence for nursing practice: a clarification of the issues. *Journal of Advanced Nursing* 30 (1), 10-17.
- Colyer, H., and Kamath, P., (1999). Evidence based practice. A philosophical and political analysis: some matters for consideration by professional practitioners. *Journal of Advanced Nursing*, 29 (1), 183-193.
- Deadman, P., (1992). Editorial: A reply to Bob Flaws. *Journal of Chinese Medicine*, 38, 12-17.
- Dunbar, J. (2001). Evidence-based rural general practice: still the evidence is largely absent. *Rural and Remote Health* (online version), 198. Available from: <http://rrh.deakin.edu.au/>
- Easthope, G. (2002). Alternative Medicine. In Germov, J. (Ed). *Second Opinion: An Introduction to Health Sociology*. (2nd Ed). South Melbourne. Oxford.
- Expert Committee on Complementary Medicines in the Health System, (2003).
- Complementary Medicines in the Australian Health System: Report to the Parliamentary Secretary to the Minister for Health and Ageing*. Canberra: Therapeutic Goods Agency. Available at: <http://www.tga.gov.au/docs/pdf/cmreport.pdf>.
- Flaws, B., (1992). Thoughts on Acupuncture, Internal Medicine, and TCM in the West. *Journal of Chinese Medicine*, 38, 5-12.
- Fruehauf, H., (1999) Science, Politics, and the Making of “TCM”. *Journal of Chinese Medicine*, 61, 6-14.
- Green, S., Buchbinder, R., Barnsley, L., Hall, S., White, M., Smidt, N., Assendelft, W., (2004). Acupuncture for lateral elbow pain (Cochrane Review). *Cochrane Library*, 3, Chichester: John Wiley & Sons, Ltd.
- James, J., (2004) Executive Officer of the Australian Acupuncture & Chinese Medicine Association Ltd. E-mail address: judy.james@acupuncture.org.au.
- Kaptchuk, T., (2001). OMD subjectivity and the placebo effect in medicine. *Alternative Therapies*, 7(5), 100-108
- Lee, A., and Done, M., L., (2004). Stimulation of the wrist acupuncture point P6 for preventing postoperative nausea and vomiting (Cochrane Review). *The Cochrane Library*, 3, Chichester John Wiley & Sons, Ltd.
- Leibovici, L., Hayes, R.B., (1999). Alternative (complementary) medicine: A cuckoo in the nest of empiricist reed warblers / Commentary: A warning to complementary medicine practitioners: Get empirical or else. *British Medical Journal*, 319 (7225), 1629-1631.
- Maclean, W., and Lyttleton, J., (1998). *Clinical Handbook of Internal Medicine: The Treatment of Disease in Traditional Chinese Medicine. Volume 1*. Campbelltown: University of Western Sydney Macarthur.
- Mason, S., Tovey, P., and Long, A.F., (2002). Education and Debate: Evaluating complementary medicine: methodological challenges of randomised controlled trials. *British Medical Journal*, 325 (7368), 832-834.
- National Academic Standards Committee for Traditional Chinese Medicine (NASC), (2001).

Australian Guidelines for Traditional Chinese Medicine Education. Brisbane: Australian Acupuncture and Chinese Medicine Association Ltd.

National Health and Medical Research Council (NHMRC), (1999). *A guide to the development, implementation and evaluation of clinical practice guidelines* Canberra: NHMRC.

NHS Centre for Reviews and Dissemination (NHS R&D), (2001). *Effective Health Care: Acupuncture*, 7 (2). York: NHS R&D.

Britton, A., McKee, M., Black, N., McPherson, K., Sanderson, C., and Bain, C., (1998). Choosing between randomized and non-randomised studies: a systematic review. *Health Technology Assessment*, 2 (13). UK: NHS Research & Development Health Technology Assessment Programme (NHS R&D HTA) available at http://160.114.96.21/webtext/letolt/anyag/hta/meth01_trial_s.pdf

Nurses Board of Victoria, (1996). *Guidelines for use of Complementary Therapies in Nursing Practice*. Revised 1999. Melbourne: Nurses Board of Victoria.

Oxford-Centre for Evidence Based Medicine Web Page, (Undated). *Evidence-Based Medicine Glossary*. Available at: <http://www.cebm.net/glossary.asp> Accessed 21/9/2004.

Pearson, A., (2003). Guest Editorial: Liberating our conceptualization of "evidence". *Journal of Advanced Nursing*, 44 (5), 441-442

Private Health Insurance Administration Council (PHIAC), (2004). *Membership and Coverage - A report. June quarter 2004* [Electronic Version]. Canberra.

Sackett, D. L., Rosenberg, M. C., Muir Gray, J. A., Haynes, R. B., and Scott Richardson, W., (1996). Evidence based medicine: what it is and what it isn't. *BMJ*, 312 (7023), 71-72.

Schneider, Z., (2003). Inferential Data Analysis, In Schneider, Z., Elliott, D., LoBiondo-Wood, G., Haber, J., (Eds), (2003). *Nursing Research: methods, critical appraisal and utilization 2nd edition*. (2003). Marrickville: Mosby.

Shapiro, K., and Shapiro, E., (1998). The Powerful placebo: From Ancient Priest to Modern Physician. *British Medical Journal*, 316 (7141), p1397.

Sheahan, D., (2001). Health Insurance Manager (Ancillary). Medical Benefits Fund of Australia Ltd. E-mail address: david.sheahan@mbf.com.au.

Southern Cross University Courses Web Page, (Undated). Available at: http://www.scu.edu.au/courses/course_desc.php?spk_cd=1205636 accessed 2/10/2004

Swedish Medical Centre web page, (2000). Available at: <http://www.swedish.org/16419.cfm> accessed 20/9/2004

The Cochrane Collaboration web page, (Undated). About us. Available at: <http://www.cochrane.org/docs/descrip.htm>. Accessed 21/9/04.

The Johanna Briggs Institute web page, (Undated). Our History. Available at: <http://www.joannabriggs.edu.au/about/history.php>. Accessed 21/9/04.

Trinder, L. (2000). A Critical Appraisal of Evidence- Based Practice. In Trinder, L. and Reynolds, S., (Eds), (2000). *Evidence based practice: a critical appraisal* 212-238. Oxford: Blackwell Science.

University of Sheffield web site, (Undated). Definitions of Evidence Based Practice. Available at: <http://www.shef.ac.uk/scharr/ir/def.html>. Accessed 5/10/2004.

Van Meijel, B., Gamel, C., van Swieten-Duijfjes, B., and Grypdonck, M. H. F., (2004). The development of evidence-based nursing interventions: methodological considerations. *Journal of Advanced Nursing*, 48 (1), 84-92.

Van Tulder, M. W., Cherkin, D.C., Berman, B., Lao, L., Koes, B. W., (2004). Acupuncture for Low Back Pain. *Cochrane Library*, 3. Chichester: John Wiley & Sons, Ltd.

Veith, I., (translator), (1949). *Huang Ti Nei Ching Su Wen: The Yellow Emperor's Classic of Internal Medicine*. Berkley: University of California Press.

Victorian Government. *Chinese Medicine Registration Act (2000)*

Victorian Government. *Victorian Nurses Act (1993)*

Warsop, A., (2002). Art, science, and the existential focus of clinical medicine *Journal of Medical Ethics: Medical Humanities*, 28, 74 - 77. BMJ Publishing Group. Available at: <http://mh.bmjournals.com/>

Yip, Y.L., (2003). Rapid Responses for Aronson. *BMJ [online version]*, 326 (7403), p1346. Available at: <http://bmj.bmjournals.com/cgi/eletters/326/7403/1346>