

Evidence-based health care and community nursing: issues and challenges

JOHN McDONALD AND JANINE SMITH

John McDonald is a Senior Lecturer in the Centre for Rural and Regional Health, and Janine Smith is Deputy Head of Nursing, Research and Higher Degrees Co-ordinator and Graduate Programs Co-ordinator in the School of Nursing at the University of Ballarat.

Abstract

This paper examines the implications of the movement towards evidence-based health care for community-based, primary health care nursing in Australia. While both aim to improve health status, we argue that they are antithetical in many respects. Community nurse practitioners draw upon primary health care principles and adopt a holistic, preventive, empowering approach to working with and in communities. By contrast, evidence-based approaches utilise systematic reviews of primarily quantitative research to inform decisions about health at three levels: public health, the health care system, and individual patients. In response to this challenge, community nurses must reiterate their philosophies and practice models. Moreover, it is imperative to produce verifiable evidence of the effectiveness of their approach while mounting a thorough critique of the evidence-based movement.

Introduction

Evidence-based health care (EBHC) is profoundly reshaping health policy and practice at local and international levels. The fundamental objective of EBHC is to improve health outcomes through reference to systematic analysis of the best available evidence from the research literature. EBHC refers to the use of evidence to inform decisions about health at three levels (Weller & Veale 1999). Level one concerns public health. This involves analysing data on risk factors, morbidity and mortality of the population, and devising health programs to improve the health status of the population. Level two is the organisation and delivery of the health care system. Level three, the individual patient level, incorporates evidence-based medicine or practice that uses evidence and clinical expertise to make decisions about the care of individual patients. This paper is principally concerned with the third level of analysis.

The evidence-based movement can be traced to the work of Dr Archie Cochrane (1979) who criticised the medical profession for not exploiting and using the results from reported randomised control trials. Since then, the movement has gathered considerable strength and is impinging on all health disciplines. In Australia, this is evidenced by frequent workshops on what it is and how to practise it; the release of National Health and Medical Research Council's (1999) handbook series on preparing clinical practice guidelines; the incorporation of evidence-based approaches in undergraduate nursing and allied health courses; the establishment of Australian centres for evidence-based practice in medicine and nursing; and the production of countless best practice guidelines, both print- and web-based. Internationally, new texts and journals devoted to evidence-based practice are regularly being published.

Community nursing is one health profession that would appear to be on a collision course with EBHC. First funded in Australia in 1973, community health nursing has sought to serve people who are marginalised from

the mainstream health care system. The profession has attracted practitioners who want to work outside clinical settings and move beyond an interventionist, medical model of treatment (Smith 2000). Community nursing embodies a philosophy of primary health care by which practitioners adopt a partnership with communities to identify health needs and find solutions that are accessible, equitable and acceptable at a local level (WHO 1975). Roberts (1998) has argued that Australian nursing has not yet begun evidence-based practice because most nurses neither read research nor apply research findings to practice. Nurses are not alone in this. According to recent reports (Robertson 2000, p 1) ‘...health service research accounts for only 0.2% of health sector expenditures’, with little evidence that policy decisions or health care choices are informed by published research. Nevertheless, it is clear that a growing demand for evidence-based practice will inevitably compel the adoption of more research into practice.

This article examines the implications that the evidence-based movement poses for community nurses. It compares and contrasts them in five major domains: underlying philosophies, stated health goals and outcomes, research methodologies, implications for medical authority, and relationship to consumers. The paper concludes by identifying ways in which the community nursing profession in Australia can respond to these challenges.

Guiding philosophies

At face value, community nursing and evidence-based health care share a concern with improving health outcomes. They are, however, divided by deep philosophical differences and methodological approaches.

The guiding philosophy of community health nursing has been summarised by McMurray (1993, p 1). She contends that community health nursing “... is a unique and continually evolving specialised area within the profession of nursing which considers the *context* of people’s lives as paramount to attaining and maintaining health”.

This is consistent with statements since 1974 from the World Health Organisation. It has defined the role of community nurses as one which, among other things is “... concerned with identifying the community’s broad health needs and involving the community in development projects related to health and welfare” (WHO 1974, p 11). In 1988 the WHO endorsed the role as that of “... a clearly identifiable, skilful and dedicated health professional ... [who] ... should live in the community and maintain regular contact with individuals, families, and groups, in their homes, schools and other institutions, workplaces and at leisure facilities” (WHO 1988, p 2).

This concept of a community nurse who worked across the broad spectrum of a community to provide equitable, accessible, affordable and socially and culturally appropriate care, has been supported consistently for thirty years in Australia (Sax 1984; Rordan & McClennan 1992; McMurray 1993; Lamont & Lees 1994; Smith 1998). Each of the settings where community health nurses practise has unique characteristics which impact on practice goals and strategies, yet each is connected to the other through the common philosophy of primary health care. McMurray (1993, p 1) states that “... by aspiring to the holistic and comprehensive primary health care goal of health for all, nurses can facilitate and enable people in communities everywhere to secure a healthful and productive life”.

One of the key differences between a primary health care model of community nursing and evidenced-based, medical models of health lies in the fundamental contrasts between *individualistic* and *universalistic* approaches to health care. There may be a number of interpretations of ‘primary health care’ (Fry 1994) but, in general, the underlying principles advocate a collaborative approach to finding local solutions to community problems rather than the imposition of universalistic prescriptions. Many innovative programs reported by community nurses are testimony to the resourcefulness and creativity of nurses who help to empower individuals and communities in ways that cannot be foreseen or tested by research. The following brief example exemplifies the underpinning philosophy of community nursing.

Primary health care in practice

Scott (1996:61) graphically illustrates the challenges that nurses in isolated community settings meet every day in creative and innovative ways. Her description of the evolution of a Community Emporium Wellness Centre is not only amusing, but also a tribute to the resourcefulness and imaginative ‘embedded wisdom’ of experienced nurses. Scott works in a remote area where, she says, ‘resources are scant for the nurse and economic resources

are few for the isolated community'. Nevertheless she emphasises that it is essential to work within a primary health care framework to strengthen community resources and meet broad, local health care needs. Her experience, which she confesses grew out of a serendipitous chain of events, and had nothing to do with formal needs assessments, designed strategies or predictable outcomes.

Unexpectedly becoming the recipient of cartons of second-hand clothing collected as part of a drought relief program, Scott began a time consuming and energy sapping process of delivering 'goodies' to the community. One client, speechless at having twenty pairs of shoes to choose from, suggested that a jumble sale would be a more effective way to deal with the increasing volume of clothes. This was a huge success. Community enthusiasm grew and, with some 'hard bargaining' and renowned rural resourcefulness (otherwise known as 'scrounging'), a shop was fitted out and the 'Emporium' was born. It was by no means a smooth operation, especially when the shop acquired another tenant and the Emporium had to move back to Scott's front veranda. But the community refused to let the project die. They developed skills in marketing and catering with the setting up of a coffee shop and established a committee of management to oversee the Emporium's growth and manage its modest profits. The Emporium's fame spread and it soon began to cater to surrounding towns, and include health promotion activities and health monitoring by Scott on her regular visits. The exciting aspect of this enterprise was that within one year profits also began to look very healthy.

Scott recounts that this project, which she 'stumbled' over, was able to donate one thousand dollars to local groups and organisations. Two individuals were funded to attend a course on aged care, food hampers were distributed to needy families and the local school received five hundred dollars. How else could the Emporium be described, but as a totally accessible, affordable, appropriate and culturally relevant exercise in community development and primary health care. As Scott says, 'professionally for me the venture has highlighted the importance of individuals and communities initiating change. In contrast to telling consumers what is best for them, to be a participant of change has been an outstanding learning experience.'

Other accounts of equally original community health initiatives can be found in the printed abstracts and proceedings of many Community Health and Primary Health Care Conferences throughout Australia. There is no scientific 'evidence' that programs such as these will work; indeed, there is no evidence that they can be replicated. The significant aspect of these programs is not that their methodologies have validity or can be reproduced with reliability. Their real value lies in: a) the skills that participants gain in the course of developing a program, b) the sense of community that comes from working together, c) having the courage to 'give it a go', and d) the development of strengths to face future social, emotional, economic or health problems with a degree of confidence. In short, these programs adopted a holistic, intersectoral approach to underlying problems and solutions, in recognition that a universalistic and clinical/biomedical perspective was not only inappropriate, but also non-existent.

Theoretical constructs of EBHC

The guiding philosophy of evidence-based health care is that best practice is grounded in the rigorous and systematic utilisation of scientific evidence. Evidence-based medicine aims to reduce "unnecessary, ineffective or harmful interventions, and to facilitate the treatment of patients with maximum chance of benefit, with minimum risk of harm, and at an acceptable cost" (NHMRC 1999). The progeny of evidence-based medicine, clinical guidelines, are designed to enhance the quality of health care and decrease the use of unnecessary, ineffective or harmful interventions (NHMRC 1999 p 9). The philosophy behind this approach is that much current practice is unscientific and unproven. The over-reliance on practice experience, outmoded teachings, 'accepted' practices or consumer demand, it is argued, is not in the best interests of either patients or the health care system. Alternatively, through the careful and systematic assessment of existing scientific evidence, it is both possible and preferable to devise clinical practice guidelines that prescribe effective interventions. In practice, evidence-based approaches require a close alliance between practitioners and researchers.

Goals and outcomes of health care

Increasingly during the 1990s, health care accountability was redefined in terms of 'efficient' and 'effective' management of resources. A market-driven health system emerged that shifted the emphasis of health care from inputs to outputs and outcomes. For example, casemix funding - aimed at reducing hospital waiting lists as well as hospital costs - coupled with technological advances which enable shorter hospital stays, are resulting in many high-acuity patients being discharged into a community health system while still requiring clinical nursing care (McLean 1997). In effect, this has been a cost-shifting exercise, which has significantly altered the focus of many community health centres from primary health care to primary medical care. The community health sector is becoming increasingly influenced by medical interpretations of 'health' as is demonstrated by the urging of an evidence-base for community nursing practice (Tovey 2000). Certainly, evidence-based principles can be applied to many of the medically orientated treatment services which are provided in the community, but these services should not be confused with a primary health care model of community nursing.

Using a primary health care approach, community nurses may work to longer timelines and have less measurable outcomes (Carberry, 1998), as they attempt to address the underlying structures which lead to poor health. By working in a community over a long period of time, community nurses develop an affinity with individuals and groups which is qualitatively different and more profound than that usually experienced by nurses who work in hospital settings or in high acuity areas. These relationships are not episodic, only occurring with admission to hospital, but require ongoing support, which often spans many years and embraces several generations of families. Thus community nurses focus on developing an understanding of the culture, values and discourses of a community, and strive to respond to those social parameters when planning their role in community care. Experience, sensitivity and wisdom guide their successful collaboration with the community, and in many instances there may be no 'evidence' for what they do.

As one community nurse, interviewed in a 1998 study said, *"I like the feeling that no matter what problems I am faced with, I know I can deal with them. More than ten years in this job have given me an amazing wealth of experience-and the confidence that goes with using my own professional judgement"* (Smith 1998 p 227). When discussing her belief in the value of a philosophy of primary health care, another nurse declared, *"I'm totally committed to primary health care. I know there are people alive today because of the way I work. For instance, my approach to diabetes education enables people to take control for the first time after being diagnosed and dismissed by the medical system"* (Smith 1998 p 230). Certainly these points relate to goals and outcomes, but they are not the goals or outcomes imposed by adherence to bio-medical research. These nurses are talking about client-centred goals and the experiential knowledge which recognises that outcomes are not always those we might choose for ourselves.

On the face of it, both community nursing and EBHC are concerned with improving health outcomes. The point of contention is that the evidence-based movement has as its primary goal a concern with implementing the most effective interventions. For EBHC, this goal is inseparable from the methodology that underpins it. Effectiveness of intervention equates to treatment with the greatest probability of benefit with minimum risk of harm. There is some debate in the literature about the extent to which EBHC is driven by economic rationalist ideologies concerned with cutting the size of the public sector and reducing costs. These arguments are countered by claims that EBHC was not designed to be applied in this way. In fact, the most effective treatments may not be the least costly.

Research methodologies

There is a stereotyped view of research methodologies in relation to health professionals. Medicine is seen as a branch of science, and medical practitioners are inculcated into the positivism paradigm wherein quantitative methodology is the only legitimate form of research. This methodology relies upon experimental research designs in order to explain the effect on one variable on another. The development of clinical guidelines rests heavily upon scientific study designs producing verifiable, statistical evidence. Evidence can be assessed according to its level, quality, relevance and strength (NHMRC, 1999). It is generally accepted that five levels of evidence exist, ranging from evidence obtained from a systematic review of all relevant randomised control

trials, down to evidence obtained from case series, either post-test or pre-test and post-test. Frameworks for the weighting of evidence in EBHC inevitably lead to much greater dependence on quantitative methodologies. A positivist and empiricist approach underpins the use of EBHC. It naturally favours those disciplines that have a research tradition, and specifically a positivist/empiricist research tradition.

By contrast, nursing is depicted as a humanistic profession whose practitioners are influenced by a qualitative or interpretivist approach to research methodology. Hayes (1997 p 123) describes how nurse researchers “have become experts in qualitative investigations that focus on meaning and feelings related to multiple aspects of health care”. O’Brien (1996) reminds us that nursing experience is gained through the relationships established between nurses and patients, which rely on therapeutic communication for their successful outcomes. The contribution that these relationships make to patient well-being and recovery are devalued therefore, when practitioners are told to rely on so-called scientific methods, such as the ‘nursing process’ to predict, assess, diagnose, implement and assess nursing care. While adequate for some routine clinical procedures, the scientific approach of rigidly applied nursing formulae are inadequate for enabling interpretation of the complex set of contextual phenomena encountered by both patients and nurses during any given therapeutic encounter.

During the 1960s and 70s most areas of nursing education, practice, research and theory development were profoundly influenced by a dominant medical paradigm. Nursing, as a relatively ‘new’ profession, did not have a distinct research tradition to draw upon, and there has been considerable debate about the role of nursing research in health care. Burns and Grove, for instance, advocated quantitative research as a method of providing ‘a more sound knowledge base to guide nursing practice ... [as it is] ... better accepted by other scientific disciplines than is qualitative research’ (1987, p 35). They acknowledged that there was a growth of interest in qualitative nursing research since the 1950s, but consigned it to the study of human emotions such as rejection, pain, caring, powerlessness, anger and comfort. In this assessment they reflect the ideology of nursing in the 1970s and early 80s, which was striving for acceptance as a ‘scientific’ profession.

However, since the 1980s there has been an uneasy alliance between nursing practice and scientifically based research methodology. Nursing scholars began to question the appropriateness of applying quantitative enquiry methods, which exclude subjective experiences, to conditions of human phenomena such as pain, or the individualised experiences which people encounter in health-care settings (Culbertson 1981; Allen, Benner & Diekelmen 1986). Lumby (1992 p 23), while acknowledging that much critical debate is still focused on the question of ‘what nursing is’, urges nurses to ‘take a fresh look at their practice using methods more sympathetic to nursing knowledge’. She points out that amid the complexity of modern nursing practice there are now many specialities, including community nursing, which have moved towards a social model of health care. The difference for both the ‘cared for’ and the nurse in this model is that the client is encouraged to maintain control and be empowered by the nursing relationship, rather than be disempowered, as has often been the case with institutionalised care.

Such research findings have little significance in EBHC. Bonnell (1999) believes that a reluctance of nurses to adopt quantitative methodologies may lead to greater marginalisation of nurses in research and other evidence-based practice initiatives. Community nursing research has traditionally not used scientific study designs. It draws heavily on practice reflection and sharing of information among networks of colleagues rather than publication in journals.

Medical authority

The literature offers conflicting viewpoints about the implications of evidence-based practice for medical authority and professional control. On the one hand, writers such as Weller and Veale (1999) assert that evidence-based practice redresses our over-reliance on medical authority. On the other hand, Salvage (1998) claims that while clinical guidelines are overtly concerned with improvements to the quality of care, one of their functions is to increase the level of control over professionals. There is little evidence yet of a significant uptake of EBHC through the use of clinical guidelines by individual practitioners. In fact, the high level of autonomy of general practitioners, for example, means that there has been little implementation of evidence-based practice (Davis et al, 1995).

Bonnell (1999) extends this by arguing that unless nurses take a leading role in research, then evidence-based nursing may emphasise routinisation and ultimately work against strategies aimed at professional authority and autonomy. Smithbattle (2000), on the other hand, questions claims that community nurses must base their practice on classification systems, practice guidelines, critical pathways and outcomes research. She asks whether standardised protocols in a 'cookbook' approach to health care, can ever be appropriate in individual contexts and varied community settings. She, too, describes several situations where experienced nurses circumvented bureaucratic rules and replaced protocols with practical reasoned actions. They also tended to respond in flexible ways and without precedents, for the good of their clients. There is no 'evidence' that can guide community nurses through complex problem solving in remote settings where there are no precedents, and resources are virtually non-existent. Textbook principles do not always translate well into this practice world. Smithbattle (2000) shows that by remaining open and respectful of our client's lives and concerns nurses can safeguard against imposing scientific norms or personal values on clinical situations. She states that 'while protocols define clients' needs and prescribe interventions from a vantage point external to the client's situation, a situated understanding of the client's world leads to interventions that are better suited to the client's world and possibilities.

Relationships with consumers

Reports of the World Health Organisation (1974; 1975) confirm that nurses were considered from the outset, to be integral to the success of community-based care, and they were to assume a pivotal position between the community and health agencies. With a 'foot in both camps' as it were, nurses were seen to be capable of interpreting both the needs of the community and the objectives of health-care policy makers. The relationship which community nurses have with communities is based on their primary health care role and their beliefs about quality of life and community values, as well as an approach to professional decision making which reflects not only their own nursing culture, but also the culture of the community. This relationship is difficult to define, but stems, in part, from the nurses' strong belief in the autonomy of clients in their own homes. It is also related to the holistic nature of community nursing, touching, as it does, on all aspects of health and social problems in community and personal life. As the WHO (1988) has indicated, community nurses live and work in the community, and so consider themselves to be a part of the community and sensitive to the same range of issues that affects their fellow citizens. Community nursing takes an empowering partnership approach. Nurses work with community members to assist them to identify health needs, develop plans to address them, and find local solutions.

There are many claims in the literature about EBHC being an empowering tool for health consumers. However, there is very little evidence yet to support these claims. Bastian (1999) asserts that EBHC offers the opportunity for consumer and community participation in decision-making. Clinical guidelines provide avenues for "sharing the knowledge" with consumers; there is thus greater impetus for changes to clinical practice (Hill 1999). However, there are a number of problems with the development and use of EBHC from the consumer's perspective. First, the consumer's voice may be heard only if it is very articulate, can speak the language of medical practitioners and researchers, and is allowed to be heard by powerful interests. Consumers are also concerned that EBHC will limit treatment choice, such as complementary or supportive care. Treatments may become oriented towards those that are favoured by more scientific research methods. Additionally, clinical guidelines may lead to treatment segregation: deserving and less deserving patients may become identified and labelled. Finally, the development and writing of clinical guidelines is largely divorced from the social determinants of health and the social context of health care (Hill 1999).

Conclusion

EBHC is fast becoming a dominant paradigm in health care (Wallace, Shorten and Russell, 1997). This paper has examined the implications for community nursing. It is apparent that EBHC and community nursing are antithetical in many respects. They are based on divergent philosophies, proffer competing views about health goals and outcomes, and arise from different research traditions. On the other hand, the two are likely to challenge medical authority, and have the capacity to empower health consumers.

For community nurses, it is important that the push for EBHC does not go unchallenged. Following Dunston and Sim (2000), three strategies are suggested. The first is to engage in debate. The rationale for and the outcomes of EBHC must be critically assessed. Community nursing, as a profession, must take a leading role in questioning the costs and benefits of EBHC. This dialogue must take place within the profession, as well as with researchers, health bureaucrats and health managers. A second strategy is to build a co-ordinated research program. Community nurses must initiate or sponsor research to demonstrate the effectiveness of the community nursing approach, and to contribute to the development of more sophisticated frameworks for utilising practice wisdom and qualitative evidence in the development of best practice approaches. Effective ways for disseminating the research outcomes must also be found. Finally, community nurses must improve their research literacy. This involves developing undergraduate and continuing education programs on the research process, including locating, appraising and using evidence. Through these strategies, community nurses will be able to mount a convincing case for the value of their role.

References

- Allen D, Benner P & Deikelman N 1986, 'Three paradigms for nursing research: methodological implications.' In P L Chinn (ed) *Nursing Research Methodology: Issues and Implications*, Aspen Publishers, Rockville, USA.
- Bastian H 1999, 'Information gaps, overload and competing ideologies: A consumer experience of evidence in maternity care', *Consumers and Evidence-Based Health Care. Proceedings of the Women's Health Victoria's Consumer-Defined Evidence-Based Health Information Forum*, Melbourne, 29 July 1999.
- Bonnell C 1999, 'Evidence-based nursing: A stereotyped view of quantitative and experimental research could work against professional autonomy and authority', *Journal of Advanced Nursing*, vol 30, no 1, pp 18-23.
- Burns N & Grove S 1987, *The Practice of Nursing Research: Conduct, Critique and Utilization*, W.B. Saunders, Philadelphia.
- Carberry C 1998, 'Outcomes steering practice: When the ends determine the means', *International Journal of Nursing Practice*, vol 4, pp 2-8.
- Cochrane A 1979, '1931-1971: A critical review, with particular reference to the medical profession' in *Medicines for the Year 2000*, Office of Health Economics, London.
- Culbertson JA 1981, 'Three epistemologies and the study of educational administration', *Review: The University Council for Educational Administration*, vol 22, no1, Winter, pp1-5.
- Davis D, Thomson M, Oxman A, & Haynes R. 1995, 'Changing Physician performance: A systematic review of the effect of continuing medical education strategies. *Journal of the American Medical Association*, vol 274, no 9, pp 700-705.
- Dunston R & Sim S 2000, 'Evidence based practice and social work: Survival and opportunity', *Social Work Practice National Bulletin*, vol 10, no 1, pp 16-19.
- Fry D 1994, *Strengthening Primary Health Care in Australia*, Issue Paper No. 10, Australian Community Health Association.
- Hayes P 1997, 'Editorial: Evidence-based practice' *Clinical Nursing Research*, vol 6, no 2, pp 123-125.
- Hill S 1999, 'Women and Evidence-based Medicine: An overview', *Consumers and Evidence-Based Health Care. Proceedings of the Women's Health Victoria's Consumer-Defined Evidence-Based Health Information Forum*, Melbourne, 29 July 1999.
- Lamont L & Lees P 1994, 'Practising community nursing in the context of primary health care' in Cooney C (ed.) *Primary Health Care*, Prentice-Hall, Sydney.
- Lumby J 1992, *Making Meaning from a Woman's Experience of Illness*, PhD Thesis, Deakin University, Geelong, Victoria.
- McCarthy A & Hegney D 1998, 'Evidence-based practice and rural nursing: A literature review', *Australian Journal of Rural Health*, vol 6, pp 96-99.

- McLean J 1997, 'Early discharge trend', *Nursing Review*, July.
- McMurray A 1993, *Community Health Nursing: Primary Health Care in Practice* (2nd ed.), Churchill Livingstone, Melbourne.
- McMurray A 1998, 'Undertaking research for the benefit of the rural community', *Australian Journal of Rural Health*, vol 6, pp 89-95.
- National Health and Medical Research Council 1999, *A Guide to the Development, Implementation and Evaluation of Clinical Practice Guidelines*, AusInfo, Canberra.
- O'Brien B 1996, 'Developing a practice based model of nursing' in J Greenwood (ed) *Nursing Theory in Australia*, Harper Educational, Sydney.
- Roberts K 1998, 'Evidence-based practice: An idea whose time has come', *Collegian*, vol 5, no 3, pp 24-27.
- Robertson I 2000, *HEU Submission to the Senate Inquiry into Public Hospital Funding*, Health Economics Update, Monash University.
- Rordan J & McLennan J 1992, *Community Health Nursing: Helping with health*, Harcourt, Brace, Jevanovich, Sydney.
- Sackett D & Rosenberg W 1996, 'Evidence-based medicine: What it is and what it isn't', *British Medical Journal*, vol 312, no 7023, pp 71-73.
- Salvage J 1998, 'Evidence-based practice: A mixture of motives?', *Nursing Times*, vol 94, no 23, pp 61-64.
- Sax S 1984, *A Strife of Interests: Politics and Policies in Australian Health Services*, Allen and Unwin, Sydney.
- Scott J 1996, 'A Community Emporium Wellness Centre', in *Seventh Annual Primary Health Care Conference Proceedings: Economic and Political Change in Health Care*, November 1996; University of Sydney.
- Smith J 2000, 'Community nursing and health care in the twenty-first century', *Australian Health Review*, vol 23, no 1, pp 114-121.
- Smithbattle L 2000, 'Sowing the seeds for the future: Preserving the wisdom embedded in community health nursing practice', in *Community Nurses Interest Group National Conference Proceedings: Health for All Through Primary Health Care*, September, Edith Cowan University.
- Tovey P (ed.) 2000, *Contemporary Primary Care: The challenges of change*. Open University Press, Buckingham.
- Wallace M, Shorten A & Russell K 1997, 'Paving the way: Stepping stones to evidence-based nursing', *International Journal of Nursing Practice*, vol 3, no 3, pp 147-52.
- Weller D 1999, 'Evidence-based policy and practice in rural health', *Proceedings of the 5th. National Rural Health Conference, Leaping the Boundary Fence - Using Evidence and Collaboration to Build Healthier Rural Communities*, National Rural Health Alliance, Adelaide, South Australia.
- Weller D & Veale B 1999, 'Changing clinical practice: Evidence-based primary care in Australia', *Health and Social Care in the Community*, vol 7, no 5, pp 324-32.
- World Health Organisation 1974, *Community Health Nursing*, Technical Report Series, No 558, WHO, Geneva.
- World Health Organisation 1975, *The Definition of Parameters of Efficiency in Primary Care and the Role of Nursing in Primary Health Care*, WHO, Reykjavik.
- World Health Organisation 1988, *Summary Report of the European Conference on Nursing*, WHO, Vienna.