

THE TRANSFER OF EVIDENCE INTO COMMUNITY NURSING PRACTICE

INTRODUCTION

There is little doubt that nursing research has increased our knowledge, however knowledge is of little benefit if it is not applied and used. Nursing research is the term used to describe the evidence that supports nursing practice. Nursing is an evidence-based profession where research, practice and education have been linked in the development of knowledge since the earliest times to the present day. Nursing education places emphasis upon the use of evidence from research in order to rationalise nursing practice and interventions.

A great and increasing challenge facing all practitioners, regardless of their discipline or background, is how to keep abreast of new research findings. This is particularly relevant in nursing because there have been significant advances in our scientific knowledge base over the past two decades. Our clients deserve to be provided with community nursing care that is based on knowledge that is an outcome of research evidence, rather than historical practice or an individual nurses 'logic'. This newsletter will examine the basic concepts of evidence-based nursing practice and some of the concepts, tools and techniques involved.

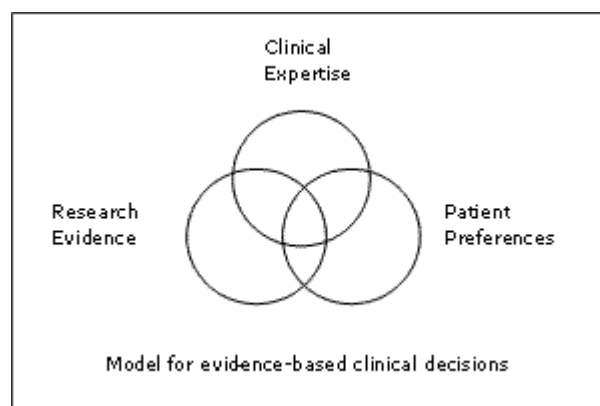
Summary points:

- The aim of evidence-based practice (EBP) is to integrate current best evidence from research with clinical policy and practice.
- Community nurses may have difficulty finding, assessing, interpreting, and applying current best evidence in practice.
- EBP practice requires both knowledge and expertise.
- Client preference is an important component in EBP decision making.
- Evidence-based services (such as electronic databases, systematic reviews, and journals that summarise evidence) make accessing current best evidence feasible and easy.
- Progress in nursing has been slow to create evidence-based clinical policy and ensuring that evidence and policy are applied at the right time.

WHAT IS EVIDENCE-BASED PRACTICE (EBP)?

All nursing clinicians (and clients!) would like to 'think' that

they are following best practice and that their practice is based on evidence... but is it the case? EBP has been defined as the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual clients (Sackett 1996). The impetus towards EBP was founded by Archie Cochrane in the 1970s (Estabrooks 1998). This notion of EBP stemmed from Cochrane's belief that resources for health care are limited and that resources should be used both equitably and effectively (Wallace et al 1997). The Cochrane Collection currently contains the Database of Systematic Reviews and the Database of Abstracts of Reviews of Effectiveness (DARE) (Estabrooks 1998). While there may be an abundance of evidence available to clinicians, the quality of that evidence can be variable. It is an expectation that health clinicians' use and interpret a wide range of evidence to inform their practices (Humphris 1999). Research evidence is only one component of EBP because EBP is integrating individual clinical expertise and the best external evidence (Sackett 1996). This is represented by the model below (adapted from Haynes *et al* 1996). This model proposes that clinical assessment and management require both knowledge and expertise. Evidence from research can help to inform or perfect that expertise, but cannot replace it. Client preference is a third important component in EBP decision making.



What evidence is important in EBP? The literature suggests that there should be a balance. Evidence needs to be examined within the context of conventional wisdom, common sense, qualitative and quantitative research studies, clinical experience and clinical judgement (Estabrooks 1998; Rolfe 1999). EBP may also encompass personal experience, qualitative research and systematic reviews of well designed research studies (Wallace et al 1997). It is the responsibility of the individual practitioner to accept or reject evidence depending on its strengths

and weaknesses (Humphris 1999).

WHAT ARE THE LEVELS OF EVIDENCE?

One tool which can be used to assist practitioners with rating the quality of evidence was developed by the National Health and Medical Research Council (NHMRC) and is called the Quality of Evidence Ratings. The NHMRC ratings establish a hierarchy of evidence that places the greatest emphasis on quantitative, scientific studies and the least emphasis on evidence derived from qualitative studies or expert opinion. Research evidence comes in different shapes and forms, each of which has some information value, but which may vary in level, quality, relevance and strength (see table below; adapted from the NHMRC 1999). These factors are important in consideration of the weight that can be placed on particular research evidence.

Level of evidence	
Degree to which bias has been eliminated by study design:	
I	systematic review
II	randomised controlled trial(s)
III-1	pseudo-randomised controlled trial(s)
III-2	comparative studies with concurrent controls, case control studies or interrupted time series with control group
III-3	comparative studies with historical control, single-arm studies, interrupted time series without parallel control group

Ratings are based on the ability to control bias in a particular research approach. Systematic review processes provide an approach to the synthesis of research evidence that takes account of the level, quality, relevance and strength of the evidence. As such, systematic review processes are the backbone of EBP. In a Randomized Control Trial (RCT) participants are randomly assigned to an intervention group or a control group. The researchers use an experimental design and the study is blinded to minimise bias. The aim of the RCT is to compare the effectiveness of one intervention over another (Humphris 1999). This research method has been dominant in medicine.

The next highest level of evidence relates to studies that lack control and/or randomisation (Wallace et al 1997). There may be ethical reasons as to why a study could not have randomisation or a control group. For example, the difficulty of not having a control group can arise when trying to ascertain whether the treatment was better than no treatment at all. If a control group is used without randomisation, the researchers may not be able to determine if the effect seen was due to differences between the groups or due to the treatment (Wallace et al 1997).

Descriptive studies that use qualitative methodologies are ranked as lowest within the NHMRC hierarchy. Interpretive methodologies are those that seek insight into individuals' subjective experiences and the context in which those experiences occur. Interpretive methods are commonly utilised in professions such as nursing (Humphris 1999). The research findings from these

studies can have limited generalisability because they represent only the experiences of the people in the study and participant numbers are usually small. Interpretive and descriptive studies provide suggestions and direction for future research and may be a supplement for a systematic review (Humphris 1999; Jones et al 2000).

The lowest level of evidence is expert opinion because of the bias involved in people's own opinions, descriptions or observations (Wallace et al 1997). The experiences of clinicians are limited by the individual clients he/she has seen and cannot be related to the whole population (Humphris 1999).

The purpose of systematic reviews

The need for systematic reviews in nursing has been addressed in Australia by organisations such as the Joanna Briggs Institute (JBI). JBI in South Australia was established to conduct systematic reviews relating to nursing clinical practice. The systematic reviews are disseminated to nurses in an easy to understand format with recommendations that are evidence-based. Organisations such as JBI have become a focal point in a health care environment in which policy makers are focusing on health outcomes rather than input (Jones et al 2000).

It is through a systematic review of the available evidence that we ensure that our clinical decisions are based on sound evidence. Systematic reviews can also help to explain differences among studies that have asked similar questions (Cook, et al 1997). Systematic reviews enable researchers to synthesise large amounts of literature in a systematic and scientific way, hence it has been argued that these reviews are one of the most important and helpful aspects of the evidence-based developments (Renfrew 1997).

HOW HAS AUSTRALIA RESPONDED TO THE EVIDENCE-BASED MOVEMENT?

Clinical practice guidelines are an important tool for the translation of evidence into practice. The NHMRC requirements for developing clinical practice guidelines are rigorous and a number of criteria must be met before a guideline is endorsed by the NHMRC. However, the NHMRC has had no role in ensuring that these guidelines are implemented, which is considered a weakness. During October 2006 the National Institute of Clinical Studies (NICS) organised a symposium to examine ways that guidelines can be translated effectively into day to day clinical practice. The symposium was attended by the first author (Visentin) to ensure that RDNS remains up to date with current knowledge around EBP.

The role of NICS is important because it 'is Australia's national agency for improving health care by helping close important gaps between best available evidence and current clinical practice' (NICS 2006). In 2007 NICS will be incorporated into the NHMRC and it is thought that this move will strengthen the translation of research findings into improvements to health care practice.

What are guidelines?

Guidelines summarise best practice evidence in order to encourage effective and efficient health care. The aim of evidence-based guidelines is to encourage practices that the evidence suggests are beneficial, and to discourage ineffective or harmful practices (NICS 2006). A Cochrane review found that when allied health professionals delivered care that was driven by guidelines, significant improvements were found in the outcome of care such as reduced infection rates and symptom relief (Thomas et al 2000 cited in NICS 2006). The success of guidelines to actually change clinical practice however, is dependent on a number of factors such as:

- methods used to develop the guidelines
- strategies used for dissemination
- strategies used for implementation
- methods used to evaluate effectiveness
- methods used to update the guidelines, and
- clinical setting

NICS (2006) states that a failure in any of the steps listed above could result in failure of the guidelines to change practice and, without evaluation, it can be difficult to know where things have gone wrong. The aim of the symposium was to explore the decisions around which guideline recommendations to focus on; consider the ways to identify the barriers and enablers to the uptake of recommendations; select strategies for getting guidelines into practice; and to plan and monitor change in practice. The symposium program included international speakers. It is widely accepted that the use of guidelines can improve clinical care and health outcomes, but as Heather Buchan (NICS) pointed out, there is very poor uptake of guideline recommendations unless there is an ongoing implementation program. The reason for this can vary but often it relates to the fact that guidelines may be too long and not user-friendly.

The RDNS Research Unit, in collaboration with RDNS expert community nursing clinicians, has been reviewing each of the RDNS policies/guidelines to ensure that they are based on the best available evidence. Some of the evidence has demonstrated that changes to clinical practice are required. Each guideline will have an evidence summary attached to it and eventually they will be accessible on the Intranet. Changing practice takes time, considerable resources, commitment and is often trans-disciplinary. Thinking in a trans-disciplinary way is a shift from thinking of knowledge as being limited to disciplinary boundaries. This way of thinking is slowly being recognized as crucial to developments associated with social and environmental sustainability, but is only just beginning to be recognized in health.

For the purposes of the NICS symposium, many different professionals came together including nurses, doctors, allied health practitioners, policy makers and researchers. It was reassuring to know that the difficulties associated with effectively incorporating evidence into clinical practice are world-wide. The symposium, however, provided us with lots of strategies and resources that could be used within our own

organisation.

Dr Susan Michie, Professor of Health Psychology in the UK, talked about the use of psychological theories when managing change. She believes that for guidelines to be implemented successfully, the implementation strategy should be based on psychological theory. She contends that there is a lack of theoretical understanding of the processes involved in changing the behaviour of health professionals. Michie et al (2005) worked with health professionals to develop a consensus on a theoretical framework that could be used when implementing research.

Ellen Reid gave a heartfelt description of the journey she and her late husband went on in the quest to source information about Amyloidosis. When her husband was finally diagnosed with Amyloidosis in 2001 there was no information given to them from health professionals as this was a rare disease. Ellen, who was a retired pharmacist, devoted her time to seeking information and disseminating it. She eventually found some UK-based guidelines for the disease and these have been invaluable. In 2005 she and her family started the first charity dedicated to helping individual with Amyloidosis and their families. Ellen highlighted just how guidelines can be used by consumers, and the benefits associated with health professionals and clients/carers working in collaboration.

Factors to consider when writing guidelines

People are more likely to change their behaviour if the guidelines are clear about what they need to change, if they understand the potential barriers and if they have plans to overcome these barriers.

When writing guidelines, it is imperative that the guideline specifies who should do what, when, where and how. Not only does this help the person implementing the guideline but it also assists with the auditing process. However, this is not an easy task and sometimes there may not be enough evidence to be specific.

Michie et al (2005) looked at the effects of rewriting sections of a consumer information brochure from the UK National Institute of Health and Clinical Excellence (NICE). The original text stated *'remember, the decision about which medicine to take is best made by you and your doctors together'*. The rewritten text said *'you should decide which medicine is best for you with the help of your doctor'*. The new wording resulted in people with schizophrenia feeling more positive about the guidelines and more capable of following them.

A web-based program called Climate (www.climate.tv) reverses the procedure for knowledge transfer. It consists of a cartoon driven version of guidelines for education of clients. Clients can complete an online referral letter to their GP if they want to do the module that relates to their medical condition. The GP then works through it with them online. This is an exciting new program which could benefit many clients with conditions such as mental illness, diabetes, asthma and arthritis. It is worth visiting the website to explore this resource further.

What are the barriers and enablers to implementing guidelines?

There are 4 major areas in which barriers may arise:

- the clinician who may have a number of beliefs that interfere with guideline implementation
- client barriers
- the health care system such as lack of resources, culture, policies or regulations
- the evidence and/or the guideline may not be appropriate, credible or feasible to implement in practice

It is also important to identify enablers that will assist with uptake and these could include the characteristics of the individual staff, a team approach, access to resources, and system structures, such as incentives.

NICS (2006) suggest a variety of techniques in which organisations can identify their own barriers and enablers prior to instigating a change to clinical practice:

- brainstorming
- case studies
- key informants
- interviews
- focus groups
- direct observation
- surveys
- nominal group technique (consensus planning tool that helps prioritise issues)
- Delphi technique (group problem solving using email, fax or mail)

Strategies for implementation of guidelines

Grol and Wensing (2005) differentiate between the different strategies for changing behaviour or implementing innovations:

- Professional-oriented strategies
- Client-oriented strategies
- Financial measures
- Organisational measures
- Legal regulations and/or rules

A recent review of the effectiveness of strategies for implementation of evidence showed that multi-professional collaboration was effective for a range of different chronic conditions. Education materials alone had mixed effects; reminders were mostly effective as were interactive small group meetings (Grol and Grimshaw 2003 cited in NICS 2006). Traditional approaches such as mailouts, conferences and review articles will most often produce limited and short-term change. The authors concluded that change is possible when a well designed intervention is used and, on average, effects were seen to be around a 10%

improvement. It is recommended that interventions target specific barriers, highlighting the importance of gathering initial information about the barriers and enablers. Establishing networks is also an important part of the implementation strategy.

CONCLUSION

It is important that, as community nurses, we keep informed of current evidence. This can seem daunting due to enormous amounts of literature that is being generated. Utilising organisations such as JBI and our own RDNS Research Unit are ways that nurses can keep abreast of new information. NICS has also produced an excellent guide to online searching that will help nurses to choose quality websites (see attached). RDNS as an organisation is committed EBP and evidence summaries for the Nursing Practice Manual, which can be located on the 'M' Drive under "Evidence Summaries".

One other important thing we can do as an organisation committed to EBP and primary health care is to encourage clients to ask the hard, evidence-based questions. Informed clients should be demanding that community nurses and doctors find answers for them because change is not going to come quickly unless it is driven by consumers.

References

- Clinical Management and Treatment Education (CLIMATE) – www.climate.tv (Accessed 12 April 2007).
- Cook, D., Mulrow, C. & Haynes, B. 1997, 'Systematic Reviews: Synthesis of Best Evidence for Clinical Decisions', *Annals of Internal Medicine*, vol. 126, no. 5 pp.376-380.
- Estabrooks, C. 1998, 'Will evidence-Based Nursing Practice make Practice Perfect', *Canadian Journal of Nursing Research*, vol. 30, no. 1, pp.15-36.
- Grol R., Grimshaw J. 2003 From best evidence to best practice: effective implementation of change in patients' care. *Lancet*, Oct 11; 362(9391): pp 1225-30.
- Haynes RB, Sackett DL, Gray JM, Cook DJ & Guyatt GH (1996). Transferring evidence from research into practice. 1. The role of clinical care research evidence in clinical decisions. *ACP Journal Club*, 125(3): A14-A16
- Humphris, D. 1999, Chapter 2 'Types of evidence', In *Achieving evidence-based practice*, Edited by Hamer and Collison, London:Bailliere, pp 13-40.
- Jones T., and Evans, D. 2000, 'Conducting a systematic review', *Australian Critical Care*, vol. 13, no. 2, pp.66-71.
- Mitchie S., Johnston M., Abraham C., Lawton R., Parker D., Walker A. (2005) *Making psychological theory useful for implementing evidence based practice: a consensus approach*, *Quality Safety Health Care*, vol. 14, pp. 26-33.
- National Health and Medical Research Council (1999), *How to use the evidence: assessment and application of scientific evidence*, Canberra
- NICS (2006), Using Evidence: using Guidelines symposium, Melbourne, Australia
- Renfrew, M. 1997, 'Influencing the development of evidence-based practice', *British Journal of Midwifery*, vol. 5, no. 3, pp.131-133.
- Rolfe, G. 1999, 'Insufficient evidence: the problems of evidence-based nursing', *Nurse Education Today*, vol. 19, pp. 433-442.
- Sackett, DL. Rosenberg, WMC, Gray JAM, Richardson WS, Evidence based medicine: what it is and what it isn't, *BMJ* 1996;312 (7023): 71-72
- Wallace, M., Shorten, A., & Russell, K. 1997, 'Paving the way: Stepping stones to evidence-based nursing', *International Journal of Nursing Practice*, vol. 3, pp 147-152.