

Asking answerable questions

Nurses have had to deal with many changes in recent years, one of which is the increased expectation that they will keep their practice up to date by reading vast numbers of publications. This expectation and the pressures of maintaining continuing education requirements come alongside ever increasing workloads and diminishing study time.

So what can be done to ease some of the pressure? Evidence-based nursing (EBN) offers at least some of the answers. In a nutshell, the aim of EBN is to make it easier to include current best evidence from research in clinical and healthcare decisions.

What is EBN?

EBN is a 5 stage process:

- Information needs from practice are converted into focused, structured questions
- The focused questions are used as a basis for literature searching in order to identify relevant external evidence from research
- The research evidence is critically appraised for validity and generalisability
- The best available evidence is used alongside clinical expertise and the patient's perspective to plan care
- Performance is evaluated through a process of self reflection, audit, or peer assessment.

The purpose of this paper is to work through stage 1: the formulation of structured, focused questions.

The types of information needs that arise regularly from our clinical practice are those questions such as *Why do we do it this way?* or *What's the best way of....?* for which neither you nor your colleagues have a ready answer. If you are able to go to the library, what strategies can you use to find answers to this type of question efficiently? How do you find good quality, relevant research without wading through hundreds of papers?

Framing the question in a way which lends itself to searching while still reflecting the specific patient or service focus is an important stage to get right. That way, when you begin searching for evidence on the topic you have chosen, the volume of research will be manageable.

Issues or questions can arise from many clinical and managerial situations. For example, one question that came from my time working in palliative care related to the development and use of pain diaries for patients with advanced cancer. I realised that I didn't actually know whether completing pain diaries was a useful thing in the palliative care of patients with cancer. Was time being spent developing something which had previously been shown to be useless or even harmful? After all, it is conceivable that monitoring one's pain in a diary actually heightens one's awareness and experience of pain. I needed to search the literature to find out if there was any existing research. To focus my search I developed the following question: *does the use of pain diaries in the palliative care of patients with cancer lead to improved pain control?*

A second question arising from my practice in palliative care was one frequently raised by patients: *will taking morphine affect my ability to drive?*

Generally, there are three elements to questions: the situation, the intervention, and the outcome. In the first example, these are palliative care of patients with cancer, the use of

pain diaries, and improved pain control. In the second, they are palliative care of patients with cancer, the use of morphine, and driving safety.

The **situation** is the patient or problem being addressed. This can be a single patient or group of patients with a particular condition or healthcare problem. In both examples the situation is *palliative care of patients with cancer*. The situation may also be individuals with similar demographic characteristics. Alternatively, the scope of the situation may be a much wider aspect of healthcare delivery, and be concerned with more managerial aspects of organising services.

Some other examples of situations are:

- A patient with a grade two pressure sore—*a single patient*
- Patients with hypertension—*a group of patients with a particular condition*
- Children under the age of 10—*a population with similar demographic characteristics*
- Primary health care for the elderly—*an aspect of healthcare delivery*
- Organisation of outpatients—*managerial aspects of organising health care.*

The **intervention** is the dimension of health care of interest. In the first example, the question was whether the use of *pain diaries* to record pain was a useful treatment for the palliative care of patients with cancer. In the second example, the intervention was *morphine*. Interventions come in many guises and recognising these can help develop a strategy for searching for the evidence. Interventions can be (Richardson *et al*¹):

- *Therapeutic*, for example different wound dressings
- *Preventive*, for example influenza vaccination
- *Diagnostic*, for example measurement of blood pressure
- *Managerial*, for example implementation of a computerised appointments system.
- Concerned with *health economics*, for example the cost effectiveness of managing venous leg ulcers in primary versus secondary care.

Questions frequently asked are whether one treatment or therapy is more effective than another, for example whether "Unna's boot" is better than "four layer bandaging" in the treatment of venous leg ulcers (see Fletcher *et al* in this issue, p50). Alternatively the question might be *is it worth doing bandaging at all?* In either case there are two strategies being compared; in the second the alternative is no bandaging. Thus questions which ask about interventions require the incorporation of a "counter intervention". The counter intervention may be standard treatment or no treatment at all. The first example could be phrased as: *does the use of pain diaries in the palliative care of patients with cancer lead to improved pain control compared with not using a diary?*

The counter intervention here is "not using a diary" or no treatment. In the driving example the counter intervention is no morphine.

Another example incorporating a counter intervention might be: *does the use of a hydrocolloid dressing on a sacral pressure sore lead to greater patient comfort than a gauze dressing?*

This question involves the comparison of two treatments: hydrocolloid dressings and gauze dressings. The **situation** is a patient with a sacral pressure sore and the **outcome** (the result we are interested in from a clinical and patient perspective) is

increased patient comfort. In the case of patients receiving palliative care, the outcomes of interest are whether pain control is improved or driving ability impaired. In the leg ulcer example, the outcome of interest is ulcer healing.

Putting it all together

The individual parts of the question are vital bits to remember when it comes to searching for evidence. One of the easiest ways to do this is to use a table.²

Putting each part of the question into its appropriate column eases the task of developing something searchable. It is important to bear in mind that the order of the question does not have to follow the order of the columns—that is, situation, intervention, outcome. As long as each element appears in the question they may occur in any order as the table shows for the following example: *does the giving of flu vaccinations to people over the age of 75 lead to reduced morbidity?*

Situation	Intervention	Counter intervention	Outcome
People >75 years of age	Influenza vaccination	No vaccination	Reduced morbidity

“Quick and dirty” searching

Sometimes it can be difficult to focus the question until you have read some research papers; background reading can help you to define the question and a “quick and dirty” search may be all that is needed to get started.

An example of an initially less focused question might be: *does the use of pain diaries lead to improved pain control?*

There is no population described and a search would produce a large amount of information about the use of pain diaries in all types of settings, but this background material might be helpful, and might be all that is available if no research has been undertaken into palliative care.

Finding the answers

I used a number of resources to search for answers to each of the questions concerning palliative care. I consulted a health information specialist who helped me target the best places to search and develop a search strategy. I first searched the databases Medline, CINAHL, and PsycLIT and then handsearched *Progress in Palliative Care*, a journal which

identifies and summarises research published elsewhere. Finally, I went to various sites on the world wide web which I knew contained information about palliative care (literature searching will be covered in a future issue).

I had varying levels of success. For the search on the use of pain diaries, I found a number of articles through electronic searching and one through handsearching. Of the articles, 3 were of sufficient interest to examine in depth. Despite the apparent relevance of the papers none directly answered my question. Because of this lack of published evidence, the question then became a research question, and an evaluation of the use of pain diaries in palliative care is now underway.

The second search, however, produced more satisfactory results. One relevant paper appeared in 2 databases. The paper examined the effects of taking continuous morphine on driving ability and was published in the *Lancet*.³ The findings showed that cancer patients taking morphine who had been on a stable dose for 2 weeks could drive without fear of impairment of ability. From the results of this research I was able to advise patients that morphine should not impair their ability to drive once they had been on a static dose for a couple of weeks.

Finally...

Question formulation is fundamental to EBN, as it converts situations and problems from practice into the focus of searching for the research evidence. The keywords of the question become the key terms for a search and time spent developing a focused question can save a great deal of searching time. Perhaps of all healthcare professionals, nurses spend most time at “the bedside” and frequently have difficulty getting to libraries.⁴ By developing focused questions, the time spent searching for research evidence will be used efficiently ensuring that nurses, given the right resources, can increasingly base their practice on evidence.

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- 1 Richardson WS, Wilson MC, Nishikawa J, *et al*. The well-built clinical question: a key to evidence-based decisions. *ACP Journal Club* 1995; Nov-Dec:123:A12.
- 2 Sackett DL, Richardson WS, Rosenberg W, *et al*. *Evidence-Based Medicine* New York: Churchill Livingstone, 1997.
- 3 Vainio A, Ollila J, Matikainen E, *et al*. Driving ability in cancer patients receiving long-term morphine analgesia. *Lancet* 1995;346:667–70.
- 4 Blythe J, Royle JA. Assessing nurses' information needs in the work environment. *Bulletin of the Medical Libraries Association* 1993;8:433–5.

Invitation to submit letters and papers on implementation

E*vidence-Based Nursing* provides practising nurses with the best research evidence along with advice from clinical experts regarding how this evidence, combined with patient preferences, can be applied to practice. We hope that *Evidence-Based Nursing* will make an important contribution to nursing, and ultimately to patient care, by bringing the findings of rigorous research to the attention of nurses, by promoting the critical appraisal of research, and by fostering implementation.

An important step in the practice of evidence-based nursing is the sharing of successful implementation strategies. We therefore welcome submission of manuscripts describing the process and results of the implementation of an evidence-based nursing intervention. Manuscripts should be no longer than 1500 words, including references. All manuscripts will be peer reviewed and submission does not guarantee publication.

We also welcome letters from our readers about *Evidence-Based Nursing*. We would like to hear about the positive and negative aspects of our journal. Your feedback is most important in assisting us to produce a high quality journal which is useful to the practising nurse. Letters should be no longer than 400 words.

All submitted material should be typewritten, double spaced, and mailed or faxed to Nicky Cullum in the UK editorial office (Centre for Evidence Based Nursing, Department of Health Studies, University of York, Heslington, York YO1 5DG).