Part I

Introducing Evidence-based Practice
Learning Outcomes

By the end of the chapter you will be able to:

- define evidence based practice;
- understand how evidence-based practice came into being;
- discuss the pros and cons of evidence-based practice;
- identify the components of evidence-based practice and the skills associated with it;
- consider why your practice needs to be evidence-based.

Introduction

Many terms are used in relation to Evidence-based Practice (EBP) – evidence-based nursing, evidence-based nursing practice, evidence-based medicine, evidence-based mental health and evidence-based health care. The idea of EBP is at the forefront of health-care discussions, leading Rycroft-Malone et al. to suggest that it has become a global phenomenon, with evidence being something of a ‘buzz word’ and rapidly becoming ‘one of the most fashionable words in healthcare’ (2004a: 82). A simple search of the CINAHL database, using the phrase ‘evidence-based practice’, and limited to ‘nursing’, revealed 3011 relevant articles. From this alone it is safe to say there has been an explosion of interest in this area.

Implicit in such discussions is the message that health care, wherever it is delivered, must be based on good, sound evidence. In days gone by, when asked why something was done in a particular way, a nurse’s mantra was ‘Sister says so’ or ‘We’ve always done it this way.’ This is no longer sufficient and the expectation is that nurses must show that strong evidence must underpin their practice. Mantzoukas (2007) has identified that EBP is central to the notion of best practice, nurse accountability, and the need to ensure that nursing activities are transparent and safe.

Whilst the importance of research in the delivery of nursing care has always been emphasized, the idea of evidence-based practice is seen as focusing the mind of those involved in care delivery on the use of appropriate evidence.
There is also a perceived lack of enthusiasm in relation to the implementation of nursing research. Glasziou and Haynes (2005) proposed that some research, essential to the delivery of quality of care, will go unrecognized for years and suggested the major barriers to using evidence are time, effort and the skills involved in accessing information from the myriad of data available. EBP is seen as a way of addressing this.

Ingersoll (2000) has also argued that focusing EBP on care delivery reflects the differences between it and research. Research concentrates on knowledge discovery whereas in EBP the application of knowledge is central. In addition she has suggested that whilst this emphasis on EBP is a welcome initiative, the wholesale ‘lifting’ of approaches and methodologies from another discipline such as medicine are not. Nurses need to make sure that the evidence used is relevant to the practice of nursing. There is a range of such evidence that can inform practice – personal experience and reflection literature, research, policy, guideline, clinical expertise, and audit (Dale, 2005) – all of which has its place within EBP and will be explored further in the various chapters of this book.

**So what is EBP?**

At its simplest, EBP is about good practice and improving the quality of care, however achieving this is a complex undertaking. Various definitions are available (see Box 1.1). French (1999) has suggested that there are certain key features of EBP, proposing it is:

- based on problems identified from the practitioner’s area of practice;
- a combining of best evidence and professional expertise and an integration of this into current practice;
- about ensuring patients receive quality care being part of quality improvement processes;
- about collaboration and requires a team approach.

**Box 1.1 Definitions of EBP**

RCN (1996: 3): ‘Doing the right thing in the right way for the right patient at the right time’.


Ingersoll (2000: 152): ‘The conscientious, explicit and judicious use of theory derived, research-based information in making decisions about care delivery to individuals or groups of patients and in consideration of individual needs and preferences’.
Dale (2005: 49): EBP involves ‘the nurse making conscious judgements about available evidence’.

Cullen et al. (2008: 2): Evidence-based nursing is ‘the application of valid, relevant, research-based information in nurse decision making’.

Considering the various definitions and French’s key features it is fair to say that the critical elements of EBP can be represented as:

Evidence → Clinical Expertise → Integration = EBP
Patient preference → Context of care

Where did the idea of EBP come from?

Professor Archie Cochrane, a British epidemiologist, is most frequently credited with starting the EBP movement. In his book Effectiveness and Efficiency: Random Reflections on the Health Services (Cochrane, 1972) he criticized the medical profession for not using appropriate evidence to guide and direct medical practice and challenged medicine to produce an evidence base. He argued there was a need to ensure treatment was delivered in the most effective way and to ensure that available evidence was used in a consistent way.

When Cochrane talked of evidence, he meant Randomised Control Trails (RCTs), which he viewed as providing the most reliable evidence on which to base medical care. RCTs are a form of research which used experimental designs to identify the effectiveness of interventions. The use of systematic reviews, which summarized the finding of a number of RCTs looking at similar areas of interest, was suggested as the ‘gold standard’ of the scientific evidence on which to base medical interventions.

The medical profession responded to Cochrane’s challenge by creating the Cochrane Centre for systematic reviews, which opened in 1992 in Oxford. The Cochrane Collaboration was founded in 1993, consisting of international review groups (currently encompassing more than 11,500 people in 90 countries) covering a range of clinical areas and producing systematic reviews. These reviews are published electronically, updated regularly and there are now over 3000 of these available.

ACTIVITY

Visit the Cochrane Collaboration Website (http://www.cochrane.org) and identify one systematic review abstract that would be of interest in relation to your current clinical environment.
Other collaborations have emerged since this time. For example, the Joanna Briggs Institute (JBI) – an international EBP collaboration – was established in Australia in 1996. Its aim is to evaluate evidence from a wide range of sources, including all research methodologies, clinical experience and expertise. The JBI has identified three activities central to its role in relation to EBP:

- evidence synthesis – the bringing together of evidence in the form of systematic reviews;
- evidence transfer – targeting the evidence at clinical areas in forms that are easily accessible, such as ‘best practice’ information;
- evidence utilization – providing tools that will enable evidence to be used and embedded in practice, such as audit tools.

**ACTIVITY**

Visit the JBI website (http://joannabriggs.edu.au) and find a best practice sheet relevant to your most recent practice experience. Using this consider what implications this might have for your own clinical practice.

The idea for evidence-based medicine (EBM) grew out of Cochrane’s work. McMaster Medical School in Canada is credited with coining the term in 1980 to describe a particular learning approach used in the school. This approach had four steps – formulating a question related to a clinical problem; searching the literature for relevant information; critically appraising the literature; and using the findings to direct clinical practice (Peile, 2004).

Sackett et al. (1996: 71) defined evidence-based medicine as ‘the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients’. Whilst the underpinning principles of EBM were hotly debated, the medical profession in general began to accept the idea, and 1995 saw the first issue of the journal *Evidence-based Medicine for Primary Care and Internal Medicine*, published by the British Medical Journal Group. Nursing, emulating its medical colleagues, began to explore the notion of basing their practice on reliable sources of evidence, which resulted in the journal *Evidence-Based Nursing* appearing in 1998. The Centre for Evidence-based Nursing (CEBN) was also established at the University of York in 1998 (www.york.ac.uk/healthsciences/centres/evidence/cebn), with the aim of promoting evidence-based nursing through research, education and development.

**Social and political drivers of EBP**

Kitson (2002) suggests a number of factors facilitated the emergence of the emphasis on evidence at this time. The availability of ‘knowledge’ via the internet and other sources brought into being ‘expert patients’ – well educated and informed individuals who accessed information relating to health and illness. The
expectations of these expert patients were that health-care professions would be aware of and use up-to-date information/research in their delivery of care and treatment. There was no longer a willingness simply to accept treatment or care purely on the advice of a doctor or nurses.

The concept of EBP was also seen as attractive by government and NHS administrators because of its potential to provide cost effective care that was also seen as clinically effective (French, 1999). In the mid-1990s the government of the day identified that quality assurance was to be placed at the forefront of the NHS agenda. Two White Papers – *The New NHS: Modern and Dependable* (DoH, 1997a) and *A First Class Service: Quality in the New NHS* (DoH, 1998) – outlined the plans for promoting clinical effectiveness and introducing clinical governance: a system these gave to ensure quality improvement mechanisms were adopted at all levels of health-care provision. Central to clinical governance were concepts of risk management and promoting clinical excellence. (See Figure 1.1 for an outline of the clinical governance framework.)

Clinical effectiveness is defined by the DoH (1998) as ‘the extent to which specific clinical interventions when deployed in the field for a particular patient or population, do what they are intended to do, that is maintain and improve health and secure the greatest possible health gain’. The Department of Health also suggested the various stages to this process:

- the development of best practice guidelines;
- the transfer of knowledge into practice through education, audit and practice development;
- the evaluation of the impact of guidelines through audit and patient feedback.

Put simply, clinical effectiveness can be seen as identifying appropriate evidence in the form of research, clinical guidelines, systematic reviews and national standards; changing practice to include this evidence; evaluating the impact of any

![Figure 1.1 Representation of the elements of clinical governance](image-url)
change and making the necessary adjustments through the use of clinical audit and patient feedback/service evaluation. Table 1.1 provides an overview of the key aspects of research – clinical audit and service evaluation.

Two organisations were created aimed at promoting an evidence-based approach to health care, which are known today as the National Institute of Health and Clinical Excellence (NICE) and the Healthcare Commission (HCC). These bodies provide guidance for health-care managers and practitioners and are charged with ensuring this guidance is followed in England and Wales. In Scotland the Health Technology Board fulfils a similar purpose. Clinical governance was introduced to ensure health care was both efficient and effective; health-care professionals were expected to show EBP supported all aspects of care delivery and service developments. It was hoped that the introduction of these measures would result in a shift in organisational culture from one that was reactive, responding as issues arise, to one with a proactive ethos, where the health care offered is known to be effective and therefore avoids unforeseen outcomes.

### Concerns about EBP

Evidence-based approaches are not without their problems. Melnyk and Fineout-Overholt (2005) suggested that EBP is viewed by many as simply another term for research utilisation. It has also been argued elsewhere that the value of research has been over emphasized to the detriment of clinical judgement and person-centred approaches, while others point to a lack of evidence to support the notion that evidence-based practice improves health outcomes.
Kitson (2002) has pointed to an inherent tension between EBP and person-centred approaches. She has argued that clinical expertise is vital in ensuring that patients’ experiences and needs are not side-lined in the pursuit of ‘best evidence’ in the form of research findings and the development of generalised clinical guidelines. Some individuals have suggested that such broad general principles are not applicable to certain aspects of care. Melnyk and Fineout-Overholt (2005) have identified this as a ‘cookbook’ approach, where a general recipe is followed with no consideration for the specific needs or preferences of individuals. There are concerns also around the ability to have a consensus in relation to the various interpretation available when translating evidence into guidelines and the relevance of these for individual areas of practice. There are also issues related to the up-dating of evidence and the ability to ensure that the information gathered is current. However, DiCenso et al. (2008) argue that as clinical expertise and decision-making processes are central to EBP, in considering the use of general guidelines both of these process must be used in the same way with any other form of evidence including guidance.

However Brady and Lewin (2007) identify that whilst the idea of clinical expertise is readily accepted by most experienced nurses, those majority of those same nurses are often unaware of the latest research in their area of practice. Nurses are generally presented as relying on intuition, tradition, and local policies/procedures to guide their practice. Stevens (2004) proposed that health-care providers with frequently not use current knowledge for a number of reason, not least of these being the rapidly growing and changing body of research, some of which is difficult to apply to practice directly. As the aim of EBP is to deliver high quality care, nurses need to have an understanding of what the exact elements of EBP are and to then develop the necessary skills and knowledge to enable them to carry this out.

French (1999) suggested that as EBP is so closely linked with EBM and its preference for certain types of evidence, there is a danger that this promotes the use of medical knowledge over other forms and therefore leads to a medicalisation of health-care environments to the detriment of other disciplines. Best evidence in the medical context is often taken to mean quantitative research findings – as identified above in the form of RCTs. Some have questioned its compatibility with nursing and the other health professions, suggesting instead the use of a more open approach. Dale (2005) proposed that this issue has the potential to create interprofessional conflict, that what nursing may count as appropriate evidence on which to base practice may be somewhat different from that of the medical profession.

What skills are needed?

EBP is often represented as a process that has a number of steps within it. Sackett et al. (2000) have suggested a four-step model:

1. Ask an answerable question.
2. Find the appropriate evidence.
3. Critically appraise that evidence.
4. Apply the evidence to the patient, giving consideration to the individual needs, presentation and context.
The JBI has a similar model containing six steps (see Box 1.2).

Box 1.2 JBI model of EBP

- Search for evidence.
- Appraise evidence.
- Summarize evidence.
- Utilise.
- Embed.
- Evaluate the impact.

Stevens (2004) has also proposed a model to explain the stages of converting knowledge into meaningful evidence to be used in EBP. The Star Model of Knowledge Transformation takes the form of a five-point star with one of the stages of transformation (discovery, summary, translation, integration and evaluation) placed on each point. (See Table 1.2 for an overview of the stages.)

There are common themes that run through all these models which would suggest there is a need to develop particular skills and knowledge related to:

- the ability to identify what counts as appropriate evidence;
- forming a question to enable you to find evidence for consideration;
- developing a search strategy;
- finding the evidence;
- critically appraising the evidence;
- drawing on clinical expertise;
- issues concerned with patient preference;
- their application to the context of care delivery;
- putting the evidence into practice.

Table 1.2 ACE Star Model of Knowledge Translation (Stevens, 2004)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Explanation</th>
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<tbody>
<tr>
<td>Discovery</td>
<td>Generation of knowledge through scientific enquiry and primary research.</td>
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<tr>
<td>Summary</td>
<td>The bringing together of a body of research into a meaningful statement,</td>
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<td></td>
<td>usually in the form of a systematic review. This may also generate new</td>
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<td></td>
<td>knowledge through the combining of findings.</td>
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<td></td>
<td>This is seen as the first step of EBP.</td>
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<tr>
<td>Translation</td>
<td>Translation into relevant practice recommendations in the form of practice</td>
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<tr>
<td></td>
<td>guidelines.</td>
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<tr>
<td>Integration</td>
<td>Individual and/or organisation practices are changed.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Impact on health outcomes, satisfaction and efficiency is evaluated.</td>
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</table>
Why does your practice need to be evidence-based?

As Craig and Pearson (2007) have already identified, few in the health-care professions would disagree with the ideas underpinning EBP – namely, that care should be of the highest standard and delivered in the most effective way. Indeed, practising without any ‘evidence’ to guide our actions amounts to little more than providing care that is based on trial and error, which none of us would advocate. However, as identified above, care is not always based on the best evidence, with Greenhalgh (2006) suggesting that many of the decisions made in health care are based on four main sources of information:

1. **Anecdotal information**  Here it is considered that ‘it worked in situation X so it must be appropriate to (the similar) situation Y’. However, as Greenhalgh points out while situations may seem very similar, patient responses are often very different.

2. **Press cuttings information**  Here changes are made to practice in response to reading one article or editorial, without critically appraising and considering the applicability of those results to your own setting specifically.

3. **Consensus statements**  Here a group of ‘experts’ will identify the best approaches based on their experiences/beliefs. Whilst clinical expertise does have a place in EBP, it does not operate without some problems. For example, clinical wisdom once held (and to a certain extent still does hold) that bed rest was the most appropriate form of treatment for acute lower back pain. However, research in 1986 demonstrated that this is potentially harmful.

4. **Cost minimization**  Here the limited resources available within a health-care setting will often result in the choosing the cheapest option in an effort to spread resources as widely as possible. However, EBP can ensure the most effective use of limited and pressurised resources. Whilst certain types of care may appear more expensive on the surface, if these prove more effective, they may turn out to be cheaper in the long run.

Perhaps part of the problem related to nursing developing an EPA ethos is that nursing is often considered as more of an art than a science and as such certain types of evidence are valued above others, such as expert opinion and practice experience. However, Polit and Beck (2008: 4) identified that any nursing action must be ‘clinically appropriate, cost effective and result in a positive outcome for clients’. The complexity of health care, and the uncertainty of people’s responses to and experiences of different types of interventions, require that a full consideration is given to all the available evidence.

Patients are likely to know a great deal about their own health needs and to expect health professionals to base care decisions on the most up-to-date and clinically relevant information. There is also an expectation that professionals will be able to comment in an informant way on any research reported in the media and identify its relevance to and appropriateness for an individual’s health needs. Miller and Forrest (2001) proposed that the ability to ensure that a professional’s knowledge and skills remain current increases their professional credibility; allows them to be an important source of information to those in their care as well as colleagues; and enables all professionals involved in care delivery to make well
informed decisions. It has also been suggested that EBP provides the framework by which such demands may be met and can foster a lifelong learning approach—an essential requirement in the health professions if staff are to remain effective in rapidly changing health-care environments.

**EBP ACTIVITY**

Consider the list of skills identified above as associated with EBP (listed on p. xxx). Choose three areas which you feel you have most difficulty with and undertake a SWOT analysis in relation to each one using the grid in Appendix 1.

**SUMMARY**

- EBP is a global phenomenon which promotes the idea of best practice, clinical effectiveness and quality care and involves an integration of evidence, clinical expertise, patient preferences and the clinical context of care delivery to inform clinical decision making.
- EBP focuses on critically appraising evidence to support care delivery rather than research to discover new knowledge.
- The emergence of the expert patient has given rise to the need for health professionals to ensure they are up to date and their care is based on the best evidence available.
- Government initiatives have promoted EBP as a way of providing both clinically effective and cost effective health care.
- Various steps are associated with the EBP process—forming a question, finding evidence, critically appraising the evidence, integrating evidence into practice.
- The knowledge and skills associated with EPA are an essential component of nursing practice.

**Further reading**

Cranston, M. (2002) 'Clinical effectiveness and evidence-based practice', *Nursing Standard*, 16 (24): 39–43. This provides a concise account of the meaning of clinical governance, the place of clinical effectiveness within this concept, and the drive towards EBP.


E-resources

**Centre for Evidence-based Nursing**: aims to promote evidence-based nursing through education, research and development.
www.york.ac.uk/healthsciences/centres/evidence/cebn

**Cochrane Collaboration**: promotes, supports and prepares systematic reviews, mainly in relation to effectiveness.
www.cochrane.org

**Joanna Briggs Institute**: promotes evidence-based health care through systematic reviews and a range of resources aimed at promoting evidence synthesis, transfer and utilisation.
www.joannabriggs.edu.au