The 2016–17 edition of A Handbook for Student Nurses has been brought completely up to date to incorporate the latest developments in the health service, such as:

- the new NHS whistleblowing policy
- Leading Change, Adding Value, the framework for nursing, midwifery and care staff
- the revalidation process for qualified nurses.

References have also been comprehensively updated.

The book provides an introduction to the essential background knowledge that pre-registration nursing students need as a foundation for their training. It covers the core of first year nursing studies:

- Legal and professional issues
- Communication
- Values and health care ethics
- Reflection and personal development
- Evidence-based practice
- Study skills
- Medicine, IV fluid and drug administration

Case studies and examples, activities and reflection points all aid learning, while references to legislation, key documents and reports, and website links to relevant organisations provide easy access to core information.

A Handbook for Student Nurses is widely recommended in institutions across the UK and is essential reading for new students.

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A HANDBOOK FOR
STUDENT NURSES
INTRODUCING KEY ISSUES RELEVANT FOR PRACTICE
2016–17 EDITION

WENDY BENBOW & GILL JORDAN
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The aim of this chapter is to remind you about the importance of respecting research and evidence-based practice within your nursing role, both as a student and when you register with the NMC.

**Learning Outcomes**

On completion of this chapter you should be able to:

- understand the concept of evidence-based practice;
- appreciate the need to consider the evidence base when carrying out nursing care, and the challenges involved.

**Introduction**

Historically nursing and, specifically, clinical procedures, have been based on rituals rather than research (Dougherty and Lister, 2015), but over the last few decades the term ‘evidence-based practice’ has become common parlance within the nursing profession. Many authors have proffered definitions as to what evidence-based practice involves: Ingersoll (2000, p. 152) suggests that ‘evidence-based nursing practice is the conscientious, explicit and judicious use of theory-derived, research-based information in making decisions about care delivery to individuals or groups of patients with consideration of individual needs and preferences’. Aveyard and Sharp (2009, p. 4) simplify this by saying it ‘...is practice that is supported by a clear, up-to-date rationale, taking into account the patient/client’s preferences and using your own judgement’. Dawes et al. (2005) believe evidence-based practice ensures that decisions on patient management are made using evidence that has been critically appraised and presented in understandable terms rather than research jargon. Finally, Hamer and Collinson (2005, p. 6) add that the ‘ultimate goal of evidence-based
Research evidence: clinically relevant research, especially patient-based research.

Local context and environment: including audit and evaluation data, local professional networks, feedback from quality assurance programmes.

Patients, clients and carers: the unique preferences, concerns and expectations each patient and carer bring to a clinical encounter and which must be integrated into clinical decisions if they are to serve the patient.

Clinical experience/expertise: the ability to use clinical skills and past experience to rapidly identify each patient's unique health state and diagnosis, the individual risks and benefits of potential interventions and patients' personal values and expectations.

Figure 7.1 – Components of evidence-based practice (adapted from Rycroft-Malone et al., 2004)
practice is to support the practitioner in their decision making in order to eliminate the use of ineffective, inappropriate, too expensive and potentially dangerous practices’.

Notwithstanding the above definitions, the central tenet of evidence-based practice is that practitioners combine their clinical or practice expertise and their knowledge of the client or patient with the high quality evidence from research (Sackett et al., 1996). Lindsay (2007) emphasises that practice requires students not only to perform skilfully but also to support their actions by referring to evidence. It is therefore an opportunity to bridge the gap between research on the one hand, and practice on the other.

*Figure 7.1* gives an example of the relationship between the three components of evidence-based practice (from Rycroft-Malone et al., 2004).

**Evidence-based practice in nursing**

In undertaking professional roles nurses need to understand how information derived from research is turned into ‘evidence’ and thus informs practice. The NMC clearly identifies that nurses have a responsibility to deliver care on the basis of the best evidence available and best practice (NMC, 2015, p. 7). The Department of Health points out that the expectations of patients can be considered as a driver for nursing practice – ‘patients are more knowledgeable and expect to be treated as partners and equals, and have to have choices and opinions available to them’ (Department of Health, 2006, p. 6).

Evidence-based practice in nursing has its roots in the evidence-based medicine movement but, in nursing, definitions of the term give prominence to the patients’ views of effectiveness. The RCN (1996a) emphasises this by saying:

> Evidence-based health care is rooted in the best scientific evidence and takes into account patients’ views of effectiveness and clinical expertise in order to promote clinically effective services. This is essential in ensuring that health care practitioners do the things that work and are acceptable to patients, and do not do the things which don’t work.

(RCN, 1996a, cited in McClarey and Duff, 1997, p. 31)
This is endorsed by NHS Scotland (2005), who go further when saying that nurses must show they are doing the right thing, in the right way, at the right time, in the right place, and get the right result. They add that it includes thinking critically about what you do, questioning whether it is having the desired result, and making a change to practice; all based on evidence of what is effective in order to improve patient care and experience.

Williamson et al. (2008) call these factors the ‘Six Rs of clinical effectiveness’, as illustrated in Figure 7.2.

<table>
<thead>
<tr>
<th>The right person</th>
<th>Was the person delivering the care competent, with the right skills and knowledge?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The right thing</td>
<td>Was there evidence to support the intervention, and was the patient agreeable?</td>
</tr>
<tr>
<td>The right way</td>
<td>Was an intervention used correctly, with correct skills and competence, or meet national guidelines and priorities?</td>
</tr>
<tr>
<td>The right place</td>
<td>Could the patient have been treated at home, or was there a more appropriate place based on specialist equipment or staff?</td>
</tr>
<tr>
<td>The right time</td>
<td>Was the intervention timely – would it have been more effective without a six-month wait?</td>
</tr>
<tr>
<td>The right result</td>
<td>Did it do what was intended?</td>
</tr>
</tbody>
</table>

Figure 7.2 – Six Rs of clinical effectiveness (Williamson et al., 2008, adapted from Bury and Mead, 1998)

Such statements by the RCN and others clearly highlight the importance of evidence-based practice in nursing. Parahoo (2014) points out that nurses represent the largest group of health care professionals throughout the world and spend considerably more time with patients than any other health professional group. Therefore, as a profession, nursing must build its body of knowledge on solid ground. However, Craig and Smyth (2007) issue a note of caution to this – the huge range of settings and people that nurses work with can be detrimental to implementing evidence-based practice; the settings in which nurses work are so varied that research cannot possibly be relevant to all. So, what is the right thing, and what are the choices available? Craig and Smyth (2007) believe that because of the range of settings and people with which nurses work, the concept of evidence-based practice is particularly challenging for them.
Lindsay (2007, p. 4) outlines what he considers the most important reasons for practice to be based on evidence as:

- the public no longer trusts health and social care professionals to do what is best;
- professionals are conscious of the risk of being sued and want clear evidence for their practices;
- emerging health and social care professions want to create their own evidence for their roles;
- governments demand clear evidence before funding expensive new treatments or care strategies.

The NMC further endorses the concept of evidence-based practice as a means of improving the quality of care. In their *Standards for Pre-registration Nursing Education* (NMC, 2010) they state that in order to offer holistic care and a range of treatment options, a newly registered nurse must make care person-centred and use evidence-based judgements and decisions to ensure high quality care. Nurses should:

- question;
- critically appraise evidence;
- take into account ethical considerations;
- take into account the individual preferences of the person receiving care;
- use evidence to support arguments.

There are many reasons why using evidence-based practice in nursing is important, and the list below does not cover them all but is a starting point:

- establishes justifiable, defensible reasons for nursing actions;
- increases cost-effective practice;
- enhances clinical effectiveness;
- is a basis for assuring quality care delivery (clinical governance);
- improves the patient’s experience;
- provides evidence of what does not work;
Carrying out evidence-based practice

Several authors (Williamson *et al.*, 2008; Sackett *et al.*, 2000) suggest a sequence of events that has to take place before information can be considered ‘evidence-based’. This is summarised in Figure 7.3.

![Diagram]

Figure 7.3 – The sequence of evidence-based practice

What is evidence?

In the past, proponents of evidence-based practice have focused on research derived from quantitative methods (data collected in the form of numbers), as they were deemed the only studies worth considering. There was little or no recognition of research gathered by qualitative means (data collected in the form of words) (Ingersoll, 2000). Dougherty and Lister (2015) believe this was worrying when, within nursing, qualitative research is the
prevalent design used. However, this is changing as, increasingly, evidence is recognised as coming from many different areas (as shown in Figure 7.1), with the proviso that it has been subjected to testing and been found credible (Higgs et al., 2008).

Credibility is key in evidence-based practice but there is little consensus about how evidence is assessed before it is used to inform practice, mainly because making such judgements about evidence is complex and difficult to achieve (Dougherty and Lister, 2015). In some instances government bodies have developed nationally accepted guidelines as a result of expert researchers undertaking research trials – examples of these are the NICE guidelines and National Service Frameworks (NSFs), which were developed to achieve consistent clinical standards across the NHS. In other instances, hospitals have created their own nursing guidelines, where procedures are regularly reviewed and updated. An example of this is the Royal Marsden Hospital’s Clinical Nursing Procedures (Dougherty and Lister, 2015). These are then published, thereby enabling other healthcare professionals and patients to benefit from the work.

**Activity 7.1**

Where might you obtain information about specific evidence-based practice required to deliver high quality nursing care? Make a list of the resources available to nurses.

**Critical awareness**

Society’s health care needs are constantly changing. This requires nurses to keep their knowledge up to date if they are to provide the best possible care to patients. Equally, nurses need to challenge everyday practices to ensure they are safe for use with patients. A major part of keeping care up to date is reviewing or evaluating literature on a subject. Evaluating research sounds rather daunting for the inexperienced but it can be broken down into a number of simple steps.

First, all research needs to be reliable (truthful) and valid (transferable), but not all research is necessarily relevant or applicable (Lindsay, 2007). Evidence sought needs to be linked directly to nurses’ practice and to inform that practice, thereby making it relevant and applicable. Pearson (2000) is concerned that research results do not always relate to the reality of everyday practice. An example of this is a project where the use of ordinary...
tap water for wound cleansing was advocated. However, the study was carried out in a developed country where water is purified – the use of water in some countries would not be appropriate.

Secondly, nurses need to be critical of what evidence they use to inform their practice to enable them to decide the value or worth of a piece of research, given the purposes for which it is to be used. Hamer and Collinson (2005, p. 11) list qualities they believe are required for nurses to be ‘critical’, which are:

- to be questioning;
- to see more than one side of an argument;
- to be objective rather than subjective;
- to weigh evidence;
- to judge others’ statements as being based on reason, evidence or logic on the one hand or based on partial evidence, special pleading, emotion or self-interest on the other;
- to look at the meaning behind the facts;
- to identify issues arising from the facts;
- to recognise when further evidence is needed.

Thirdly, nurses need to know how to evaluate a research article. Walsh (1997) states the decision (and ultimate accountability) lies with individual nurses to decide if the evidence they use is relevant, so they need the skills to evaluate the evidence critically. Below are some hints for evaluating research articles. This is a comprehensive guide to this process, but you may not be able to address all the points – it depends on the focus of the research article.

The article

**The title** – is it informative, interesting and to the point? i.e., does it address the question that you want answered?

**The authors** – what do you know about the authors? Do they have a vested interest in the conclusions of the study?

**The abstract** – does it summarise the main points of the study adequately and accurately? Be careful, as sometimes abstracts promise more than what is written in the rest of the paper.
Introduction – is the problem or purpose of the study clearly stated?

The questions – are they stated clearly and concisely? Do they follow logically from the problems? Are they worth answering? Are they answerable?

The literature – is the background information adequate? Does the author appear to know her/his subject? Does he/she appraise related research and authoritative statements? Or has he/she strung together citations and quotes which support her/his proposal without consideration of antagonistic arguments? Are specific theories used in order to put the study and potentially the findings into context? Does this theory seem relevant?

Relevance – is the study placed in the context of current professional knowledge? What is the potential contribution of the study to practice?

Aims – are the aims stated clearly, concisely and precisely? Are they logically related to the original question(s)? How were they formulated; for example, does evidence from the literature support intuition, instinct and experience? If treatment is being investigated, are the aims related to efficacy and safety?

The method

Design – is the study descriptive or experimental? Is it described adequately? Does the chosen design seem appropriate to you? A hypothesis or set of hypotheses is necessary for an experimental design. Does it follow logically from the original problem and theories?

Assumptions – are any assumptions being made? Is their use explained? Are they justifiable and appropriate? Was a pilot study completed, i.e. was a questionnaire or special report pre-tested for validity and reliability? Were modifications made? What were they and why?

Ethical considerations – has the author considered the ethics of the method? Is the proposed method ethically acceptable? For example, will all service users receive the treatment/intervention they need rather than the treatment needed for the study? Will a control group be required to receive a bogus or dummy treatment of dubious efficacy?

Participants – how were people selected? Are individuals allocated to alternative treatment/intervention groups? Is this ethical? Is there an account of how each person was chosen? Were specific criteria used to include or exclude people in and from the study? Are they clearly stated? Is the reasoning behind them apparent and sensible?
Samples – was a specific size of sample chosen (for example, for statistical purposes)? Does it seem adequate to provide sustainable results? If the author aims to make general comments about a population on the basis of the findings, who forms this population? Is the sample representative of this population?

Data collection – is the method described adequately? Could you replicate it from the description? Are the reasons for the choice of method stated? If special report forms, assessment forms, questionnaires or interview schedules have been used, are copies provided with the paper or is an address given for copies?

Analysis – is the method of analysis understandable? Have statistical tests been used? Are reasons for choice given which explain their appropriateness? Do you understand and accept the explanation?

Results – are results intelligible enough for you to interpret them and draw your own conclusions? Are they relevant to the stated problem? Does your background knowledge and common sense indicate that they are realistic and feasible? Are ‘raw’ data given, or only proportions, percentages, etc., after manipulation? Are histograms, pie charts and other graphic representations explained? Are the tables helpful? If results are based on responses to a questionnaire or interview schedule, what is the response rate? Are statistical results included? Are they meaningful? Is the statistical probability of results by chance included? Is it appropriate?

Discussion – are the results interpreted in relation to the original questions? Are the original questions answered? Have the aims been fulfilled? Does the author discuss any weaknesses in the methodology and factors which may have affected validity or reliability? For example, should sample selection be discussed? If criteria of inclusion and exclusion need clarification, is the explanation acceptable? Should the advantages and disadvantages of the method of data collection be discussed? Are they? Have you noticed anything that was omitted? Has the author referred to it or ignored it? Have the findings been related to the existing body of knowledge and relevant theory? Are the clinical implications discussed? Was the project funded? By whom? Might the results be biased because of the interests of the financing body?

Conclusions – how do they compare or contrast with the conclusions you drew from your interpretation of the results? Do they relate logically to the results?

Recommendations – are the recommendations self-evident from the reported results? Could you attempt to implement them, and should you? Is this study an end in itself, or does it suggest further research?
References – is the length of the list more impressive than its quality? Are any references conspicuous by their absence?

ACTIVITY 7.2

- Find a research article in any nursing journal and review it, taking into account the above hints.

Clinical effectiveness – does it work?

The term ‘evidence-based practice’ is often linked with clinical effectiveness. Williamson et al. (2008) believe clinical effectiveness is concerned with using treatments or care that have been shown to work, and it is important that what nurses do is effective because ‘the NHS is a publicly funded service and it would be financially wasteful, pointless and immoral … to be using particular clinical interventions if they were not known to be effective’ (Williamson et al., 2008, p. 82).

The link between evidence-based practice and clinical effectiveness can be seen in the RCN’s (1996b, p. 1) definition of clinical effectiveness: ‘applying the best available knowledge, derived from research, clinical expertise and patient preferences, to achieve optimum processes and outcomes of care for patients’ – a definition not dissimilar to the definition of evidence-based practice.

McClarey and Duff (1997) believe clinical effectiveness has three distinct parts – again not very different from evidence-based practice:

- Obtaining evidence – from research, either published in journals or available on databases; from national level studies based on research, for example, clinical guidelines, systematic reviews or national standards;

- Implementing the evidence – by changing practice to include the research evidence and, where possible, locally adapting national standards or guidelines;

- Evaluating the impact of the changed practice – and readjusting practice as necessary, usually through clinical audit and patient feedback.

Clinical effectiveness is also linked to clinical governance (see Chapter 6). Solomon (2003) states that clinical governance initiatives introduced by the government (Department of Health, 1998) aim to ensure that care provided
is of high quality and has effective outcomes. These outcomes are achieved by employing the principles of evidence-based practice. Colyer and Kamath (1999, cited in Palfreyman et al., 2003) add the economic benefits of evidence-based practice to their definition as they believe the overall purpose of evidence-based practice is to provide effective health care within the limited resources available. The Department of Health endorses this by saying demonstrating clinical and cost effectiveness is a key goal for the NHS (Department of Health, 1995; Department of Health, 1997) and one means of achieving this is evidence-based practice.

Factors affecting the implementation of evidence-based practice

As indicated throughout this chapter, the use of evidence-based practice is critical to nurses, whether they be students or registered. However, Dougherty and Lister (2015) point out that, on the whole, delivering evidence-based care can be demanding and needs determination and time. Reasons for nurses not engaging in this practice have been cited by many authors, perhaps best summarised by Ciliska et al. (2001, p. 520) who say: ‘barriers (to evidence-based practice) occur when time, access to journal articles, search skills, critical appraisal skills, and understanding of the language used in research are lacking’.

Other authors have also highlighted difficulties in engaging nurses in research and evidence-based practice (Gerrish and Lathlean, 2015; Palfreyman et al., 2003; Craig and Smyth, 2011). Some explanations for this are:

- The nature of evidence:
  - lack of clinically relevant research in nursing;
  - what do you do if there is no evidence?;
  - tension between evidence and practice – where research unequivocally says that a particular practice, treatment or intervention works, and it doesn’t;
  - research is applied in a set of experimental conditions and cannot be reproduced in real life settings.

- How evidence is communicated:
  - often published in academic journals rather than professional journals which clinical nurses are more likely to read;
limited places at conferences where up-to-date information is presented;
language of research is sometimes a barrier;
researchers fail to draw out the implications of their research for practice.

Knowledge and skills of individual nurses:
- nurses do not have the knowledge and skills to access and appraise research information;
- changing practice is exhausting – how often are nurses asked to do this?
- changing practice involves accepting that you may have ceased to be right, and that you may not have been right for some time.

Organisational barriers:
- time, heavy clinical workloads;
- lack of authority and support to implement findings;
- implementing research in one area of practice may disrupt other area.

Finally, Lindsay (2007) reminds nurses that evidence is not only used to change practice, but it can also be used to support existing practice. Walsh (1997) believes research needs to be done by some, facilitated by others, and implemented by all.

**ACTIVITY 7.3**

Choose a nursing duty and explore the literature about it. Then compare your findings with the practice you observe in your clinical area. Do they differ, and if so, what would you do about it?

**FURTHER READING**

This chapter does not attempt to discuss research methodologies, nor how to seek out literature – there are many textbooks that can help you with that. One such is Bruce Lindsay’s *Understanding Research and Evidence-Based Practice*. 
Chapter summary

- All care given should be based on evidence-based practice.
- The care must be appropriate for the individual patient.
- Evidence-based practice is often linked with clinical effectiveness and clinical governance.

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