No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be. ...
Isaac Asimov (1920–92)
**KEY ISSUES**

- Healthcare decision making is associated with uncertainty and health care professionals have to deal with this uncertainty in their decision making.
- Key policy drivers have led to the development of an evidence-based culture in health care with a focus on the quality of decisions taken by health care professionals.
- Judgements and decision making are intricately linked and one cannot be examined without an understanding of the other.
- This book examines a number of normative (how decisions should be made in an ideal world), descriptive (how decisions are made in the real world) and prescriptive (how decisions can be improved in the real world) theories and applications.
- Intuition and expertise are important factors in decision making and judgement in nursing but cannot be relied upon as a successful solo strategy for good decision making.

**WHY WRITE THIS BOOK?**

Who could dispute that nurses and midwives make sensible decisions? The quote from Asimov that starts this book might, indeed should, raise some interesting questions in the mind of the reader. One question that arises is ‘If a decision is to be considered sensible then surely some knowledge of what the future might look like after the decision is made is required?’ We can apply this question to nursing decisions and at this point suddenly some of the decisions we make as nurses and midwives may not look quite so sensible. How many of us can truthfully say that we know what the future (even in the short term) is going to look like? How many of us have thought something (predictable) is going to happen, only to have something unexpected take its place? Of course, people predict the future when making decisions all the time, otherwise choices would be made with no thought as to the likely consequences of our actions. When making choices we draw on a variety of sources of information: experience, the ‘first principles’ of stored knowledge or facts, the expertise of others, and occasionally we may look at the experiences of tens, hundreds, even thousands, of others in the form of research evidence.
Of course, such prediction is fallible and flawed. Our experiences can be distorted with hindsight, people can be selective in telling us the information they think we need, first principles often have to be recast as new knowledge replaces old (e.g. giving concentrated oxygen to neonatal babies was considered a good course of action for many years – it was later found to cause blindness) and research can be flawed, often appearing to warrant the services of a translator just to make it understandable. Moreover, even if the information we draw on when casting possible futures is ‘fit for purpose’ then, as human beings, we are not always terribly good at handling it in the complex machine that is cognition.

This book is about how we can combat and avoid some of the pitfalls we are all prone to when handling information in decision making. It was written with a simple aim: to point nurses in the direction of techniques, literature and ideas that (in our experience) are not encountered by nurses during their professional preparation, development or practice. Or, if nurses do come into contact with them (again in our experience) the concepts are not terribly well presented. We have tried to strike a balance between readability, technical detail, practical examples and enough ‘science’ to satisfy the technocrats. In doing so it is inevitable that some mathematical and scientific notation will be encountered. Some chapters involve some extremely simple calculations. We hope that readers will take the time to engage with these exercises and not to skip over the bits they feel are too statistical or have too many numbers in. Our own research suggests that nurses occasionally avoid more numerate research approaches and decision making aids (in common with the other 98% of the population!). This is a shame, there is much that can be learned from the literature in this area and we sincerely believe that nurses will benefit from being exposed to it.

Finally, a caveat: this book is only an introduction to the academic areas of clinical decision making and judgement. We have striven to show the fundamental basics of techniques, and to do so alongside examples that make them meaningful. The book is categorically not a ‘how to’ manual, nor does it offer the definitive right way to make decisions. Readers will be disappointed if they think that this book will show them how to make 100% ‘successful’ clinical decisions. Good clinical decisions are born of a consideration of the resources available to you, the wishes of the patient, the cognitive and practical resources you possess by virtue of your clinical expertise and knowledge generated by good quality research. The best decision analysis, clinical guideline, policy capturing
mathematical model or decision support software package will only ever fill some of the gaps in our decision making armoury. The techniques referred to in this book complement professional judgement and decisions, they are not intended to, and could never, replace such processes.

**WHY WORRY ABOUT DECISION MAKING?**

A number of policy and professional imperatives mean that nurses have to worry about the decisions they make and the ways in which they make them. In the UK, and the western world generally, there has been an increasing emphasis placed on the need for health care professionals to account for the decisions they make for, with, and on behalf of, their patients. In the UK, several policy initiatives have led to the creation of an evidence based health care culture (Mulhall & Le May, 1999; Box 1.1).

Driving this culture is a societal concern for greater transparency in the decisions taken on its behalf by policy makers and the professionals charged with interpreting and delivering the policies of central

<table>
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<tr>
<th>Box 1.1 Key milestones in the development of an evidence based NHS culture in the UK</th>
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<tr>
<td>◆ <strong>Working for patients</strong> (Department of Health (DoH), 1989)</td>
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<td>◆ <strong>Research for health</strong> (DoH, 1993a)</td>
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<td>◆ <strong>Report of the task force on the strategy for research in nursing, midwifery and health visiting</strong> (DoH, 1993b)</td>
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<td>◆ <strong>A vision for the future</strong> (DoH, 1993c)</td>
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<td>◆ <strong>Supporting research and development in the NHS (the Culyer Report)</strong> (DoH, 1994)</td>
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<td>◆ <strong>Methods to promote the implementation of research findings in the NHS</strong> (DoH, 1995)</td>
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<td>◆ <strong>Promoting clinical effectiveness</strong> (DoH, 1996a)</td>
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<td>◆ <strong>Research and development: Towards an evidence based health service</strong> (DoH, 1996b)</td>
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<td>◆ <strong>The new NHS: modern, dependable</strong> (DoH, 1997)</td>
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<tr>
<td>◆ <strong>Towards a strategy for nursing research and development</strong> (DoH, 2000)</td>
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All these reports are published by the Department of Health and are available from Her Majesty’s Stationery Office, London.
governments. Alongside these rising concerns, society is faced with new and increasingly sophisticated tools with which to acquire the information it perceives it needs. Approximately 25% of the UK population regularly use the Internet, and health service providers are increasingly offering advice and information via these new technologies.

Nurses are taking on new roles: health promoters, giving diagnostic and prognostic information to patients, assessing health risks and screening for early signs of treatable disease. Moreover, in the community many act as public health workers, focusing on whole communities as well as individuals: community profiling, developing health needs assessments, carrying out communicable disease control and undertaking community development work.

These policy drivers have been accompanied by a series of professional drivers, which are shaping the decision making agenda of nurses. The restrictive role based guidance of the old statutory regulatory body of UK nurses has been replaced with guidance on the scope of professional practice (UKCC, 1992). This freedom to practise more autonomously has been accompanied by an increased onus on professional accountability for one's decisions as the cornerstone of a largely self-regulated professional body.

Nursing has also been developing its own internal links between research and professional activity. The relationship between knowledge and decision making has been a crucial element of nursing's attempt to increase its professional status. A number of commentators point to the requirement for professional occupations to possess and develop a relatively esoteric body of knowledge as the basis for practice (Freidson, 1970; Millerson, 1964). How a professional group uses this knowledge determines its position as a profession. MacDonald (1995) suggests that for nursing in particular the interface between nursing's knowledge base and practice (represented by its clinical decisions) is characterised by three constraining factors on nursing attaining 'full' professional status: the nature of nursing knowledge itself, indeterminacy in application and a lack of objectivity in practice.

At the more micro level of individual services and hospitals (in the UK at least) we have seen the evolution of the quality and audit agendas of the 1980s and 1990s into the clinical governance and risk management agendas of the twenty-first century. The Labour government that was elected in 1997 pursued a systematic approach to improving the quality of decisions taken by healthcare professionals in the NHS. The term 'Clinical governance' (DoH, 1998) is intended to encapsulate this
approach – officially defined as:

‘... a framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish’ (DoH, 1998, p. 33).

The Boards of NHS organisations now have a formal duty to ensure that quality is improved and new bodies – the Commission for Health Improvement (CHI) and the National Institute for Clinical Excellence (NICE) – have been established to assist this process (Fig. 1.1).

The UK Department of Health is proposing (for the first time) to examine professional performance and the outcomes of clinical decisions in the NHS and to link this to employment in the NHS. Poor practice, and the decisions that lead to it, will be ever less acceptable. Chief Executives will be accountable for the overall performance of their organisation and they are increasingly likely to scrutinise the quality of provision in individual clinical areas. Evidence based practice and the development of a solid and transparent rationale for decisions will not be an optional extra for doctors, nurses, PAMs (professions allied to medicine) and managers.

In the US, the growth of managed care also has significant implications for professional groups working in health maintenance organisations. As well as challenging the boundaries of clinical freedom and the status of professional judgement, greater supervision of decisions and a fundamental shifting of the professional–patient relationship, managed care

Figure 1.1 The NHS quality structure. Reproduced with permission from DoH (1998).
schemes herald a number of decision challenges for clinicians. The proliferation of clinical guidelines to pre-authorise care delivery, influence management of care and treatment, and guide the management of complex, high-cost cases means that what is no more than a form of decision support has the potential to fundamentally alter the relationship between professional judgement and action. The quality of the guidelines, and the assumptions underpinning them, will have a significant influence on the eventual utility of the end product. As decision analysis and other algorithmic forms of analysing choices often play a part in the guideline development process, then an understanding of how to undertake and apply these techniques will be advantageous to nurses.

WHAT ARE JUDGEMENTS AND DECISIONS?

So what is it about professional nursing practice that makes this book's contribution unique? For us it is the focus on professional choices rather than tasks; knowledge you can use rather than interesting facts about diseases or health (most of which never impact on the management of patients); real life practice rather than the imagined activities of those who see professional status as a good in its own right rather than a means to a desirable end, namely, the higher quality care and treatment of patients.

To make this contribution, we should be clear about the parameters of the book and its focus.

In the literature on judgement and decision making, different authors use a number of expressions to describe the same phenomenon. Terms used include, clinical decision making (Field, 1987; Ford et al., 1979; Luker & Kenrick, 1992), clinical judgement (Benner & Tanner, 1987; Itano, 1989), clinical inference (Hammond, 1964), clinical reasoning (Grobe et al., 1991) and diagnostic reasoning (Carnevali et al., 1984; Radwin, 1990). A useful distinction has been made by Dowie (1993, p. 8), who defines judgements as ‘the assessment of alternatives’ and decisions as ‘choosing between alternatives’. In a nursing context, one might make a judgement that a patient’s condition has deteriorated and then decide to call a doctor. It is important to recognise that although judgements and decisions can be separated, in health care practice they are interlinked, and therefore often discussed as a single entity.

At this point, it is also worth mentioning that when examining judgement and decision making we can focus on processes and/or outcomes. When considering process, investigators are interested in how individuals have reached their judgements and decisions. There is often therefore
very little interest in the outcome of that process; i.e. how good, bad, accurate or inaccurate it may be. Alternatively, other investigators may be interested in the quality of the outcome of a judgement or decision process, without really considering how that judgement or decision was reached. Again, most research that considers judgement and decision making in nursing and midwifery will have elements of both process and outcome in their studies. In this book, certain chapters focus more on the processes of judgement and decision making (Chs 2, 4 and 6 in particular), whilst others concentrate on the outcomes of that process (Ch. 10, for instance). However, as with most research into judgement and decision making, many of the chapters in the book consider both the process and the outcome of nursing and midwifery judgement and decision making.

THEORIES OF JUDGEMENT AND DECISION MAKING

The study of human judgement and decision making has been the focus of attention for psychologists and others for over half a century. The theories developed from this scrutiny are equally valid for investigating judgement and decision making in nursing and midwifery. The purpose of this section of the chapter is to provide you with a brief overview of some of these theories, together with some of the important concepts that have emerged from them. The remaining chapters in the book build on these theoretical approaches to a greater or lesser extent.

Theories of judgement and decision making can be subdivided into three categories: normative, descriptive and prescriptive. Normative theories assume that an individual is rational and logical, concentrating on how decisions should be made in an ideal world. Usually based on statistical approaches, some of the techniques described in Chapters 5 and 8 in this book have been derived from such normative approaches. Normative theories therefore are often concerned with how ‘good’ a judgement or a decision is (the outcome) and do not really consider how those judgements or decisions are made in the real world. In contrast, descriptive theories of judgement and decision making try to describe how individuals reach their judgements or decisions. In this way they are more interested in the process of judgement and decision making. Chapter 2 summarises some of the main findings from the large body of work examining how individuals make judgements and decisions. Finally, prescriptive theories try to ‘improve’ the judgements and decisions of individuals, by examining how
individuals actually make judgements and decisions, and trying to help them. Examples of this type of approach are discussed in Chapters 8, 9 and 10.

Information processing

Perhaps the most influential descriptive theory, used as the basis of many of the studies into nursing and midwifery judgement and decision making, is that of information processing (Newell & Simon, 1972). Newell and Simon suggest that human reasoning is ‘bounded’, in that it is limited by the capacity of the human memory. Subsequent research using information processing theory (also known as the hypothetico-deductive approach) examines how both doctors and nurses reason when making judgements and decisions. This research has suggested that individuals go through a number of phases in their reasoning processes (Elstein et al., 1978; Hamers et al., 1994; Radwin, 1990; Tanner et al., 1987). Box 1.2 outlines the different stages of reasoning when making judgements and decisions, as identified by Elstein et al. (1978), and gives an alternative view of the processes, as identified by Carnevali et al. (1984).

Although there are different numbers of phases in each example in Box 1.2, common features of the reasoning process have been identified in

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**Box 1.2 Stages in the reasoning process**

**Four stage process (Elstein et al., 1978)**
- Cue acquisition.
- Hypothesis generation.
- Cue interpretation.
- Hypothesis evaluation.

**Seven stage process (Carnevali et al., 1984)**
- Exposure to pre-encounter data.
- Entry to the data search field and shaping the direction of data gathering.
- Coalescing of cues into clusters or chunks.
- Activating possible diagnostic explanations (hypotheses).
- Hypothesis and data directed search of the data field.
- Testing diagnostic hypothesis for goodness of fit.
- Diagnosis.
a number of studies. With reference to nursing and midwifery, the first stage involves one of gathering preliminary clinical information about the patient (also called the cue acquisition stage). This information can also be gathered before a patient encounter. For instance, you could collect information about the patient’s age, medical history, what symptoms they have now (pain, raised temperature, what colour they are, how they move etc.), and what the doctor thinks might be wrong with them.

Following this, you might generate initial and tentative hypotheses (possible explanations for the clinical information you have collected). These are related to the data gathered and cues held in short term memory. From the research that has been carried out, the number of hypotheses generated is normally thought to be between four and six. For instance, you might be looking after a patient who is exhibiting a number of different signs and symptoms (clinical information). You think he might be having a heart attack, although he could just have bad indigestion, or he might just be anxious.

You then move on to the third stage in the reasoning process (interpretation). This involves you interpreting the cues gathered during the data gathering stage and classifying them as confirming, refuting or not contributing to the initial hypotheses (explanations) that you have generated. For instance, some of the clinical information you have collected about your patient – such as a normal ECG – suggests to you that he probably is not having a heart attack even though some of the symptoms he is exhibiting suggest he might be.

Using this classification, the final evaluatory stage involves you weighing up the pros and cons of each possible explanation for your patient’s signs and symptoms and choosing the one favoured by the majority of the evidence. Chapter 2 explores in more detail some of the specific ways in which we use information when reasoning to make judgements and decisions, based on this information processing approach.

**Intuition and the role of expertise**

In the nursing literature in particular, an alternative explanation for how nurses and midwives make judgements and decisions has been equally influential: the idea of intuition. However, just as there is a lack of consensus over the terms used to describe decision making, there is an equal lack of consensus over what is meant by the term intuition. Various definitions of intuition are highlighted in Box 1.3.

Despite the variations in definition, there are commonalities in that intuition is perceived to be a process of reasoning that just ‘happens’, that
cannot be explained and that is not rational. Perhaps the most well known researcher examining nurse decision making along intuitive lines is Patricia Benner (1984). The main tenet of the intuitive approach is that intuitive judgement distinguishes the expert from the novice; with the expert no longer relying on analytic principles to connect their understanding of the situation to appropriate action. Nursing (as coordinated action) appears intuitive to the outside observer and feels internalised within the practitioner; clinical decisions are the result of an almost unconscious level of cognition (Hamers et al., 1994).

The purpose of this book is to try to provide a pragmatic overview of some of the issues clinical nurses encounter in their everyday practice when making judgements and decisions, and to show how those decisions and judgements might be improved. Despite the undoubted influence of intuitive explanations of judgement and decision making in nursing and midwifery, intuitive theories cannot provide all the answers. This is because, by their nature, intuitive models suggest that knowledge regarding about judgement and decision making is almost impossible to communicate, that it is intangible, and that nurses are unable to express what it is they do. It is therefore difficult to imagine a scenario where nursing’s knowledge base becomes a shared resource easily and equally available to all practitioners. Moreover, whilst acknowledging that experts and novices perform differently when making judgements and decisions, it is beyond the scope of this chapter to discuss the issues in detail. The different performance in judgement and decision making tasks of experts is almost

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**Box 1.3 Definitions of intuition**

- ‘Understanding without a rationale’ (Benner & Tanner, 1987).
- ‘A perception of possibilities, meanings and relationships by way of insight’ (Gerrity, 1987).
- ‘Knowledge of a fact or truth, as a whole; immediate possession of knowledge: and knowledge independent of the linear reasoning process’ (Rew & Barron, 1987).
- ‘Immediate knowing of something without the conscious use of reason’ (Schrader & Fischer, 1987).
- ‘[A] … process whereby the nurse knows something about a patient that cannot be verbalized, that is verbalized with difficulty or for which the source of knowledge cannot be determined’ (Young, 1987).
certainly connected to their more extensive knowledge base. However, issues around the ‘context specific’ nature of this knowledge and ability (Crow et al., 1995) limit the ability to generalise and merit a depth of discussion that is beyond this chapter. The Annotated further reading section at the end of this chapter suggests texts with a more in depth discussion of these issues.

The cognitive continuum

A number of commentators highlight that making judgements and decisions is often a combination of stages in the reasoning process (as outlined from the information processing perspective) and intuition. For example, Philips and Rempushki (1985) found that whilst decision making was grounded in the acquisition of data it was far from the linear and monotonic progression assumed by information processing approaches.

An alternative theory or explanation that acknowledges the differences between information processing and intuition is the idea of a cognitive continuum. This theory suggests that reasoning is neither purely intuitive nor purely analytical: that it is located at some point in between. According to the cognitive continuum theory, the major determinants of whether a practitioner utilises a rational or intuitive approach to decision making are primarily determined by the position of the decision task on a continuum. The continuum ranges from pure intuition through system aided judgement to pure analysis (represented by the scientific experiment). A graphical explanation of the continuum can be seen in Figure 1.2. The most appropriate cognitive mode to use for the task in hand depends on three factors: the structure of the task, the number of information cues and the time available to make the judgement or decisions. If a task is poorly structured, with a lot of information cues available and not much time to make the judgement or decision, then intuition is the most appropriate form of cognition to use. If the task is well structured, with few cues and a lot of time available, then a more analytical form of cognition is appropriate. It could be suggested that most healthcare decision making falls somewhere in between these two extremes, and therefore the most appropriate form of cognition for practitioners to use is that of system aided judgements. This type of approach is more ‘prescriptive’ (helping individuals to improve their judgement and decision making). Chapters 8–10 discuss ways in which this can be facilitated.
A BRIEF INTRODUCTION TO IMPORTANT CONCEPTS

To understand the whole nature of judgement and decision making in nursing, you need to understand the nature of the concepts that are discussed throughout this book. Box 1.4 lists some of these concepts; it is not an exhaustive list and the definitions offered are ‘off the cuff’, succinct, versions of terms, expressed in the (workaday) language we use as researchers.

SO WHAT DOES THIS BOOK OFFER?
A WALK THROUGH

Chapter 2 highlights those ways in which unaided judgement and decision making can go wrong. The author (Carl Thompson) outlines the short cuts (heuristics) commonly employed by human decision makers and exposes some ways in which the negative effects of using these short cuts can be minimised. The chapter endeavours to outline some of the
**Box 1.4 Some words and terms likely to be encountered in later chapters**

**Action**: the behaviour following on from a judgement or decision.

**Base rate**: sometimes called the prior probability or prevalence. It is usually the true number of patients or subjects in a population who have the disease or characteristic you are interested in. Base rates are usually mentioned in the context of assessing the value of diagnostic tests.

**Bias**: a tendency to make judgements or decisions on the basis of some pre-formed idea or prejudice.

**Bounded rationality**: the idea that human beings can never be entirely rational because it is not possible to know in advance exactly what the consequences of choices may be and, even if we could, then humans have only limited computational power.

**Clinical information**: those characteristics associated with patients and which have a bearing on the diagnosis or management of health and illness. These can be (in the case of non-iatrotropic symptoms) laboratory results, physical manifestations of disease or verbal information provided as part of history taking.

**Cognitive continuum**: the idea that certain decision tasks merit specific decision making and cognitive styles – ranging from intuition for ill structured, not easily controlled decisions at one end through to the scientific experiment for highly controllable, well structured at the other.

**Cognitive processing**: the thought processes used when making a judgement or decision.

**Cues**: see Clinical information, but those features that arise during decision making that have an impact on the eventual decision choice.

**Decision**: a choice between two alternatives.

**Decision rules**: the rules or guidelines that an individual uses to guide their decisions (they are internal to the way we think, rather than written down). Often they are not explicit and the individual may not be aware of them.

**Decision analysis**: a systematic means of charting and considering the risks, benefits, harm and eventualities associated with the various choices comprising a decision task.

**Error**: a form of decision failure, due either to failure to store or retrieve information for a decision correctly (a slip or a lapse) or some problem at the level of planning or working out a decision (a mistake).

(continued)
Box 1.4 (continued)

Evidence: anything you pay attention to when deciding on a course of action. Generally, however, the term refers to knowledge derived from research.

Heuristics: often referred to as ‘rules of thumb’. Heuristics are particular strategies that individuals have developed to process a large amount of information efficiently. They ‘short cut’ having to process a large amount of irrelevant data when making judgements and decisions.

Information processing: a model of cognition based around short term and long term memory. Short term memory houses the stimuli or ‘keys’ that unlock the factual or experiential information contained in long term memory.

Intuition: immediate knowing of something without the conscious use of reason. It should be noted, though, that the term itself attracts competing definitions.

Judgement: the assessment of alternatives.

Knowledge: the basis of all thought – what we ‘know’ may come from a variety of different sources, such as formal learning and experience. It has also been suggested that we may have different types of knowledge: the idea of the ‘know how’ and ‘know that’.

Lapse/slip/mistake: see Error.

Probability: chance, or a numerical measure of uncertainty.

Risk: a situation in which there are different possible outcomes, each of which has a known probability of occurring.

Satisficing: in the context of bounded rationality. The term usually refers to the fact that, in real life, decision makers will choose the most feasible option rather than the optimal one as measured by purely rational approaches.

Sensitivity: the ability of a test to identify true positive cases (people who actually have the disease or condition that it is testing for).

Specificity: the ability of a test to identify true negative cases (people who do not have the disease or condition that it is testing for).

Storage: another term for the long term memory. It refers to where we ‘keep’ our knowledge, such as particular episodes that we have experienced.

Uncertainty: the inability to predict with accuracy what is going to happen. Most judgement and decision making in nursing and midwifery practice is made in conditions of uncertainty – you do not know precisely what the result of your judgement or decision will be.
approaches to errors, slips, lapses and mistakes in decision making and judgement, and present some of the theoretical and empirical justifications for these approaches. It is a largely generic introduction to the idea of error in dealing with clinical uncertainty and draws on a broad body of literature in making its claims that a few simple cognitive ‘tips’ have the potential to deliver significant benefits in error reduction in practice.

Jane Cioffi’s chapter (Ch. 3) takes the theme of exploring judgement further and places it firmly in a nursing context. In fleshing out the picture of judgement painted in Chapter 2, Cioffi manages to illustrate the complex interplay between clinical experience, judgement tasks and accuracy. This chapter also offers some valuable strategic pointers for those nurses keen to explore the limitations and potential of judgement in practice.

The real life judgements of clinicians form the basis of Maxine Offredy’s contribution in Chapter 4. Offredy examines the clinical cues, information and features of clinical cases that impact on the judgements of community nurses. As well as highlighting that nurses and doctors use similar processes (and reach similar outcomes) in their diagnostic and treatment clinical decisions, she also manages to show that mapping the complex phenomena of cognition, judgement and decision making calls for a keen methodological imagination. This chapter shows how well constructed scenarios and ‘think aloud’ techniques are a useful tool in the decision researcher’s armoury. Based on her research she provides some hints for promoting the better handling of clinical cues in the diagnosis and treatment planning of common conditions.

The concept of risk in decision theory is central to many people’s common sense ideas of the benefits of better handling uncertainty, for example, through risk reduction or more accurate forecasting. In Chapter 5, Dawn Dowding and Trevor Sheldon not only develop the concept of risk and rework it for a healthcare audience, but also show how social judgement approaches to decision making under uncertainty can improve the accuracy of the judgements and risk assessments nurses face.

Of course, the best decision support system in the world is rendered useless if targeted at the wrong decisions. The notion that if we are to improve the decisions of nurses then we should have a robust picture of the kinds of decisions that nurses make lies at the heart of Chapter 6. Dorothy McCaughan uses the results of a nursing research study commissioned as part of the UK NHS R&D strategy to illustrate that, far from being some mystical activity open only to nurses, acute care nursing decisions can be captured by a reasonably short typology. Once acknowledged, a wealth of support for decision makers (some generated from
nursing research studies but most from other disciplines) becomes available to clinicians. In exploring the decisions of nurses, McCaughan shows that decision makers (and the educators that equip them) need to acquire a range of skills – not all of which are currently widely in evidence in the nursing workforce.

Perhaps the biggest challenge facing nurse decision makers who are aware of the decisions they make, and more importantly the clinical uncertainties that accompany them, is the conversion of these uncertainties into a strategy for action. The technique of developing focused clinical questions forms the start point for Kate Flemming and Mark Fenton’s exploration of evidence based approaches to clinical practice and decision making (Ch. 7). As well as addressing the fundamentals of problem identification, searching, critical appraisal and implementation, the two authors offer a simple, example-rich, introduction to some of the statistical terms and quantitative measures used in evidence based approaches to decision making. This section offers a valuable starting point for nurses wanting to add a new dimension to discussions of the benefits, harms, risks and effects of nursing interventions with both colleagues and patients.

Making sense of complex decision problems is not always easy. Even harder is tracking the probabilities associated with decision choices or possible courses of action. Decision analysis offers one means of making such considerations more systematic and is an ideal technique for those nurses facing the kinds of decisions where a choice is not required ‘yesterday’. For example, planning a change in service delivery or organisation, or purchasing a new piece of equipment. The technique also has the advantage of improving the decisions made by clinicians in certain situations. Dowding and Thompson (Ch. 8) offer an overview of this valuable approach to systematising judgements and decisions, and provide empirical examples where the approach has worked as well as outlining the pitfalls.

In this era of managed care – in both its explicit US and (more implicit) UK guises – guidelines are becoming an increasing feature of the judgements and decisions of nurses. In Chapter 9, Jo Rycroft-Malone offers the reader an accessible introduction to the nature, development and implications of clinical guidelines. She cuts through much of the terminological confusion in this area to illustrate how to handle guidelines and their development. Moreover, she provides pointers on development, not just where the evidence is strong and the conditions for implementation ideal, but also where professional consensus is the strongest form of evidence available and pragmatism the order of the day.
Robert Crouch gives us a feel for the future of decision support in Chapter 10. The author shows how the power of modern computer technology can make ‘real time’ decision support a reality for nurses. As well as positing a convincing case for using such technologies, he shows us the myriad of approaches to computerising decision support. The chapter provides a valuable guide through the options available to anyone thinking of utilising new technologies to support the judgements and decisions of clinicians.

All of the chapters have questions for discussion and an annotated further reading included at the end. We would strongly encourage readers to take advantage of the opportunities for discussion, personal or group reflection and knowledge enhancement that these sections offer. If you are a teacher thinking of using the book as part of course work then we would appreciate feedback regarding modifications for future editions.

We hope that the book whets your appetite with regard to this fascinating area. Moreover, we would urge you to seek out the more detailed literature in this area and to find new and imaginative ways of incorporating some of the techniques, skills and tips highlighted in this book in your own practice (and evaluating its impact of course). Finally, it is worth restating that this book is intended only as an introduction. And, whilst not wishing unduly to influence your professional judgement, we sincerely hope that you will make the wise decision to use the book as a starting point for a much longer journey through the literature on improving your clinical decisions and the judgements that feed them.

ANOTATED FURTHER READING


An excellent introductory text to all the major debates in decision making and judgement.


A nice illustration of expertise in a critical care environment. The book is soundly located in the intuitive-expertise model of decision making and judgement. Whilst rich in descriptive power and normative recommendation, it fails to provide much in the way of a counter position to this stance.

*A succinct overview of the major approaches to decision making theory and the rationale for a cognitive continuum.*

**REFERENCES**


