Strategies for avoiding pitfalls in clinical decision-making

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This article is the first in a series of four exploring how nurses make decisions. It distinguishes clinical judgement from the process of decision-making and looks at the sorts of decisions nurses make and what can go wrong.

Nurses are increasingly being asked to exercise their clinical judgement and make choices with, and on behalf of, patients. Over the past 14 years a series of NHS policy documents has led to the creation of an evidence-based culture and nursing is now firmly at the centre of attempts to modernise and rationalise the delivery of health care in the UK.

Being at the heart of health care delivery is an enormous challenge for nurses but it is also a golden opportunity. More than ever before the profession has the chance to influence patients’ experiences of the NHS. Nurses already make clinical decisions and exercise clinical judgement on a daily basis. However, we are only beginning to map the kinds of decisions (and associated clinical uncertainties) they face in practice. The extent to which nurses apply the correct balance of experiential and research knowledge to clinical decisions is also largely unknown, as are the ways in which nurses cope with the complex problems of handling multiple and often conflicting information. This four-part series will explore nurses’ judgement and decision-making and offer practical advice on ensuring these processes are undertaken in an informed way.

The challenge of decision-making

Making a *Difference* (Department of Health, 1999) emphasises the central role of nursing in achieving the government’s vision of high-quality, responsive, and appropriate health services that meet the needs of patients as individuals (DoH, 2002), while the chief nursing officer for England envisages nurses who can work ‘smarter’ (DoH, 2003) to improve the patient’s experience. The nursing contribution to multidisciplinary efforts to improve the NHS has five key elements:

- Providing clean, comfortable, and friendly places to be;
- Building closer relationships;
- Providing more information and choice (DoH, 2003).

Exact details on how these elements should be achieved are left to the individual acute and primary care trusts. However, 10 key roles for nurses (DoH, 2000) have been outlined, and there is a clear expectation that hospital trusts and primary care trusts will work towards incorporating them into nursing activity. Some of these activities will require nurses to take on new decision and judgement responsibilities, such as ordering and interpreting tests and X-rays, making referral decisions, prescribing, and triage. These responsibilities will generate uncertainties, yet nurses will still have to make clinical decisions based on the information available to them at the time – which may in some circumstances be inadequate. Having to make decisions in less than ideal circumstances has been referred to as decision-making under conditions of irreducible uncertainty (Eddy, 1990).

Despite such conditions of uncertainty, nurses must meet the requirements of their code of professional conduct (NMC, 2002). This requires them to take personal accountability for evidence-based practice, providing information and identifying risk; decision-making and professionalism then go hand in hand. In addition to these policy and professional imperatives a series of new nursing roles, such as ‘first contact’ clinicians in primary care, are making nurse decision-makers a routine part of health care in many parts of the NHS.

These role and policy developments have significant educational implications for the profession yet, to date, nurse education in the UK has not reflected the needs of nurses as autonomous decision-makers. As a consequence we believe nursing students leave their preregistration preparation without having developed the intellectual and cognitive skills they need in order to handle the complex information and judgements required when decision-making in practice.

**REFERENCES**


Defining decision-making

It is important to define the terms clinical decision-making and clinical judgement. These are two of several expressions describing nurses’ professional activities that are used interchangeably. For example, clinical decision-making (Luker and Kenrick, 1992; Field, 1987; Ford et al, 1979), clinical judgement (Itano, 1989; Benner and Tanner, 1987), clinical inference (Hammond et al, 1964), clinical reasoning (Grobe et al, 1991), diagnostic reasoning (Radwin, 1990; Canevalli et al, 1984), and intuition (Hamers et al, 1984) have all been used to describe either the assessment of alternatives (which we shall refer to as clinical judgement) or choosing between those alternatives (which we shall refer to as clinical decision-making). Box 1 gives a practical example illustrating the distinction between clinical judgement and clinical decision-making.

Judgements and decisions are interlinked. Judgements often feed or form clinical decisions – and often the process of exercising judgement or making a decision is an almost unconscious activity. For some decisions (the very complex and those where the stakes are high) nurses should be explicit and much more aware of the choices they face in practice and the information that informs those choices.

Mapping clinical uncertainty

A number of researchers have used clinical decisions as a way of tapping into some of the uncertainties that clinicians face in practice (Ely et al, 2002; Ely et al, 1999; Dowie, 1993; Ely et al, 1992; Covell, 1985). Decisions often generate uncertainties, and by expressing these as clinical questions it is possible to ‘map’ the types of uncertainties clinicians face.

Obviously, the possible combinations of types of patient, the outcomes nurses would like to see fostered or avoided by their decisions, the interventions being considered, and contextual factors associated with choices (such as a patient’s preferences) are infinitely variable. However, the uncertainties at the core of decisions are both finite and amenable to knowledge derived from research. Box 2 provides a list of typical nursing decisions described by nurses (or observed by researchers) and some examples from practice.

Simply knowing something about the decisions they make can help to improve nurses’ decision-making. For example, if they reflect on their decisions in ways that allow them to add more structure to them, this can influence the ways in which they use information. The act of breaking down a decision into a decision tree (the focus of the second article in this series) has been shown to improve nurses’ diagnostic abilities (Panniers, 1994).

Hammond et al (1964) – and his idea of the cognitive continuum – offers an explanation for this: the better structured a decision is (that is, the more its complexity is reduced), the greater the decision-maker’s ability to influence it and the more time available for decision-making, the more likely it is that analytical ways of handling information will be used to make the choice.

Specifically, Hammond et al’s theory suggests that in some cases rational approaches to handling information will result in better decisions, while in others, intuitive approaches will. However, it is only possible to distinguish between good and bad ways of handling information and making decisions if something is known about the decision tasks faced.

Clinical decisions can be structured in a variety of ways, but perhaps the easiest is simply to recast the decision as a structured clinical question. Structured clinical questions make the components of decisions explicit, and in doing so allow one to ‘see the wood for the trees’ and isolate which parts of the decision require consideration.

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**REFERENCES**


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Education ■ Decision-making ■ Judgement

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**BOX 2. TYPES OF DECISION**

1. **Service delivery, organisation or management.** For example, choosing how to organise handovers so communication is most effective.

2. **Referral.** For example, deciding if a referral to a critical care outreach team member is warranted.

3. **Assessment** (as in decision to assess/what modes of assessment to employ). For example, the decision to use the Edinburgh postnatal depression screening tool routinely in health visiting practice.

4. **Diagnosis or ordering tests.** For example, deciding whether routine urine culture and sensitivity testing is necessary for all attendees at a paediatric outpatient clinic.

5. **Information-seeking.** For example, deciding whether to seek information on the extent of serious side-effects in middle-aged women using buPROPion to help with smoking cessation.

6. **Communication** (including the communication of risks and benefits). For example, deciding what to tell a middle-aged woman who asks about the risks associated with the use of buPROPion.

7. **Treatment or intervention.** For example, deciding whether to use a short-stretch or four-layer compression bandaging system on a patient with a venous leg ulcer.

   a. **Targeting.** For example, deciding which patient (of the three possible) is most likely to benefit from the single spare pressure-relieving bed the ward possesses.

   b. **Timing.** For example, deciding when to begin a cardiac rehabilitation educational intervention with patients after myocardial infarction.

   c. **Prevention.** For example, deciding how best to prevent nappy rash in newborn infants.

The level of agreement reached when the five-person research team were asked to code decision-related data according to this list showing types of decisions was 0.80 (Kappa score with a standard error of 0.02) by the end of the data collection period (Thompson et al, 2004).
A good clinical question relating to a decision should have four components:
- The population group of the patient you are considering making the choice with;
- The outcome(s) you would like to promote (or avoid);
- The intervention (if it is an intervention decision) or choice A (if it is a different kind of decision);
- The counter intervention or choice B (there may be more than one counter intervention or choice associated with a particular decision).

Box 3 gives examples of clinical questions from primary care nurses. Readers may find it helpful to try asking questions of their own, or rewriting those in Box 3 so they have more structure.

Clinical questions can also form the basis for an information search strategy. Of course, some questions can be answered using the nurse’s existing knowledge. The key to deciding whether or not further information is needed depends on an honest answer to the questions ‘Do I really know the answer to the question?’ and ‘Is it possible that I am being over-confident of my ability to answer the question without further information?’

While in many cases further information may not be needed, it is important to remember that mistakes in the planning and execution of clinical decisions are a major factor in adverse events occurring in the NHS. In developed health care systems 7–10 per cent of patients suffer some form of adverse event while receiving health care. Around half of these adverse events are considered to be preventable, or to put it another way, they have some kind of error component (Vincent et al, 2001). While errors will never be completely eradicated from health care, many could be prevented by developing better defences within health care systems (DoH, 2000).

Improved decision-making is one such defence.

What can go wrong?

The reason nurses need to think about their decision-making and exercising of clinical judgement is to improve them. Human beings are far from perfect when it comes to handling and presenting information in the context of clinical decision-making. A clinical example can illustrate this.

The example comes from observing three practice nurses and one nurse practitioner provide information on the risks of seizure associated with the smoking cessation drug bupropion. The real risk of a seizure is in the region of 0.03 per cent (1 in 30,000), including people with predisposing factors. When asked about the risks each of the four nurses told their patient something different:
- Nurse A said the chances of having a fit were 1 in 1,000;
- Nurse B said the chances of having a fit were 1 in 100;
- Nurse C said that in the city where she worked (population of one million plus) she had heard from the community pharmacist that six or seven people had ended up in intensive care due to fits;
- Nurse D said to her patient, only half jokingly: ‘Chances are you will almost certainly die if you take bupropion!’

All the nurses had attended a training course on smoking cessation, and routinely screen patients for their suitability to take bupropion. Despite this, none were able to convey an accurate estimation of risks involved in taking the drug. Nor did they put that risk into context with the risk of death from smoking (114,000 deaths per year, the single greatest cause of premature death in the UK).

Most clinicians avoid quantitative expressions of risk when talking to patients, choosing instead to use qualitative expressions such as ‘rarely’, ‘possible’ or ‘unlikely’. Shaw and Dear (1990) examined what happened when parents and doctors were asked to quantify qualitative expressions such as ‘rarely’ through to ‘likely’. They found that when the mothers of young babies were given an expression such as ‘unlikely’ their estimates ranged from 0–40 per cent. It would appear that avoiding numbers does not necessarily avoid a problem of handling and conveying information.

Conclusion

All clinicians are imperfect decision-makers who have to operate under conditions of irreducible uncertainty. To err is indeed part of the human condition, and we will always make mistakes. The best we can hope for is that adequate defences exist in health care systems to help prevent errors. One of the best forms of defence for nurses is to try and improve their own individual and team decision-making.

References


