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JAN Forum: Clinical decision making in nursing: theoretical perspectives and their relevance to practice – a response to Jean Harbison

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Decision making by nurses is now firmly established on practice, policy and educational agendas. New, constantly evolving, roles, and a policy context that is challenging traditional professional boundaries (for example, the imminent announcement on United Kingdom (UK) nurse prescribing) mean that, more than ever, nurses are being given autonomy and power to be able to exercise their decision choices. With this freedom however, comes responsibility. Responsibility to a new professional body in the UK, responsibility to an ever more informed public, and responsibility to service commissioners and colleagues who – quite rightly – expect nursing to demonstrate its worth in the health care team and contribution to the health care product. Clinical decisions are both the means by which this responsibility is exercised, and ultimately, the means by which nurses' contribution to the production of health will be judged.

Jean Harbison's cogent and timely response to my original paper (Thompson 1999) unpacks some of the rather crude arguments of the first paper. In doing so, the author develops a line of reasoning highlighting the benefits of thinking of decision making along a continuum (and the rejection of either rational or intuitive decision modes for all decisions). The paper is well written and will, I hope, attract responses from clinicians and academics alike.

Harbison quite rightly implies that the challenge for nursing is to highlight the contribution of nurses to the production of good health care outcomes, '...the

apparent assumption...is that because nurses intend to benefit their patients, their decision making actually does so'. Recent papers from the field of primary care suggest that, whilst the decisions made by nurses may not be optimal in terms of quality, their diagnostic and treatment choices are certainly no worse than those of other professions (Lattimer *et al.* 1998, Shum *et al.* 2000, Venning *et al.* 2000). However, what is required – as Harbison highlights – is the production of research evidence to show the different ways in which nurses make decisions can be improved.

Decisions need to be more accurate (when diagnosing illness – or indeed health), have the most positive impact when making treatment choices, or have the intended impact on understanding or behaviour when choosing what information to communicate to patients regarding prognosis, risk or benefits. Harbison misinterprets my original claim (I can argue this now because of the positive effect of hindsight bias) that, 'there is no point considering the quality of decisions as we do not have enough information about what constitutes quality'. I stand by my original assertion that the evidence of what constitutes accurate nursing diagnoses, or the optimal nursing intervention choices for populations of patients is still (relatively) small when compared with the bio-medical literature. However, the argument remains a justification for more descriptive research not less. Not because, as Harbison implies, I think there should be more studies to add to the seemingly endless volumes showing how nurses intuitively know what is right without reference to any gold standard (in the case of diagnosis) or assessment of alternatives (in the case of interventions). Rather, I was arguing that what we need is more description of the decision tasks facing nursing in its constituent arenas in order

that we can better match the *modus operandi* of the cognitive continuum's categories with the decision choices actually faced by nurses. Only by matching strategies for decision making to decision tasks in this way, shall we gain a purchase on 'what might be' in relation to steering nurses to make better decisions. Of course, having claimed that I was wrong Harbison then points out the very point outlined above, 'a justifiable decision for descriptive research is to establish what judgement/decision tasks nursing practice actually requires, with a view to considering whether this is being done well'. At York we have recently completed a project examining the decisions of acute care nurses (Thompson 1999) and we are currently mapping the decision choices of primary care nurses (due for completion in 2002).

Harbison is incorrect when arguing that Newell and Simon's (1972) original research on information processing is 'value free'. The idea of rationality (bounded or otherwise) as devoid of value judgements is nonsensical. Rationality is necessarily, and by definition, concerned with finding the best (most efficient, effective, efficacious) route to a predetermined end point. In setting the desired end point and the 'best' route to achieving it, all sorts of value judgements creep in. Admittedly, for decision theorists there may be philosophical devices such as the principles of decision comparability and coherence (Lindley 1985) which recast these value judgements as 'science' but the point remains: value judgements and rational decision making are not mutually exclusive.

Harbison rightly points out that intuition is hardly random and handily shatters (the Benner-esque) vision of the nurse as an almost mystical figure expertly exercising intuitive judgements which only they can recognize. Moreover, her paper shows that simply

because intuitive assessments somehow 'feel right' this is no justification for relying upon them as a sole strategy. In doing so, she highlights the emotive language adopted by some commentators. Randall and Downie (1996) for example, speaks of 'sensitivity and imagination'; Benner and Tanner (1987) speak of 'a sense of salience'; Rolfe (1997) speaks of 'the fuzzy nurse'. Harbison suggests that 'imagination' might be the ability to generate hypothetical situations. I would go further and suggest that without an appropriate appreciation of alternatives to 'intelligent guessing' then one might as well set about generating hypothetical results of decisions as well. In fact Harbison alludes to this situation, when highlighting the susceptibility to the biases we are all prey during cognition (she draws on the anchoring heuristic as an example), a theme I have explored more fully elsewhere (Lamond & Thompson 2000). Having established that intuition is not the universal good that any cosmic traveller systematically reviewing the research literature on nurse decision making might assume, Harbison reinforces again the need for more descriptive research which will enable practitioners to choose the appropriate cognitive strategy for a given decision task. Particularly as evidence already exists to show that the blanket application of intuitive approaches to decision making is often less effective than more systematic approaches (Shamian 1991, Letourneau & Jensen 1998, Mosher *et al.* 1999, Warren *et al.* 1999).

Harbison recognizes that nursing has by and large rejected Bayesian approaches to improving decision making – although in my opinion I am not sure that we ever really engaged with them in the first place, unlike our medical colleagues. However, I think the author's assertion that this rejection downplays the issue of quality in nursing decisions is a little unfair. Bayesian assessment of decision probabilities relies on having evidence which adequately enables the revision of the likelihood of clinical events or decision outcomes. I would argue that much nursing research deals with subjects that are either peripheral to nursing choices and decisions (question – do we really need another survey

on clinical supervision?) or else generate results which have little impact on the behaviours of nurses (repeat – do we *really* need another survey on clinical supervision?). By mapping the real life decisions of nurses we can generate research which is fit for the purposes of reducing the uncertainties of real life nurses. For an example look at the 'bottom up' approaches to commissioning in Health Technology Assessment Programmes in countries such as the UK (<http://www.ncchta.org/main.htm>) and Sweden (<http://www.sbu.se/sbu-site/index.html>).

Jean Harbison's paper questions my interpretation of 'correctness' with respect to the endpoint of decision analysis. Of course, I would agree with her that decision analysis has a focus on the 'optimum answer for that decision owner'. However, the paper's arguments could be strengthened simply by referring to the concept of utility. Decision analysis seeks to maximize utility: a numerical measure of the attractiveness of decision choices. As decisions in health care almost always involve a number of stakeholders it is possible – indeed it is good practice – to question 'whose utilities?' are being catered for in decisions. What decision analysis offers is the opportunity for patients to see *exactly* how much value is attached to their opinions in the construction of decision choices. Decision analysis results are explicit and amenable to harnessing the power of new technology as a route to making the processes involved easier and quicker. Given the enhanced role (and by implication weighting) of patient views in decision analysis I would agree that the rejection, on moral or ethical grounds, of decision analysis is unjustified.

If I am interpreting Harbison correctly she claims that, 'predominantly relevant to practising nurses are intuition and peer decision making, located at modes 6/5 [of the cognitive continuum].' I would dispute this. Consider the decisions faced by one medical staff nurse on an acute medical ward observed in one 3-hour period last year (Thompson *et al.* 2000) (Table 1):

The 18 decisions taken by this staff nurse represent one decision task every 10 minutes. Clearly, not all of them

merit a full blown scientific experiment (mode 1) but neither do they all merit intuitive guesswork (mode 6). That said, time is an important factor in decision making and one might argue that the time constraints associated with these decision choices rule out any other mechanism than intuition. The task for nursing research is to ensure that for those decisions requiring more systematic decision making modes, the evidence is summarized concisely and reliably in order that the results can be factored into future (similar) decisions, and analytical reasoning made as straight forward as possible.

Jean Harbison suggests that bounded rationality limits the usefulness of accommodating evidence into practice. Again, I would take an opposite tack on this issue. For me, an evidence based approach to decision making with its emphasis on the explicit balancing of patient preference, clinical expertise, the available resources and the best quality research evidence (DiCenso *et al.* 1998) can do more to combat the effects of bounded rationality than compound it. Reframing clinical uncertainty and decision choices as focused clinical questions (Flemming 1998) sets the boundaries for considering decision choices, acts as a framework for the explicit consideration of alternatives, and helps to select the most appropriate framework for the consideration (appraisal) of evidence. Reframing may exclude some alternatives – but at least this exclusion is explicit and visible. If it is visible then it can be challenged, and the framework revised. The ability to revise the probabilities one attaches to decision choices is (for me) the mark of a cognitively 'open' clinician. Unfortunately, the evidence suggests that too often nurses are excessively cautious in the revision of their ideas, preferring – as Harbison points out – the anchoring effects of their initial hypothesis.

Jean Harbison implies that everyday nursing practice may not require the use of complex thinking. This may be true, however, everyday practice does merit the provision of robust and valid decision solutions. And whilst the decision making processes of nurses may be (or may appear to be to the decision maker themselves) relatively simple, the

Table 1 Observed decisions made by one medical staff nurse in a 3-hour period (afternoon shift) in one UK medical admissions ward (Thompson *et al.* 2000)

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- Decides to allow a dressing to stay in place for 3 days on a lady with a large sacral pressure sore
 - Decides that a patient can be discharged if her blood results are normal
 - Shared decision with bed coordinator regarding bed management
 - Decides to check that a patient has signed a consent form
 - Decides to move patient into a sideroom after chemotherapy
 - Decides to ring the dietician for advice regarding the management of a diabetic patient and how best to manage a patient previously treated with total parenteral nutrition and who is now not eating
 - Decides what information to impart to patients' relatives regarding conditions
 - Decides on the appropriateness of meals for the numerous diabetic patients at lunchtime
 - Decides on the optimal balance of skills during staff lunch breaks for staff
 - Decides to call the doctor regarding whether or not a patient can have aspirin or not
 - Decides to refer a patient to the palliative care clinical nurse specialist
 - Decides to place a patient on a pressure relieving mattress
 - Decides to give a painkiller as a response to a patient request
 - Decides to refer a patient with 'nigging' chest pain to the doctor
 - Decides what advice to give a colleague who asks for advice regarding the taking of a wound swab
 - Decides to refer a patient with a sore mouth to the clinical nurse specialist
 - Decides that a patient who was to be discharged should now not be the patient doesn't understand her self-medication programme
 - Decides to phone the colonoscopy clinic for advice regarding the diet of a patient going for endoscopy
-

application of those choices may not. Decision support and new decision technologies hold the promise of reducing the variability associated with simple decisions and at the same time making the complex ones easier to grapple with. Crucially, many of these solutions come from disciplines other than nursing. A point which reinforces Harbison's assertion that '[nursing's] reluctance to consider knowledge generated by disciplines other than nursing has the potential to lead to isolation of the profession.' Linkages between nurses and other professions which focus on improving the process of decision making are beginning to happen. A few enlightened researchers are using the accumulated knowledge of cognitive psychologists and informatics experts as a route to improving the decisions made in the health care arena and nursing's input into those decisions. For example, the Nursing Research Initiative for Scotland is examining:

- How nurses make decisions about urinary catheterization.
- Constant observation and suicide: a social judgement analysis.
- The development and evaluation of a computerized clinical guidance tree for benign prostatic hyperplasia and hypertension.

See <http://www.nris.gcal.ac.uk> for more details on this programme of work.

In conclusion then, I welcome this contribution from Jean Harbison, and – perhaps worryingly given that it is a critique of my own work – find myself agreeing with many of the paper's arguments. Maybe this is because of my ability to revise my original views, perhaps it is because of the 'rose tinted' impact of hindsight bias, or (as is more likely) Harbison manages to add value and weight to the arguments that I posited originally. The idea of a cognitive continuum has much to offer nurses and its potential has yet to be fully exploited. The exploration and description of the decisions of nurses constitutes a challenge for researchers. Specifically, we need to generate knowledge able to reduce the uncertainties of nurses. How the research community responds to this challenge will dictate whether we make the most of the new and emerging technologies that are able to support the decisions that nurses make.

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