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Discussion paper

Dealing with uncertainty in general practice: an essential skill for the general practitioner

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ABSTRACT

Many patients attending general practice do not have an obvious diagnosis at presentation. Skills to deal with uncertainty are particularly important in general practice as undifferentiated and unorganised problems are a common challenge for general practitioners (GPs). This paper describes the management of uncertainty as an essential skill which should be included in educational programmes for both trainee and established GPs.

Philosophers, psychologists and sociologists use different approaches to the conceptualisation of managing uncertainty. The literature on dealing with uncertainty focuses largely on identifying relevant evidence and decision making. Existing models of the consultation should be improved in order to understand consultations involving uncertainty.

An alternative approach focusing on shared decision making and understanding the consultation

from the patient's perspective is suggested. A good doctor-patient relationship is vital, creating trust and mutual respect, developed over time with good communication skills. Evidence-based medicine should be used, including discussion of probabilities where available. Trainers need to be aware of their own use of heuristics as they act as role models for trainees. Expression of feelings by trainees should be encouraged and acknowledged by trainers as a useful tool in dealing with uncertainty. Skills to deal with uncertainty should be regarded as quality improvement tools and included in educational programmes involving both trainee and established GPs.

Keywords: general practitioners, training, uncertainty

Introduction

Uncertainty and unpredictability are core elements in the complex system of healthcare provision, presenting challenges for health professionals, patients and managers.¹ Skills to deal with uncertainty are particularly important in general practice as undifferentiated and unorganised problems are a common challenge for general practitioners (GPs),² in contrast to the caseload of many hospital colleagues.³ Since there is usually no obvious diagnosis at point of patient presentation, one can say that uncertainty is inherent in general practice.

Doctors' and patients' level of certainty seem to be directly correlated and interdependent. Validated scales have been developed to measure uncertainty in physicians⁴ and as a source of stress for patients.⁵ Tolerance of diagnostic uncertainty seems to affect test ordering behaviour,⁶ and medico-legal worries have been implicated as one of the reasons for the increasing use of tests by GPs.^{7,8} On the other side, uncertainty is a powerful source of stress for patients⁹ and GPs¹⁰ and has been linked to burnout.¹¹ Grol *et al* linked uncertainty to personality and developed a scale of risk avoidance.¹²

This paper describes management of uncertainty as an essential skill, which should be included in educational programmes for both trainee and established GPs. It was developed as a result of several discussion group meetings of interested EQuIP delegates, general reading around the subject and a focus group held at a European conference.

The conceptual approach to managing uncertainty

It is possible to adopt a number of different approaches which influence the way in which we conceptualise the importance and the implications of managing uncertainty. Taking a philosophical approach, the existentialist believes that most of the time humans manage to bridge the gap between the need for order and constancy on one hand and the unavoidable reality of lonely and limited existence in a chaotic and therefore unpredictable world on the other. Therefore uncertainty arises when a patient presentation produces a sense of helplessness in the doctor (a product of lifelong existential reality).

If we were to adopt a psychological approach we could say that uncertainty can arise due to a cognitive process (difficulty in perception and interpretation of facts by the doctor), and/or a personality clash and/or as an indivisible part of doctor-patient interaction and communication. In contrast, the sociological literature challenges the assumption that human beings are rational decision makers and instead describes the so-called 'social processes model' of decision making.¹³

Rational thinking is an important part of the process but is not the whole story. Rather than balancing the pros and cons of any decision in an objective and logical way, the social processes model emphasises the wider context within which decisions are made, risk is managed and uncertainty is dealt with. Decision making is seen as a complex, iterative social process,

influenced by personal experiences and by the views of and advice from other people (the validity of which is based on the level of trust between the giver and the receiver of the information). Objective information and rationality therefore play only one, sometimes small, part in a 'knowledge construction' process that underlies how people deal with uncertainty as they make clinical decisions.¹⁴

A practical approach to uncertainty

There are many consultations where there are no straight answers, no clear diagnosis and no obvious treatment, where guidelines and decision-making protocols do not lead to a satisfactory outcome. In this situation, at one extreme the doctor who believes in their own infallibility when faced with diagnostic decisions can be a source of danger, as can the doctor at the other extreme who struggles with indecision on a daily basis. For the majority, however, uncertainty is a normal component of the working day and dealing with it is a necessary skill. The literature on dealing with uncertainty in practice focuses largely on identifying relevant evidence and decision making.

Identifying relevant evidence

In order to identify evidence, one should know that there is appropriate evidence present. Then, one should have access to the evidence at the time it is needed during the consultation. Evidence-based medicine is a useful tool when faced with uncertainty, particularly when discussions of probability¹⁵ are employed. However, when all available evidence has been sought and found wanting it can be a challenge to know when to stop the quest for a definitive answer (e.g. GPs' desire to understand complaints and meet patient expectations seems to affect their test ordering behaviour even when tests are not indicated according to clinical guidelines).¹⁶ As James¹⁷ so eloquently puts it, 'the limits of evidence-based medicine and guideline use in clinical practice may be found in the grey zones of uncertainty where science meets art.'

In an interesting approach to test ordering, Sonnenberg¹⁸ appeals to doctors to consider his so-called medical uncertainty principle. This is based on Heisenberg's uncertainty principle from quantum mechanics. Put in simple terms, the principle implies that as doctors' diagnostic certainty increases due to the use of diagnostic tests a patient's health deteriorates as a result of the investigations. In order to use tests rationally and reasonably, doctors need to be able to tolerate a certain amount of uncertainty.

Medical decision making

Science appears to offer a sense of security in medical decision making but this may be lost when faced with uncertainty. Analysing decision making is cited as a key area in helping doctors to deal with uncertainty, and this view is supported by the literature.^{19–24}

Patient-related factors such as co-morbid conditions, quality of life indices, the financial situation and restricted access to health care are all important factors in medical decision making.²³ Summerton³ suggests that decision making in primary care is a very different process from that undertaken by hospital-based doctors. It is particularly important to analyse symptoms from a patient's perspective, taking context into account. Experienced clinicians seem to base their diagnoses on cognitive structures which they have developed from dealing with a series of similar patients in the past. Having reflected on how they dealt with one patient they then extrapolate their findings to others. This involves a combination of reflection in action (during the consultation) and reflection on action (afterwards).²⁵

Arborelius *et al*²⁶ analysed consultations where GPs appeared unsure in their interactions with patients – this appears to have been compounded by the fact that the GPs did not acknowledge and use their feelings of uncertainty as useful information. Baerheim²⁰ describes the diagnostic process starting from a patient's history and proceeding to a result that can be categorised. Patients do not present their symptoms as a list but rather in the context of a story of how these symptoms have affected their lives and the chronological order in which they appeared – a story of illness.

The doctor gathers, sifts and prioritises the information presented in order to identify a few possible diagnoses – much of this process may take place at an unconscious level. Patients rarely present perfect textbook symptoms that can be readily classified into a neat diagnosis – most stories are complicated by multiple symptoms and contextual variations. Some of the most important symptoms from the doctor's diagnostic perspective may be regarded as trivial by the patient and may be mentioned as an aside to the main story. The ability to pick up these threads seems to be one of the characteristics of an expert and may be missed by the inexperienced doctor. One difficulty at this point arises in patient involvement and shared decision making.

Having arrived at a tentative diagnosis the doctor then tests his or her theory, most commonly by the use of a closed question. There are, therefore, two clearly defined phases to this process – the first is information gathering and the second is applying tests to check if the initial diagnosis can be verified. These tests include checking the patient's perspective – after all, the doctor is the expert on the disease but the patient is

the expert on their own illness. Some authors categorise doctors’ competence into ‘Professional readiness’ and ‘Working behaviour’, where professional readiness comprises the inclination to understand and act based on medical knowledge, modified by experience, knowledge of the patient, involvement and uncertainty.²⁷ As to Wulff’s suggestion,²⁸ it is not possible to offer the patient ‘just the facts’, explain the different options, and then leave it to the patient to make the choice. He claims that there is an inherent element of paternalism in clinical decision making and that clinical practice presupposes a mutual trust between physician and patient.

The new science of the probabilistic paradigm is one that accepts a degree of uncertainty as an inherent part of reality and includes values and feelings as an inescapable concern of science. Within the new paradigm decision making is no longer based on ‘optimal’ solutions provided by scientists.²⁹ The actors involved must agree on the definition of perceptions, narratives, interpretation of models, data and indicators that are selected by the scientists. The role of scientists still remains crucial, though it is somewhat changed. They have to contribute to the definition of acceptable compromises. For this purpose, scientists have to contribute to society by learning as quickly as possible about different perceptions towards options, problems and constraints, instead of seeking deep ultimate knowledge.³⁰

Traditionally doctors are trained to seek certainty and their concept of rationality is grounded in the mechanistic paradigm, which has no place for uncertainty, therefore making it difficult to be rational about uncertainty.³¹ The probabilistic paradigm describes a set of probable causes in constantly changing configurations replacing the old concept of a definite cause or causes for a given effect.

Training doctors to deal with uncertainty

Training doctors to deal with uncertainty should concentrate on shared decision making, meticulous evaluation, exclusion of relevant worrisome differential diagnosis and establishing a relationship of trust with the patient.³² Rules of thumb or heuristics have been identified as short cuts used by GPs in formulating a diagnosis. André *et al*¹⁹ demonstrated that GPs could readily identify with this concept and regularly used such rules to simplify their work. In many cases the rules were learnt from respected colleagues. An example¹⁹ would be ‘when a patient is able to bear weight on a leg it is not broken’. This suggests a role for GP trainers who as role models need to be aware of

their own rules and the influence they may have on trainees.

An important aspect of doctors’ training and uncertainty is the inability of trainers and/or training system to cope with the highly dynamic and challenging environment of practise. Using an outcomes-based approach and engaging with key stakeholders may provide an opportunity to identify and promote critical capabilities needed by managers to support the challenges confronting health services, including workforce flexibility.³³ Richardson’s suggestion on this point is for health management education to acknowledge the uncertainty within a multifaceted and complex health system.³⁴ He states: ‘Health management educators challenged to prepare managers for a complex and volatile system will need to be bold in the design of new curriculum’.

When a trainer is analysing a consultation, they should look out for the pitfalls identified in Box 1.

Trainers are often urged to encourage their trainees to involve patients as far as possible in shared decision making. Chalmers³⁸ maintains that explicit admission of uncertainty by doctors can undermine patients’ confidence and may reduce the therapeutic effectiveness of individual encounters. Shared decision making and a patient-centred consultation approach encourages the sharing of uncertainty with patients, but the impact of this on patients has not been researched to any great degree.

In an interesting UK study,³⁹ differences between verbal and behavioural activity during consultations emerged. GPs and patients viewed GP verbal expressions such as ‘I don’t know’ as detrimental to patient confidence. However, GP behaviour such as consulting books, asking a hospital colleague for advice or referring to hospital were regarded as neutral or even positive activities by patients. Overall, doctors underestimated the impact of their verbal comments on patient confidence. Older patients from a higher social class that knew their doctors better were more confident in dealing with doctors’ expressions of uncertainty.³⁹

Complexity theory can be used as a model to teach about management of uncertainty within the consultation. Innes *et al*⁴⁰ use the Stacey diagram⁴¹ (Figure 1) to illustrate the relationship between the certainty of cause and effect and the uncertainty of diagnosis. Complex problems are a normal part of general practice – the GP who tries to be 100% rational in every diagnostic decision is at risk of burnout. The ability to accept the fact that uncertainty is part of the system a doctor is working in and not a reflection on professional inadequacy is paramount to survival. Box 2 contains a list of useful points for the trainer to consider when teaching about management of uncertainty in general practice.

Box 1 Reasons for common diagnostic pitfalls^{35–37}

Faulty knowledge

- Insufficient knowledge of the condition
- Insufficient skills
- Inability to generate hypotheses

Faulty data gathering

- Poor history taking
- Failure to perform indicated screening procedures
- Excessive/insufficient data gathering

Faulty information processing

- Inability to generate early hypotheses
- Erroneous interpretation of clues
- Missing noticeable symptoms and signs

Faulty verification

- Failure to consider other possibilities
- Confirmation bias and overemphasis on positive findings
- Premature closure

Box 2 Points to ponder when dealing with uncertainty

- It is important to accept that uncertainty is a normal part of general practice
- A good doctor–patient relationship is vital (giving time with good communication skills and creating trust)
- Involve the patient in the decision-making process
- Discuss probabilities including the degree of uncertainty involved if relevant
- Consider each patient as an individual and take their background into consideration – support, social network, education
- Use external evidence (evidence-based medicine – particularly risk calculation, guidelines) and respect the internal (doctor's and patient's) evidence
- Consider the use of a checklist for diagnosis
- Maintain good clinical records
- Be aware of your feelings and acknowledge them – be able to forgive yourself and others when managing the unexpected
- Apply reflective practice
- Peer group discussions on problematic cases can be very helpful

Conclusion

Existing models of the consultation need to be revised to understand consultations involving uncertainty. An alternative approach focusing on shared decision making⁴² and understanding the consultation from the patient's perspective is suggested.⁴³ A good doctor–patient relationship is vital, creating trust and mutual respect developed over time with good communication skills. If the patient believes that the doctor is trying to understand their story and that the doctor's

motivation is to do their best for the patient then they will be empowered to deal with uncertainty. Evidence-based medicine should be used, including discussion of probabilities where available. Trainers need to be aware of their own use of heuristics as they act as role models for trainees. Expression of feelings by trainees should be encouraged and acknowledged by trainers as a useful tool in dealing with uncertainty.

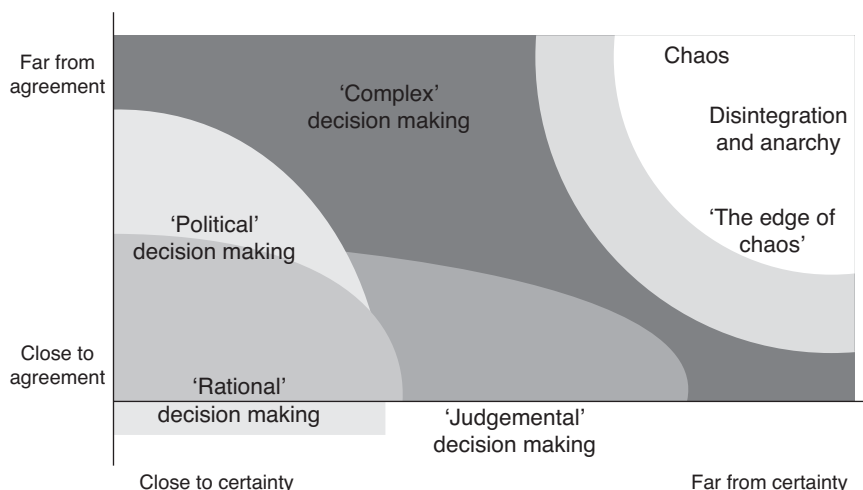


Figure 1 The Stacey matrix: complexity and the consultation.³⁷ Stacey's matrix, proposing a method to select the appropriate management actions in a complex adaptive system based on the degree of certainty and level of agreement on the issue in question. It helps by identifying management decisions on two dimensions: the degree of certainty and the level of agreement

Strategies for dealing with uncertainty need to be considered and debated more explicitly and patients must be involved in this process.⁴³ The public needs to be educated on the limits of the medical knowledge base and the degree of uncertainty that is part of every clinical encounter.

Skills to deal with uncertainty should be regarded as quality improvement tools and included in educational programmes involving both trainee and established GPs.

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A focus group comprised of 25 GPs from 12 countries (Belgium, Denmark, France, Finland, Germany, Iceland, Ireland, Israel, Norway, Switzerland, Turkey and the UK) produced their own solutions based on personal experience of dealing with uncertainty at an EQuIP workshop in Belgium in 2004. Despite working in diverse healthcare systems there was a unanimous feeling that the solutions arrived at by the group were applicable in all settings.

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None.

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