

MANAGING UNCERTAINTY IN PRIMARY CARE

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WHY DO WE HAVE UNCERTAINTY

History: may be incomplete, untypical, may focus on illness experience and not the salient disease features.

Examination: physical signs may be absent or untypical.

All tests and investigations have false-positive and false-negative rates



WHY DO WE HAVE UNCERTAINTY

Numerous treatment options

Something goes wrong

Many conditions require input from other team members, eg community palliation

- Limited capacity

- Patients may not like their teams or find them hard to access.

Clinicians themselves may not have all the knowledge or skills needed.



		Disease	No Disease	
Test	positive	Right positive a = 80	False positive b = 180	260
	negative	False negative c = 20	Right negative d = 720	740
Total		100	900	1000

Sensitivity (sens): is the proportion of people with disease who have a positive test

Specificity (spec): is the proportion of people free of a disease who have a negative test

Positive predictive value (PPV): probability that a patient with a positive test has got really the disease

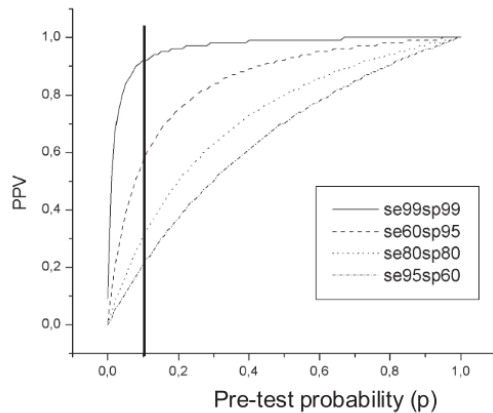
Negative predictive value (NPV): probability that a patient with a negative test is really healthy

$$\text{sens} = a/a+c = 80.0\%$$

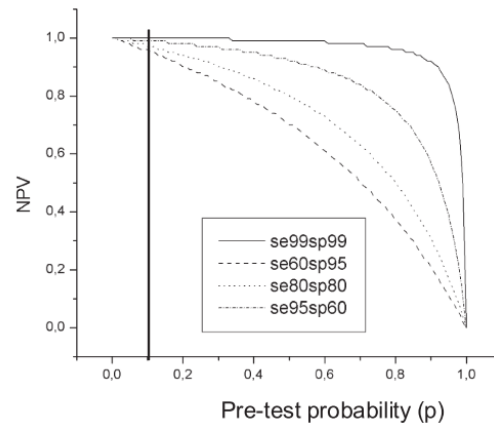
$$\text{spec} = d/b+d = 80.0\%$$

$$\text{PPV} = a/a+b = 30.8\%$$

$$\text{NPV} = d/c+d = 97.3\%$$



$$\text{PPV} = \frac{\text{sens}}{\text{sens} + (1 - \text{spec}) \left(\frac{1}{p} - 1\right)}$$



$$\text{NPV} = \frac{\text{spec} (1 - p)}{(1 - \text{sens}) p + \text{spec} (1 - p)}$$

**EATING A VARIETY OF NUTRITIOUS
FOODS**




EACH DAY

DONALD SCHON

Because of troubling, interesting phenomena, a physician expresses uncertainty, takes the time to reflect and allows himself to be vulnerable. Then he restructures the problem. This is the key to the art of dealing with situations of uncertainty, instability, uniqueness and conflict.

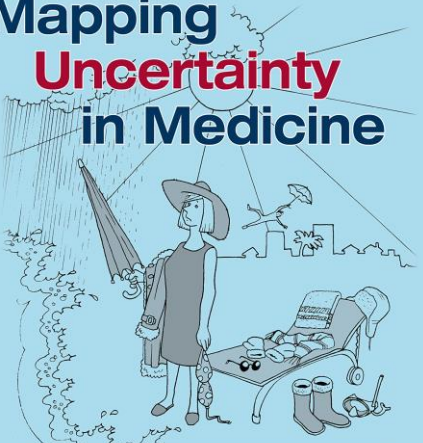


CLASSIFYING UNCERTAINTY




RCGPLearning
Essential CPD for primary care

Mapping Uncertainty in Medicine



What do you do when you don't know what to do?

Avril Danczak
Alison Lea
Geraldine Murphy



Royal College of
General Practitioners

Alam et al. *BMC Family Practice* (2017) 18:79
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BMC Family Practice

RESEARCH ARTICLE

Open Access

Managing diagnostic uncertainty in primary care: a systematic critical review



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Abstract

Background: Diagnostic uncertainty is one of the largest contributory factors to the occurrence of diagnostic errors across most specialties in medicine and arguably uncertainty is greatest in primary care due to the undifferentiated symptoms primary care physicians are often presented with. Physicians can respond to diagnostic uncertainty in various ways through the interplay of a series of cognitive, emotional and ethical reactions. The consequences of such uncertainty however can impact negatively upon the primary care practitioner, their patients and the wider healthcare system. Understanding the nature of the existing empirical literature in relation to managing diagnostic uncertainty in primary medical care is a logical and necessary first step in order to understand what solutions are already available and/or to aid the development of any training or feedback aimed at better managing this uncertainty. This review is the first to characterize the existing empirical literature on managing diagnostic uncertainty in primary care.

Methods: Sixteen databases were systematically searched from inception to present with no restrictions. Hand searches of relevant websites and reference lists of included studies were also conducted. Two authors conducted abstract/article screening and data extraction. PRISMA guidelines were adhered to.

Results: Ten studies met the inclusion criteria. A narrative and conceptual synthesis was undertaken under the premises of critical reviews. Results suggest that studies have focused on internal factors (traits, skills and strategies) associated with managing diagnostic uncertainty with only one external intervention identified. Cognitive factors ranged from the influences of epistemological viewpoints to practical approaches such as greater knowledge of the patient, utilizing resources to hand and using appropriate safety netting techniques. Emotional aspects of uncertainty management included clinicians embracing uncertainty and working with provisional diagnoses. Ethical aspects of uncertainty management centered on communicating diagnostic uncertainties with patients. Personality traits and characteristics influenced each of the three domains.

Conclusions: There is little empirical evidence on how uncertainty is managed in general practice. However we highlight how the extant literature can be conceptualised into cognitive, emotional and ethical aspects of uncertainty which may help clinicians be more aware of their own biases as well as provide a platform for future research.

Trial registration: PROSPERO registration: CRD42015027555

Keywords: Diagnosis, Uncertainty, Primary medical care, Burnout, Training

DYSFUNCTIONAL WAYS OUT OF UNCERTAINTY

Analysing: Unfocused investigations, cognitive biases

Negotiating: Blaming the patient or the system, conflict or complaints, premature closure

Networking: Excess investigations, over-medicalisation, passing anxiety or responsibility on to others

Team-working: Passing the buck or blaming other teams, withdrawal of services, conflict



3 TABLES

1 case on each table, 2 phases in each case.

10-15 minutes to discuss each case in groups

Then most will swop to next table

Debrief to large group afterwards.

TOLL OF UNCERTAINTY ON THE CLINICIAN

Decision making in uncertain situations, especially when the doctor feels that he 'doesn't know what to do', is stressful and uses a lot of mental energy.

This is quite apart from the consequences of what we might experience if something goes wrong.

Clinicians need to have a self-awareness of their own emotional responses to uncertainty.



PROCESS RATHER THAN OUTCOMES

Much of the uncertainty that we experience might be managed more effectively if we replace our ambitions to be certain about outcomes with the more modest aim of having increased certainty of process



DUAL PROCESS THEORY

Type 1: Quicker, associative, concrete, practically based, automatic. Schon calls it “professional artistry.”

Type 2: Theory based, abstract, rule based, chosen, methodical no automatic. Schon calls it “Technical, rational professionalism.”



BIAS

Anchoring bias – first bit of information is given more weight than later pieces of information, which are disregarded

Ascertainment bias – prior expectations colour thinking, “there is a lot of it about.”

Availability bias – memorable events occurring recently dominate thinking

Omission bias – omission in case of potential harm (e.g. omitting chemotherapy because the effects of disease are preferred to the risk of side effects of the treatment)



BIAS

Bandwagon bias – this is what we all do round here (regardless of the appropriateness or evidence)

Satisficing bias/ premature closer – if one diagnosis/hypothesis is found others are not sought (e.g. a second fracture)

Gamblers bias – a tendency to think a run of things cannot continue rather than taking each case on its merits (e.g. this cannot be the fourth case of shingles)



OTHER IMPEDIMENTS TO CLEAR THINKING

Too many interruptions

Too high workload

Lack of supervision or colleague support



OTHER IMPEDIMENTS TO CLEAR THINKING

The patient's emotional or psychological issues

- Too distressed to tell story clearly

- Avoids sensitive subjects

More senior colleague has already made a diagnosis

Alternative diagnosis may result in expensive tests or treatment



BOLAM TEST

In the UK, practice was legally judged to be adequate, if what was done would be considered reasonable by other medical professionals, working in the same field. (1957)

This still applies to diagnosis and treatment options. However the shelter of a group norm in terms of information given to patients was removed by the case of Montgomery. (1999)

Information given to a patient should be determined by what a reasonable person would want to know

