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## Why general practitioners do not implement evidence: qualitative study

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### Abstract

**Objectives** To explore the reasons why general practitioners do not always implement best evidence.

**Design** Qualitative study using Balint-style groups.

**Setting** Primary care.

**Participants** 19 general practitioners.

**Main outcome measures** Identifiable themes that indicate barriers to implementation.

**Results** Six main themes were identified that affected the implementation process: the personal and professional experiences of the general practitioners; the patient-doctor relationship; a perceived tension between primary and secondary care; general practitioners' feelings about their patients and the evidence; and logistical problems. Doctors are aware that their choice of words with patients can affect patients' decisions and whether evidence is implemented.

**Conclusions** General practitioner participants seem to act as a conduit within the consultation and regard clinical evidence as a square peg to fit in the round hole of the patient's life. The process of implementation is complex, fluid, and adaptive.

### Introduction

Although evidence based medicine has heightened awareness of the most effective management strategies for many conditions, much of the evidence is not acted on in everyday clinical practice.<sup>1</sup> Numerous strategies to improve implementation of such evidence have been tested,<sup>2</sup> and various impediments have been identified.<sup>3</sup> General practitioners have been cautious about the evidence based model generally.<sup>4</sup> Reasons for this include being reluctant to jeopardise relationships with the patient,<sup>5</sup> and patients' unwillingness to take certain drugs.<sup>6</sup>

There may be unique barriers to implementing evidence in general practice within a patient centred context.<sup>7</sup> We used a qualitative approach to explore the reasons why and circumstances in which doctors had not implemented evidence they knew about.

### Participants and methods

Three focus groups of established general practitioners were set up in three areas, each located around a different district general hospital in the south west of

England. Each area is geographically separate by about 80 km and tends to develop its own medical community.

Participants were asked to discuss their behaviour in individual cases, which could be seen as sensitive. We therefore adapted the standard focus group techniques to use a Balint-style model.<sup>8,9</sup> The particular Balint-style feature of these groups that distinguished them from standard focus groups was that each meeting focused around the case notes of a particular patient, the doctor-patient relationship, and the feelings that were generated.

The groups consisted of six to eight volunteer general practitioners, each led by an experienced group leader. Participating doctors represented a mix of urban, rural, and semirural practices. There were a total of 19 doctors: 13 men and six women.

At each meeting, a group member was asked to present the details of a case in which he or she had knowingly not followed evidence based practice. We asked the groups to discuss the case and explore the implementation issues arising from it as well as the doctor's feelings about these issues. The local research ethics committee approved the study. The researchers were not part of the group, but before the first meeting of each group a researcher attended and explained the research agenda.

The meetings were taped and transcribed, and each researcher separately analysed the transcripts. Each researcher used a grounded theory approach in developing theoretical principles (or at least explanatory principles).<sup>10</sup> We met to compare analysis and identify common themes. To ensure compatibility of analysis, we each analysed three transcripts jointly and the others separately.

### Results

Transcripts for 11 meetings were available for analysis. The main clinical areas the general practitioners discussed included hypertension, ischaemic heart disease, and anticoagulation. Six main themes emerged from the data (box).

#### Personal and professional experience of practitioner

Despite being a relatively homogeneous group, the general practitioners' enthusiasm for the evidence and the way in which they implemented it varied. This

### Main themes from data

The process of implementing clinical evidence is affected by the personal and professional experiences of the doctor

The relationship that the doctor has with individual patients also affects the process

There is a perceived tension between primary and secondary care: the doctors thought that specialists approach evidence based practice differently

The practitioner's feelings about their relationships with patients and about the evidence have an important role in modifying how clinical evidence is applied

The doctor's choice of words in consultations can sway patients to accept or reject clinical evidence. Doctors realise this and can use it to pre-empt patients' decisions

Implementation comes up against logistical problems, which affect how evidence is applied

seemed to be partly explained by their previous experience of clinical practice. Mishaps or spectacular clinical successes can have a direct influence on subsequent practice.

Two influences were relevant: the doctors' life experience and experience of hospital medicine as students or juniors doctors. "My grandfather died when he was shocked," recalled one participant, discussing anticoagulation in atrial fibrillation, "so I reach for a decent dose of warfarin and digoxin no hesitation at all." Another said: "I actually had two 50 year olds who had strokes from atrial fibrillation because they didn't get warfarin ... that really hit me." In another group, one general practitioner said, "I lost a patient as an SHO, so that puts me off warfarin."

### Doctor's relationship with individual patients

Implementation was influenced by the relationships that doctors developed with their patients. "Even if the evidence was extremely good," one general practitioner said, "most of us would only ever interpret it in the context of the patient." Perceived patient characteristics could have a positive or negative effect on implementation.

Patients could influence clinical decisions as a result of their own experiences. One patient reportedly said, "My brother died on warfarin, I'm not taking rat poison." Some doctors found that personal relationships tended to make practising evidence based medicine "harder because you have a close relationship with them." At other times patients could simply block a doctor's attempts to practise evidence based medicine: "Sod that, says the patient, I'm fine."

The assumptions doctors made about their patients seemed at times paternalistic. Some were described by their doctor as "the type who did not want to rock the boat," others as "depressive cum fatalist." "Somatisers," declared one doctor, "eventually get something." By using these descriptions, the contributors were suggesting that their view of the patient modified how and when they applied the evidence.

### Perceived tension between primary and secondary care

The general practitioners felt that secondary care doctors approached evidence based practice differently, treating "diseases rather than patients" in a context that they perceived as much more controlled than the "real life" of general practice. On the whole, the relationship was described in pejorative terms. One doctor described cardiologists as "being a bit of an evidence based mafia."

Specialists were accused of failing to realise just how tricky it was controlling some common diseases. "You get stropmy letters from the clinic saying your patient's blood pressure is still 160, and I go ... yes, yes, I know. You feel under pressure from the guidelines, but you know it's not from want of trying." In one group, quite a fundamental difference in approach to clinical practice between primary and secondary care was described. "A few hypertensives, without any symptoms, they're well. They're just running a risk. We give them a drug and a side effect—change the quality of their life," said one doctor.

### Clinical evidence can evoke feelings among doctors and patients

For the doctors in our study, clinical evidence is not just an intellectually celibate commodity that is lifted out of medical journals and transferred to a patient. It has an emotional impact on practitioners and patients. "Yes it does make me feel anxious ... all the *BMJs*, all the rags ... these people must be on warfarin." "With me messing about with his medication and trying to practise evidence based medicine, I found it was making [the patient] feel more anxious."

Another aspect of this theme reflected the doctors' feelings about the consequences of failing to act on clinical evidence. One participant poignantly described how, after the death of a young man who had been inadequately anticoagulated for a venous thrombosis, he felt unease "standing behind his widow in the greengrocer queue."

The group discussions also produced data that indicated doctors' familiarity with the evidence and a positive attitude to it. They described its importance to everyday practice: "I think it's always the basis for most of what I do ... it's fundamentally evidence based but it's tailored completely." They recognised that evidence based medicine gives new emphasis: "That is the one that I have been hammering, the diabetic blood pressures, to try and get them to 140/80, and I am certainly getting them better than I was but it is hard work." For some of the general practitioners evidence based medicine was revolutionary: "I think that is the first time I have become aware of one study, or group of studies, that has actually changed my practice within a week."

### Words used by doctors can influence patients' decisions

Doctors realised that the words they chose to present the evidence could have a strong influence on the patient's decision. They effectively limited the options while seeming to invite the patient to make the decision. The semantics then affect the way in which evidence is implemented by swaying the patient in a particular direction. "There is a reasonable chance of

you having a stroke in the next year or so if you don't do something about your blood pressure... I'm as barbaric as that," commented one participant.

The tension between encouraging autonomy and effectively limiting options by the slanted presentation of relevant material was a relatively strong theme: "I make these judgments in theory with the patient but probably on my own."

The choice of words or the use of metaphors like "slanting" or "selling" were mechanisms the doctors used to influence patients to make a decision about their treatment that was consistent with what the doctor had decided was appropriate. Doctors would refer to "rat poison" when describing warfarin if they felt its use would be difficult or inappropriate, or describe pills as "having been shown to keep the heart young" when they wanted a patient to agree to treatment.

### Logistics of general practice

The doctors in this study described some tricky logistical problems that made them less enthusiastic about implementing clinical evidence. "Risky," "hard work," and a "hassle" both for doctors and patients were typical descriptions of the problems of starting treatment. One doctor said, "The problem is starting him on the ACE because he is very anxious about any medication change, and every time you change the medication it entails another four or five visits to go and see him and to try and reassure him that he is on the right medication."

Knowing the patient's personal situation influenced implementation too. Doctors took into account the patient's behaviour, capabilities, or rural location when making decisions. One doctor felt reluctant to anticoagulate one 88 year old woman because "she had an alcohol problem, kept falling. She was forever in casualty being stitched up, bandaged up, whatever."

### Discussion

The themes emerging from our study show the complexity of implementing evidence from well structured clinical trials in individual patients. Our findings are supported by other studies in the United Kingdom,<sup>6,11</sup> the Netherlands,<sup>5</sup> and Australia.<sup>12</sup> In some ways, our study illustrates what Kernick has described as the parallel universes of scientific research and general practice.<sup>13</sup> The doctors in this study were exploring personal importance—that is, the "key to the transfer of an idea to and the evaluation and interpretation of an idea by the doctor and patient together."<sup>14</sup> Evidence is not implemented in a simple linear way, as some definitions of evidence based practice imply, but in an evolving process whereby reciprocal contributions from the doctor and the patient over time influence how evidence ultimately is used.

Doctors in the groups were talking about situations in which they already knew the evidence but had not implemented it. Although the groups did not confine their discussion exclusively to incidents in which the clinical evidence was not applied, the data focus wholly on implementation issues. We felt that if a wider brief had been given to the groups—for example, to discuss

### What is already known on this topic

General practitioners do not always act on evidence in clinical practice

General practitioners are reluctant to jeopardise their relationship with the patient and sometimes feel that patients are unwilling to take drugs

### What this study adds

Implementation of evidence by general practitioners is a complex and fluid process

Decisions are influenced by the doctor's personal and professional experience as well as by their knowledge of and relationship with the patient

Doctors' choice of words can influence patients' decisions about treatment

implementation generally—the detail of the difficulties these practitioners had implementing evidence would have been less likely to come up. There was plenty of evidence that the doctors were implementing evidence and were happy to do so.

The data also indicated that doctors were working together with patients and for the benefit of their patients. Sometimes these factors and the doctor's experience lead to the conclusion that strictly sticking to the rules of guidelines is not appropriate. Whether that is the strength of individual doctoring in a long standing and trusting relationship with a patient or a weakness remains open to debate.

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- Haynes RB, Sackett D, Guyatt G, Cook D. Transferring evidence from research to practice: overcoming barriers to application. *Evidence-Based Medicine* 1997;2:68-9.
- Oxman AD, Thomson MA, Davis DA, Haynes RB. No magic bullets: a systematic review of 102 trials of interventions to improve professional practice. *Can Med Assoc J* 1995;153:1423-31.
- Budd J, Dawson S. *Influencing clinical practice: implementation of research and development results*. London: Management School, Imperial College of Science Technology and Medicine, 1994. (Report to North Thames Regional Health Authority.)
- Sweeney KG. Evidence an uncertainty. In: Marinker M, ed. *Sense and sensibility in health care*. London: BMJ Publishing, 1996:59-87.
- Veldhuis M, Wigersma L, Okkes I. Deliberate departures from good general practice: a study of motives among Dutch general practitioners. *Br J Gen Pract* 1998;48:1833-6.
- Howitt A, Armstrong D. Implementing evidence based medicine in general practice: audit and qualitative study of antithrombotic treatment for atrial fibrillation. *BMJ* 1999;318:1324-7.
- McColl A, Smith H, White P, Field J. General practitioner's perceptions of the route to evidence based medicine: a questionnaire survey. *BMJ* 1998;316:361-5.
- Balint M. *The doctor, his patient and the illness*. London: Pitman, 1957.
- Salinsky J. Psychoanalysis and general practice: what did the Romans do for us? *Br J Gen Pract* 2001;51:506.
- Glaser B, Strauss A. *The discovery of grounded theory*. Chicago: Aldine, 1957.
- Tomlin Z, Humphrey C, Rogers S. General practitioners' perceptions of effective health care. *BMJ* 1999;318:1532-5.
- Mayer J, Piterman L. The attitudes of Australian GPs to evidence-based medicine: a focus group study. *Fam Pract* 1999;16:627-32.
- Kernick DP. Muddling through in a parallel track universe [letter]. *Br J Gen Pract* 2000;50:325.
- Sweeney KG, MacAuley D, Gray DP. Personal significance: the third dimension. *Lancet* 1998;351:134-6.

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