Attitudes and behaviours towards clinical guidelines: the clinicians' perspective

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Abstract

Objectives—To find out what attitudes hospital doctors have towards the culture of clinical guidelines; to ascertain perceived knowledge and use of clinical guidelines; and to investigate why hospital doctors think that clinical guidelines may not be used and how they think that the use of guidelines can be encouraged.

Design—Postal questionnaire survey between October 1993 and January 1994.

Setting—Hospitals within Oxford region.

Subjects—409 doctors of all grades working in one of six specialties (anaesthetics, paediatrics, general surgery, general medicine, obstetrics and gynaecology and accident and emergency medicine). 47 were randomly picked as part of the pilot study, 362 were extracted from hospital staffing lists.

Results—268 clinicians (66%) responded to the questionnaire. Most respondents (77%, 208) expressed welcoming attitudes towards guidelines but 51% (136) perceived the attitudes of their colleagues as being less favourable. Over three quarters of respondents claimed to use guidelines at least once a month. Most respondents learnt about guidelines from discussions with their peers (50%, 134 respondents) or senior doctors (37%, 99) or from journals (39%, 105). Reasons why guidelines may not be used included being unaware of particular guidelines (80%, 213 respondents) and the fact that guidelines had been poorly developed (64%, 171) or were impractical (49%, 132). The best ways to encourage the use of guidelines were thought to be encouragement from senior doctors (72%, 193 respondents) and peers (59%, 157) and by monitoring behaviour and providing feedback (68%, 181).

Conclusion—The decision to use a guideline was based on the perceived value of each guideline and was influenced by other clinicians' behaviour. The results provide an insight into aspects of dissemination and implementation which are perceived as influential by the recipients of guidelines.

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Introduction

A growth in the development of clinical guidelines has been prompted over recent years by

the need to improve the quality of health care and to keep a tight grip on escalating costs. The term clinical guideline has, in the past, been applied to anything from a rigid protocol to a vague heuristic. The broad view of clinical guidelines is that they outline procedures to be followed and thus help doctors in making decisions.

Attempts to implement clinical guidelines have met with limited success because the behaviour of clinicians often has not changed in line with the recommendations in the guidelines.¹ Various factors have been seized on to account for this resistance – for example, the fear of losing clinical freedom¹⁻³; the careless design of many guidelines, which renders them either impractical to refer to or not feasible to carry out^{1 4-6}; the lack of evidence or consensus on which to base guidelines^{3 6-9}; and the belief that clinical guidelines are being created to reduce healthcare costs or to aid administrative procedures at the expense of quality.^{2 10} The evidence cited to support these views has been meagre.

Dukes argues that persuasion is necessary to encourage use of clinical guidelines and that to be persuaded doctors will need to see that the benefits of clinical guidelines outweigh the drawbacks.¹¹ In the light of this, Dukes states, "It is a little strange in this situation that no-one has systematically explored practitioners' attitudes or asked them where protocols might be useful to them." Research exploring clinicians' views on and attitudes towards the concept of guidelines has largely focused on general practitioners. Grol found that 80% of his sample of Dutch general practitioners were in favour of basing their decisions on nationally developed standards, but 56% thought that adherence to standards should not be compulsory.¹² Wilson *et al* found that less than a quarter of their sample of primary care physicians claimed to use guidelines "frequently."¹³

The objectives of this research were to find out the attitudes of hospital doctors towards the culture of clinical guidelines and to what extent they perceive clinical guidelines as being used. I also asked hospital doctors why they thought clinical guidelines might not be used and how they thought the use of clinical guidelines could be encouraged.

Subjects and methods

Between October 1993 and January 1994 questionnaires were sent to all consultants, senior registrars, registrars, senior house officers, and house officers working (a) in anaesthetics, paediatrics, general surgery, general medicine, and obstetrics and gynaecology in hospitals in

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four districts of the Oxford region and (b) in accident and emergency medicine in one district. Four hundred and fifty clinicians were included in the sample, 50 of them being randomly selected to take part in a pilot study and the rest being taken from medical staffing lists. This sample size was chosen to represent a balance between an adequate sample size and acceptable costs.

The questionnaire was developed as a result of an examination of published work and exploratory interviews carried out with a randomly chosen subset of the population. Salient factors concerning guidelines were elicited during the interviews, and an outline questionnaire was drawn up and subsequently modified as a result of each interview. The questionnaire was divided into three sections: personal details, current situation, and attitudes towards clinical practice guidelines. Questions about current situation offered a series of fixed choice responses; attitudes were rated on 8 point Likert scales (appendix).

A stepwise multiple regression analysis was carried out using the statistical package for the social sciences to isolate factors explaining the variance in scores for the percentage of guidelines used. Attitudes were compared by specialty and grade of doctor after reducing the attitude scale so that the first four scores (1–4) were combined to form a category termed welcoming and the last four scores (5–8) to form a category termed resentful.

Results

The pilot study was performed to ensure the questionnaire made sense to clinicians and would yield meaningful results. No problems were identified, so the same questionnaire was sent to the main sample. Subjects in the pilot study were added to the main sample for the analysis.

MAIN STUDY

Forty one questionnaires were returned uncompleted because the clinicians were no longer employed by the department to which the questionnaire had been sent. This left a sample of 409 clinicians. Responses were obtained from 268 doctors (66%) after two postal reminders. Eighty four per cent (42/50) of paediatricians who were sent a questionnaire returned it, as did 72%(91/126) of anaesthetists, 65%(43/66) of general physicians, 65%(43/66) of obstetricians and gynaecologists, 48%(11/23) of accident and emergency doctors, and 41%(32/78) of general surgeons; six responses came from people who were currently working in specialties other than those targeted by the study. Eighty per cent (119/149) of consultants who were sent a questionnaire returned it, as did 63%(17/27) of senior registrars, 59%(48/81) of registrars, 61%(67/110) of senior house officers, and 40%(17/43) of house officers.

ATTITUDES

Over three quarters of respondents (77%, 208/268) rated their attitude towards guidelines on the welcoming half of the Likert scale

(table 1). Normative attitudes were thought to be less favourable, with 51%(136) of respondents believing that their own attitudes towards guidelines were more welcoming than those of their colleagues, and 12%(32) believing that their colleagues' views were more welcoming than their own. Overall 69%(185) clinicians said that they believed guidelines were useful, and 76%(203) thought that guidelines could improve the quality of health care if they were well developed.

Clinicians working in general medicine had the most welcoming attitudes towards guidelines. The most resentful attitudes were held by general surgeons (table 2). Senior house officers had the most welcoming attitudes towards guidelines; the most resentful attitudes were expressed by house officers (table 3).

CURRENT KNOWLEDGE AND USE OF GUIDELINES

No guidelines in the appropriate specialty were known at all by 7.5%(20) respondents; 64%(172) respondents knew of fewer than 20 guidelines in their specialty. A total of 57%(136) respondents stated that they used less than half of the guidelines they knew of. Overall, 60%(161) respondents said that they used a guideline either daily or weekly, with 76%(203) using at least one guideline every month.

PURPOSE OF GUIDELINES

The most commonly stated purpose of guidelines was to aid decision making (72%, 194 respondents), followed by improving patient outcomes (58%, 156) and incorporating research findings into practice (42%, 112). Two hundred and six respondents said that they would not be reluctant to use guidelines designed to reduce costs without affecting patient outcomes.

FINDING OUT ABOUT GUIDELINES

Over half the respondents (50%, 134) said that they learnt of guidelines through discussions with their peers; 39%(105) read them in journals and 37%(99) received information during discussions with senior doctors. Eight per cent (21) of respondents had themselves developed the guidelines they used.

REASONS WHY GUIDELINES ARE NOT USED

Most clinicians stated that some guidelines were not used because people did not know about them (80%, 213 respondents). Poor development and impractical recommendations were considered by many respondents

Table 1 Respondents' attitudes towards guidelines and their views of their colleagues' attitudes. Values are numbers (percentages) of respondents (n = 268)

Attitude and Likert score	Own attitude	Colleagues' attitude
None expressed	10(4)	22(8)
Extremely welcoming	32(12)	7(3)
1	60(22)	27(10)
2	65(24)	46(17)
3	51(19)	78(29)
4	26(10)	53(20)
5	19(7)	24(9)
6	3(1)	8(3)
7	2(1)	3(1)
Extremely resentful		
8		

Table 2 Attitudes towards guidelines by specialty among 262 respondents. * Values are numbers (percentages) of specialists

	Welcoming (score 1–4)	Resentful (score 5–8)	No response
Accident and emergency medicine (n = 11)	9(82)	2(18)	0
Anaesthetics (n = 91)	68(75)	21(23)	2(2)
General medicine (n = 43)	39(91)	4(9)	0
General surgery (n = 32)	18(56)	12(38)	2(6)
Obstetrics and gynaecology (n = 43)	34(79)	7(16)	2(5)
Paediatrics (n = 42)	35(83)	3(7)	4(10)

*Six respondents had moved into other specialties and were unaccounted for.

Table 3 Attitudes towards guidelines by grade of doctor. Values are numbers (percentages) of doctors

	Welcoming (score 1–4)	Resentful (score 5–8)	No response
Consultant (n = 119)	89(75)	26(22)	4(3)
Senior registrar (n = 17)	13(76)	1(6)	3(18)
Registrar (n = 48)	37(77)	10(21)	1(2)
Senior house officer (n = 67)	58(87)	7(10)	2(3)
House officer (n = 17)	11(65)	6(35)	0

to affect negatively the extent to which guidelines are used (table 4).

HOW TO ENCOURAGE USE OF GUIDELINES

The best ways to persuade clinicians to use guidelines were thought to be encouragement from senior doctors or peers and monitoring behaviour and providing feedback. Regulation, sanctions, or payment were not thought to be appropriate ways of encouraging the use of guidelines by many respondents (table 5). Several respondents commented that clinicians would use guidelines if they were convinced that they improved health care.

PREFERRED FORMAT FOR GUIDELINES

Most respondents (60%, 161) thought that flow charts were a useful format for guidelines; checklists and checklists backed by details were also favoured (by 46%(124) and 39%(105) respondents respectively). Two to three pages of details and computer programs were not so popular (favoured by 14%(37) and 12%(32) respondents respectively).

PREDICTORS OF PERCENTAGE OF GUIDELINES USED

Factors that were thought to influence the use of guidelines were entered into a stepwise multiple regression with the percentage of

Table 4 Why guidelines are not used

	No (%) of respondents agreeing (n = 268)
Doctors are unaware of them	213(79)
Some guidelines are poorly developed	171(64)
Some guidelines are impractical to carry out	132(49)
Doctors don't like the idea of guidelines	101(38)
It is not practical to refer to guidelines when necessary	70(26)
Other	31(12)

Table 5 How to encourage use of guidelines

	No (%) of respondents agreeing (n = 268)
Encouragement from senior doctors	193(72)
Monitor performance and provide feedback	181(68)
Encouragement from peers	157(59)
Other ways	25(9)
Doctors should not be encouraged to use guidelines	21(8)
Introduce regulation for use	17(6)
Introduce sanctions for non-use	10(4)
Link payment to use of guidelines	9(3)

guidelines that respondents use as the dependent variable. These factors included respondents' attitudes towards guidelines; respondents' perceptions of their colleagues' attitudes towards guidelines; and whether respondents thought that guidelines would deny the individuality of the patient, reduce doctors' autonomy, be useful, or improve the quality of health care. The percentage of guidelines that colleagues were thought to use explained the greatest amount of the variance in the dependent variable ($R^2=0.41$, $P<0.001$), with the belief that guidelines deny patients their individuality being included in the equation next (cumulative $R^2=0.42$, $P<0.001$). Therefore, respondents were likely to use a greater percentage of guidelines the higher the percentage of guidelines they thought their colleagues used and the less they believed that guidelines deny patients their individuality. None of the other factors added significantly to the explanation.

Discussion

These results show that most respondents had welcoming attitudes towards clinical guidelines and believed that they were useful and could improve the quality of health care if they were well developed. Guidelines were thought to be most useful for aiding decision making, improving patient outcomes, and incorporating research into practice. Peers and senior doctors were thought to be rich sources of information about guidelines and effective at encouraging their use.

Most clinicians expressed welcoming attitudes towards the culture of guidelines, which does not support the hypothesis that negative attitudes towards guidelines hinders their implementation.¹⁴ In addition, the claim of over three quarters of respondents that they were not reluctant to use guidelines that reduce costs without affecting the quality of care was unexpected.³ Payment, sanctions, or regulation may be effective means of ensuring the implementation of guidelines,¹⁵ but few respondents thought that they were appropriate methods for encouraging the use of clinical guidelines.

Grol found that, although clinicians were positive about recommended procedures, measures of clinicians' behaviour showed that they did not use guidelines to the expected extent.¹² Results of social psychological research have suggested that an imbalance between attitudes and behaviour may result from the belief that other people's attitudes are not congruent with one's own.¹⁶ The finding that respondents in this study believed that their attitudes towards guidelines were more positive than the attitudes of their colleagues may therefore result in lower use of guidelines than would otherwise be expected. Mittman *et al* argue that in addition to education, information, and financial incentives (which have traditionally been thought to influence doctors' behaviour), social norms and the values of peers help clinicians decide what behaviour is appropriate in a particular situation.¹⁷

The finding that 60% of respondents claimed to use a guideline weekly or more frequently, suggests that the use of guidelines among these clinicians, whether by referring to the document or basing decisions on memorised recommendations, is regular. The most commonly expressed reason why doctors may not use clinical guidelines was that doctors were unaware of them. This view does not explain why 51% of respondents said that they used less than half of the clinical guidelines that they knew about. The large proportion of respondents who agreed that some guidelines were not used because they had been poorly developed or were impractical, shows that beneficial guidelines are carefully selected from the total number available.

The response rate was 66%, which means that the views of over a third of the sample may have been different from those expressed. The sample was intended to be representative of the proportion of clinicians at each grade in each of the chosen specialties, but the non-responders and clinicians who were no longer in post may have led to a sample that was not entirely representative of the population as a whole. Non-responders telephoned by Grol were less positive than the respondents towards the organisations developing the standards.¹² The results of the current study may therefore be overoptimistic; non-responders might have been less positive about the culture of clinical guidelines than is suggested by the views of respondents.

The term clinical practice guideline was not defined in the questionnaire, so some variation in responses may be attributable to different understandings of what a guideline is. As mentioned above, the term may be used to refer to anything from a rigid protocol to a vague heuristic. This study focused on attitudes and behaviours towards the culture of clinical guidelines rather than confining respondents to one specific definition. Similarly, when examining the extent to which guidelines are said to be used, the term use was not defined in the questionnaire; thus the responses may be interpreted with various possible uses in mind.

Self reported behaviour is an inaccurate measure of true behaviour. Lomas *et al* showed that clinicians' claims to have adapted their behaviour towards the recommendations of a guideline on repeat caesarean sections were not supported by the numbers of repeat sections performed.¹⁸ Distortion of memory or an attempt to give socially desirable and consistent answers may be responsible for discrepancies between reported and actual behaviour.

The influence of other clinicians was illustrated in this research by the statement of many respondents that encouragement from peers and senior doctors was an effective means of encouraging the use of guidelines. Much information on guidelines was also said to derive from other clinicians. Further research is needed to clarify the strength and nature of the relation between clinicians' behaviour and established social norms. The

differences in attitudes expressed by members of different specialties may also be influenced by the social norms of each group and therefore warrants further investigation.

In conclusion, the results indicate that the culture of guidelines has been greeted positively by this sample of clinicians, but individual guidelines are evaluated according to certain criteria before they are adopted. Other clinicians are perceived as having an effect on whether guidelines are used. Coercive measures of implementing guidelines, such as regulation, payment, or sanctions, were not thought to be appropriate.

This study has highlighted the dissemination and implementation processes which were thought by this sample of clinicians to have influenced their behaviour in relation to the use of guidelines. In contrast to this broad look at attitudes and self reported behaviours towards the developing culture of guidelines, further research is needed to explore clinicians' attitudes and actual behaviour towards specific guidelines. Thus, factors which differentiate between guidelines that are used and those that are ignored can be more accurately identified and manipulated in future implementation strategies.

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Appendix

Extract of questions summarised from questionnaire

CURRENT SITUATION

[For the next five questions the answers are given in parentheses.]

To your knowledge, how many clinical practice guidelines exist in your specialty?
(None, 1–5, 6–20, 21–50, 51–100, >100.)

How often do you use at least one clinical practice guideline?
(Every day, weekly, monthly, yearly, never.)

How many clinical practice guidelines do you use at least once a year?
(None, 1–5, 6–20, 21–50, 51–100, >100.)

What percentage of clinical practice guidelines that you know of, do you follow?
(None at all, 1%–50%, 51%–95%, 96%–100%.)

In your experience, what percentage of clinical practice guidelines that they know about do your colleagues use?
(None at all, 1%–50%, 51%–95%, 96%–100%.)

[For the next 11 questions respondents were asked to tick as many answers as they thought applied.]

In your experience, how are clinical practice guidelines usually developed?

- By reviewing clinical papers applying clinical findings to practice
- By documenting current practice
- Through discussion between specialists
- They are decided by a government body or department
- They are formulated by the royal colleges
- They are formulated by the defence societies
- Other (please specify)

How do you think clinical practice guidelines should be developed?

- By reviewing clinical papers applying clinical findings to practice
- By documenting current practice
- Through discussion between specialists
- By a government body or department
- By the royal colleges
- By the defence societies
- Other (please specify)

In your experience, what form do individual clinical practice guidelines take?

- A checklist
- 2–3 pages of details
- A checklist backed by 2–3 pages of details
- A flow chart
- A computer program
- Other (please specify)

What type of clinical practice guidelines would be most useful to you?

- A checklist
- 2–3 pages of details
- A checklist backed by 2–3 pages of details
- A flow chart
- A computer program
- Other (please specify)

Why do you think clinical practice guidelines are used?

- They are not used
- They are useful for delegating tasks to junior doctors
- They incorporate new research findings into current practice
- They reduce costs
- They improve patient outcomes
- They enable doctors' behaviour to be controlled by others
- They aid decision making
- They make the clinical manager's job easier
- Other (please specify)

In your experience, who uses clinical practice guidelines to guide their behaviour?

- House officers
- Senior house officers
- Registrars
- Senior registrars
- Consultants
- No one
- Other (please specify)

How did you find out about the clinical practice guidelines, if any, that you use?

- Don't use any
- Medical school
- Journal articles
- Discussion with peers
- From senior doctors
- Through the post
- Other (please specify)

Why do you think that some clinical practice guidelines are not used?

- Doctors are unaware of them
- Some guidelines are impractical to carry out
- It is not practical to refer to guidelines when necessary
- Doctors don't like the idea of guidelines
- Some guidelines are poorly developed
- Other (please specify)

What do you think would be the most appropriate way to encourage doctors to use clinical practice guidelines?

- Doctors should not be encouraged to use guidelines
- Link payment to guideline use
- Introduce sanctions for non-use
- Monitor performance and provide feedback
- Encouragement from senior doctors
- Encouragement from peers
- Regulation
- Other (please specify)

Why do you think there is a move towards the development of more guidelines?

- There is no move towards the development of more guidelines
- They are useful in decision making
- They make it easier for senior doctors to delegate
- They incorporate new research findings into current practice
- They make it easier to control what doctors do
- They improve patient outcomes
- They make the clinical manager's job easier
- Other (please specify)

**ATTITUDES TOWARDS CLINICAL PRACTICE
GUIDELINES**

[The answers to the next seven questions were scored from 1 to 8 (Likert scale); the ranges of responses are given in parentheses.]

How useful do you believe clinical practice guidelines are to you?

(Extremely useful to totally useless)

How would you describe your attitude towards clinical practice guidelines?

(Extremely welcoming to extremely resentful)

How would you describe the attitudes of most of your colleagues towards clinical practice guidelines?

(Extremely welcoming to extremely resentful)

Would you be reluctant to use clinical practice guidelines that were aimed at reducing costs without affecting patient outcomes?

(Extremely reluctant to not at all reluctant)

Do you agree or disagree that using clinical practice guidelines reduces the autonomy of doctors?

(Strongly agree to strongly disagree)

Do you agree or disagree that guidelines deny the individuality of the patient?

(Strongly agree to strongly disagree)

Do you agree or disagree that the implementation of well developed clinical practice guidelines would improve the quality of care within the National Health Service?

(Strongly agree to strongly disagree)

[The last questions required yes or no answers.]

Can you suggest a guideline that does not exist at present, but that you would consider useful? Please give details.

Would you be willing to be interviewed on the topic of guidelines at some future date?