Clinical guidelines in primary care: a survey of
general practitioners’ attitudes and behaviour

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SUMMARY

Background. In the United Kingdom little is known about
general practitioners’ attitudes to and behaviour concerning
clinical guidelines.

Aim. A study was performed to investigate these two
under-researched areas.

Method. In 1994 a postal questionnaire on clinical guidelines
was sent to all 326 general practitioner principals on the
list of Lincolnshire Family Health Services Authority.
The questionnaire consisted of 20 attitude statements and
an open question on clinical guidelines, as well as surveying
characteristics and behaviour of respondents.

Results. Of the 326 general practitioners sent questionnaires, 213 (65%) replied. Most respondents (78%) reported
having been involved in writing inhouse guidelines. An
even greater proportion (92%) reported having participated
in clinical audit. Respondents were generally in favour of
clinical guidelines, with mean response scores indicating a
positive attitude to guidelines in 15 of the 20 statements, a
negative attitude in four and equivocation in one. The
majority of respondents felt that guidelines were effective
in improving patient care (69%). Members (or fellows) of
the Royal College of General Practitioners had a more pos-
itive attitude than non-members towards guidelines. They
were also significantly more likely than non-members to
have written inhouse guidelines, as were those who had
participated in audit compared with those who had not par-
taken in audit. A substantial minority (over a quarter) of
general practitioners were concerned that guidelines may
be used for setting performance-related pay, or that they
may lead to ‘cookbook’ medicine, reduce clinical freedom
or stifle innovation. There was also concern that guidelines
should be scientifically valid.

Conclusion. This study suggests that many general practi-
tioners in the Lincolnshire Family Health Services Authority
area have produced written inhouse guidelines. This is
largely sustained by positive attitudes about the effective-
ness and benefits of clinical guidelines. The positive atti-
dute of RCGP members supports it in its continuing role in
developing, implementing and evaluating guidelines in
primary care. The question of whether incorporation of
guidelines into clinical audit is an effective means to dis-
seminate systematic research-based guidelines warrants
further study.

Keywords: informal protocols; management of disease;
quality of patient care; doctors’ attitudes.

Introduction

Clinical guidelines are ‘systematically developed state-
ments to assist practitioner and patient decisions about
appropriate health care for specific clinical circumstances’.

Since the Royal College of General Practitioners launched its
quality initiative in 1983,2 there has been an increasing trend to
develop and adopt guidelines for use in primary care. Guidelines
have proliferated in the United Kingdom, spurred on by health
reforms and pressure from outside and within the medical profes-
sion.3 The main aim of guidelines is to improve the practice and
outcome of medical care by reducing inappropriate variations in
practice. Guidelines have been closely associated with performance
review, clinical audit and the burgeoning quality culture of the
National Health Service.4

General practitioners frequently fail to follow systematic guidelines5 despite evidence that guidelines improve clinical practice.6 It has been said that it is easier to write guidelines than to
implement them7 and this is partly because of factors that
determine change in behaviour, such as a doctor’s attitudes.
Attitudes and behaviour may be strongly influenced by peer
pressure and custom.8 When looking at the attitudes of Dutch
general practitioners towards the Dutch college of general practi-
tioners national standards for care, Grol found a generally pos-
itive attitude but he also encountered concerns about compulsory
adoption, external regulation and the potential for abuse of guide-
lines.9 He subsequently cited a doctor’s personal characteristics,
including competence, motivation and attitudes, as important
factors in the effective uptake of guidelines.10 In the United
States of America, doctors have had a longer and reportedly less
happy relationship with guidelines.11 In a questionnaire survey of
internists, most thought that guidelines would improve the quali-
ity of care (70%) but some felt that they would be used to dis-
cline physicians (68%), would increase costs (43%) or would
make practice less satisfying (34%).12

Although there has been much editorial comment in the UK,
both positive and negative, on the subject of clinical guidelines,
this has been largely based on the experience of guidelines in the
USA, Canada and the Netherlands. Little is known about the atti-
dutes of general practitioners in the UK to guidelines in primary
care. A study was carried out in Lincolnshire to investigate gen-
eral practitioners’ attitudes to and their reported behaviour con-
cerning clinical guidelines and to investigate factors that might
be associated with attitudes and behaviour.

Method

All 326 general practitioner principals on the medical list of Lin-
colshire Family Health Services Authority were invited to com-
plete a postal questionnaire, between February and October 1994,
on the subject of clinical guidelines. The same questionnaire was
sent to non-respondents after six weeks. Questionnaires were
accompanied by a covering letter in which guidelines were
defined as ‘statements designed to assist decision-making about
appropriate care for a specified clinical condition’.

One section of the questionnaire consisted of factual questions
on the respondent’s characteristics and behaviour. This included
age, sex, membership (or fellowship) of the RCGP and trainer
status. General practitioners were also asked whether they had
written guidelines or carried out clinical audit in their practice,
either individually or with other members of the practice team.
Clinical audit was taken to include medical (disease management
and prevention) and administrative audit, although this was not
specified in the questionnaire.

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The other section of the questionnaire comprised a series of attitude questions on guidelines for 10 areas of concern identified by a search of the literature and by unstructured informal interviews with general practitioner colleagues of the author. Because respondents are more likely to reply in the affirmative, a balanced questionnaire using paired statements expressing opposite attitudes was employed, as has been used elsewhere. The pairs of statements were randomly ordered for each of the 10 areas of concern, giving 20 questions in all. A Likert-type format with five response codes ranging from strongly agree (scoring one point) to strongly disagree (scoring five points) was used for each statement. Mean scores were calculated after reversing the scores for positive statements; thus a higher score always signified a more positive attitude to guidelines. A mean score of more than 3.0 indicated a positive attitude, less than 3.0 indicated a negative attitude and 3.0 indicated equivocation. An open question asking for other comments was included at the end of the questionnaire.

Completed questionnaires were analysed using EPI INFO version 6. Responses were compared using the chi square test for nominal data and a two-tailed Fisher's exact test where the results were in the form of a two-by-two table, with an expected cell value less than five. The two-tailed t-test was used to compare mean scores of RCGP members and non-members because the samples were large and similar in size and the results obtained were similar to those using χ² for trend with ordinal data. The internal consistency of attitude responses using reversed coding for positive statements was calculated using SPSSPC.

Results
Of the 326 Lincolnshire general practitioners who were sent questionnaires, 213 (65.3%) returned completed questionnaires.

General practitioner characteristics and reported behaviour
The characteristics of the 213 respondents are shown in Table 1. Non-respondents were similar to respondents in terms of age, sex and number of practice partners. Many reported having produced written guidelines for patient care (78.4%) and most (92.0%) reported having carried out clinical audit in their practice, either individually or with others in the practice team.

General practitioners who had participated in audit were more likely than those who had not participated in audit to report having written inhouse guidelines (85.4% of 192 versus 20.0% of 15; two-tailed Fisher's exact test, P<0.001; data missing for five respondents). Members (or fellows) of the RCGP were more likely than non-members to report having produced written guidelines (89.4% of 94 versus 73.5% of 113; χ² = 8.3, 1 degree of freedom (df), P<0.01; data missing for six respondents). General practitioner trainers were more likely than non-trainers to report having produced written guidelines (97.0% of 33 versus 77.5% of 173; χ² = 6.7, 1 df, P<0.01; data missing for seven respondents). There was no association between having produced written guidelines and age or sex.

Members (or fellows) of the RCGP were significantly more likely than non-members to report having participated in audit (96.9% of 97 versus 88.7% of 115; χ² = 4.0, 1 df, P<0.05; data missing for one respondent). They were also more likely than non-members to be trainers (26.8% of 97 versus 7.8% of 115; χ² = 13.8, 1 df, P<0.001; data missing for one respondent).

Attitudes to clinical guidelines
The responses to the 20 attitude statements are displayed in pairs in Table 2. Response scores indicated a positive attitude to guidelines in 15 of the 20 statements, a negative attitude in four and equivocation in one, but actual scores must be interpreted with caution as they are derived from ordinal data. A total of 74.2% of respondents agreed/strongly agreed that guidelines can be used flexibly to suit the needs of individual patients and 68.5% agreed/strongly agreed that using well-constructed guidelines would improve patient care. In total, 59.6% of general practitioners disagreed/strongly disagreed that adopting guidelines would increase the risk of litigation. The more widely held negative attitudes, held by more than a quarter of respondents, were that: general practitioners should base guidelines only on what has been scientifically proven (50.7%); the respondent did not become a general practitioner in order to practise 'cookbook' medicine (43.7%); the respondent was worried that guidelines would be used for performance-related pay (31.0%); guidelines would diminish a general practitioner's clinical freedom (25.8%); and guidelines would stifle innovation (25.4%). Many general practitioners, however, agreed/strongly agreed that good practice was not always scientific (75.6%).

The internal consistency of attitude responses using reverse coding for positive statements was calculated: Cronbach's alpha 0.83 (standardized item alpha 0.84).

 Compared with practitioners who reported having produced written guidelines those who reported having produced written guidelines were more positive in 10 statements (significantly more positive for three of these statements), about the same in seven and more negative in three. For example, those who reported having produced written guidelines were more likely than those who did not to agree that 'If I follow accepted guidelines I am less likely to be sued' (68.9% of 167 versus 50.0% of 40; χ² for trend = 9.3, P<0.01) and that 'Implementing

Table 1. Characteristics and reported behaviour of general practitioners responding to questionnaire on guidelines.

<table>
<thead>
<tr>
<th>% of 213 respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>25–34 years</td>
</tr>
<tr>
<td>35–44 years</td>
</tr>
<tr>
<td>45–54 years</td>
</tr>
<tr>
<td>&gt; 55 years</td>
</tr>
<tr>
<td>Data missing</td>
</tr>
<tr>
<td>RCGP</td>
</tr>
<tr>
<td>Member (or fellow)</td>
</tr>
<tr>
<td>Non-member</td>
</tr>
<tr>
<td>GP trainer</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Data missing</td>
</tr>
<tr>
<td>Inhouse guidelines for patient care</td>
</tr>
<tr>
<td>Written individually/with others in practice team</td>
</tr>
<tr>
<td>Not produced at all</td>
</tr>
<tr>
<td>Data missing</td>
</tr>
<tr>
<td>Carried out clinical audit</td>
</tr>
<tr>
<td>Individually/with others in practice team</td>
</tr>
<tr>
<td>Not at all</td>
</tr>
<tr>
<td>Data missing</td>
</tr>
</tbody>
</table>
Table 2. Responses of 213 general practitioners to paired statements in questionnaire on attitudes to clinical guidelines, and comparison of response scores of members of the RCGP with those of non-members.

<table>
<thead>
<tr>
<th>Statement</th>
<th>% of 213 GPs responding</th>
<th>Mean scorea of RCGP Members (n = 98)</th>
<th>Mean scorea of RCGP Non-members (n = 115)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effectiveness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using well-constructed guidelines will improve patient care</td>
<td>66.7 26.3 5.2</td>
<td>3.69</td>
<td>3.76 3.63</td>
</tr>
<tr>
<td>Guidelines would not improve the care I give to patients</td>
<td>25.4 29.1 45.5</td>
<td>3.24</td>
<td>3.44 3.07</td>
</tr>
<tr>
<td>Clinical freedom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can exercise clinical judgement within guidelines</td>
<td>69.0 21.6 9.4</td>
<td>3.88</td>
<td>3.87 3.89</td>
</tr>
<tr>
<td>Guidelines will diminish a GP's clinical freedom</td>
<td>17.8 25.8 56.3</td>
<td>3.46</td>
<td>3.43 3.49</td>
</tr>
<tr>
<td>Innovation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines help doctors to work in the same way</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines stifle innovation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients as individuals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines can be used flexibly to suit needs of individual patients</td>
<td>74.2 16.4 9.4</td>
<td>3.79</td>
<td>3.85 3.74</td>
</tr>
<tr>
<td>Patients are too different for guidelines to be of any use</td>
<td>12.2 27.2 60.6</td>
<td>3.61</td>
<td>3.85 3.40***</td>
</tr>
<tr>
<td>Litigation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If I follow accepted guidelines I am less likely to be sued</td>
<td>64.8 25.8 9.4</td>
<td>3.73</td>
<td>3.90 3.59*</td>
</tr>
<tr>
<td>Adopting guidelines will increase risk of litigationb</td>
<td>20.7 19.7 59.6</td>
<td>3.53</td>
<td>3.48 3.56</td>
</tr>
<tr>
<td>'Top down' versus 'bottom up'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines should be based on what actually happens in general practiceb</td>
<td>69.0 21.6 9.4</td>
<td>3.88</td>
<td>3.87 3.89</td>
</tr>
<tr>
<td>GP's shouldn't bother to develop local guidelines when national guidelines existb</td>
<td>17.8 25.8 56.3</td>
<td>3.46</td>
<td>3.43 3.49</td>
</tr>
<tr>
<td>Scientific basis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good practice is not always scientificbc</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We should base guidelines only on what has been scientifically proven</td>
<td>50.7 24.4 24.9</td>
<td>2.61</td>
<td>2.64 2.58</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find it helpful to follow accepted guidelines</td>
<td>57.3 31.5 11.3</td>
<td>3.48</td>
<td>3.66 3.29**</td>
</tr>
<tr>
<td>I didn't become a GP to practise 'cookbook' medicinec</td>
<td>43.7 29.6 23.5</td>
<td>2.54</td>
<td>2.74 2.37*</td>
</tr>
<tr>
<td>Performance-related pay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would adopt guidelines if there was financial rewardb</td>
<td>24.9 31.5 43.7</td>
<td>2.72</td>
<td>2.64 2.76</td>
</tr>
<tr>
<td>I am worried guidelines will be used for performance-related pay</td>
<td>31.0 33.3 35.7</td>
<td>3.04</td>
<td>3.24 2.86*</td>
</tr>
<tr>
<td>Political overtones</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementing guidelines will demonstrate my competence as a GPc</td>
<td>17.8 34.3 47.4</td>
<td>2.55</td>
<td>2.62 2.49</td>
</tr>
<tr>
<td>Guidelines are the first step to GPs losing independent contractor status</td>
<td>18.3 28.2 53.5</td>
<td>3.42</td>
<td>3.72 3.16***</td>
</tr>
</tbody>
</table>

n = number of respondents who were RCGP members/non-members. Positive questions (first in each pair) have been recoded so that a high score means a positive attitude to guidelines; a score less than three indicates a negative attitude overall. Items where RCGP members have lower mean scores than non-members. Data missing for one respondent. Data missing for seven respondents. Two-tailed t-test: *P<0.05, **P<0.01, ***P<0.001.
guidelines will demonstrate my competence as a general practitioner' (21.7% of 166 versus 5.0% of 40; $\chi^2$ for trend = 5.5; $P<0.05$; data missing for one respondent); they were more likely to disagree that 'Patients are too different for guidelines to be of any use' (63.5% of 167 versus 45.0% of 40; $\chi^2$ for trend = 5.5; $P<0.05$).

**RCGP membership and attitudes to guidelines**

Mean response scores comparing RCGP members (or fellows) with non-members are shown in Table 2. Members (or fellows) of the RCGP expressed a more positive attitude than non-members to guidelines in all but five of the 20 attitude statements. In nine of the attitude statements, RCGP members were significantly more positive than non-members.

**Respondents' comments**

There were many comments, both positive and negative, offered by the general practitioners in this study.

Positive comments included: 'if the majority, at least, agree and follow guidelines then the outcome will be positive', 'guidelines, flow data and protocols help with decision-making when time is limited' and 'guidelines are a means of improving standards'. Many of the positive comments were qualified in some way, for example 'guidelines must be regarded as guidelines to assist in patient management rather than rules which must be followed'. One general practitioner agreed with the 'development of guidelines provided they are supported by audit and not used as a critical tool' and another felt that they were 'as good and flexible as the person that uses them'.

The negative comments included complaints about the 'top down' approach, for example guidelines 'are often drawn up by doctors who are not in full-time general practice' or they are 'a bureaucratic set of rigid barriers within which we must stay like robots'. Several practitioners believed that guidelines were really only applicable to a few conditions such as diabetes and asthma. A few felt strongly that guidelines detracted from personal care with one general practitioner stating that 'a doctor made his or her own decisions on knowledge, experience and the evidence before him or her at the time... guidelines seem to me to invalidate this principle' and another stating that 'because of the diversity of patients' conditions, I believe guidelines... are of limited value and may detract from the individual and personal approach which I believe best serves my patients'. Another general practitioner argued that 'as a small practice we have verbal guidelines'.

General practitioners who were negative about guidelines often expressed their views strongly. The following comment is perhaps typical.

'Protocols increase the risk of litigation, are usually written by people with no earthly idea of what general practice is about and unfortunately not every situation and patient can be pigeonholed like this. There is a place for structured management of well-defined conditions such as diabetes, hypertension and asthma but very little else.'

**Discussion**

It has been previously surmised that there are widely differing attitudes towards clinical guidelines in the UK.16 Much of this speculation may have arisen from the negative experience of guidelines abroad, especially in the USA, rather than in the UK. Little is known about current attitudes and practices with regard to guidelines in general practice in the UK, which has a strong tradition of independence based upon independent contractor status and where there may have been less exposure to guidelines.

With a response rate to the survey of 65% there may have been selection bias. Respondents, however, closely matched non-respondents for demographic characteristics, such as age, sex and number of practice partners. Although the findings are important and relevant to Lincolnshire, further study would be needed before the results could be extrapolated to other counties. However, there is no obvious reason why the characteristics, attitudes and behaviour of Lincolnshire general practitioners should differ from those of general practitioners in other areas of the country.

The questionnaire did not distinguish between expert systematically-based guidelines and local practice-based guidelines, although attitudes may differ towards each, and there may have been confusion in some respondents' minds between the two. Little is known about the content of practice-based guidelines although it is unlikely that there is sufficient time or resources for their systematic development in primary care. The low rate of non-response for individual questions and the additional comments, which accorded well with the responses to the attitude statements, suggested that no major issue had been missed. A qualitative study may have been a less biased method of exploring these beliefs but would have required more time for data collection and analysis.

Perhaps surprising is the finding that 78% of responding general practitioners reported having produced inhouse guidelines. The figure may have been exaggerated by the requirements for health promotion in the 1990 contract for general practitioners where funding is usually dependent on practice guidelines approved by family health services authorities. This may not be the whole explanation since clinical audit has never been a contractual obligation and yet was reported to have been voluntarily undertaken by 92% of principals in the study.

Another explanation for the high proportion of principals who had produced inhouse guidelines, supported by the findings presented here, is that general practitioners feel largely positive towards guidelines. Guidelines as defined in the covering letter arguably encompass both non-systematic practice guidelines and systematic research-based guidelines, although practitioners may have different opinions towards guidelines which they have developed or adapted and those that are available at national or local levels.

Most respondents believed guidelines to be useful in delivering personal care flexibly and to be effective in improving patient care. This may be particularly true for larger group practices where there is more likely to be specialization and delegation of tasks in the primary care team. Most practitioners did not believe that autonomy would be threatened or that guidelines would open the floodgates of litigation.

The most common negative attitudes were that guidelines should be based only on what has been scientifically proven, that doctors did not become general practitioners to practise 'cookbook' medicine, a concern that guidelines may be used for performance-related pay and that they may diminish clinical freedom or stifle innovation.

RCGP membership was associated with a more positive attitude to guidelines. In nine of the 20 attitude statements, RCGP members (or fellows) were significantly more positive than non-members whereas one significant association would have been expected by chance, assuming $P<0.05$. The well-publicized activity of the RCGP in promoting guidelines may have influenced members' attitudes.17 Alternatively, general practitioners who are more positive towards guidelines may be more likely to seek and achieve RCGP membership. These results reinforce the RCGP's continuing role in developing, implementing and evaluating guidelines in primary care.
There was also a strong association between reported guideline writing and clinical audit activity. This is not surprising since the development of guidelines is a natural extension, if not an integral part, of audit. The audit cycle requires the establishment of criteria and standards against which performance can be measured. Criteria and standards are essential elements for evaluating and measuring change in this process. They may be adopted by the participants as a guideline for good practice at the outset or may later be developed into a guideline. Standard setting is based on best an explicit, or at worst an implicit, guideline and many audits are based on measuring care against established guidelines. It has also been suggested that the use of guidelines in medical audit may increase their uptake and that it may be beneficial to integrate the ‘guideline industry’ with the medical audit initiative. Finally, the improvements in practice that are the goal of medical audit are often implemented as guidelines.

This survey suggests that many general practitioners in the Lincolnshire Family Health Services Authority area have produced written inhouse guidelines. The existence of inhouse guidelines is largely sustained by positive attitudes among general practitioners about the effectiveness and benefits of guidelines to patient care. The notion that widespread negative attitudes towards guidelines may have adversely affected their implementation is not supported by the findings here. The most important concern was about the scientific validity of guidelines, although many general practitioners conceded that good practice is not always scientific. Misgivings about ‘cookbook’ medicine, target payments, reduced clinical freedom and stifling of innovation were fears of over a quarter of respondents. Local ownership of guidelines is an important issue for general practitioners despite suggestions that this may not influence adherence to them in practice. This present survey did not look at how general practice guidelines were arrived at, or at their content or validity, and these may be areas for future study. The positive attitude of members of the RCGP suggests that they welcome the RCGP’s guideline initiative. The questions of whether participation in audit encourages the development and implementation of guidelines and of whether incorporation of guidelines into clinical audit is an effective means to disseminate systematic research-based guidelines may be further avenues for study.

References

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From the President: Dame Josephine Barnes DBE DM FRCP FRCOG

ROYAL MEDICAL BENEVOLENT FUND - CHRISTMAS APPEAL 1995

The Royal Medical Benevolent Fund meets every month to consider cases and to allocate funds to over 900 people, young and old. The proceedings are, of course, confidential but they reveal the often desperate needs unexpected in members of a great profession and their families.

Christmas may be especially poignant for those suffering from poverty or bereavement. The Christmas Appeal provides a gift for everyone and has always been generously supported. Due to your generosity in 1994, we were able to increase the individual gifts to children, according to their age.

Very many letters of thanks are received from those to whom a little can mean so much, a special meal or extra gifts. The needs increase year by year so I hope that the records of previous years can be equalised or, better still, exceeded.

Contributions marked “Christmas Appeal” may be sent to the Secretary, Royal Medical Benevolent Fund, 24 King’s Road, Wimbledon, London SW19 8QN or to the Treasurer or Medical Representative of your local guild of the RMBF.