Family Practice
© Oxford University Press 1998

Vol. 15, No. 2
Printed in Great Britain

Use of guidelines in primary care—practitioners' perspectives

Carole Langley, Alex Faulkner, Chris Watkins, Selena Gray and Ian Harvey

Langley C, Faulkner A, Watkins C, Gray S and Harvey I. Use of guidelines in primary care—practitioners' perspectives. *Family Practice* 1998; **15**: 105–111.

Background and objectives. Concern about the inadequate take-up of guidelines in general practice has concentrated on problems arising from the process of their development and implementation. However, these perspectives fail to take account of the needs, attitudes and problems of GPs themselves. In this study we aimed to identify barriers to the use of guidelines and opportunities for tackling them, from the point of view of the GP, so that future guideline development and policy could be more sensitive to the needs of GPs in the environment in which they work.

Method. Twenty in-depth semi-structured interviews were audiotaped with GPs from within the Avon Health Authority area, representing GPs with different backgrounds and working environments. The transcribed data collected were analysed using a grounded theory approach.

Results. Utilization of guideline information is complex. GPs' appraisals of the value of guidelines interact with prior knowledge and beliefs, practicalities of existing information storage and retrieval systems, and individual working practices. Conditions where guidelines are most likely to be referred to may be those either very rarely or very commonly presenting in general practice. Key issues for the uptake of guidelines in the consultation are: general preference for certain formats of presentation; reputability and ownership; use of guidelines in shared decision-making; scope for computer-based systems; and GPs' attitudes to time pressures on information-seeking in relation to tolerance of uncertainty.

Conclusion. Local initiatives might usefully explore the possibilities of supporting development of guideline-retrieval systems customized for individual GPs or practices. Novel means of stimulating 'ownership' and demonstrating reputability should be sought. The analysis provides a framework for understanding the complexities of the processes of GPs' use of guidelines in practice which can be useful in explaining the results of trials of guideline effectiveness. Guideline implementation occurs in the context of conflicting pressures for clinical autonomy and professional standardization and quality improvement.

Keywords. General practice, practice guidelines, qualitative.

Introduction

The variation in the way in which presenting problems of patients are managed by GPs is under increasing scrutiny. Guidelines, defined as 'recommendations for patient management that identify one or more strategies for treatment'[1] have been identified as a means for overcoming this variation by standardizing and improving the quality of care. Guidelines can be applied to all aspects of patient care including referral,[2] disease management,[3,4] prescribing[5,6] and preventive care. Owing to the diversity of different problems with which they are faced, and the unpredictability with which they are presented in a consulting session, GPs have neither the time nor the resources to review original published research to identify best practice. The well-constructed guideline represents a way of providing such up-to-date information in an accurate and concise format.[7] It is expected that providing GPs with guidelines will lead to more effective clinical practice[8] and therefore better

Received 10 September 1997; Accepted 3 November 1997.
Department of Social Medicine, University of Bristol, Canynge Hall, Whiteladies Road, Bristol BS8 2PR, UK.

patient care.[9] The following an agreed set of guidelines would also mean that care would be standardized across any particular population, thus enhancing cost effectiveness[10] and creating more accurate planning of health care services.[11] There is concern about the apparent lack of take-up of guideline information by GPs in their day-to-day consultations with patients.[12–14] Studies aimed at improving this situation have considered three broad areas. The first concerns the way in which guidelines are developed. This approach includes questions about the process of development, who should be involved and what types of evidence should be included.[8,15–20] The next area of concern relates to dissemination and implementation.[7,10,11] Here a frequent approach is that of evaluating and/or improving physician compliance using techniques more often associated with health promotion, which address the gap between intent and action by use of reminders,[21] incentives[22] and/or peer appraisal.[3] Such an approach tends to be mechanistic in that it assumes a lack of judgement by the GP, and tends to portray the information in guidelines as external to GPs working practices. The final approach focuses on the views and working practices of GPs to identify possible barriers to the use of guidelines. It is this area that is examined in this study. Compared with the twin concerns for guideline development and for implementation, practitioners' own perspectives have received scant attention.[23,24] The dominant approach has been to frame the issue, in reseachers' or policymakers' terms, as a 'problem' of lack of guideline implementation or as 'doctors failing to follow guidelines'.[25] The majority of studies use questionnaires which are based largely on published literature.[24,25] This means that the hypotheses tested by the researcher may not match GPs' concerns in practice, and may evoke responses which are perceived as being professionally acceptable but do not represent reality.[21] Our study, in contrast, sought to address the question from the GPs' viewpoint using qualitative inquiry methods without introducing implicit expectations of appropriate responses.

A qualitative approach is particularly suitable for exploring complex human behaviour such as that posed by 'why?' and 'how?' questions[26] and has recently been used to explore reasons for GPs' behaviour.[27,28] In order to draw out GPs' concerns from their own viewpoints it is necessary that the enquiry is centred on them and conducted in a non-judgmental manner.

Methods

Respondents

The Avon Health Authority register of GPs was used to invite 20 GPs to take part in in-depth interviews. They were chosen to represent GPs in different categories:

- Number of partners in practice
- Gender
- Location (urban/rural, social class mix of population served)
- Ethnicity (of practitioner and list)
- Fundholding status

The only excluding factor was that they should not be working in any of the practices in which staff of the division of academic primary care worked. The selection was otherwise random.

Interview schedule

An initial literature search used four databases (Medline, EmBase, Psychlit, Sociofile) plus relevant bibliographies and discussions with colleagues and contacts in the field to identify a range of issues associated with the use of clinical guidelines. These included more general aspects, such as use of computer systems in general practice, uncertainty and decision-making. The full list of issues was discussed by the project team, which consisted of two social scientists, a full-time GP and two public health physicians. This produced a shortlist of areas for the interview framework:

- Opening comments to elicit GPs' overall perspectives/perceived problems
- Dilemmas and whether these could be addressed using evidence-based medicine
- Perceived need for information
- Information-seeking behaviour including source, storage, retrieval
- Guidelines as a source of information—amount, content, presentation and assimilation
- Evaluation of information and guidelines in assisting everyday decisions
- Perception of guidelines as authoritative/gold standard/use in litigation
- Difficulties experienced, e.g. in terms of knowledge gaps and patient characteristics and how guidelines might help

This list was used to help the interviewer to build on responses and elicit detailed accounts. Topics of interest would arise according to the GPs' concerns and could therefore be covered in any order.

Procedure

Five exploratory interviews were conducted at the GPs' surgeries and were audiotaped. The theme of information in general was used in order not to make restrictive assumptions about GPs' use of resources for information and advice and thus to permit views about guidelines in the narrow sense to be set in context. Some examples of recent printed guidelines were used to elicit

comments on content, presentation and practical usefulness.

A further fifteen interviews were carried out using the same schedule, although unpredicted items which arose during the earlier interviews, for example, the role of practice nurses, were included in later encounters. With one exception, interviews were held within the practice premises. All the interviews were audiotaped and full transcriptions made.

Analysis of data

A 'grounded theory' approach to analysis[29,30] was used to organize the data in order to produce a meaningful pattern. This process consisted of dividing up the raw data, in the form of transcripts, into simpler text units. Each of these could then be compared with text from other transcripts and units which referred to similar notions could be separated from those which did not. Each grouping could then represent a provisional category for classification. This process was repeated, using more data and adjusting the scheme of categorizations until it included as much of the data as possible.

In the first stage of analysis, transcripts were inspected and text units gathered into emergent categories by the interviewer. These were then tested by being applied to transcripts by other members of the research team, working blind to the interviewer's categorizations. This process produced a coherent scheme of analysis which could be applied to all the interview data. Immersion in the scripts and the research team's joint assessment suggested that data were related to three broad areas: (i) characteristics of the information/guidelines *per se*; (ii) GPs' perspectives and behaviour; and (iii) external variables which influenced the way that GPs interacted with guidelines. Each of these provided three themes within which data could be allocated to more defined areas or categories (see Fig. 1). Originally, 75 codes were established in order to gain maximum sensitivity to the data. Members of the research team individually wrote codes on samples of scripts. Early agreement confirmed that the scheme was able to differentiate between individual text units, whilst providing a coherent conceptual framework.

The initial scheme was applied to the data from the remaining 15 interviews. Categorizations were firstly made by hand and eight scripts were checked against the categorizations made by other team members. Discrepancies in classification were resolved by discussion.

Organization of the data was completed with the aid of the NUDIST (Non-numerical Unstructured Data Indexing Searching and Theorising) program.[31] This enabled multiple code allocation, reorganization where necessary and a means of calculating how much data pertained to each area. Issues that were mentioned by 15 or more respondents accounted for approximately 80% of the coded material.

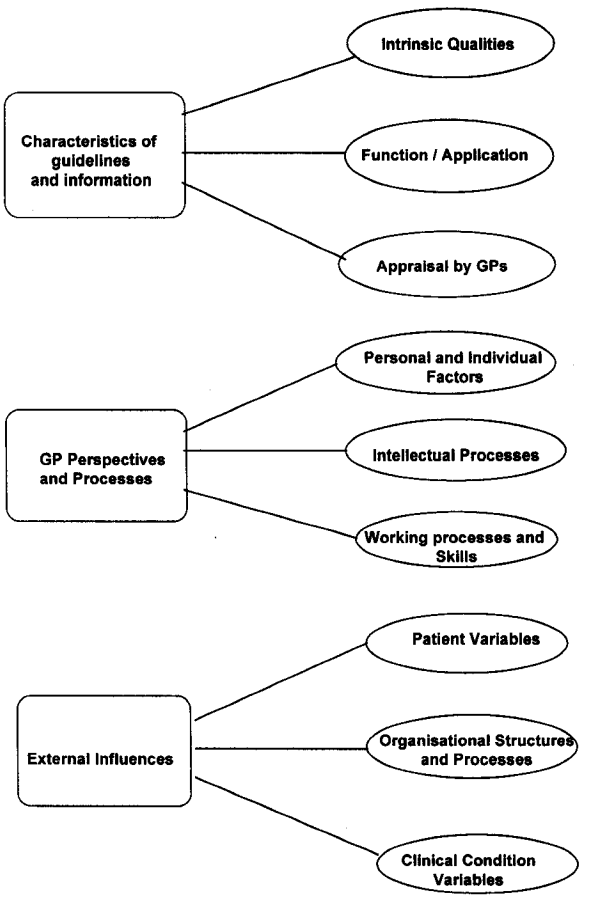

FIGURE 1 *Overall themes used in analysis*

Results

The results presented here are drawn from the categories of comments made by 15 or more respondents. These are outlined in Tables 1 and 2. The findings are presented in each subsection below in order of importance, as indicated by numbers of respondents and responses, within the six major themes. Apart from one category, 'perspectives of patients', which was reallocated under the theme of 'GP perspectives', very few comments in all were classified in the third broad area of 'external influences'.

Intrinsic qualities

Despite GPs appreciating information, especially that which was locally relevant, "You want one page" or "I can't go through all that lot" were common reactions to detailed guidelines. A summary or checklist could be more concise and therefore seen as more appropriate. Having a national source was seen as a positive characteristic only if the recommendations were non-controversial. With the exception of those concerning referral, guidelines needed to include considerable GP input and feeling of 'common ownership' if they

TABLE 1 *Themes and categories from analysis of guidelines and information characteristics*

Theme	Category
Intrinsic qualities	Amount, e.g. number or length
	Type, e.g. referral/ organizational
	Source, e.g. national or local
	Presentation, e.g. flowcharts, A4
	Information to be adapted
Function or application	Prompt or guide
	An easy reference
	Information for patients
	Medico-legal use
Appraisals guidelines by GPs	Weight of authority behind
	Worth or value
	Compatibility with usual practices
	Practical applicability
	Realistic

TABLE 2 *Themes and Categories from analysis of GP-related factors*

Theme	Category
Personal and individual variables	Attitudes to IT
	Perceptions of time
	Perceptions of patients
Intellectual processes	Expressions of uncertainties
	Knowledge/experience
	Information-seeking behaviour
	Taking on new knowledge
	Opportunities for reading
Working processes and skills	Actual computer use
	Decision-making in general practice
	Communications with professionals outside one's own practice
	GPs' personal organization strategies
	GPs' retrieval strategies
	Working relationship with patient
	Communications within the practice

were to affect everyday management. There was a wide range of comments concerning presentation but they all emphasized simplicity and brevity with book forms, complex flowcharts and composite 'newspaper' layout being viewed negatively.

The function/applications of guidelines

Almost all respondents considered guidelines to be an 'ideal' which could be adjusted to suit circumstances or used in conjunction with GP knowledge. The overall attitude could be summed up by ". . . because they are called guidelines and not edicts or hard and fast rules, we, we have got the choice . . . to use our discretion". There was general agreement that guidelines could serve as an easy reference to communicate most recent recommendations but this was very much tempered by the necessity to be clear and 'more cut and dried'. Ease of reference could be provided by both paper summaries and computer systems, as long as there were not "too many buttons to press" or "too many screens to go through". They could be used to explain treatment to patients and purpose-written leaflets could empower patients to ask questions. In order to be effective in this function, however, written information needed to take literacy levels into account. Patients might have disregarded mass-produced documents because they were not seen as pertaining to the individual or because they were more used to obtaining information verbally. Although there was a general feeling that guidelines might be used in litigation in the future, few of the GPs felt threatened by the possible application in legal cases where, they considered, the Bolam test[32] of reasonable care would persist in the foreseeable future.

Appraisals of guidelines

The value of a guideline was firmly connected with its practical usefulness and relevance to general practice. This was often perceived to be greater if the information originated with known and trusted local bodies or consultants. This did, however, raise the issues of the validity of the evidence base and whether the originator had a good working knowledge of general practice.

It was generally felt that guidelines could not always apply to individual cases even with GP interpretations. Many recommendations had resulted from work in hospital settings and did not "give useful results that are then transferrable into the real work place". The feeling that guidelines do not always apply to everyday situations results in a selective take-up of guidelines which tend to be in accordance with the GP's usual practices. The appraisal of guidelines emerged as a complex process requiring assessment of evidence, local knowledge and prediction of individual outcomes, judgements which include a large individual element.

GPs' personal and individual variables

(a) Attitudes to IT. The potential for using a computer to access information was generally acknowledged, but it was felt that it would have to be very easily accessed. Guidelines would have to be limited and optional. Whereas some GPs envisaged an 'on-line library' or other separate database ("A good CD ROM would make it very easy"), others preferred information to

be linked with patient records. Some of the most positive comments came from GPs with very little computer experience, whilst current use of the latest generation of GP systems gave rise to a long list of deficiencies including "too limited", "too many screens to plough through", "still based on paper systems". Half the GPs admitted to limited skills and/or underuse of their system. Six had experienced a computerized decision support system (either Prodigy or Mentor), but half of these had abandoned the facility.

(b) Perceptions of time. Half the GPs reported having no time to do what they perceived as 'extras', such as evaluating information or keeping up to date. They could be described as having a 'White Rabbit' persona, feeling themselves to be under constant pressure of time, as is Lewis Carroll's character. Thus, they felt unable to take up consultation time with activities such as inputting or retrieving information.

(c) Perceptions of patients. Commonly, GPs regarded their patients as whole beings who also brought non-medical needs to the surgery. Since compliance is affected by the information given, this had to be adjusted to suit individuals. Patient leaflets were generally seen as empowering and one GP suggested that guidelines might be based on the sort of things patients ask, such as when an improvement could be expected.

GPs' intellectual processes

All the GPs except one admitted there were times when they were unsure about treatment and/or referral and twelve said that they would look up information relating to referrals or treatment. They felt that they would often know what was in the guidelines anyway because they had assimilated them or had picked up the knowledge necessary to deal with the majority of presentations through experience and professional life. They were, therefore, more likely to seek advice concerning conditions which they did not see very often or conditions where practice was changing. A good baseline knowledge was needed in order to recognize knowledge gaps and evaluate information, a view feelingly expressed by one GP: "you have to be reasonably up with the game in order even to have a judgement about whether the guideline's sensible or not, even to know if you ought to ask a question about it". In addition to asking colleagues and contacting local consultants, there was a wide range of sources of information including computer decision support systems, BNF/MIMS, textbooks, hospital/FHSA, journals and guidelines. Their biggest problem was lack of time for reading and they were therefore in favour of easily assimilated information and guidelines. Any resulting change in working practices they would see, however, as cautious and 'evolving'.

GPs' working practices and skills

In addition to clinical knowledge, decisions are based on knowing the patient and local facilities. Although GPs often refer to colleagues and are likely to contact professionals outside their own practice, they felt that decisions depended on their own individual assessments. One of the most important inputs to this was listening to the patients and communicating on the right level, although they sometimes needed to negotiate around patients' demands.

Disorganization was an important theme. Organization of incoming information was reported as a major task, with a variety of paper storage systems in use, none of which coped with all types of presentation format. Most commonly, A4 ring binders were used to group information according to clinical condition. Retrieval was often slower than it should be, but GPs were unlikely to look for things unless they felt that they were needed.

Desktop computers were used mainly for patient records, with only a few GPs using e-mail and limited databases. Although it was felt that computers should be able to help with information storage and retrieval, they would have to be far less clumsy than the present systems, which were perceived to be incapable of holding a user-friendly database, poor at word-processing and without links to rest of the NHS. Overall the feeling was that "we should be able to do better!"

Discussion

The extraction of major themes from this rich and varied source of data leads inevitably to some simplification. However, this is necessary in order to clarify and illuminate those factors which affect the information-handling behaviour of GPs within their working environment. Our analytic framework highlights the interactions between GPs and information resources in the environment in which the consultation takes place.

GPs may look up information only occasionally but they may draw on guidelines in a more general way. They can have value both as a 'look-up' resource and as a general educational tool. Their accounts suggested that new knowledge can be assimilated and so become available as part of their growing knowledge base. This is linked to their preference for guidelines which are brief, clear and simple. There is a tension here, however, because oversimplification could damage the perceived quality of guidelines' recommendations. In meeting these requirements, guideline developers need also to establish reputation by reference to source and evidence.

Conflicting principles are also in evidence in the issues of ownership, reputation of sources and GP workloads. Application of guidelines in general practice was felt to be more likely if GPs (or someone who

knew general practice) were involved in their construction. On the other hand, it was widely recognized that general practices can differ greatly, and that most GPs have little or no time to perform research or evaluations. The time taken to assess some guidelines could outweigh their potential as a readily available source of information. Guideline developers need to address how ownership can be enabled in these complex professional and working environments.

The style and form of communication in the context of the GP–patient relationship is of course of central importance, and the introduction of guidelines into the consultation must take this into account. GPs are increasingly using guidelines as part of shared decision-making processes in the consultation, and this will have an impact upon the guideline design process.

The physical form in which guidelines appear is important to GPs. Storage systems, largely by default, relied on what was available. Information pertaining to common ailments was often the easiest to locate, but less likely to be needed, whereas that concerning rarer conditions was often more difficult to find. Guidelines which did not physically fit into the main system of storage were likely to be 'filed' out of context. It would appear that storage activities are often performed as an administrative procedure rather than as a prelude to retrieval.

Current reliance on bulky paper systems to hold information about up-to-date medical practice seems an anachronism, but are the current GP computer systems capable of providing an easily accessed database? GPs with relatively little IT experience were more optimistic than those who were more experienced and who could furnish more detailed criticisms of their systems, and of their own limitations. Recently introduced decision support systems are designed to interact with the patient record. Whilst this might be desirable in terms of integration and instant prompting, those currently in use were perceived as clumsy or not sufficiently discriminating. On the other hand, a system providing a separate database would require expensive updating of equipment.

Conclusion

Guidelines hold the promise of being the vehicle by which research findings may be brought more directly to bear in primary care consultations. One barrier on this path, the applicability of evidence to the presenting problems which the GP actually sees, needs to be addressed during the development stage. There is a clear need for the general practice viewpoint to be included more when deciding content and presentation of individual guidelines, and in designing suitable systems, be they computer-based or otherwise. Ease of reference or retrieval is certainly a prime requirement, and there may be scope for local initiatives to develop in-house retrieval systems tailored to individual or practice working styles. But this in itself is not enough to guarantee widespread use in practice. Previous research has emphasized the importance of 'ownership' in principle, and our examination of detailed issues in the working environment suggests that innovative means of stimulating uptake of guidelines and their perceived reputability should be sought.

The analysis presented here offers an analytical framework which is capable of giving a fine-grained account of the complex of different factors involved in GPs' information-related behaviour in their working environment. Evaluation of guideline effectiveness using clinical and patient outcome measures is an important aspect of the process of improving evidence-related practice, but it is necessary for policy-makers and researchers in primary healthcare to recognize the complexity of these information-related behaviours in interpreting the results of studies of the impact of guidelines on practice.

Many pressures exist around GPs' use of guidelines in the consultation. As in other occupations, individual professional autonomy conflicts with pressure toward standardization of services, and tacit everyday working practices conflict with pressures to make standards of service explicit and grounded in a research base. Thus changes in the overall patterns of GPs use of guidelines in patient care will be the result of interaction between these conflicting, but constructive, pressures.

Acknowledgements

This study was supported by a grant from the NHS Executive South & West Research and Development Directorate. Thanks are due to all the participants and to colleagues who provided constructive comments.

References

[1] Sutton PA. *Clinical guidelines evaluation.* Final report of Department of Health guidelines evaluation project. Department of Public Health Medicine, University of Hull.

[2] Bailey J, King N, Newton P. Analysing General Practitioners' Referral Decisions II. Applying the Analytical Framework: Do High and Low Referrers Differ in Factors Influencing their Referral Decisions? *Fam Pract* 1994; **11:** 9–14.

[3] Grol R. Implementing guidelines in general practice care. *Qual Health Care* 1992; **1:** 184–191.

[4] Schellevis FG, van-Eijk JT, van.den Lisdenk EH, van den Velden J, van Weel O. Implementing guidelines in general practice. *Int J Qual Health Care* 1994; **6:** 257–266.

[5] Onion CWR, Dutton CE, Walley T, Turnbull CJ. Local clinical guidelines: description and evaluation of a participative method for their development and implementation. *Fam Pract* 1996; **13:** 28–34.

[6] Evans JStBT, Harries C, Dennis I, Dean J. General practitioners' tacit and stated policies in the prescription of lipid lowering agents. *Br J Gen Pract* 1995; **45:** 15–18.

[7] Royal College of General Practitioners. *The development and implementation of clinical guidelines.* Report from general practice, v. nr 26. London: RCGP; 1995.

[8] Thomson A. Effect of warning concerning putative adverse effects. *Soc Sci Med* 1993; **37:** 883–886.

[9] Johnston ME, Langton KB, Haynes RB, Mathieu A. Effects of computer-based clinical decision support systems on clinician performance and patient outcome. *Ann Intern Med* 1994; **120:** 135–142.

[10] Grimshaw JM, Hutchinson A. Clinical practice guidelines—do they enhance value for money in health care? *Br Med Bulletin* 1995; **51:** 927–940.

[11] *Effective Health Care.* Implementing clinical practice guidelines. No. 8. NHS Centre for reviews and dissemination. York, University of York.

[12] Brook RH. Practice guidelines and practising medicine. Are they compatible? *JAMA* 1989; **362:** 3027–3030.

[13] Delamothe T. Wanted: guidelines that doctors will follow. *Br Med J* 1993; **307:** 218.

[14] Klazinga N. Compliance with practice guidelines: clinical autonomy revisited. *Health Policy* 1994; **28:** 51–66.

[15] Eddy DM. Practice policies: where do they come from? *JAMA* 1990; **263:** 1265–1275.

[16] Woolf SH. practice guidelines: a new reality in medicine. II Methods of developing guidelines. *Arch Internal Med* 1992; **152:** 946–952.

[17] Tanenbaum SJ. What physicians know. *N Engl J Med* 1993; **329:** 1268–1270.

[18] Gill P, Dowell AC, Neal RD, Smith N. Evidence based general practice: a retrospective study of interventions in one training practice. *Br Med J* 1996; **312:** 819–821.

[19] Haines A. The science of perpetual change. *Br J Gen Pract* 1996; **46:** 115–119.

[20] Dans PE. Credibility, cookbook medicine, and common sense: Guidelines and the college. *Ann Intern Med* 1994; **120:** 966–967.

[21] McGuire LB. A long run for a short jump: Understanding clinical guidelines. *Ann Intern Med* 1990; **113:** 705–708.

[22] Worrall G, Chaulk P. Hope or experience? Clinical practice guidelines in family practice. *J Fam Pract* 1996; **42:** 353–356.

[23] Newton J, Knight D, Woolhead G. General practitioners and clinical guidelines: a survey of knowledge, use and beliefs. *Br J Gen Pract* 1996; **46:** 513–517.

[24] Siriwardena AN. Clinical Guidelines in primary care: a survey of general practitioners' attitudes and behaviour. *Br J Gen Pract* 1995; **45:** 643–647.

[25] Feder G, Griffiths C, Highton C. Practice guidelines improved reporting of patient variables. *Evidence-Based Med* 1996; **1(4)** p. 127.

[26] Griffiths F. Qualitative research: the research questions it can help answer, the methods it uses, the assumptions behind the research questions and what influences the direction of the research. *Fam Pract* 1996; **13:** S27–30.

[27] Elder NC, Miller WL. Reading and Evaluating Qualitative Research Studies. *J Fam Pract* 1995; **41:** 279–285.

[28] King N, Bailey J, Newton P. Analysing general practitioners' referral decisions. *Fam Pract* 1994; **11:** 3–8, 9–14.

[29] Glaser B, Strauss A. *The Discovery of Grounded Theory: Strategies for Qualitative Research.* Chicago: Aldine; 1967.

[30] Strauss AL, Corbin J. *Grounded Theory Methodology: An Overview.* In Denzin N, Lincoln YS (eds). *Handbook of Qualitative Research.* London: Sage; 1994: 273–285.

[31] Richards T, Richards L. The NUDIST Qualitative Data Analysis System. *Qualitative Sociology* 1991; **14:** 307–324.

[32] Dimond B. Standard setting and litigation. *Br J Nurs* 1994; **3:** 235–238.