



# University of HUDDERSFIELD

## University of Huddersfield Repository

Marshall, Joyce, Mead, Paula, Jones, Karen, Kaba, Evridiki and Tovey, Phillip

Implementing evidence-based practice in primary care: perceptions of a multifaceted programme to encourage guideline use

### Original Citation

Marshall, Joyce, Mead, Paula, Jones, Karen, Kaba, Evridiki and Tovey, Phillip (2002) Implementing evidence-based practice in primary care: perceptions of a multifaceted programme to encourage guideline use. *Journal of Clinical Excellence*, 4 (2). pp. 223-229. ISSN 1475-9896

This version is available at <http://eprints.hud.ac.uk/id/eprint/8213/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: [E.mailbox@hud.ac.uk](mailto:E.mailbox@hud.ac.uk).

<http://eprints.hud.ac.uk/>

## Original articles

# Implementing evidence-based practice in primary care: perceptions of a multifaceted programme to encourage guideline use

Joyce Marshall MPH

Research Fellow, Centre for Research in Primary Care, University of Leeds, Leeds, UK

Paula Mead MSc

Research Associate/Health Visitor

Karen Jones MSc

Research Associate/Project Co-ordinator

Department of Primary Care, University of Newcastle, Newcastle upon Tyne, UK

Evridiki Kaba PhD

Research Associate, Department of Health Sciences and Clinical Evaluation, Alcuin College, York, UK

Phillip Tovey PhD

Principal Research Fellow, Centre for Research in Primary Care, University of Leeds, Leeds, UK

## ABSTRACT

**Objective** To explore the acceptability of the various elements of a multifaceted intervention designed to facilitate the process of guideline implementation by primary care teams and to understand constraints to the use of guidelines in this setting.

**Design** A descriptive qualitative study using semi-structured group interviews.

**Setting** Primary care.

**Participants** 34 general practitioners (GPs), six practice nurses and one practice manager were involved in group interviews from ten general practices.

**Results** The themes identified reflected the elements of the intervention: benefits and problems of critical appraisal workshops; perceptions of the usefulness of guidelines; responses to audit feedback and the impact of facilitation. Even where

practitioners were committed to guideline implementation their use was not always straightforward. Aspects such as the maintenance of a good relationship with the patient and the influence of colleagues in secondary care were seen as important. Issues of time and resources were also highlighted.

**Conclusions** Implementation of clinical guidelines is a complex activity. Interventions used to encourage their use should be flexible and directly relevant to practical issues. Local ownership of the process is important but agreed deadlines for activity may be important to facilitate action.

**Keywords:** audit, clinical effectiveness, critical appraisal, evidence-based practice, guidelines, practice facilitation

## Introduction

Evidence-based practice has gained considerable prominence in the last decade. It promotes the use of research evidence in decisions about the effective-

ness of healthcare procedures.<sup>1</sup> Clinical guidelines can be effective as a means of implementing research evidence in some circumstances, may reduce inappropriate variations in practice and are central to the Government's health reforms.<sup>2–6</sup> The National Institute for Clinical Excellence (NICE) produces and

disseminates national guidelines, and clinical governance provides a framework of accountability and an implementation mechanism for NICE guidelines.<sup>7</sup>

Despite the widespread use of guidelines implementation is not guaranteed.<sup>8,9</sup> The contexts within which guidelines are implemented vary considerably. National guidelines therefore may need to be adapted to suit local circumstances.<sup>10</sup>

This paper reports the findings of a qualitative study that aimed to explore issues arising from, and perceptions and acceptability of, the various elements of an intervention designed to encourage the use of evidence-based guidelines. It was one aspect of the evaluation of this intervention and aimed to offer explanation and understanding of how the intervention was received within different practices. The intervention (described in Box 1) was effective overall in encouraging primary care teams to use evidence-based guidelines and is reported fully elsewhere.<sup>11</sup>

## Participants and method

General practices were recruited to the study by two researchers (JM and PM) from a list of all practices in the Northern and Yorkshire region. Each practice was recruited via one interested person who engaged other members of the team in the research. Each team subsequently elected to implement one of three evidence-based guidelines: stable angina, persistent wheeze in adults or venous leg ulcers. The issues surrounding the implementation of each of these guidelines were very different; therefore this paper

presents only those arising from the use of guidelines for stable angina (ten practices).

Researchers (JM and PM) conducted two group interviews approximately six months apart in each practice, one before the intervention and one afterwards. Semi-structured interview schedules, developed from the feasibility study, were used to explore the existing process of care and issues arising from attempts to implement the evidence-based guidelines.<sup>14</sup> General practitioners' (GPs') attitudes to, and perceptions of, guidelines, audit, facilitated visits and critical appraisal training were also specifically sought. The specific topics of questioning in each interview are outlined in Box 2. The main purpose of this qualitative investigation was to gain a general understanding of aspects of the implementation process and, more specifically, the usefulness of the various elements of the intervention. These interviews were audio-recorded, with participants' consent, and fully transcribed.

Data were coded and organised into themes. It has been argued that shared, rather than individual, understanding of the data should be demonstrated to increase validity.<sup>15</sup> In this study one researcher (EK) categorised and organised the data into themes based on the different elements of the intervention and this was subsequently entered into a framework and analysed further by the two researchers (JM and PM) who had collected the data.<sup>16</sup> This made it easy to identify variation between practices and to see at a glance how responses to each component of the intervention related to the others. In the reporting of the results, efforts have been made to include both generalities and differences, even if those differences were only seen in one general practice.

### Box 1 Four linked interventions to encourage the use of evidence-based guidelines

- 1 Two members of each of the ten intervention practices were offered critical appraisal training. This one-day workshop used the framework adapted by the Oxford Critical Appraisal Skills Programme (CASP) and introduced the evidence-based clinical guidelines.<sup>12</sup>
- 2 The guidelines introduced at the workshop and subsequently used throughout the research project were those produced by the North of England Stable Angina Guideline Development Group.<sup>13</sup>
- 3 Clinical practice was audited by researchers at the beginning of the study and then again after six months to measure compliance with the guidelines. The recording of three Grade I or II recommendations in the guidelines was assessed in each record (Grade I = consistent findings from a majority of multiple acceptable studies; Grade II = based on a single acceptable study or inconsistent finding in multiple acceptable studies). Data were collected from a random sample of the records of patients identified as having stable angina in each practice and were sent to another researcher who prepared practice-specific summaries, including anonymous comparisons with other practices.
- 4 Visits were arranged to each practice to discuss guideline implementation. At these meetings the results of the audits were fed back to participants. Practices were not directed in how to use the guidelines but were offered support by researchers if required.

### Box 2 Summary of topic guide used for semi-structured group interviews

#### Group interview prior to use of guidelines

- Reaction to the critical appraisal workshop
- Current care for patients with angina
- Responses to guidelines (in general and specific guidelines)
- Feedback baseline audit – responses to this

#### Group interview after the project intervention (six months later)

- What did they hope to achieve during the study?
- What has happened as a result of the study?
- Reactions to different aspects of the intervention:
  - critical appraisal training
  - guidelines
  - audit with feedback
  - facilitation
- What were the sustaining factors?
- What were the barriers to using the guidelines?
- Networking with other practices

## Results

Ten general practices took part and data were collected in a total of 19 group interviews. One practice declined a second interview due to pressure of work and lack of motivation (GP Practice Y11). A total of 34 GPs, six practice nurses and one practice manager participated. Attendance at the meetings was variable depending primarily on practice size (attendance varied between one and nine). Practice size varied from 2000 to 15 500 patients, covering both urban and rural areas. There was a mix of male and female and older and younger participants.

An exhaustive list of categories emerged initially and these, unsurprisingly, reflected the components of the intervention. These categories were collapsed into four major themes:

- benefits and problems of critical appraisal workshops
- GPs' responses to the guidelines; barriers to guideline implementation and motivating factors
- responses to audit feedback
- the impact of facilitation.

## Critical appraisal workshops

The purpose of the workshop was to produce a lifelong method of learning that would stimulate ongoing commitment to evidence-based practice and to introduce one specific evidence-based guideline. A mismatch between the project team's and the practitioners' understanding of the workshop aims became apparent. Practitioners were often more interested in the specific guideline and thought that more time should have been spent discussing its implementation.

The research facilitators encouraged two people from each practice to attend the workshop; a GP and a practice nurse attended from most practices. Attendance was determined by practical factors such as availability on the day and by the interest of individual practitioners. One practice did not send any representatives to the workshop due to problems with annual leave. Attendees were charged with disseminating the information back to other members of their teams.

Most participants considered the workshops to be a useful part of the project. Evidence-based practice was considered as 'the way forward' and 'very much the in thing', some described how it had 'changed the way we think'. Several GPs said they had not specifically used the critical appraisal skills since the training, giving lack of time as the reason for this. They did, however, describe being more critical of research papers. For one GP certain aspects of evidence-based practice had been demystified. She described how she found it easier to understand certain publications:

'Actually going through the papers critically, and going through the kind of statistical things, I mean, this never really meant anything to me before – you know, numbers needed to treat – and it kind of demystified it . . . going through journals and articles and things like that, and it makes you more aware of it, like *Bandolier*, and using that all the time just to know what it means.' (GP Practice Y15)

In one practice a GP thought it was 'unrealistic to appraise papers in practice' due to lack of time and resources, but thought that it was useful for 'stimulating discussion' between members of the team at practice meetings. Some GPs appreciated the part of the workshop introducing and discussing the guidelines most, as this was the part they felt was relevant for their practice. One female respondent said:

'From the study day, the basic points that I remember were the fact that we should have patients on beta-blockers and aspirin. I mean they are just the key points, there was nothing new to that, but it was just a re-emphasis really . . .' (GP Practice Y12)

Despite considerable general enthusiasm for the workshops, some criticisms emerged. These primarily centred upon lack of clarity about the purpose of the workshop and for one GP this led to lack of enthusiasm for the project generally:

‘I just thought there was very little content, there wasn’t enough in it, and I felt particularly there wasn’t enough about angina. I went along thinking that I was going to learn how to treat angina and I felt I learned very little, except with the group, but by then I had been so switched off I actually made a positive step not to read the book [guidelines].’ (GP Practice Y11)

Once the facilitation visits commenced, it became clear that the ethos and objectives of the project had not always been fully disseminated to the rest of the team by the initial contact person. This may account for some of the ensuing confusion about the purpose of the workshops.

## Perceptions and use of guidelines

GPs perceived and used guidelines in a number of different ways. In many practices they were believed to ensure consistency and to promote a team approach to care. The guidelines were often used as a working framework to prompt memory or as consultation aids:

‘They [guidelines] are useful because as medicine goes on . . . we don’t know everything . . . so the guidelines will just remind you, prompt you to do things you might not remember to do.’ (GP Practice Y16)

Some practice teams produced a simplified document based on the guidelines stating the basic recommendations for good practice. This served to make it more readily accessible throughout the practice and gave doctors a sense of ownership that has previously been shown to be important.<sup>3</sup> Other benefits cited include easy access to research findings, feeling prepared before seeing patients and making consultations easier:

‘It is easier to explain and it’s easier to tell the patients why you are doing certain things.’ (GP Practice Y15)

In one practice achieving large changes (as measured by audit) during the course of the research intervention there was a culture of guideline use. In this practice a system had been developed whereby each GP took responsibility to investigate and collect existing ‘evidence’ for a particular condition and produce a guideline for use within the practice. These were accepted for use following discussion at a practice meeting. In this practice the GPs agreed with the guideline recommendations and were surprised to discover from the initial audit results that they were not performing as well as expected.

However, not all GPs were enthusiastic about using guidelines, nor did all practices use them as a team:

‘. . . information that comes to the practice: you don’t sit down and have a partners’ meeting, a practice policy, but I suppose it’s up to us as individuals.’ (GP Practice Y11)

Much of the data focused on the barriers that impeded the implementation of the guideline. GPs in one practice believed the research was outdated:

‘I’m sure the research will be over five years old. Latest evidence is coming that beta-blockers are a thing of the past . . . so I think we are talking about old evidence.’ (GP Practice Y14)

Other GPs recognised the need to be aware of research evidence but found the guidelines difficult to use in practice. Often there were complex reasons for this – many felt that patients should be treated individually and considered the individual patient’s co-morbidity, priorities and preferences. Several respondents were reluctant to commence treatment if patients were asymptomatic or if their symptoms were well controlled on their existing medication due to possible side effects of the drugs:

‘Whether we could change somebody when they are on an established thing (medication) and they are quite happy with it, I don’t know . . . people don’t like change.’ (GP Practice Y17)

Maintenance of good relationships with patients was paramount for some GPs and this was linked to patients’ compliance with recommended treatment – perceived to be a major barrier to implementation. Another concern was fear of being blamed for an adverse event:

‘It’s more to do with the fact that although they are stable, you change them and they’re going to have their MI next week. You know they would have had it anyway, but you changed them didn’t you . . . there is a risk with these people, and what about building relationships? Here, at the end of the day, that is what we are about.’ (GP Practice Y13)

Another important influence was the interaction with cardiologists in secondary care. Some GPs felt that colleagues in secondary care controlled their prescribing:

‘The local cardiologists have lots of influence on our prescribing.’ (GP Practice Y11)

Others used and valued informal discussions with cardiologists and continued to manage the patient in primary care:

‘I think that certainly I have got two or three of the consultant cardiologists who I can phone up and either discuss a patient, what should I do here . . .’ (GP Practice Y15)

Since GPs use their colleagues in secondary care for

information and clarification in situations where they are uncertain, and tend to be reluctant to change medication, it would seem prudent to involve hospital doctors in any proposed guideline implementation programme.

## Responses to audit feedback

Responses to audit feedback were variable and were linked to perceptions of the guidelines. In practices where the information presented in the guidelines was acceptable the audit feedback was sometimes a catalyst for improvement, particularly if performance was not as good as expected:

‘The aspirin was really disappointing. I think it [audit] certainly stimulates you to look at your practice . . . because your assumption until you see it in black and white – impressions can be so misleading and you think you are sailing along and everything’s okay really and then you find that you are not.’ (GP Practice NI1)

Many respondents liked the visual comparative graphs. One GP explained why:

‘I think the comparative graphs stimulate as well. We like to think hopefully we are a fairly competitive, well organised practice, and if you see your colleagues doing better it certainly stimulates me to try and do better.’ (GP Practice YI2)

One practice, demonstrating better than average results at the initial audit, expressed a feeling of complacency:

‘I think if you feel that something’s going okay . . . there is plenty to do and plenty of areas to develop, so if you have looked at an area and you seem to be performing adequately or well, then you may move on to other things.’ (GP Practice NI3)

If GPs did not agree with certain aspects of the guidelines, for example believing the information about the use of beta-blockers to be out of date or having concerns about the side effects of drugs, then understandably even poor results failed to stimulate improved performance. In one practice there was lack of agreement between partners about certain aspects of the guidelines. Many barriers to guideline implementation were raised and although one partner prioritised prevention of coronary events, others prioritised their relationship with the patients. In this practice, consensus was not achieved and therefore the amount of improvement as measured by audit will have been limited.

In some practices poor audit results were perceived as poor recording rather than lack of good quality care. This was particularly relevant to the prescription of prophylactic aspirin, as one GP explained:

‘. . . quite often we discuss with the patients about aspirin

and it’s not being recorded that they are on aspirin because it is cheaper to purchase their own.’ (GP Practice YI2)

For some practices it seemed that the audits motivated them to improve the quality of recording, but it is likely that in time this would result in improved care for the patients who were not receiving the treatment, providing the audit cycle was continued.

## The impact of facilitation

In contrast to the discussion about guidelines themselves, respondents made very little spontaneous reference to the facilitation process. It was often assumed to be an implicit part of the intervention and it was mostly viewed positively. For most practices it prompted them to implement actions agreed at a previous meeting when they knew that another visit was due. One GP said:

‘. . . it actually gets you to do something, doesn’t it. It’s relatively easy to be full of good intentions but somebody coming along and actually making the process happen is very helpful.’ (GP Practice YI6)

This does, however, raise questions about the sustainability of practice developments such as this one when research projects end.

## Discussion

Although this multifaceted intervention has been shown to facilitate implementation of guidelines, it could have been accomplished more effectively.<sup>11</sup> Better understanding of perceptions and issues surrounding the various elements are therefore important. Guidelines were perceived and used differently within different practices but generally, in agreement with other studies, a sense of local ownership was important.<sup>3</sup> In many practices, production of a simplified document based on the guidelines provided this. Belief in the information in the guidelines was an important prerequisite. But even when participants were committed to implementation, this belief was balanced against aspects such as maintenance of the relationship with patients and concern about adverse events.

Critical appraisal training could have been improved by better course preparation and its effect could have been maximised by linking it more closely with clinical practice. This would perhaps be better conducted within localities using an ongoing programme. Audit can be a useful tool; visual comparative feedback seemed to be particularly powerful.

However, audit is best used as part of the audit cycle to ensure continuing improvements. Facilitation was considered most useful for setting deadlines for action and could have been more effectively used by assisting practice teams to identify barriers to implementation at the outset.

There are some limitations to this study. The practices recruited for this study were volunteers who had been recruited through one person within the practice (usually a GP) with specific interest in evidence-based practice. It is therefore likely that some responses reflect that interest. The semi-structured format of the interview schedule may have restricted spontaneous responses from participants. However, although this study was never intended to be an in-depth exploration of all the aspects of evidence-based practice, our findings resonate with those of other studies.<sup>17,18</sup>

Many strategies have the potential to improve professional performance in primary care. One approach that has been used in hospital settings is clinical practice benchmarking. This is a scheme adapted from industry that seeks to use all levels of evidence in the identification of standards of excellence and uses structured comparison and sharing to improve quality and consistency of care.<sup>19</sup> In clinical benchmarking, not only are outcomes considered but also the structures and processes that need to be in place. Such an approach could involve clinicians from both primary and secondary care and may have the potential to improve consistency of care. Failures in communication between primary and secondary care practitioners have been identified as a problem which can lead to inconsistent information and advice to patients. These patients then have a poor understanding of their condition and treatment plans.<sup>20</sup> Use of computerised information exchange could also be used to reduce these problems.

It is important to take into account the diverse nature of general practice when planning implementation strategies as there are no 'magic bullets' which will prove successful in all cases. Interventions, such as the one used in this study, may be more readily used in smaller groups of practices, for example primary care trusts. The practices within this research project did not make contact with each other to share ideas, although this was encouraged. All respondents said that they would have been more likely to do this if other practices were more local. A multifaceted intervention such as this could be used on an ongoing basis, using critical appraisal skills to address specific issues of direct relevance to clinical practice. Potential barriers to implementation could be identified at the outset and facilitation used to address some of these.

Although many of the issues encountered were unique to this particular guideline for the manage-

ment of angina, there was one main lesson to be learned from all three guidelines. There is a need to identify at the start the reasons for suboptimal performance. Potential barriers to change should be identified, enabling interventions to be tailored most effectively to the problems. It must be recognised that extra resources may be required for this and, indeed, lack of resources may be a barrier in itself. Resources are always limited and therefore choices will need to be made. This highlights the notion of 'opportunity cost', in which in allocating resources to a particular activity a sacrifice is made, in that an opportunity to obtain some other benefit is lost.<sup>21</sup> This study clearly illustrates the need to become more proactive and to acknowledge that time spent now may save both time and resources in the future and, more importantly, may improve quality of life for patients. It may be that different ways of organising care are needed.

For maximum effect, it is necessary to involve the whole team in the process of change from the outset. In this study, although multidisciplinary participation was strongly encouraged, because management of angina was seen as a medical role responses from the few nurses who participated were minimal. Involvement from other members of the primary care team could, however, lead to further improvements in care. For example, nurse practitioners could take on a more central role in the care of patients with angina. A recent systematic review suggests that care provided by nurse practitioners was equivalent to that provided by doctors for care at first point of contact.<sup>22</sup> It is possible that the role of nurse practitioners could be extended to include the care of patients with chronic conditions such as angina. This systematic review revealed that patients were more satisfied with care they received from nurse practitioners and that these nurses spent longer in consultations than doctors.<sup>22</sup> In view of the psychological factors associated with symptoms such as chest pain, such sharing of the workload could lead to more time spent helping patients to make sense of their condition and to improved self-care.<sup>20</sup>

Due to the dynamic nature of evidence and regular revisions of evidence-based clinical guidelines, ongoing processes will need to be put in place. This will require allocation of both time and resources to ensure ongoing quality improvement. It is likely that better teamworking and innovative use of technology could provide some solutions both within primary care and across the primary/secondary care interface.

#### ACKNOWLEDGEMENTS

This study was carried out in collaboration with the research team of the Network for Evidence-based Practice in the Northern and Yorkshire region and

was funded by Northern and Yorkshire NHS Executive Regional Office Research and Development Programme.

## REFERENCES

- 1 Sackett DL, Richardson WS, Rosenberg W and Haynes RB (1997) *Evidence-based Medicine: how to practice and teach EBM*. Churchill Livingstone: London.
- 2 Grimshaw JM and Russell IT (1993) Effect of clinical guidelines on medical practice. *Lancet* **342**: 1317–22.
- 3 Nuffield Institute for Health (1994) Implementing clinical practice guidelines: can guidelines be used to improve clinical practice? *Effective Health Care* **8**: 1–12.
- 4 NHS Centre for Reviews and Dissemination (1999) Getting evidence into practice. *Effective Health Care* **5** (1): 1–16.
- 5 Woolf SH, Grol R, Hutchinson A, Eccles M and Grimshaw J (1999) Potential benefits, limitations and harms of clinical guidelines. *British Medical Journal* **318**: 527–30.
- 6 Department of Health (1997) *The New NHS: modern and dependable*. The Stationery Office: London.
- 7 Department of Health (1998) *A First Class Service*. The Stationery Office: London.
- 8 Evans D and Haines A (2000) *Implementing Evidence-based Changes in Healthcare*. Radcliffe Medical Press: Oxford.
- 9 Harrison S (2001) Implementing the results of research and development in clinical and managerial practice. In: Baker M and Kirk S (eds) *Research and Development for The NHS: evidence, evaluation and effectiveness*. Radcliffe Medical Press: Oxford, pp. 141–52.
- 10 Haynes B and Haines A (1998) Getting research into practice: barriers and bridges to evidence-based practice. *British Medical Journal* **317**: 273–6.
- 11 Network for Evidence-based Practice (NEBPIN) Research Team (2001) *Does 'Evidence-based Practice' Change the Process and Outcome of Primary Care for Chronic Disease? – trial randomised by practice*. University Department of Health Sciences and Clinical Evaluation: York.
- 12 Guyatt GH, Sackett DL and Cook DJ (1993) Users' guide to the medical literature II. How to use an article about therapy or prevention. *Journal of the American Medical Association* **270**: 2598–601.
- 13 North of England Stable Angina Guideline Development Group (1996) North of England Evidence-based Guidelines Development Project: summary version of evidence-based guideline for the primary care management of stable angina. *British Medical Journal* **312**: 827–32.
- 14 Jones K, Wilson A, Russell I, Roberts A, O'Keeffe C, McAvoy B, *et al.* (1996) Evidence-based practice in primary care. *British Journal of Community Nursing* **1**: 276–80.
- 15 Mays N and Pope C (1995) Qualitative research: rigour and qualitative research. *British Medical Journal* **311**: 109–12.
- 16 Ritchie J and Spencer L (1994) Qualitative data analysis for applied policy research. In: Bryman A and Burgess R (eds) *Analysing Qualitative Data*. Routledge: London, pp. 173–94.
- 17 Freeman AC and Sweeney K (2001) Why general practitioners do not implement evidence: qualitative study. *British Medical Journal* **323**: 1–5.
- 18 Tomlin Z, Humphrey C and Rogers S (1999) General practitioners' perceptions of effective health care. *British Medical Journal* **318**: 1532–5.
- 19 Ellis J (2000) Sharing the evidence: clinical practice benchmarking to improve continuously the quality of care. *Journal of Advanced Nursing* **32**: 215–25.
- 20 Bass C and Mayou R (2002) Chest pain. Clinical review: ABC of psychological medicine. *British Medical Journal* **325**: 588–91.
- 21 Mooney GH, Russell EM and Weir RD (1986) *Choices for Healthcare: a practical introduction to the economics of health provision*. Macmillan Press: London.
- 22 Horrocks S, Anderson E and Salisbury C (2002) Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. *British Medical Journal* **324**: 819–23.

## ADDRESS FOR CORRESPONDENCE

JL Marshall, Research Fellow, Centre for Research in Primary Care, Hallas Wing, Nuffield Institute for Health, 71–75 Clarendon Road, University of Leeds, Leeds LS2 9LN. Tel: +44 (0)113 343 4837; fax: +44 (0)113 343 4836; email: [j.marshall@leeds.ac.uk](mailto:j.marshall@leeds.ac.uk).

Accepted November 2002