

Research papers

Developing change proposals to improve the management of coronary heart disease in primary care

Stephen Rogers MSc MRCP MFPHM

Senior Lecturer and Associate Medical Director, Islington Primary Care Trust

James Hickling MSc MRCP

Research Fellow

Irwin Nazareth PhD MRCP

Professor

Department of Primary Care and Population Sciences, Royal Free and University College London Medical School, London, UK

ABSTRACT

The *National Service Framework for Coronary Heart Disease* provides indicators and criteria, which can guide improvement activity in primary care, but this guidance will need to be complemented by local initiatives to promote change. The need for change strategies to be tailored to the problems and settings they are meant to address is only now clearly understood. Effective evidence-based implementation will require a correct diagnosis of underlying barriers to change, an understanding of the effectiveness and appropriateness of alternative change strategies and a judicious selection from the available options. In this paper we show how local investigations of barriers to change might be

used to generate change proposals for implementation by primary care organisations. Although the change proposals we developed were complex, the policy context in primary care is favourable for engaging practitioners and patients and for delivering change. It is our hope that local investigations will be used alongside the research literature on the implementation of change, to develop change proposals that are grounded in evidence and tailored to particular settings.

Keywords: coronary heart disease, implementation, management of change, primary care

Background

Coronary heart disease (CHD) is among the biggest killers in the United Kingdom. In England alone, more than 1.4 million people suffer from angina, 300 000 have heart attacks and 100 000 die from heart problems every year. The *National Service Framework for Coronary Heart Disease* indicates that general practitioners (GPs) should identify all patients with confirmed CHD, record risk factors and assure that appropriate treatments are offered.¹ Thereafter the

importance of detecting and treating patients at high risk of developing CHD is emphasised, with smoking, hyperlipaemia and hypertension targeted for intervention (see Box 1).

Surveys in general practice have indicated that there is some way to go. For example in a study of 1319 Scottish CHD patients, 63% took aspirin, 18% were still smoking and lipids were managed according to guidelines in only 16%. Amongst the 257 patients with heart failure, only 40% were on angiotensin converting enzyme (ACE) inhibitors.² Similarly, areas of primary prevention are in need of

Box 1 National Service Framework for Coronary Heart Disease standards

Standard three GPs should identify all patients with established CHD and record their risk factors. Clinical interventions should include relevant lifestyle advice, help to stop smoking, control of hypertension, low dose aspirin, cholesterol reduction, beta-blockers after myocardial infarction, ACE inhibitors in heart failure, warfarin or aspirin in atrial fibrillation and careful control of blood pressure and blood glucose in patients with diabetes.

Standard four GPs should identify all patients at high risk of developing heart disease but who have not yet developed symptoms. Clinical interventions in this group should include relevant lifestyle advice, help to stop smoking, control of hypertension, cholesterol reduction and careful control of blood pressure and blood glucose in patients with diabetes.

attention, especially adequacy of blood pressure control in the elderly and the application of multiple risk factor assessment techniques in primary care.³⁻⁵

Local initiatives and practical support will be crucial to the effective delivery of change in primary care and primary care trusts (PCTs) will carry responsibility for identifying strategies for implementing change that are applicable to their particular settings. The recommendations made in the *National Service Framework for Coronary Heart Disease* are based on a large body of research evidence and well-conducted systematic reviews. The strategies selected to support the implementation of these recommendations should also be evidence based.

Intervention trials directed towards improving cardiovascular disease management or prevention in the general practice setting have generally failed to deliver more than modest improvements.⁶⁻⁸ Typically such trials have evaluated alternative service frameworks, or different models for the organisation of care. A complementary area of literature that may be equally if not more important to primary care organisations is the very considerable research on interventions designed to bring about behavioural change in both health professionals and patients. Many different interventions directed towards changing professional practice have been tested in randomised controlled trials. Most have found their place in systematic reviews organised according to a widely accepted taxonomy.⁹ Similarly, randomised studies of interventions to change patient behaviour have been summarised in systematic reviews. Many of these reviews appear in the health promotion literature.¹⁰⁻¹³

The need for change strategies to be tailored to the problems and settings that they are meant to address is only now clearly understood.¹⁴ For those involved in implementing *National Service Frameworks*, the trick will be to select those interventions most suitable for the purpose. A single intervention is unlikely to be sufficient and for some improvement areas, patients, practitioners and organisations will need to be targeted.¹⁵ Effective evidence-based implementation will require a correct diagnosis of underlying barriers to change, an understanding of the effectiveness and appropriateness of alternative change strategies and a judicious selection from the available options.¹⁶ In this paper we show how local investigations on barriers to the adoption of evidence across topics of relevance to the *National Service Framework for Coronary Heart Disease* might be used to generate change proposals for implementation by primary care organisations.

Developing change proposals

Survey and interview methods, observational techniques and group methods have been suggested as ways of investigating barriers to effective practice (see Box 2).¹⁷⁻²² Each has strengths and weaknesses. For example, surveys may be conducted remotely, but require a predetermined list of possible barriers. Through interviews it may be possible to explore perceived barriers in more depth, but these are time consuming and can be difficult to interpret and assimilate. Group processes such as focus groups can be useful, but may be influenced by dominant participants and produce stereotypical results.^{21,22}

An alternative group method to focus groups is the nominal group process. This is a highly structured

Box 2 Investigation of barriers

Surveys Used to measure perceptions and opinions of individuals against a predetermined list of possible barriers.

Interviews Structured or semi-structured so as to explore perceived barriers in more or less depth.

Observation Direct observation of practice, simulations or tests to explore possible barriers.

Group process Methods using team members to generate ideas using more (e.g. nominal group technique) or less (e.g. brainstorming) approaches.

method, which elicits the consensus views of multi-disciplinary groups of professionals and results in a ranked list of outcomes. It utilises helpful aspects of group dynamics through discussion, while allowing independent contributions by all participants.²²

We conducted a series of nominal group meetings among health professionals in a group of 12 practices that had previously participated in a survey of current practice with respect to the management of various aspects of cardiovascular disease. Each of three different topics was investigated on different occasions. These were the use of ACE inhibitors in heart failure, the use of statins in the secondary prevention of CHD and the treatment of systolic hypertension in the elderly. Meetings began with a presentation of the performance of the practice on the implementation of a particular clinical change. Participants then listed factors which they thought might act as barriers, and ranked these in descending order. In order to provide summary data for barriers operating across practices, a thematic framework was devised to classify factors identified into broader groups. The factors were coded, weighted according to their rankings in individual practices, and then aggregated across practices within thematic groups presented in order of importance (see Box 3).

We then went on to identify the interventions that might best address the barriers identified. No attempt was made to deduce underlying psychological or behavioural causes for perceived barriers to change, as has been suggested by other authors.^{14,24} Rather, our selection was based on our understanding of the problem as expressed by informants, together

with a knowledge of the task, the setting and the literature.

The barriers elicited and the change proposals generated for each of the three cardiovascular disease topics appear in Boxes 4–6. The evidence base for the interventions selected across all three topics included four Cochrane reviews, three other systematic reviews, two narrative reviews and one observational study identified through Medline searches. The Clinical Outcomes Group of the NHS Executive grades recommendations for clinical practice as ‘A’ where there is a body of literature of good quality and consistency including at least one randomised controlled trial to support the specific recommendation. Applying the same principles to our change proposals, the strength of the recommendations would be grade A for four of five component interventions identified to address the use of ACE inhibitors in heart failure, grade A for all five component interventions identified to address the use of statins in CHD and grade A for four of the six interventions identified to address the treatment of systolic hypertension in the elderly.

Discussion

A common feature of implementation activity in the health service is that project management draws on experience and local knowledge, while neglecting careful consideration of the research literature.³⁵ In this paper we argue that implementation strategies

Box 3 Nominal group meetings

Sample A group of 12 practices that had previously participated in a survey of current practice with respect to the management of various aspects of cardiovascular disease. Ten were in London and two in neighbouring counties. All were part of the Medical Research Council general practice research framework.

Topics Each of three different topics was investigated on different occasions: the use of ACE inhibitors in heart failure, the use of statins in the secondary prevention of CHD and the treatment of systolic hypertension in the elderly.

Participants All doctors and practice nurses were invited. Over 80% of doctors participated and about 40% of nurses.

Format For any topic, survey data for the practice was presented alongside that for other practices. Participants were then asked to list any factors that might reduce the adoption of evidence-based management in their own practice. Participants offered their ideas in turn, and these were listed on a flip chart. The group then discussed the materials they had generated and reduced the list by combining and clarifying ideas. Participants then ranked the five factors they felt to be most important, and the sum for each factor was calculated.

Synthesis A thematic framework was devised to classify factors identified into broader groups. The factors were coded, weighted according to their rankings in individual practices, and then aggregated across practices within thematic groups and presented in order of importance.²³

Box 4 Example A: the use of ACE inhibitors in heart failure

The convention (A1), (A2), (A3) etc is used to label the barriers identified for the use of ACE inhibitors in heart failure, where (A1) has the highest score based on cumulated rank sum from the nominal group process across participating practices, (A2) the second highest, (A3) the third highest, etc.

Barriers elicited

- Drug factors – side effects, contraindications and cautions of ACE inhibitors (A1)
- Inertia – good symptom control on diuretics (A2)
- Doctor factors – low awareness, knowledge and skills in managing heart failure, uncertainty of ACE inhibitor benefits in particular patients (A3)
- Difficulty of follow up – dose titration and renal monitoring reduce patient adherence and GPs' initiation of therapy (A4)
- Diagnostic uncertainty because of limited access to echocardiograms (A5)
- Doctor–patient relationship – poor communication, patient education, non-compliance (A6)

Change proposal

- Detailing visit to persuade physicians of the potential benefits to patients and to address concerns around patient assessment and initiation of therapy (A1, A2)
- Small group interactive training sessions to discuss issues in the management of heart failure (A1, A3)
- Guidance for assessing patients and initiating treatment produced locally (A3), including model integrated care pathways and options for improving practice systems (A4)
- Echocardiography introduced with carefully designed reports to help guide practitioners with management decisions (A5)
- Decision aides designed for patients starting ACE inhibitors to explain benefits of treatment, possible side effects and importance of compliance (A6)

Evidence base

- Academic detailing/motivational visits can promote simple behavioural changes especially in prescribing (A1, A2)²⁵
- More complex issues would need to be considered in other fora such as small group interactive meetings (A1, A3)²⁶
- There is some evidence for the effectiveness of external facilitators in improving practice systems and the organisation of care (A4)²⁷
- Open access echocardiography assists the identification of patients with impaired function and increases the appropriate use of ACE inhibitors (A5)²⁸
- Appropriately designed decision aides can improve patient knowledge, communicate realistic expectations and reduce decisional conflict (A6)²⁹

should be evidence based and tailored to the local setting and we share three examples of where we have used information on barriers to change to support the development of evidence-based change proposals.

The change proposals we developed were complex. Constraints on delivering improvements in the management of CHD exist at the level of the practitioner, the patient, the practice and the local configuration of services. Also, the patterns of constraints depend on the area of clinical practice examined. For example, physician education, system and organisational issues figured high on the agenda for assuring effective management of heart failure, while patient education and negotiation around treatment were much more important for improving the management of hypertension in the elderly. Such findings will be important for those developing change proposals and rather preclude the implementation of blanket proposals in

the hope that they might impact across a range of clinical outcomes.

Despite the challenges, the climate is favourable for primary care organisations to be considering the evidence-based implementation model. Most are in the process of building their clinical governance expertise and are integrating public health functions with the day-to-day business of developing services.^{36,37} Governance and educational activities are becoming more closely linked, and a focus on performance will be reinforced through periodic Commission for Health Improvement and Audit (CHAI) reviews.^{38,39} Simultaneously, annual appraisal of GPs and a new contract, which emphasises quality of care above quantity of care, will enhance the motivation of doctors to become engaged with change interventions directed towards improving clinical effectiveness.^{40–42} Finally, patients themselves are demanding more

Box 5 Example B: the use of statins in the secondary prevention of coronary heart disease

The convention (B1), (B2), (B3) etc is used to label the barriers identified for the use of statins in CHD, where (B1) has the highest score based on cumulated rank sum from the nominal group process across participating practices, (B2) the second highest, (B3) the third highest, etc.

Barriers elicited

- Doctor factors – reluctance to start treatment (borderline benefit, borderline cholesterol, possible side effects), unaware of guidelines, doctor forgets, fails to do blood tests (B1)
- Selective use of drugs – unclear benefit in the elderly, more intolerance, co-morbidities (B2)
- Patient attitude – reluctance to start new drug (general attitude, elderly attitudes, fatalism) (B3)
- Poor hospital – general practice communications, lost test results (B4)
- Low priority for the patient – asymptomatic, hidden benefit, alternative health beliefs (B5)
- Delayed treatment – targeting lifestyle or other more important ongoing problems (smokers, the obese, drinkers) (B6)

Change proposal

- Detailing visits to physicians (B1)
- Small group sessions and local guideline development to clarify local policy, resource implications and target groups (B1, B2)
- Decision aides to ensure that patients are fully informed and can come to conclusions through shared decision making (B3, B5)
- Hospital-led secondary prevention (B1, B4)
- Improved systems for communication of results, including prompting/reminder system for results where action is required (B4)
- Improved practice systems, with templates and reminders for CHD patients (B1, B6)

Evidence base

- Academic detailing/motivational visits can promote simple behavioural changes, especially in prescribing (B1)²⁵
- More complex issues would need to be considered in other fora such as small group interactive meetings (B1, B2)²⁶
- Guidelines introduced in the context of detailing or interactive meetings are more likely to be implemented than provision of guidelines alone (B1, B2)³⁰
- Appropriately designed decision aides can improve patient knowledge, communicate realistic expectations and reduce decisional conflict (B3, B5)²⁹
- Several reviews have indicated that reminders and checklists can be effective in avoiding slips or triggering particular behaviours in healthcare professional practice across a variety of clinical areas (B1, B4)³¹
- Similar interventions should be directed towards hospital staff to ensure that patients under outpatient care are being managed according to common guidelines³⁰

information on the clinical effectiveness of treatment options and government policy is emphasising patients' rights in this respect.^{43–47}

Consideration will need to be given to where one would start in actually implementing such change proposals. Pointers might include: (1) the importance attached to a particular barrier by the informants; (2) the degree to which change in one area is likely to be necessary for subsequent changes to occur; (3) the likely impact of a particular intervention; and (4) the feasibility and cost of implementing the intervention, given local constraints and other demands on resources. Various activities might be construed as components in a continuous quality improvement sequence, where progress is monitored and new

interventions build on what has already been achieved.⁴⁸

CHD continues to be a major cause of illness and death in the United Kingdom. The *National Service Framework for Coronary Heart Disease* is directed towards improving prevention and treatment of CHD and draws attention to the need for better management in primary care settings. PCTs have access to a formidable literature on the effectiveness of a range of strategies for the implementation of change. It is our hope that local investigations will be used alongside the research literature on the implementation of change to develop change proposals that are grounded in evidence and tailored to particular settings.

Box 6 Example C: effective treatment of systolic hypertension in the elderly

The convention (C1), (C2), (C3) etc is used to label the barriers identified for the treatment of systolic hypertension in the elderly, where (C1) has the highest score based on cumulated rank sum from the nominal group process across participating practices, (C2) the second highest, (C3) the third highest, etc.

Barriers elicited

- Reluctance of patients – alternative health beliefs, asymptomatic condition, low priority, especially if multiple other pathologies (C1)
- Poor compliance by patients – reluctance to take medication, especially elderly (fatalism), fear of side effects, forgetfulness (C2)
- Not treated aggressively enough – target blood pressure perceived too low (C3)
- Patients resistant to changing important associated lifestyle factors (C4)
- Poor follow up by practice – new patients, lack of continuity of care, software not user friendly (C5)
- Poor follow up by patients – patient does not attend, housebound (C6)

Change proposal

- Mass media campaign directed towards the older patient (C1, C2, C5)
- Detailing visits to persuade physicians of the importance of effective control of blood pressure (C3)
- Decision aides for patients found to be hypertensive (C1)
- Counselling on the importance of adherence to treatment regimes (C1, C2, C6)
- Distribution of medication management devices (C2)
- Use of reminders (C5)
- Improved practice systems and involvement of other health professionals in monitoring of blood pressure and drug use (C2, C5, C6)

Evidence base

- There is evidence from time series studies for effects of mass media campaigns on health service utilisation (C1, C2, C5)³²
- Appropriately designed decision aides can improve patient knowledge, communicate realistic expectations and reduce conflict when considering treatment options (C1)²⁹
- A range of approaches is available which can be expected to improve adherence, though none are highly effective (C2)³³
- The provision of medication management devices could provide a mechanism for improving adherence to complex medication regimes (C2)³⁴
- Detailing visits can change professional practice (C3)²⁵
- Reminders can help ensure that follow up and recall are effective (C5, C6)³¹
- External facilitators can help develop practice systems and changes in the organisation of care (C5, C6)²⁷

ACKNOWLEDGEMENTS

The research was funded in part from the NHSE Implementation Methods Programme and the North Thames Primary Care Research Network. Twelve practices from the MRC General Practice Research Framework participated in the nominal groups. Azeem Majeed, Jeremy Wyatt and an unknown referee commented on earlier drafts.

REFERENCES

- 1 Department of Health (2000) *National Service Framework for Coronary Heart Disease. Modern Standards and Service Models*. HMSO: London.
- 2 Campbell NC, Thain J, Deans HG, Ritchie LD and Rawles JM (1998) Secondary prevention in coronary heart disease: baseline survey of provision in general practice. *British Medical Journal* **316**: 1430–4.
- 3 Duggan S, Eccles M, Steen N, Jones S and Ford G (2001) Management of older patients with hypertension in primary care: improvement on the rue of halves. *Age and Ageing* **30**: 73–6.
- 4 Fahey T (1998) Assessing heart disease risk in primary care, cholesterol lowering should be just one part of a multiple risk factor intervention. *British Medical Journal* **317**: 1093–4.
- 5 Robson J, Boomla K, Hart B and Feder G (2000) Estimating cardiovascular risk for primary prevention: outstanding questions for primary care. *British Medical Journal* **320**: 702–4.
- 6 Campbell NC, Thain J, Deans HG, Ritchie LD, Rawles JM and Squair JL (1998) Secondary prevention clinics for coronary heart disease: randomised trial of effect on health. *British Medical Journal* **316**: 1434–7.

- 7 SHIP study group (1999) Randomised controlled trial of follow up care in general practice of patients with myocardial infarction and angina: final results of the Southampton Heart integrated care project. *British Medical Journal* **318**: 706–11.
- 8 Oxcheck Study Group (1995) Effectiveness of health checks conducted by nurses in primary care: final results of the Oxcheck study. *British Medical Journal* **310**: 1099–104.
- 9 Sowden A, Watts IS and Wilson P (eds) (1999) Getting evidence into practice. *Effective Health Care* **5** (1).
- 10 Tang JL, Armitage JM, Lancaster T, Silagy CA, Fowler GH and Neil HA (1998) Systematic review of dietary intervention trials to lower blood cholesterol in free living subjects. *British Medical Journal* **316**: 1213–20.
- 11 Hardeman W, Griffin S, Johnston M, Kinmonth AL and Wareham NJ (2000) Interventions to prevent weight gain: a systematic review of psychological models and behaviour change methods. *International Journal of Obesity and Related Metabolic Disorders* **24**: 131–42.
- 12 Dunn C, Deroo L and Rivara FP (2001) The use of brief interventions adapted from motivational interviewing across behavioural domains. *Addiction* **96**: 1725–42.
- 13 Lawlor DA and Hanratty B (2001) The effect of physical activity advice given in routine primary care consultations: a systematic review. *Journal of Public Health Medicine* **23**: 219–26.
- 14 Grol R (1997) Beliefs and evidence in changing clinical practice. *British Medical Journal* **315**: 418–21.
- 15 Wensing M and Grol R (1994) Single and combined strategies for implementing changes in primary care: a literature review. *International Journal of Quality in Health Care* **6** (2): 115–32.
- 16 Grol R and Grimshaw J (1999) Evidence based implementation of evidence based medicine. *Joint Commission Journal on Quality Improvement* **25**: 503–13.
- 17 Laxdal ER (1982) Needs assessment in continuing medical education: a practical guide. *Journal of Medical Education* **57**: 827–34.
- 18 Crandall SJS (1998) Using interviews as a needs assessment tool. *Journal of Continuing Education in the Health Professions* **18**: 155–62.
- 19 Miller GE (1990) The assessment of clinical skills, competence, performance. *Academic Medicine* **65**: S63–7.
- 20 Allen J and Rashid A (1998) What determines competence within a general practice consultation? Assessment of consultation skills using simulated surgeries. *British Journal General Practice* **48**: 1259–62.
- 21 Kitzinger J (1995) Introducing focus groups. *British Medical Journal* **311**: 299–302.
- 22 Jones J and Hunter D (1995) Consensus methods for medical and health services research. *British Medical Journal* **311**: 376–80.
- 23 Hickling J, Nazareth I and Rogers S (2001) The barriers to effective management of heart failure in general practice. *British Journal of General Practice* **51**: 615–18.
- 24 Robertson N, Baker R, Hearnshaw H (1996) Changing the clinical behaviour of doctors – a psychological framework. *Quality in Health Care* **5**: 51–6.
- 25 Thomson O'Brien MA, Oxman AD, Davis DA *et al.* (2003) Educational outreach visits: effects on professional practice and health care outcomes (Cochrane Review). *The Cochrane Library, Issue 3, 2003*. Update Software: Oxford.
- 26 Thomson O'Brien MA, Freemantle N, Oxman AD, Wolf F, Davis DA, Herrin J (2003) Continuing education meetings and workshops: effects on professional practice and health care outcomes (Cochrane Review). *The Cochrane Library, Issue 3, 2003*. Update Software: Oxford.
- 27 Harvey G, Loftus-Hills A, Rycroft-Malone J *et al.* (2002) Getting evidence into practice: the role and function of facilitation. *Journal of Advanced Nursing* **37**: 577–88.
- 28 Murphy JJ, Frain JP, Ramesh P, Siddiqui RN, Bossingham CM (1996) Open-access echocardiography to general practitioners for suspected heart failure. *British Journal of General Practice* **46**: 475–6.
- 29 O'Connor AM, Stacey D, Rovner D *et al.* (2003) Decision aides for people facing health treatment or screening decisions (Cochrane Review). *The Cochrane Library, Issue 3, 2003*. Update Software: Oxford.
- 30 Grimshaw JM and Russell IT (1993) Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations. *Lancet* **27**: 1317–22.
- 31 Buntinx F, Winkens R, Grol R and Knottnerus JA (1993) Influencing diagnostic and preventive performance in ambulatory care by feedback and reminders. A review. *Family Practice* **10** (2): 219–28.
- 32 Grilli R, Ramsay C and Minozzi S (2003) Mass media interventions: effects on health services utilisation (Cochrane Review). *The Cochrane Library, Issue 3, 2003*. Update Software: Oxford.
- 33 Haynes RB, McKibbon KA and Kanani R (1996) Systematic review of randomised trials of interventions to assist patients to follow prescriptions for medications. *Lancet* **348**: 383–6.
- 34 Wendt DA (1998) Evaluation of medication management interventions in the elderly. *Home Healthcare Nurse* **16**: 612–17.
- 35 Haines A and Jones R (1994) Implementing findings of research. *British Medical Journal* **308**: 1488–92.
- 36 McColl A and Roland M (2000) Knowledge and information for clinical governance. *British Medical Journal* **321**: 871–4.
- 37 Department of Health (2001) *The report of the Chief Medical Officer's Project to Strengthen the Public Health Function*. Department of Health: London.
- 38 Howe A (2000) Primary care education in the new NHS: a discussion paper. *Medical Education* **34**: 385–90.
- 39 Day P and Klein R (2001) Commission for Improvement invents itself. *British Medical Journal* **322**: 1502–3.
- 40 Rogers S, Humphrey C, Nazareth I, Lister S, Tomlin Z and Haines A (2000) Designing trials of interventions to change professional practice in primary care. *British Medical Journal* **320**: 1580–3.
- 41 Department of Health (2002) Non consultant career grade doctors: annual appraisal. Advance letter (MD) 05/02. Department of Health: London.
- 42 NHS Confederation (2002) *Your Contract, your Future. General practitioner contract framework*. NHS Confederation: London.

- 43 Elwyn G, Edwards A and Kinnersley P (1999) Shared decision making in primary care: the neglected second half of the consultation. *British Journal of General Practice* **49**: 477–82.
- 44 Coulter A, Entwistle V and Gilbert D (1999) Sharing decisions with patients: is the information good enough? *British Medical Journal* **318**: 318–22.
- 45 Department of Health (2001) *Shifting the Balance of Power within the NHS. Securing delivery*. Department of Health: London.
- 46 Department of Health (2001) *Shifting the Balance of Power within the NHS. Next steps*. Department of Health: London.
- 47 Department of Health (2002) *Shifting the Balance of Power within the NHS. Communication*. Department of Health: London.
- 48 Berwick DM, Godfrey AB and Roessner J (1990) *Curing Healthcare. New strategies for quality improvement*. Jossey Bass: San Francisco.

ADDRESS FOR CORRESPONDENCE

Dr Stephen Rogers, Department of Primary Care and Population Sciences, Royal Free and University College London Medical School, Holborn Union Building, Highgate Hill, London N19 3UA, UK. Tel: +44 (0)20 7288 3454; fax: +44 (0)20 7281 8004; email: s.rogers@pcps.ucl.ac.uk

Accepted May 2003