

my actors Bill Patterson, Alison Sinclair, Sophie Pilgrim, and John Liddle, statistician Rob Elton, the Lothian Primary Care Research Network, and all the general practitioners in Lothian who let me interview their patients.

Contributors: Mike Porter and John Howie, Department of Community Health Sciences, Edinburgh University, will act as guarantors for the paper.

Funding: Lothian Health funded the author's three month sabbatical during which the study was conducted.

Competing interests: None declared.

- 1 Stiles WB, Putman SM, Wolf MH, James SA. Interaction exchange structure and patient satisfaction with medical interviews. *Med Care* 1979;17:667-81.
- 2 Roter D, Hall J. Physician interviewing style and medical information obtained from patients. *J Gen Intern Med* 1987;2:326.
- 3 Heaton PB. Negotiation as an integral part of the physician's clinical reasoning. *J Fam Pract* 1981;13:845-8.
- 4 Sackett DL, Haynes RB, Gibson ES, Hackett BC, Taylor DW, Roberts RS, et al. Randomised clinical trial of strategies for improving medication compliance in primary hypertension. *Lancet* 1975;i:1205-7.
- 5 Stewart M, Brown JB, Weston WW. *Patient-centred medicine*. Thousand Oaks, CA: Sage, 1995.
- 6 Tuckett D, Boulton M, Olson C, Williams A. *Meetings between experts*. London: Tavistock, 1985.
- 7 Brody D. The patient's role in clinical decision making. *Ann Intern Med* 1980;93:718-22.
- 8 Pendleton D, Schofield T, Tate P, Havelock P. *The consultation. An approach to learning and teaching*. Oxford: Oxford University Press, 1984:97-103.
- 9 Coulter A. Partnerships with patients: the pros and cons of shared clinical decision-making. *J Health Serv Res Policy* 1997;2:112-21.
- 10 Office of Population Censuses and Surveys. *General household survey*. London: HMSO, 1991:150-60.
- 11 Boulton M, Tuckett D, Olson C, Williams A. Social class and the general practice consultation. *Sociol Health Illness* 1986;8:323-50.
- 12 Byrne PS, Long BEL. *Doctors talking to patients*. London: HMSO, 1980.
- 13 Szasz TS, Hollender MC. A contribution to the philosophy of medicine: the basic models of the doctor-patient relationship. *Arch Intern Med* 1956;97:585-92.
- 14 Botelho R. A negotiation model for the doctor-patient relationship. *Fam Pract* 1992;9:210-18.
- 15 Savage R, Armstrong D. Effect of general practitioner's consulting style on patients' satisfaction: a controlled study. *BMJ* 1990;301:968-70.
- 16 Ende J, Kazis L, Ash A, Moskowitz M. Measuring patients' desire for autonomy: decision making and information seeking preferences among medical patients. *J Gen Intern Med* 1988;4:23-30.
- 17 Cassileth B, Zupkis R, Sutton-Smith K, March V. Information and participation preferences among cancer patients. *Ann Intern Med* 1980;92:832-6.
- 18 Prochaska JO, Di Clemente CC, Morcross JC. In search of how people change an application to addictive behaviour. *Am Psychol* 1992;44:1102-14.
- 19 Buchan I. 'Time and motion' in general practice. *Practitioner* 1978;221:298-301.
- 20 Bain DJG. Patient knowledge and the content of the consultation in general practice. *Med Educ* 1982;11:347-50.
- 21 Pendleton DA, Bochner S. The communication of medical information in general practice consultation as a function of patients' social class. *Soc Sci Med (Med Psychol Med Sociol)* 1980;14a:669-73.
- 22 Cartwright A, O'Brien M. Social class variations in health care and in the nature of general practitioner consultations. *Sociol Rev Monogr* 1976;22:77-98.
- 23 Porter M, MacIntyre S. What is, must be best: a research note on conservative or deferential responses to antenatal care provision. *Soc Sci Med* 1984;11:1197-200.
- 24 Shapiro J, Shapiro DH. The psychology of responsibility: some second thoughts on holistic medicine. *N Engl J Med* 1979;295:939-43.

(Accepted 5 July 2000)

Clinical governance in primary care

Knowledge and information for clinical governance

Alastair McColl, Martin Roland

The new requirements of clinical governance are a challenge for everyone working in the NHS. If the quality of health care is to be improved, existing knowledge about effective clinical and organisational practice must be applied and new information to monitor and evaluate care must be generated and interpreted.

Within individual general practices and primary care teams, all staff will have a role in obtaining and using information for clinical governance—whether for maintaining chronic disease registers, promoting evidence based practice, improving the organisation of services, or reporting on the outcomes of care. In primary care groups and trusts, there is greater emphasis on improving the health of the population. This requires the collection and aggregation of information across practices to assess health needs, reduce inequalities, and monitor the quality of care in comparison to agreed standards.

In this paper, we discuss the additional knowledge that will be needed by all staff working in primary care and the challenges faced by leaders of primary care groups and trusts. We suggest where they can find relevant information. Everyone in primary care needs to be familiar with these sources if clinical governance is to succeed as a way to improve the quality of health care.

Summary points

Everyone in primary care needs to be familiar with the requirements of clinical governance if it is to succeed as a way to improve the quality of care

Producing, collecting, and analysing primary care information is difficult, but some practices have already overcome these barriers

Individuals and primary care group and trust leaders can do much to promote clinical governance, but problems remain

Clinical governance has highlighted the need for additional knowledge and information on determinants of population health

This is the last of five articles

Woolpit Health Centre, Bury St Edmunds IP30 9QU
Alastair McColl
general practitioner

National Primary Care Research and Development Centre, University of Manchester, Manchester M13 9PL

Martin Roland
professor of general practice

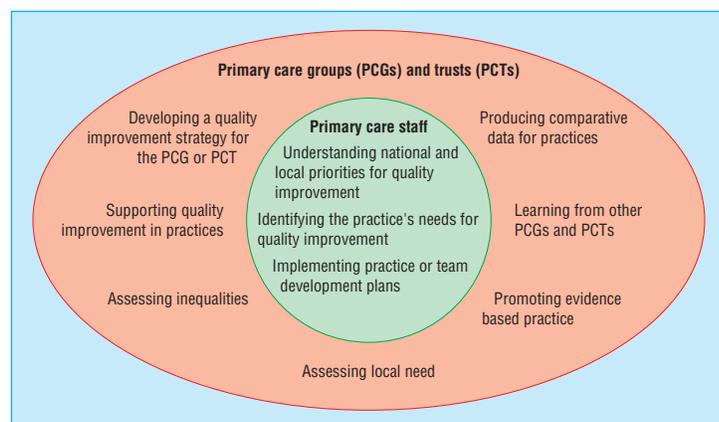
Correspondence to:
A McColl
a.mccoll@ukgateway.net

Series editor:
Rebecca Rosen
BMJ 2000;321:871-4

bmj.com

URLs and links to information sources are available on the BMJ's website

Many problems exist with producing, collecting, and analysing the necessary information; we aim to provide examples of pragmatic approaches to overcome these barriers. (The version of this paper on the *BMJ's* website includes numerous URLs to show what information is available). Other, harder to measure



Clinical governance in primary care: key activities for which knowledge and information are required

aspects of quality care such as communication and continuity may increasingly be overlooked.¹

Practices and practitioners: knowledge and information for improved clinical practice

The many dimensions of clinical governance outlined by Rosen highlight the wide range of information which primary care staff will need to use.² Effective clinical practice requires access to and use of evidence based guidance on cost effective care. To implement national service frameworks and local health improvement priorities, staff will need to understand what these priorities are and monitor progress towards agreed standards. Pringle's paper on developing individuals for clinical governance emphasised the need for clinicians to find information which will improve their own practice and aid learning in the primary care team as a whole.³ Such work is likely to go a long way towards fulfilling the General Medical Council's requirements for revalidation. The following section outlines important sources of knowledge and information in relation to each of these key areas.

Clinical knowledge for evidence based practice

Many sources of information on cost-effective interventions are available to help clinical management in primary care (see table A on the *BMJ's* website). Skills in critical appraisal are important, and there are many courses to help make sense of information on cost effective interventions. Asking a well defined question and knowing about sources of information are important first steps.⁴

NeLH—the national electronic library for health—will eventually help to improve access to information in the practice.⁵ In one English region only 20% of general practitioners had access to bibliographic databases in their surgeries and 17% had access to the world wide web.⁶ Primary care groups and trusts will need to invest in adequate information technology hardware, software, and training. To avoid duplication of effort, relevant information should be coordinated at a national level and facilitated locally through post-graduate libraries.

Computerised clinical decision support systems used during consultations can help to improve

performance and patient outcomes.⁷ In England and Wales, Prodigy software is available free of charge on 85% of computer systems; it can offer advice during consultations on what to do in over 150 conditions commonly seen in primary care.

Computerising information to monitor care

Practices will have to provide data relating to quality indicators identified as national and local priorities. Standards set in the national service frameworks provide examples of national priorities for quality improvement which must be monitored locally.

Collecting information on clinical quality is best done from computers in the practice—for example, computerised recall systems help ensure that patients with diseases such as diabetes and hypertension are seen at least annually and that they are receiving optimal treatment. However, information on individual diagnoses must be entered on the practice's computer. In some parts of the country virtually all general practitioners are doing this already as part of their routine daily work, but for other doctors it will be a big change.

In the long run, it will be easier for clinicians to learn how to record key diagnoses by using computerised Read codes rather than relying on laborious searches of notes. Some practices have not yet been computerised, and individual doctors vary in their ability to enter patients' data on their practice's system. Many health authorities and computer system suppliers run courses on data entry, and some primary care groups are already encouraging clinicians to enter key data relevant to the national service framework for coronary heart disease.

The MIQUEST project is one of the national facilitating projects within the NHS information management and technology strategy.⁸ It aims to help practices standardise their data entry and provides software to help with data extraction, including data required for national performance indicators.

Knowledge about clinical governance and quality improvement priorities

Many primary care practitioners remain unsure about the meaning of clinical governance and about the changes needed within a practice to implement it. There are many sources of practical advice on clinical governance in primary care and on practice development.⁹ Funding is available to support development of the practice team, such as the non-medical education and training levy, but this is not always applied effectively.¹⁰

People may also be unclear about national and local priorities for improving the quality of health services. Documents highlighting some of the national priorities relevant to primary care are shown in table B on the *BMJ's* website. These priorities have been selected for various reasons, including low take-up of effective interventions¹¹ and areas where there is strong evidence of inequalities in the provision of health care.¹² All primary care groups and trusts will identify their own local priorities—often these will be based on health improvement programmes (HimPs) developed by health authorities.

Primary care groups and trusts: information for improving population health

Practising clinicians need new clinical knowledge and skills to improve and monitor the quality of care they provide—and those leading the implementation of clinical governance at the level of primary care groups or trusts face additional challenges. Clinical governance leaders will have to coordinate the collation of information for practical purposes such as assessing inequalities, needs assessment, and national performance indicators. They will need to be able to learn from others in primary care and to be able to get research into practice by changing clinical behaviour.

Addressing inequalities in access to care and variation between practices

Practices operate under very different circumstances, and many outcomes may relate to social and demographic characteristics of the population rather than the primary care they receive.¹³ Primary care groups and trusts will have to decide how much can be achieved by supporting practices to improve performance, and how much effort needs to be directed in other ways, such as efforts to reduce smoking in deprived populations.

Routinely available information on health and health service activity at a primary care level is lacking, however. Deprivation scores are available for each practice in a primary care group or trust. These can be used to examine differences between practices in observed and expected rates for both the detection of diseases and uptake of effective interventions.¹⁴

Such studies could be a useful mechanism for primary care groups and trusts to investigate inequalities in access to effective health care and variation between practices. They could be used, as part of clinical governance, to target help towards practices in more deprived areas with low uptake of interventions or higher than expected rates of identified disease. However, primary care groups and trusts will need an agreed strategy on how to shift resources between practices. Without appropriate funding and investment in the quality of data, education, and organisational development, studies to examine such variations and to derive performance indicators could initially increase variation between practices.¹⁴

Further developing the ability to assess local needs

Many publications are relevant to needs assessment in primary care.¹⁵⁻¹⁷ Local annual public health reports give some idea of how health authorities assess the needs of their local populations, and many are available on websites. Members of the primary care team could have a key role in highlighting problems that need to be addressed in local health improvement plans. Public involvement in such work is also seen as important.¹⁸ Two questionnaires that can be used to assess patients' views of general practice are the patient enablement instrument and the general practice assessment survey.¹

Producing comparative national indicators for the primary care group or trust

Computer skills vary considerably among clinicians within practices. Uneven distribution of hardware and

incompatibility of different systems remain a problem, as does variable interest in inputting and using information at the practice level. Even so, some data can be collected across all practices in a primary care group or trust to derive national performance indicators.¹⁴ If all the practices in a primary care group or trust standardise their data entry and have compatible systems the MIQUEST project can help with data extraction.⁸

Some primary care groups and trusts have persuaded all their practices to adopt the same computer system. This has considerable advantages in terms of local computer training, maintenance, and upgrading and makes it easier to extract data for deriving national indicators. The complexity of aggregating data in primary care groups or trusts that have various computer systems may require someone to be appointed to supervise the process. The data would need to be standardised for differences in age and sex between practices, and indicators would be presented back to practices in an easily understandable format.¹⁴ Such work raises questions about data confidentiality and data storage. The Caldicott committee recently proposed the establishment of a network of organisational guardians to oversee access to such information.¹⁹ Each primary care group or trust should have a guardian and each practice should have a lead person for confidentiality and security issues.²⁰

Support for developing clinical governance

Clinical governance leads in primary care groups and trusts face numerous challenges. They will need to encourage practice teams to adopt systems to reduce risk, including significant event monitoring²¹; to respond to complaints and suggestions from patients; and to comply with health and safety regulations. *Clinical Governance: a Practical Guide for Primary Care Teams* is aimed at helping primary care teams to decide where to make a start with clinical governance,⁹ and table C on the *BMJ's* website shows other resources.

A further challenge lies in identifying good practice in other areas and encouraging its introduction locally. There are now over 160 primary care beacon sites,²²



LANE PAYNE

and sharing information about good practice with other local groups can be an effective way to encourage change. Details of various voluntary external inspection schemes can be found in *Quality Assessment for General Practice; Supporting Clinical Governance in PCGs*.¹

Perhaps the greatest challenge facing clinical governance leaders is that of changing clinical behaviour. Researchers have identified cost effective methods to change clinical behaviour within primary care—highlighting, for example, the central role of local opinion leaders and the importance of linking audit to feedback to participants.^{23 24} Table D on the *BMJ*'s website gives sources of information on clinical audit and effectiveness. The need for organisational development in order to achieve change and quality improvement was discussed by Huntington et al²⁵; likely levers of change include revalidation, NHS appraisal, and comparisons of the performance of local practices as part of clinical governance. (The figure shows some of the key activities for which knowledge and information are required for clinical governance.)

Problems that need to be solved

Progress with clinical governance so far has depended on the dedication of a considerable proportion of clinicians working in primary care. Although there is an enormous amount that individuals and primary care group and trust leaders can do, the following issues still need to be addressed:

- More resources are required to implement clinical governance, including funding for practice team education and training. Better use can be made of audit and educational funds;
- Further standardisation of data recording and retrieval in primary care is needed, building on the many requests for it and attempts at standardisation.^{8 26 27} The PRIMIS project will help to develop comparable data systems across primary care computers⁸;
- Access to relevant primary care information varies considerably. Although the National Health Service Information Strategy²⁸ could eventually solve this problem, interim solutions are needed now. The web based database of the National Primary Care Research and Development Centre (www.npcrdc.man.ac.uk) allows NHS staff and academics to access a wide range of data from primary care groups and trusts on populations and health services;
- There is a need to focus on a few indicators that are relevant to primary care and that are amenable to change and to avoid a proliferation of less appropriate ones;
- Research should be commissioned to measure aspects of primary care, such as communication skills and continuity of care, that are overlooked in performance frameworks because they are currently difficult to measure.

Conclusion

The additional knowledge required by everyone who works in primary care to take on the new role of clinical governance is daunting. However, many sources of information are available. Clinical governance offers the

opportunity to all healthcare workers in primary care to take charge of the agenda to improve the health and health care of their local population while at the same time providing the accountability that is now expected.

We thank our colleagues for their helpful comments on earlier drafts of this manuscript.

- 1 Roland M, Holden J, Campbell S. *Quality assessment for general practice; supporting clinical governance in PCGs*. Manchester: National Primary Care Research and Development Centre, University of Manchester, 1998. www.npcrdc.man.ac.uk/ (accessed July 2000).
- 2 Rosen R. Improving quality in the changing world of primary care. *BMJ* 2000;321:551-4.
- 3 Pringle M. Developing individuals for clinical governance. *BMJ* 2000;321:737-40.
- 4 Sackett DL, Richardson WS, Rosenberg W, Haynes RB. *Evidence-based medicine—how to practice and teach EBM*. London: Churchill Livingstone, 1997.
- 5 Gray J, de Lusignan S. National electronic Library for Health (NeLH). *BMJ* 1999;319:1476-9.
- 6 McColl AJ, Smith H, White P, Field J. General practitioners' perceptions of the route to evidence based medicine: a questionnaire survey. *BMJ* 1998;316:361-5.
- 7 Hunt DL, Haynes RB, Hanna SE, Smith K. Effects of computer-based clinical decision support systems on physician performance and patient outcomes. A systematic review. *JAMA* 1998;280:1339-46.
- 8 Collection of Health Data from General Practice Project. www.nottingham.ac.uk/chdgp/ (accessed July 2000).
- 9 Roland M, Baker R. *Clinical governance: a practical guide for primary care teams*. Manchester: National Primary Care Research and Development Centre; Leicester: Clinical Governance Research and Development Unit, University of Leicester, 1999. www.npcrdc.man.ac.uk/ (accessed July 2000).
- 10 Department of Health. *A review of continuous professional development in general practice. A report by the chief medical officer*. London: Department of Health, 1997.
- 11 McColl AJ, Roderick P, Gabbay J, Smith H, Moore M. Performance indicators for primary care groups: an evidence based approach. *BMJ* 1998;317:1354-60.
- 12 *Independent inquiry into inequalities in health*. London: Stationery Office, 1998.
- 13 Giufreda A, Gravelle H, Roland M. Measuring quality with routine data: avoiding confusion between performance indicators and health outcomes. *BMJ* 1999;319:94-8.
- 14 McColl AJ, Roderick P, Smith H, Wilkinson EK, Moore M, Exworthy M, Gabbay J. Clinical governance in primary care groups: the feasibility of deriving evidence-based performance indicators. *Quality in Health Care* 2000;9:90-7.
- 15 Murray S, Graham L. Practice based health needs assessment: use of four methods in a small neighbourhood. *BMJ* 1995;310:1443-5.
- 16 Stevens A, Raftery J. *Health care needs assessment—the epidemiologically based needs assessment reviews*. Oxford: Radcliffe Medical, 1997.
- 17 Wilkinson JR, Murray SA. Assessment in primary care: practical issues and possible approaches. *BMJ* 1998;316:1524-8.
- 18 NHS Executive. *Patient and public involvement in the new NHS*. Leeds: NHS Executive, 1999. www.doh.gov.uk/involve.htm (accessed July 2000).
- 19 Caldicott Committee. *Report on the review of patient-identifiable information*. London: Department of Health, 1997.
- 20 NHS Executive. *Caldicott guardians in the NHS. Briefing note 01/99*. Leeds: NHS Executive, 1999. on www.doh.gov.uk/nhsexec/briefnot/0199.htm (accessed July 2000).
- 21 Pringle M. Preventing ischaemic heart disease in one general practice: from one patient, through clinical audit, needs assessment, and commissioning into quality improvement. *BMJ* 1998;317:1120-4.
- 22 NHS Executive. *Beacon services: part of the NHS learning network*. Leeds: NHS Executive, 1999. www.nhsbeacons.org.uk/ (accessed July 2000).
- 23 NHS Centre for Reviews and Dissemination, University of York. *Getting evidence into practice*. London: Royal Society of Medicine Press, 1999.
- 24 Implementing clinical guidelines: can guidelines be used to improve clinical practice? *Effective Health Care* 1994;1(8).
- 25 Huntington J, Gillam S, Rosen R. Organisational development for clinical governance. *BMJ* 2000;321:679-82.
- 26 Data Standards Team IMG. *Data administration good practice guidelines for GP practices*. Leeds: NHS Executive, 1997.
- 27 Newrick DC, Spencer JA, Jones KP. Collecting data in general practice: need for standardisation. *BMJ* 1996;312:33-4.
- 28 NHS Executive. *Information for Health: an information strategy for the modern NHS 1998-2005*. Leeds: NHS Executive, 1998. www.doh.gov.uk/nhsexipu/strategy/index.htm (accessed July 2000).

Endpiece

How to die

Before I became old, I tried to live well; now that I am old, I shall try to die well; but dying well means dying gladly.

Seneca