

sugar and adjust their insulin doses, achieving far better control than when the doctor was making the insulin adjustments.<sup>9</sup> You learned from Dr David Sobel at Kaiser Permanente in America, who trained chronically ill adults to provide care and education to other chronically ill adults, achieving better health status outcomes and lower cost for both teachers and students.<sup>10</sup> You built your programmes on evidence of the benefits of patient self care in studies of asthma treatment,<sup>11</sup> hypertension treatment, and self diagnosis of urinary tract infection.<sup>12</sup>

By the early 21st century, the NHS was becoming a truly patient centered clinical care system. The emphasis today is on helping people with acute and chronic illnesses to become experts in their own care whenever they wish, able to participate fully in their own diagnosis, treatment, and monitoring. Shared decision making, incorporating every patient's values and circumstances, is now the norm.<sup>13</sup> NHS patients today write in and read their own medical records, receive much of their care in their own homes, and remain fully connected with their loved ones and communities.

At first, your doctors resisted this trend—fearing, perhaps, that it would relegate them to second fiddle, demean their expertise, and perhaps subject patients to undue hazards. Instead, this reformulation of the respective roles of doctor and patient has helped everyone—giving patients and their families the chance to establish control over their own lives and giving doctors, nurses, and other healthcare professionals the chance to focus their time and energies on exactly those technical, pastoral, and humanitarian tasks that they are in the best position to pursue.

These principles endure. You are not by any means finished. As in 1998, and as it will be in 2048, you in

2023 seek the continual improvement of an NHS full of knowledge, taking the best as its norm, growing its capacity as a full and integrated system of shared effort, wasting little, and respecting every patient as an individual. You continue to know that you started off right in 1948, and with some important midcourse corrections, you remain well on track. Maybe some day healthcare leaders in the United States will catch up. I am sure you will help them if they ask.

The author thanks Paul Plsek, John Oldham, Diane Plamping, Jo Bufford, and Jan Filotowski for helpful comments.

- 1 Secretary of State for Health. *The new NHS*. London: Stationery Office, 1997. (Cm 3807.)
- 2 Rogers E. *Diffusion of innovations*. 4th ed. New York: Free Press, 1995.
- 3 Batalden PB, Mohr JJ, Nelson EC, Plume SK, Baker GR, Wasson JH, et al. Continually improving the health and value of health care for a population of patients: the panel management process. *Qual Manage Health Care* 1998;5:41-51.
- 4 Berwick DM, Nolan TW. Physicians as leaders in improving health care. *Ann Intern Med* 1998;128:289-92.
- 5 Nolan T, Schall M. *Reducing delays and waiting times throughout the health-care system*. Boston: Institute for Healthcare Improvement, 1996.
- 6 Womack JP, Jones DT. *Lean thinking: banish waste and create wealth in your corporation*. New York: Simon & Schuster, 1996.
- 7 Kaplan SH, Greenfield S, Ware JE Jr. Assessing the effects of physician-patient interactions on the outcomes of chronic disease. *Med Care* 1989;27:S110-27.
- 8 Devine EC. Effects of psychoeducational care for adult surgical patients: a metaanalysis of 191 studies. *Patient Educ Counsel* 1992;19:129-42.
- 9 Mulley A, Mendoza G, Rockefeller R, Staker L. Involving patients in medical decision making. *Quality Connection* 1996;5(1):5-7.
- 10 Sobel DS. Rethinking medicine improving health outcomes with cost-effective psychosocial interventions. *Psychosom Med* 1995;57:234-44.
- 11 Lahdensuo A, Haahtela T, Herrala J, Kava T, Kiviranta K, Kuusisto P, et al. Randomised comparison of guided self management and traditional treatment of asthma over one year. *BMJ* 1996;312:748-52.
- 12 Nelson EC, Splaine ME, Batalden PB, Plume SK. Building measurement and data collection into medical practice. *Ann Intern Med* 1998;128:460-6.
- 13 Gerteis M, Edgman-Levitan S, Daley J, Delbanco TL, eds. *Through the patient's eyes*. San Francisco: Jossey-Bass, 1993.

## Clinical governance and the drive for quality improvement in the new NHS in England

Gabriel Scally, Liam J Donaldson

A commitment to deliver high quality care should be at the heart of everyday clinical practice. In the past many health professionals have watched as board agendas and management meetings have become dominated by financial issues and activity targets. The government's white paper on the NHS in England outlines a new style of NHS that will redress this imbalance.<sup>1</sup> For the first time, all health organisations will have a statutory duty to seek quality improvement through clinical governance. In the future, well managed organisations will be those in which financial control, service performance, and clinical quality are fully integrated at every level.

The new concept has echoes of corporate governance, an initiative originally aimed at redressing failed standards in the business world through the Cadbury report<sup>2</sup> and later extended to public services (including the NHS). The resonance of the two terms is important, for if clinical governance is to be successful it must be underpinned by the same strengths as corporate governance: it must be rigorous in its application, organisation-wide in its emphasis, accountable in its delivery, developmental in its thrust, and positive

### Summary points

Clinical governance is to be the main vehicle for continuously improving the quality of patient care and developing the capacity of the NHS in England to maintain high standards (including dealing with poor professional performance)

It requires an organisation-wide transformation; clinical leadership and positive organisational cultures are particularly important

Local professional self regulation will be the key to dealing with the complex problems of poor performance among clinicians

New approaches are needed to enable the recognition and replication of good clinical practice to ensure that lessons are reliably learned from failures in standards of care

NHS Executive  
(South and West),  
Westwood House,  
Lime Kiln Close,  
Stoke Gifford,  
Bristol BS34 8SR  
Gabriel Scally,  
regional director of  
public health

John Snow House,  
Durham University  
Science Park,  
Durham DH1 3YG  
Liam J Donaldson,  
regional director,  
NHS Executive  
(Northern and  
Yorkshire)

Correspondence to:  
Dr Scally  
gscally@doh.gov.uk

BMJ 1998;317:61-5

in its connotations. The introduction of clinical governance, aimed as it is at improving the quality of clinical care at all levels of healthcare provision, is by far the most ambitious quality initiative that will ever have been implemented in the NHS.

### Origins of clinical governance

Although clinical governance can be viewed generally as positive and developmental, it will also be seen as a way of addressing concerns about the quality of health care. Some changes in healthcare organisations have been prompted by failings of such seriousness that they have resulted in major inquiries. Variations in standards of care between different services have been well documented. Under the previous government's market driven system for the NHS, many felt that the quality of professional care had become subservient to price and quantity in a competitive ethos. Moreover, some serious clinical failures—for example, in breast and cervical cancer screening programmes<sup>3</sup>—have been widely publicised and helped to make clinical quality a public confidence issue.

#### What is clinical governance?

Clinical governance is a system through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish

Clinical quality has always engendered a multiplicity of approaches. Universally accepted definitions have been difficult to achieve, and some have even considered the term too subjective to be useful.<sup>4</sup> The World Health Organisation is helpful in exploring the idea of clinical governance.<sup>5</sup> It divides quality into four aspects:

- Professional performance (technical quality)
- Resource use (efficiency)
- Risk management (the risk of injury or illness associated with the service provided)
- Patients' satisfaction with the service provided.

These dimensions of quality are taken a stage further in the components identified in the new NHS white paper as being the attributes of an organisation providing high quality clinical care. The development of clinical governance is designed to consolidate, codify, and universalise often fragmented and far from clear policies and approaches, to create organisations in which the final accountability for clinical governance rests with the chief executive of the health organisation—with regular reports to board meetings (equally as important as monthly financial reports)—and daily responsibility rests with a senior clinician. Each organisation will have to work out these accountability arrangements in detail and ensure that they are communicated throughout the organisation.

### Quality improvement philosophy

At any one time, the organisations making up a health service show variation in their performance against quality criteria (fig 1). Quality improvement must address the whole range of performances. Failures in

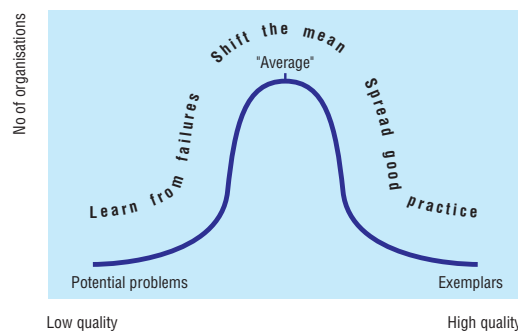


Fig 1 Variation in the quality of health organisations

standards of care—whether detected through complaints, audit, untoward incidents, or routine surveillance—represent one end of the range. Organisations that are exemplars represent the other end. At present once good practice is recognised, the scope for more general applicability and methods to transfer it both locally and nationally are not well developed.

The process of learning lessons from both exemplar and problem services has never before been tackled systematically in the NHS. However, a major shift towards improved quality will occur only if health organisations in the middle range of performance are transformed—that is, if the mean of the quality curve is shifted. This will necessitate a more widespread adoption of the principles and methods of continuous quality improvement initially developed in the industrial sector and then later applied to health care.<sup>6</sup> Generally these involve an organisation-wide approach to quality improvement with emphasis on preventing adverse outcomes through simplifying and improving the process of care. Leadership and commitment from the top of the organisation, team work, consumer focus, and good data are also important.

In the NHS a key part of establishing a new philosophy of quality improvement will be to decide how clinical audit fits in to an integrated approach. Although the concept of peer review is well established in the United Kingdom, the implementation of clinical audit in the NHS is not a complete success. Concerns have focused on the failure of audit processes to detect and moderate significant clinical failures; on incomplete participation (table 1); on the lack of connection and flow of information to those responsible for managing services; on substantial declines in the amount of regional audit; and on the value for money for what amounts to a significant annual investment.<sup>8</sup>

Table 1 Percentage of questionnaires returned in the 1994-5 national confidential inquiry into perioperative deaths<sup>7</sup>

Region or country	Surgical	Anaesthetic
Anglia and Oxford	73.9	81.7
North Thames	68.6	64.2
North West	75.6	75.3
Northern and Yorkshire	80.8	84.1
South and West	80.6	88.5
South Thames	75.1	74.3
Trent	77.8	72.8
West Midlands	74.2	74.1
Wales	75.0	72.8
Northern Ireland	82.3	80.7

Two new external bodies will facilitate and reinforce the local duty for quality in the NHS. The style of working of the Commission for Health Improvement and the National Institute for Clinical Excellence will be important, as will the way in which they are viewed by local services. Any external body can add value in different ways: inspecting, investigating, advising, supplying expertise, facilitating, accrediting. The role of the two new bodies could contain elements of all these functions. However, it will be important that they establish an overall philosophy which will be based (at least in their initial approach to local organisations) on facilitating improvement and encouraging evaluation. Health organisations must not be defensive if the full benefits of these important additions to the national scene are to be realised.

The case study (box) describes an imaginary hospital (Gridstone) that is ailing as an organisation. Conventional indicators of performance—for example, response times and budgetary control—are showing up badly. Other indicators, such as general practitioners' referral preferences and the inability to fill vacant posts, suggest that all is not well with the quality of care provided. It is obvious too that the relationship between doctors and management is dysfunctional. Clinical governance offers the opportunity for the hospital to look at itself afresh and start to rebuild its quality ethos—a fact that is recognised by the new chief executive.

## Culture, leadership, and teams

The feature that distinguishes the best health organisations is their culture. The applicant for the medical directorship of Gridstone Royal Infirmary at her interview recognises that an organisation that creates a working environment which is open and participative, where ideas and good practice are shared, where education and research are valued, and where blame is used exceptionally is likely to be one where clinical governance thrives (box next page). The challenge for the NHS is the active creation of such cultures in most hospitals and primary care groups of the future. However, evidence on how to define a "good" culture and on the methods required to promote one is largely lacking in the healthcare field. The fact that those leading health services do not traditionally think along these lines perhaps explains the initial scepticism of some of the panel members at the medical director's interview at Gridstone. But although the management literature deals with such subjects extensively, uncertainty exists about how best to appraise it critically.

Most observers would identify leadership as an equally important ingredient in successful organisational change. However, leadership too is a rather vague concept. Among professionals it is often based on a model of wise authority rather than of authority conferred by virtue of position. The introduction of clinical and medical directors in NHS trusts has changed this approach dramatically. Posts may well be publicly advertised and are invested with significant responsibilities and authority. Although this change has taken place, little effort has been expended in developing leadership skills among members of the professions expected to take on these posts. Moreover, many who hold such posts (as in the Gridstone

### Case study: Gridstone Royal Infirmary NHS Trust

Gridstone Royal Infirmary NHS Trust has advertised for a new medical director with specific lead responsibility for developing clinical governance in its hospital, which serves a small city and its surrounding county population. The hospital has had a troubled past four years: a recurrent financial deficit has increased each year; targets for inpatient waiting times agreed in annual performance plans have repeatedly not been met; and members of the senior medical staff have regularly used the local newspaper to criticise decisions by the trust's management. The hospital has a higher number of medical posts filled by locum than any hospital in the region. A confidential survey of general practitioners' opinions conducted for the community health council showed that many were referring to hospitals outside the county because of concerns about standards of care in some of the local hospital's clinical departments. There have been two chief executives in the past four years. The current, newly appointed chief executive is the first woman senior manager ever appointed to the hospital's staff. She states that the key to creating an organisation with a reputation for high quality is successful implementation of clinical governance.

example) will find themselves leading clinical governance strategies within their organisations. Medical directors of NHS trusts may recognise that they have skill deficits, but although these may be addressed when someone is in post, a proactive approach would undoubtedly be preferable.<sup>9</sup>

New approaches to undergraduate medical education, such as the introduction of problem based learning and joint education with other professional disciplines, should in time improve teamworking skills; the importance of teamworking has been emphasised by the General Medical Council.<sup>10</sup>

One of the strongest statements in the recent NHS white paper for England was that a new era of collaboration would begin. Competition, a feature of the previous eight years, was to be ended. The strength of the working relationship between senior managers and health professionals will be at the heart of successful clinical governance. Other partnerships will be important too. Day to day and longer term developmental progress will depend on effective partnerships with universities, local authorities, patients' representative groups, and voluntary organisations.

## Evidence and good practice

The evidence based medicine movement<sup>11</sup> has always had a major influence on many healthcare systems of the world. Accessing and appraising evidence is rapidly becoming a core clinical competency. Increasingly, neither clinical decisions nor health policy can any longer be comfortably based on opinion alone.

The NHS research and development programme has helped with the production and marshalling of the evidence needed to inform clinical decision making and service planning. Clinical governance will require a greater emphasis at local level, where currently the infrastructure to support evidence based practice is not always in place. The most obvious is information technology to enable access to specialist databases (such as the Cochrane collaboration). However, libraries, for example, are a basic requirement for access to professional knowledge, and a recent review in one English region has shown wide variation in funding for and access to library services.<sup>12</sup>

Although presenting evidence, or providing access to it, is a necessary condition for adopting new practices,

*A consultant rheumatologist is an external applicant for the post of medical director of Gridstone Royal Infirmary NHS Trust. If she is appointed she will be expected to take the lead on implementation of clinical governance. Here is an extract from her interview*

**Q:** In your vision of clinical governance will our doctors be more accountable than they are now?

**A:** I think the scope of professional responsibility will be much broader than at present—covering commitment not just to delivery of a safe and effective service but to the quality goals of the organisation as a whole and to the clinical team.

**Q:** Isn't clinical governance just a more formal way for us to weed out the poor performers?

**A:** No, I think the concept is much more fundamental than that. Certainly, it is vital that poor performance is recognised and dealt with better than it has been in the past. That's what people mean when they talk of local self regulation. We need to identify problems of poor performance much earlier, through mechanisms like making sure everyone takes part in effective clinical audit, and having more open communication within teams. But we must also try to prevent many of these problems. This will mean learning where possible from failures in standards of care—for example, by looking at our record of complaints and untoward incidents. It will also mean having better data to review quality in each clinical service; ensuring that clinical teams work more effectively so that individuals are taking fewer decisions in isolation; being clearer about the skills and competencies needed in each area of service; and being willing to change things to make them better.

**Q:** Okay, you've convinced us that there's more to addressing poor performance than sorting out the bad apples, but you say there is also more to the concept of clinical governance?

**A:** Yes, I see the first and most important task as an organisational one—to create the kind of service where high quality is assured and improvement takes place month on month, year on year.

**Q:** Sounds a little "mother pie," doctor, doesn't it? I mean, how could you possibly suggest anything else?

**A:** I think you mean "motherhood and apple pie," don't you? I know that you and the chairman run private companies. You are surely not going to tell me that establishing the right leadership and culture are not keys to successful organisations are you?

**Q:** Okay, could you be a bit more specific? How will we recognise a good culture in the hospital if we see it?

**A:** It is because the leadership and the culture have been wrong that you have had so many problems over the past four years. I see a positive culture as one in which doctors, managers, and other healthcare professionals work closely together with a minimum of hierarchies and boundaries. It would also be one with an environment in which learning and evaluation are encouraged and blame is rarely used. This will be brought about only through the leadership of the chief executive and the board (including me as medical director if I am appointed), by the clinical directors of each service, and by individual team leaders in every clinical area. A safe, high quality service for patients attending your accident and emergency department depends just as much on the leadership skills of the staff nurse in the department as it does on the clinical skills of the trauma surgeon or the management skills of the medical director at trust board level. That is why I emphasise leadership and culture and why I will eat "mother pie" if I am wrong.

**Q:** Are there any other points about clinical governance you would like to make? Time is short, and we do want to ask you about your attitude to consultants having reserved spaces in the car park.

**A:** There is a great deal more I could say, but just two points for now. Firstly, it is vital that the right infrastructure is in place for clinical governance: information technology, access to evidence, and education and training, as well as some protected time for individuals and teams to think about the quality of their services, review data, appraise evidence, and plan improvements. Secondly, we must find ways of involving patients much more than we have in the past—they are, after all, the people we are doing this for.

it is not sufficient. The field of behaviour change among health professionals is itself developing an evidence base, through which it is becoming clear that single measures (such as general feedback) are not effective and multifaceted strategies are needed—using techniques such as input from a respected colleague, academic detailing, and individual audit and feedback.<sup>13</sup>

Much of the evidence based work to improve clinical decision making has centred on specific interventions and clinical policies. However, clinical governance is also expected to address how good practice can be recognised in one service and transferred to others. Where whole services—for example, a community diabetic service or a service for women with menstrual problems—are concerned, it is much more difficult to identify the beneficial elements and replicate them elsewhere. A new major strand in the NHS research and development programme—addressing so called service delivery and organisation—is intended to tackle this problem.

Changes to the NHS complaints procedure in 1996 reduced the fragmentation and inconsistency of previous arrangements as well as introducing more openness and lay participation.<sup>14</sup> The health service has yet to develop a simple way to allow the important, generalisable lessons to be extracted from the extensive analysis, information gathering, and independent judgment which now underpin the handling of complaints. Moreover, a wealth of other information on clinical incidents which are the subject of internal and external inquiries is generated, but there is no obvious route for this information to be channelled to prevent similar errors from recurring. Clinical governance has the opportunity to address this weakness—requiring organisational as well as individual learning.

## Dealing with poor performance

Poorly performing doctors and other health staff are a risk not only to patients but also to the organisation they work for. Though relatively few in number, their existence, and the tenacity with which the problem is addressed, is very important to the standing of the NHS and the healthcare professions in the eyes of the public. The controversy generated by this subject can lead some to believe that the sole purpose of clinical governance is to sort out problem doctors (see interview (box)). A small proportion of hospital based medical staff are likely to have sufficient deficiencies in their performance to warrant consideration of disciplinary action.<sup>15</sup> The introduction of new performance procedures by the General Medical Council has signalled a change in approach—away from a reluctance to do anything that might be seen as criticism of a fellow professional. It would be wrong, however, to rely on a body such as the General Medical Council to deal with most problems. Local professional regulation needs to be developed so that satisfactory and timely solutions can be found to what can be complex problems. The test will be whether such cases can be dealt with in a sympathetic manner which, while correctly putting the protection of patients first, will also deal fairly with experienced and highly trained professionals.

## Professional development

The staff of a healthcare organisation will be the key to how it rises to the challenges of the new agenda. Firstly, good recruitment, retention, and development of staff will make a major contribution. Secondly, staff must be supported if they are to practise well: skills training, modern information technology, access to evidence are all important. Thirdly, staff must participate in developing quality strategies and be encouraged to look critically at existing processes of care and improve them. Finally, valuing staff and letting them know that they are valued—easily espoused but often overlooked—is a common feature of organisations that show sustained excellence in other sectors<sup>16 17</sup>

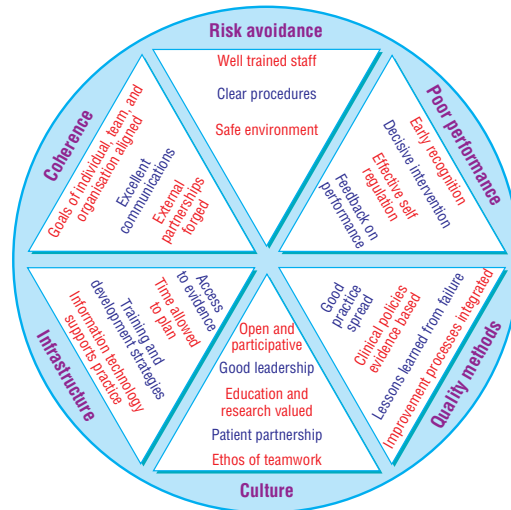
In the NHS the development of educational consortiums has for the first time given NHS trusts and health authorities direct control over the type of training received by large numbers of professional staff. The alignment of this new system to the goals of clinical governance will be essential. Systematic reviews are beginning to inform the design of training and continuing professional development programmes for doctors.<sup>18</sup> Designing programmes that help to advance the quality goals of every organisation and which draw on an evidence base will also be part of the principles of good clinical governance.

## Data quality

The importance of clinical record keeping is well established. The collection and analysis of routine patient data has been a central part of the health service's planning and administration. At the outset, the internal market in the NHS (which operated between 1990 and 1997) was seen as highly dependent on the exchange of data about the quality of care provided. However, the emphasis in data collection was on the number of treatments, length of stay, and costs of care. There are substantial failings in the completeness of some of the vital clinical data (table 2). A renewed commitment to the accuracy, appropriateness, completeness, and analysis of healthcare information will be required if judgments about clinical quality are to be made and the impact of clinical governance is to be assessed. These issues are so important and have been so unsatisfactorily dealt with in the past that they will need to be addressed nationally not only locally.

**Table 2** Percentage of hospital episodes in which the primary diagnosis or primary operative procedure is unknown, England 1995-6<sup>19</sup>

Region	Primary diagnosis	Primary operative procedure
Northern and Yorkshire	4.2	2.0
Trent	21.9	0.7
Anglia and Oxford	2.4	1.8
North Thames	3.2	8.4
South Thames	3.5	1.8
South and West	1.7	0
West Midlands	2.2	0.2
North West	1.9	0.4
England	4.5	2.1



**Fig 2** Integrating approaches of clinical governance

## Conclusion

Clinical governance is a big idea that has shown that it can inspire and enthuse. The challenge for the NHS—health professionals and managers alike—is to turn this new concept into reality (fig 2). To do this requires the drawing together of many strands of professional endeavour and managerial commitment into a cohesive programme of action in each healthcare organisation in England. This will need leadership and creativity. If this challenge is met the beneficial consequences will flow to every hospital, practice, and patient in the country.

- Secretary of State for Health. *The new NHS*. London: Stationery Office, 1997. (Cm 3807.)
- Report of the Committee on the Financial Aspects of Corporate Governance. London: Gee, 1992.
- NHS Executive (South Thames). *Review of cervical cancer screening services at Kent and Canterbury hospitals*. London: NHS Executive, 1997.
- Brotherston HHF. Medical care investigation in the health services. In: Nuffield Provincial Hospitals Trust. *Towards a measure of medical care. Operational research on the health services—a symposium*. Oxford: Oxford University Press, 1962.
- World Health Organisation. *The principles of quality assurance*. Copenhagen: WHO, 1983. (Report on a WHO meeting.)
- Berwick DM. Continuous improvement as an ideal in health care. *N Engl J Med* 1989;320:53-6.
- Gallimore SC, Hoile RW, Ingram GS, Sherry KM. *The report of the national confidential enquiry into perioperative deaths 1994/1995*. London: NCEPOD, 1997.
- Clinical Audit in England. HC 27 Session 1995-96*. London: National Audit Office, 1995. (Report by the comptroller and auditor general.)
- Wood TJ, Scally G, O'Neill D. Management knowledge and skills required by UK and US Medical Directors. *Physician Executive* 1995;21(8):26-9.
- General Medical Council. *Good medical practice: guidance from the General Medical Council*. London: GMC, 1995.
- Evidence-based Medicine Working Group. Evidence-based medicine: a new approach to teaching the practice of medicine. *JAMA* 1992; 268:2420-5.
- Access to the knowledge base: a review of libraries*. Bristol: NHS Executive, 1997. (A report to the NHSE Regional Office for the South and West.)
- Oxman AD, Thomas MA, Davis DA, Hayes RB. No magic bullets: a systematic review of 102 trials of interventions to help health professionals deliver services more effectively and efficiently. *Can Med Assoc J* 1995;153:1423-31.
- NHS Executive. *Guidance on implementation of the NHS complaints procedure*. Leeds: NHS Executive, 1996.
- Donaldson LJ. Doctors with problems in an NHS workforce. *BMJ* 1994; 308:1277-82.
- McGregor D. *The human side of the enterprise*. New York: McGraw Hill, 1960.
- Kanter RM. *The change masters*. London: Allen and Unwin, 1984.
- Davis DA, Thomas MA, Oxman AD, Hayes RB. Evidence for the effectiveness of CME: a review of 50 randomised controlled trials. *JAMA* 1992;268:1111-7.
- NHS Executive. *Clinical effectiveness indicators: a consultation document*. Leeds: NHSE, 1998.

## Will the fudge on equity sustain the NHS into the next millennium?

Nicholas Mays, Justin Keen

Health Systems Programme, King's Fund, London W1M 0AN

Nicholas Mays, *director*

Department of Government, Brunel University, Uxbridge, Middlesex UB8 3PH

Justin Keen, *research fellow*

Correspondence to: Mr Mays N.Mays@kehf.org.uk

BMJ 1998;317:66-9

The NHS was established as a compromise between key parties; it allowed those patients who could afford it to have access to both private health care and the NHS and it permitted consultants to have access to income from private practice while working in the NHS. This safety valve for excess demand was developed contrary to the founding principles of equity, but it has been a feature of health care in the United Kingdom ever since; it allows more affluent patients to circumvent the periodic funding crises in the NHS while maintaining their support for health care funded by taxes. However, the share of total healthcare spending contributed by the private sector has risen steadily. This trend has led some commentators to argue that the NHS is not sustainable, primarily because funding through taxation will lead to an increasing gap between the demand for and supply of health care. Alternatives to the NHS would involve requiring a larger private contribution to the costs of health care but such systems require complex regulation and seem to produce inequities that reveal the specific interests of their proponents. In contrast, expanding the funding of the NHS in line with increases in the gross national product is affordable and broadly equitable.

Whether the UK compromise between public and private interests will be sustained cannot be predicted. Recent developments suggest that major change may occur unintentionally through the cumulative effects of small or unplanned changes, or both, or result from applying policy thinking from other fields of welfare, such as social security reform.

### Health care was rationalised, not nationalised

There is a tendency in commentary on the NHS to discuss it as though it is the only healthcare system in the United Kingdom but this has never been an accurate reflection of the situation. The early history of the NHS shows clearly that the newly nationalised service did not represent a clean break with the past even though it rapidly consigned private health care to a residual role that served a small minority of the population.<sup>1</sup> Rather, it was a partial rationalisation of what existed, conditioned by a need to reassure and encourage, rather than coerce, a number of conservative professional interest groups to participate. Thus from the outset the NHS was entangled in a wide range of relationships (with both private finance and those who supplied health care and related goods and services privately) which compromised its goal of ensuring that health services were available exclusively on the basis of need.

Over the 50 years some of the large scale features of this compromise have remained remarkably stable, both within the NHS and in its relationships with the private sector (box next page). Thus the 1946 act which

### Summary points

The advent of the NHS did not lead to the abolition of private finance for or the private provision of health care in the United Kingdom

Shares of total healthcare spending and healthcare provision contributed by the private sector have risen steadily since the end of the 1960s

Several recent policy developments may cumulatively lead to a radically different balance of public and private finance and insurance

Alternatives to the NHS that involved a larger share of private financing would require complex regulation and would be less equitable than current arrangements

founded the NHS represents a long term compromise between the interests of the state and the interests of professional, commercial, middle income, and upper income groups. This compromised fudged the equity principle in the 1946 act by permitting, and at times encouraging, private health care to develop alongside the NHS as a safety valve for people with the resources to make additional provision for themselves. The question now is whether the compromise will continue to protect the NHS into the 21st century.

### Continuity and change

Despite successive funding crises threatening the comprehensiveness and sustainability of the NHS, an increasing level of criticism of its apparently poor performance, and the tolerance of private health care by successive governments the main developments in NHS policy since 1948 have done little directly to undermine the fundamental principles of the NHS as being predominantly funded by taxes and providing universal access to services. Instead, changes in policy have attempted, as in the case of the internal market,<sup>2</sup> to improve efficiency and responsiveness to patients' needs within a publicly funded system.

Over time there have been shifts in the perception of what is possible and desirable in the future. Perhaps the biggest change has been in the perception that there is a widening gap between what the NHS might be able to provide with more resources and what it can provide at current levels of funding. For example, the increasing numbers of high cost drugs that the NHS is required to purchase lead to contentious priority decisions and fuel the demand for more spending. One result of this perceived gap is that successive government changes to the NHS have not reduced the

**Public-private ties established with the founding of the NHS**

- General practitioners work as independent contractors, not salaried employees
- Specialist doctors and other professionals can maintain both NHS and private practices
- NHS pay beds (essentially private beds in NHS hospitals which allow the trust to charge for the bed and consultants to charge separately for services)
- Prescription and other charges to users for NHS services
- Patient access to both NHS and private treatment, sometimes for the same condition; access to private treatment on the basis of ability to pay rather than need
- Reliance of the NHS on pharmaceutical and other industries to develop new products with the NHS contributing resources to development and testing

attraction of private health care. Far from private practice diminishing as the NHS has grown, the private sector has become steadily more important both in financing and supplying health care, but this has not threatened the founding principles of the NHS.<sup>3</sup> The box below summarises some of the main trends in the balance between private and public finance and the provision of health services.

**Arguments for changes in the NHS**

The NHS continues to have high levels of public support. Seventy seven per cent of the population support the principle of a health service available to all, although this does not necessarily mean that they oppose people having the choice of paying for private health care.<sup>8</sup> Although it is difficult to believe when you are on an NHS waiting list, people are more satisfied with arrangements in the United Kingdom than are people in either Canada or the United States.<sup>9</sup> The United Kingdom also compares favourably internationally in terms of fairness of funding, equality of access, and efficiency.<sup>10</sup>

Nevertheless, arguments persist that a higher share of private funding in a mixed economy of public and private care is inevitable and desirable. Critics tend to argue that a publicly funded system, particularly one funded through general taxation, cannot provide the volume and standard of health care that an increasingly affluent, aged, and sophisticated population wants (despite the fact that we cannot determine objectively what level of spending is correct). The main difference between the United Kingdom and other comparable countries lies not in the amount of public funding for health care but in the lower level of private funding. There is a clear gap between NHS resources and demand, shown particularly clearly in the provision of expensive new drugs such as interferon beta. Yet more public spending is not an option if the United Kingdom is to remain internationally competitive in increasingly global markets, and additional spending is political suicide for any government. If more affluent people are only able to spend more of their money on health care provided outside the NHS then, inevitably, the private sector will and should grow to meet the unmet demand in the public sector.

Governments, including the current one, have responded to this argument by vowing to keep taxes and public spending down which further encourages the suspicion that institutions like the NHS are unsustainable and that more private finance is the only alternative. A range of solutions to the perceived financial unsustainability of the NHS has been proposed. For example, Hoffmeyer and McCarthy<sup>11</sup> propose a model to replace the NHS and meet increasing demand with a guaranteed package of health care for all; their model comprises competing health insurance agencies, compulsory insurance, premiums based on income and (health) risk, a central fund designed to share the costs of high risk groups, safety nets for individuals unable to afford or find insurance, providers competing for the business of insurance agency purchasers, and a prohibition against insurers excluding whole groups of patients or insisting on unreasonable terms to avoid risk.

This model has something in common with the different forms of insurance that were available in the United Kingdom before the formation of the NHS. The central ideas are that patients can choose between different packages and insurers, and more affluent patients can insure themselves for higher levels of care, which would increase the level of funding for health care beyond that permitted by successive parsimonious governments. Behind the scenes the government would attempt to ensure that each insurer had roughly equal funds in relation to the requirements of those enrolled in their plan.

But is it the case that we cannot afford the NHS, and would it be a good thing to abandon the basic architecture of health care in the United Kingdom for something new? Analysis indicates that given even conservative estimates of economic growth the United Kingdom can continue to pay for the welfare state and the NHS through taxation, if it chooses.<sup>12</sup> Whether we should spend more is a separate question to which there is no objective answer.

As to whether the United Kingdom should opt for a more explicitly mixed system with much more private finance and a basic publicly subsidised sector

**Trends in the mix of public and private financing**

- Total spending in the NHS and in the private healthcare sector rose from 3.9% of gross domestic product in 1960 to 7.1% of gross domestic product in 1992<sup>4</sup>
- The private sector's share of total spending on health care rose from around 3% in the 1960s to 14% in 1985 and to 16% in 1992<sup>3</sup>
- Public and private expenditure on private hospital care and private nursing home care increased from 9.9% of total healthcare expenditure in 1986 to 19.9% in 1996<sup>5</sup>
- The number of subscribers to private health insurance policies increased from 2.45 million in 1986 to 3.17 million in 1996<sup>6</sup>
- Payments by patients for NHS services rose from £35m in 1960 to £919m in 1996<sup>7</sup>
- Investment in new hospitals under the private finance initiative announced since 1 May 1997 was £660m (Department of Health press release 98/123)

for the less well off, 40 years' experience from all over the world cautions against it.<sup>13</sup> Such systems, like that in the United States, tend to perform poorly in terms of public satisfaction, health outcomes, efficiency, access, and equity of finance, and are difficult to manage and regulate. They do, however, tend to increase expenditure, jobs, and incomes in the health sector. For this reason, they are supported by providers and private insurers. They are also attractive to upper income taxpayers since they enable such people to benefit at the expense of poorer people, because user charges and the cost of private insurance impose more of a burden on those who are poor and who are more likely to make higher use of services. The greater the reliance on private finance and the less the reliance on taxation or social insurance, the greater the opportunity for people to purchase more services for themselves without having to pay to support a similar standard of care for everyone else. Since those in need in any one year will be a small proportion of the population—and they will be disproportionately elderly people and those with chronic illnesses, who are least able to pay—private finance tends to improve access to care for those who are least likely to need it. Healthcare financing changes in the United Kingdom would thus have profound consequences for the equitable distribution of resources.

### The shape of things to come

Irrespective of the merits of these arguments—and they have made little headway in most countries that have systems providing universal access to care—there is little doubt that a more mixed economy is emerging in the United Kingdom (box), albeit not always as a direct result of explicit reform of health policy. Further changes could occur simply through the accumulation of seemingly separate smaller scale changes which would further reduce the contribution of publicly funded health services; the box summarises a few of these changes.

Change may also come about unintentionally if the proposals contained in the government white paper *The New NHS*,<sup>14</sup> which sets out Labour's plans for the abolition of the internal market, are acted on. One

#### Developments that are altering the mix of financing for health care

- Charging for eye tests on the NHS
- Moving NHS dental care into the private sector
- Commercial funding for all major NHS capital schemes
- Changes in social security leading to a requirement for personal insurance against accident and sickness
- Plans for compulsory private insurance for long term care
- Proposals from some NHS healthcare trusts for additional contributions from local people
- Government plans to charge insurers for the full cost of NHS treatment of motorists and passengers involved in road accidents

theory is that the unwitting combination of the new primary care groups (groups of practices responsible both for commissioning hospital and community health services and developing general practitioner services) in England and the use of the private finance initiative (a scheme under which private finance is used to build hospitals which are then leased back to the NHS) will lead to something akin to an American style system developing in the United Kingdom; general practitioners might in effect function outside the NHS and this could possibly trigger an unplanned shift to a system in which patients choose to enrol with a range of competing primary care based total healthcare plans using vouchers from the NHS together with private insurance to cover additional services.<sup>15</sup>

Some of the changes would emphasise more strongly the difference between the privately insured haves and the publicly subsidised have nots, along the lines of the American model,<sup>16</sup> which could undermine the current majority support for the NHS. However, this does not seem to be the intention of the government, which has signalled that its priority is to support the NHS and to reduce the likelihood that people will use the private sector by making the reduction of NHS waiting lists a priority.<sup>18</sup> Like its predecessor, this government's aim seems to be to improve efficiency within the publicly funded system using management techniques borrowed from the private sector.

### Conclusion

The overall position at the moment is one where most of the main elements of the 1946 compromise settlement remain in place—for better or for worse. The fact that the compromise was not simply between public and private interests but was more complex has made it difficult to change. Gazing into a crystal ball is rarely rewarding but it seems that the NHS may move in one of at least three different directions. In the first scenario key elements of the 1946 settlement, including the privileged position of consultants, will be renegotiated, with sources of finance staying broadly the same. The rapid evolution of the debate on clinical self regulation, particularly following the case in Bristol in which three surgeons were accused of continuing to operate despite high mortality,<sup>19</sup> suggests that this may already be happening. The second scenario is of more



Public and private have always coexisted in the NHS: an early general practitioner deputising service



radical change, whether planned or unplanned, with a far larger role for private finance. Some of the signs suggest that this is not out of the question. The third scenario, which tends already to be the outcome of the periodic crises in the NHS, is that it will continue to muddle through, with its current least worst settlement largely in place. As time goes on and if the private sector continues to grow this third path may become less likely, since an increasing proportion of the population will come to rely on the private sector for more of its health care.

Maybe the most important development will be in our sensibilities. Having been told for so long that change is inevitable, the prospect of change does not seem quite so alarming, even though the evidence that it will solve the enduring problems of health care in the United Kingdom is lacking.

Thanks for helpful comments, but no responsibility for the contents of this paper, are due to Tony Harrison and Sean Boyle.

- 1 Rivett G. *From cradle to grave: fifty years of the NHS*. London: King's Fund, 1998.
- 2 Secretaries of State. *Working for patients*. London: HMSO, 1989. (Cm 555.)

- 3 Propper C. *Who pays for and who gets health care?* London: Nuffield Trust, 1998. (Health economics series, no. 5.)
- 4 Organisation for Economic Cooperation and Development. *Health care reform: the will to change*. Paris: OECD, 1996.
- 5 Laing W. *Laing's review of private healthcare*. London: Laing and Buisson, 1997.
- 6 Association of British Insurers. *The private medical insurance market*. London: ABI, 1997.
- 7 McGuigan S. *Office of Health Economics compendium of health statistics 1997*. London: OHE, 1997.
- 8 Judge K, Mulligan J-A, New B. The NHS: new prescriptions needed? In: Jowell R, Curtice J, Park A, Brook L, Thomson K, Bryson C, eds. *British social attitudes, the 14th report: the end of Conservative values?* Aldershot: Ashgate/Social and Community Planning Research, 1997:49-72.
- 9 Blendon RJ, Leitman R, Morrison I, Donelan K. Satisfaction with health systems in ten nations. *Health Aff (Millwood)* 1990;9:185-92.
- 10 Wagstaff A, van Doorslaer E. Equity in the finance of health care: some international comparisons. *J Health Economics* 1992;11:361-87.
- 11 Hoffmeyer UK, McCarthy TR. *Financing health care*. Amsterdam: Kluwer Academic, 1995.
- 12 Hills J. *The future of welfare: a guide to the debate*. Rev ed. York: Joseph Rowntree Foundation, 1997.
- 13 Evans RG. Health care reform: who's selling the market and why? *J Public Health Med* 1997;19:45-9.
- 14 Secretary of State for Health. *The new NHS*. London: Stationery Office, 1997. (Cm 3807.)
- 15 Pollock A. The American way. *Health Serv J* 1998;108:28-9.
- 16 Reinhardt U. A social contract for 21st century health care: three-tier health care with bounty hunting. *Health Economics* 1996;5:479-99.
- 17 Milburn A. The chance we've been waiting for. *Health Serv J* 1998;108:20.
- 18 Treasure T. Lessons from the British case. *BMJ* 1998;316:1685-6.

## Change and resistance to change in the NHS

Diane Plamping

The NHS is 50 years old. Every government since 1948 has re-invoked its founding principles, but there is less agreement about how services based on these principles should be organised. Alongside remarkable stability in the espoused purpose of the NHS there has been almost constant structural change. Health action zones and primary care organisations are the latest offerings. There is a paper mountain of advice on reforms, restructuring, and managing change. Yet many behaviours do not change. The puzzle is why the NHS has been so unchanging, given the barrage of attempts to "reform" it.

Some things have changed, of course, in as much as complex systems can be changed from outside. Bits have been knocked off and elements have been down-sized or re-engineered, but these changes have been resisted by most "insiders." These insiders have been successfully self ordering so that much of what happens in the NHS is unchanged in nature, if reduced in quantity. During all this investment in managing change, most insiders have not come to want the NHS to be different.

In this anniversary year it may not be enough simply to restate values and purpose. A more fruitful approach may be to focus on the behaviour of this complex system and to try to understand what creates the internal dynamics and maintains enduring patterns of order and behaviour.

Commonly, change is understood in terms of top-down plans. The centre has a strategic "map," and this is translated into organisational structures that are designed to fit, like the pieces of a jigsaw. But this has only a limited influence on the way that individual staff work with patients. Another approach is to look for

### Summary points

Despite considerable structural change and numerous attempts at "reform," the underlying nature of the NHS has remained remarkably stable and many behaviours have not changed

This stability could be explained by the stability of the guiding principles that shape behaviour in the NHS—"Can do, should do," "Doing means treatment," "Treatment should fix it," and "I am responsible"

These principles, though once appropriate, may now be reducing the NHS's adaptive capacity

To allow proper reform of the NHS, we have to engage directly with these guiding principles and change them, rather than simply changing the organisational structure

guiding principles that are compatible with both the purpose of the NHS and the daily decision making that takes place in millions of patient contacts. If we could describe what gives rise to the behaviour patterns of the NHS this might help us decide what we want to retain and what we want to adapt to take us through the next 50 years. We can hypothesise that, if there are guiding principles that shape behaviour in the NHS, then the NHS can be reformed only by engaging with and changing the principles themselves.

Urban Health Partnership, Primary Care Group, King's Fund, London W1M 0AN  
Diane Plamping,  
codirector

www@dial.pipex.com

BMJ 1998;317:69-71

## Principles that shape behaviour

Can we describe the principles that shape the behaviour which we identify with the NHS? Are they still useful? May they now be reducing the NHS's adaptive capacity, although they were once useful? What are the appropriate guiding principles for a modern, publicly funded, national health service? We have identified some principles that we believe, taken together, can describe current patterns of behaviour in the NHS:

- Can do, should do
- Doing means treatment
- Treatment should fix it
- I am responsible

### Can do, should do

This reflects the way in which the original statement of purpose that the NHS provide a comprehensive health service is converted into everyday meaning that the NHS should provide health care on the basis of "what can be done should be done" (personal communication, M Flatau, Complexity and Management Centre, University of Hertfordshire). In 1948 this principle made sense: there were postwar shortages of everything (so more was better), far fewer available treatments, and a widespread belief that science produced unalloyed benefits. Fifty years later the same conditions do not apply: the range of possible medical interventions could swallow a huge section of our gross domestic product (GDP), we are more wary of technology,<sup>1</sup> and treatment can be seen as unkind, unnecessary, ineffective, inappropriate, or unethical.<sup>2</sup>

Cochrane suggested that the NHS should provide all effective treatments free of charge.<sup>3</sup> But does this mean do everything that is effective or does it mean do everything that is appropriate? Or, since there can surely be no guarantee that the NHS budget will be allowed to match that level of service, does it mean do everything that is on the authorised list of NHS treatments?

The introduction of purchasing in the 1980s has revealed that there may be two self ordering systems



The NHS's concentration on treatment allowed it to ignore determinants of health such as poverty and ill housing

TOPHAM PICTUREPOINT

within the NHS—crudely, one represented by clinicians and patients and one by managers and public health practitioners. "Can do, should do" is a principle based on rights. For individual therapeutic decisions it probably still provides a reasonable basis for action, although "Can do, should be available" might be closer to the balance required between advantage and risk. In contrast, the public health principle of do what produces the maximum health gain with the available resources is founded on a goal based interpretation of distributive justice. This is not a dilemma when one or other horn presents the best solution. It is a paradox in which resolution requires the adequate expression of both elements.

From this perspective it may be time for the NHS to limit "Can do, should do" to a set of interventions recognised by all as effective and necessary for social cohesion and guaranteed to be universally available without delay. Any additional spending on health care would then be governed by the principle of maximising the health gain for the population.

### Doing means treatment

In the 1940s the NHS was part of the creation of the welfare state, perhaps even its flagship. The motivation for change was not the unequal standardised mortality ratios of different social classes. The motivation was to make medical care available to everyone, which has become internalised as "Doing means treatment." For practitioners and managers, equity has come to mean equal treatment rather than the agenda of redistributive social justice of the 1940s.

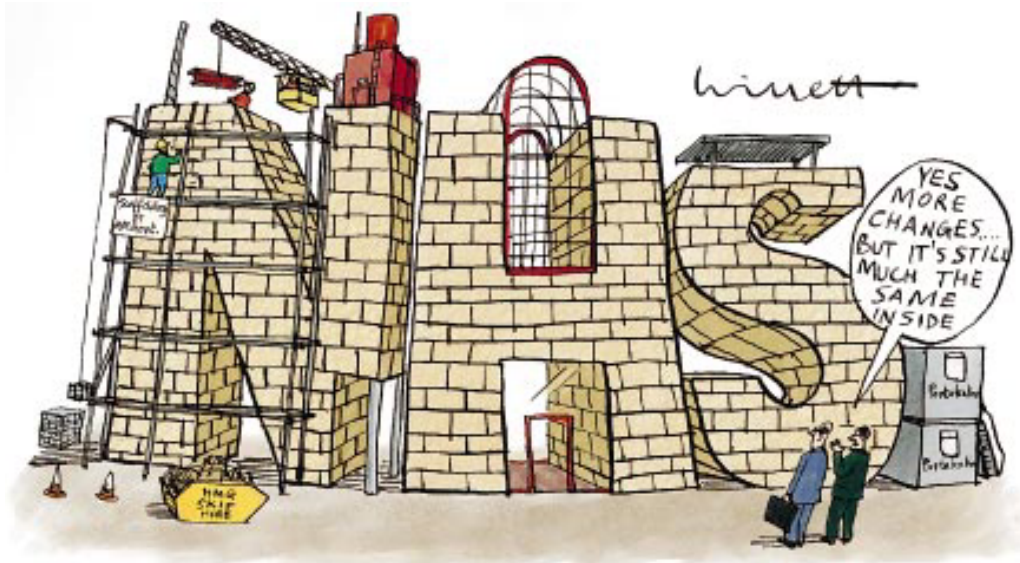
There is no lack of evidence linking poor diet and poor housing, for example, to poor health,<sup>4,5</sup> but this has little impact on behaviour in the NHS. The potential benefits of disease prevention and health promotion are uncontested. The principle of "Doing means treatment" has allowed preventive therapies and health promoting activities to be accepted at a personal level. But this principle may be responsible for the fact that 50 years later the NHS has not tackled the major determinants of ill health that require collective action. How will the NHS respond to today's agenda from the Social Exclusion Unit and the government green paper *Our Healthier Nation*?<sup>6</sup>

### Treatment should fix it

Most healthcare professionals are motivated to make people well. The hope that they can do so leads to the belief that treatment should fix it and, thus, that the product is cure. In 1948 there was a legacy of ill health that had never been treated. It was reasonable to assume that once treatment got under way the population would become healthier. Fifty years later this principle is no longer advantageous if the system is designed to deal with acute illness but still deals inadequately with chronic illness. The application of this principle over the years has resulted in relative underinvestment in caring and rehabilitative services. It is no accident that the Cinderella services remain Cinderellas.

### I am responsible

Part of the "genetic code" of professional identity is the principle "I am responsible." Professionals have to be able to decide and act autonomously. In 1948 many



interventions could be handled by a single professional, and if that professional took responsibility the job would be responsibly done. Fifty years later the “I” can be a problem when it excludes others from sharing that responsibility. As technology has advanced and specialisation progressed, interprofessional working has become the norm. Responsibility has to be shared with patients too, many of whom are looking for a partnership with clinicians in deciding their treatment and care. And now the white paper *The New NHS* proposes something called “a duty of partnership” on all organisations in the NHS.<sup>7</sup>

When “I am responsible” leads to many different individuals struggling for dominance, team working and interagency cooperation become fraught. So called solutions turn out to have more to do with ownership than collaboration, which may go some way to explaining the NHS mania for reorganising control structures. How would it work if this principle were replaced by “I am responsible in partnership with others”? This would support working across boundaries to build relationships and other sorts of management activity. And we might see mainstream money, not just peripheral budgets, linked to working in partnership. What would it mean for professional interactions with patients, and with other professionals, to be guided by the principle “The system is responsible and I will behave responsibly”? For a start, we might expect a new emphasis on co-providing, in which professional-patient interactions would be seen as meetings between experts where the knowledge of experience is valued alongside professional expertise.<sup>8</sup>

## Conclusions

Management of change in the NHS often consists of attempts to control behaviour by changing the organisational structure. I suggest that order, in contrast with control, may arise from guiding principles that reflect the meaning and purpose people ascribe to their work in the NHS. Changing to a new pattern of order may

be achieved by engaging directly with these guiding principles.<sup>9</sup>

People are exploring ways of working that allow intervention at this level.<sup>10</sup> These include, but are not limited to, large group interventions,<sup>11</sup> and they share several key features:

- People come together from a range of different perspectives
- People spend enough time together to move beyond first impressions
- People engage in conversations that generate possibilities but don't start with problem solving.

You can start the process yourself by talking about “Can do, should do” over a cup of coffee with somebody you don't usually work with.

The ideas in this article are from work in progress in the Urban Health Partnership based at the King's Fund (members Martin Fischer, Pat Gordon, Diane Plamping, Julian Pratt). The partnership is developing a whole system approach to interagency partnership and public participation.

Funding: King's Fund, Baring Foundation, St Thomas's Trustees, NHSE North Thames.

Conflict of interest: None.

- 1 Beck U. *Risk society: towards a new modernity*. London: Sage, 1992.
- 2 Jennett B. *High technology medicine: benefits and burdens*. London: Nuffield Provincial Hospitals Trust, 1984.
- 3 Cochrane AL. *Effectiveness and efficiency: random reflections on health services*. London: Nuffield Provincial Hospitals Trust, 1971.
- 4 DHSS Working Group on Inequalities in Health. *The Black report*. London: DHSS, 1980.
- 5 Ambrose P. *The real cost of poor homes*. London: Royal Institution of Chartered Surveyors, 1996.
- 6 Department of Health. *Our healthier nation: a contract for health*. London: Stationery Office, 1998.
- 7 Secretary of State for Health. *The new NHS*. London: Stationery Office, 1997. (Cm 3807.)
- 8 Popay J, Williams G. Public health research and lay knowledge. *Soc Sci Med* 1996;42:759-68.
- 9 Pratt J, Kitt I. Going home from hospital—a new approach to developing strategy. *Br J Health Care Manage* (in press).
- 10 Pratt J, Plamping D, Gordon P. *Working whole systems*. London: King's Fund (in press).
- 11 Bunker BB, Alban BT. *Large group interventions—engaging the whole system for rapid change*. San Francisco: Jossey-Bass, 1997.

(Accepted 9 June 1998)

## Getting research findings into practice

# Making better use of research findings

Andrew Haines, Anna Donald

**This is the first in a series of eight articles analysing the gap between research and practice**

Department of Primary Care and Population Sciences, Royal Free and University College London Schools of Medicine, London NW3 2PF  
Andrew Haines, professor of primary health care

Department of Epidemiology and Public Health, University College London Medical School  
Anna Donald, lecturer

Correspondence to: Professor Haines a.haines@ucl.ac.uk

Series editors: Andrew Haines and Anna Donald

BMJ 1998;317:72-5

There is increasing interest in implementing research findings in practice both because of a growing awareness of the gap between clinical practice and the findings of research and also because of the need to show that public investment in research results in benefits for patients. Improved understanding of the reasons for the uptake of research findings requires insights from a range of disciplines. In order to promote the uptake of research findings it is necessary to identify potential barriers to implementation and to develop strategies to overcome them. Specific interventions that can be used to promote change in practice include using clinical guidelines and computerised decision support systems, developing educational programmes, communicating research findings to patients, and developing strategies for organisational change.

Interest in how best to promote the uptake of research findings has been fuelled by a number of factors including the well documented disparities between clinical practice and research evidence of effective interventions. Examples include interventions in the management of cardiac failure, secondary prevention of heart disease,<sup>1</sup> atrial fibrillation,<sup>2</sup> menorrhagia,<sup>3</sup> and pregnancy and childbirth.<sup>4</sup> In the United Kingdom the advent of the NHS research and development programme has led to greater involvement of NHS personnel in setting priorities<sup>5</sup> and to the establishment of a programme to evaluate different methods of promoting the implementation of research findings.<sup>6</sup> The concept of pay back on research<sup>7</sup> has also been developed, resulting in a framework that can be used to assess the benefits arising from research.

Relying on the passive diffusion of information to keep health professionals' knowledge up to date is doomed to failure in a global environment in which about 2 million articles on medical issues are published annually.<sup>8</sup> There is also growing awareness that conventional continuing education activities, such as conferences and courses, which focus largely on the passive acquisition of knowledge have little impact on the behaviour of health professionals.<sup>9</sup> The circulation of guidelines without an implementation strategy is also unlikely to result in changes in practice.<sup>10</sup>

Health professionals need to plan for rapid changes in knowledge, something that is likely to persist throughout our professional lifetimes and which encompasses not only diagnostic techniques, drug treatment, behavioural interventions, and surgical procedures but also ways of delivering and organising health services and developing health policy. Many health professionals already feel overburdened, and therefore a radical change in approach is required so that they can manage change rather than feel like its victims. A number of steps are necessary in order to support this process.

### Summary points

Reasons for failing to get research findings into practice are many and include the lack of appropriate information at the point of decision making and social, organisational, and institutional barriers to change

All people within an organisation who will have to implement the change or who can influence change should be involved in developing strategies for change

Better links between clinical audit, continuing education, and research and development need to be developed

Evidence of the effectiveness of specific interventions to promote change is still incomplete, but a combination of interventions will probably be needed

The pressure for more effective and efficient implementation of research findings is likely to grow

### Keeping abreast of new knowledge

Health professionals need timely, valid, and relevant information to be available at the point of decision making. Despite extensive investment in information technology by the NHS the rapid delivery of such information is not widely available. Relatively simple prompting and reminder systems can improve clinicians' performance<sup>11</sup>; the price of useful databases such as *Best Evidence* (which comprises *Evidence-Based Medicine* and the American College of Physicians Journal Club on CD ROM) and *The Cochrane Library* is little more than the cost of subscribing to a journal. There are an increasing number of journals, such as *Evidence-Based Medicine*, that review important papers rigorously and present the results in a way that busy clinicians can rapidly absorb. The NHS reviews and dissemination centre in York compiles systematic reviews that are relevant to clinicians and policy-makers. Nevertheless, many clinicians still do not receive such information,<sup>12</sup> and more needs to be done to provide a wider range of high quality information that is usable in practice settings.

Librarians' roles are changing rapidly; in North America, for example, some librarians are involved in clinical practice through programmes such as literature attached to the chart (LATCH).<sup>13</sup> In these programmes, hospital librarians participate in ward rounds and actively support clinical decision making at the bedside. Requests for information are documented

in the notes, and articles are subsequently delivered to the ward. Similar programmes could be introduced elsewhere after appropriate evaluation, but information support is also needed in primary care settings. In the United Kingdom many health professionals, such as nurses, may not be permitted to use their hospital library since they are not formally affiliated with the (medical) body that funds them.

### Implementing knowledge

Research findings can influence decisions at many levels—in caring for individual patients, in developing practice guidelines, in commissioning health care, in developing prevention and health promotion strategies, in developing policy, in designing educational programmes, and in performing clinical audit—but only if clinicians know how to translate knowledge into action. The acquisition of database searching and critical appraisal skills should give health professionals greater confidence in finding and assessing the quality of publications, but this does not necessarily help in applying new knowledge to day to day problems.<sup>14</sup> Much attention has been paid to the use of best evidence during consultations with individual patients—that is, using evidence based medicine derived largely from epidemiological methods.<sup>15</sup> However, organisational change is often also necessary to implement clinical change. Even a step as simple as ensuring that all patients with a history of myocardial infarction are offered aspirin requires that a number of smaller steps are taken including identifying patients, contacting them, explaining the rationale, checking for contraindications, and prescribing aspirin or advising patients to buy it over the counter. Furthermore, health professionals have their own experiences, beliefs, and perceptions about appropriate practice; attempts to change practice which ignore these factors are unlikely to succeed. Awareness of these pitfalls has led to greater emphasis on understanding social, behavioural, and organisational factors which may act as barriers to change.<sup>17</sup>

A wide spectrum of approaches for promoting implementation has been used. These approaches are underpinned by a number of theoretical perspectives on behavioural change such as cognitive theories which focus on rational information seeking and decision making; management theories which emphasise organisational conditions needed to improve care; learning theories which lead to behavioural approaches involving, for example, audit and feedback and reminder systems; and social influence theories which focus on understanding and using the social environment to promote and reinforce change.<sup>18</sup>

Clearly these approaches are not mutually exclusive. For example, the transmission of information from research to single practitioners or small groups of health professionals through educational outreach has a strong educational component but might also include aspects of social influence interventions<sup>19</sup> in pointing out the use of a particular treatment by local colleagues. The marketing strategies used by the pharmaceutical industry depend on segmentation of the target audience into groups that are likely to share characteristics so that a message can be tailored to that



group.<sup>20</sup> Similar techniques might be adapted for non-commercial use within the NHS. The evidence for the effectiveness of different approaches and interventions is still incomplete and will be reviewed in a subsequent article in the series.<sup>21</sup> In many cases a combination of approaches will be more effective than a single intervention.<sup>22</sup> No single theoretical perspective has been adequately validated to guide the choice of implementation strategies.

The study of the diffusion of innovations—how new ideas are transmitted through social networks—has been influential in illustrating that those who adopt new ideas early tend to differ in a number of ways from those who adopt the ideas later. For example, those who adopt new ideas early tend to have more extensive social and professional networks.<sup>23</sup> Much of the medical literature has a bias towards innovation and the underlying assumption is that innovations are bound to be beneficial. However, in health care the challenge is to promote the uptake of innovations that have been shown to be effective, to delay the spread of those that have not yet been shown to be effective, and to prevent the uptake of ineffective innovations.<sup>24</sup>

#### Steps in promoting the uptake of research findings

- Determine that there is an appreciable gap between research findings and practice
- Define the appropriate message (for example, the information to be used)
- Decide which processes need to be altered
- Involve the key players (for example those people who will implement change or who are in a position to influence change)
- Identify the barriers to change and decide how to overcome them
- Decide on specific interventions to promote change (for example the use of guidelines or educational programmes)
- Identify levers for change—that is, existing mechanisms which can be used to promote change (for example, financial incentives to attend educational programmes or placing appropriate questions in professional examinations)
- Determine whether practice has changed in the way desired; use clinical audit to monitor change

**Important characteristics of the message****Content**

- Validity
- Generalisability (settings in which the intervention is relevant)
- Applicability (the patients to whom the intervention is relevant)
- Scope
- Format and presentation (for example, will there be written or computerised guidelines, will absolute and relative risk reductions be presented)

**Other characteristics**

- Source of the message (for example, professional organisation, Department of Health)
- Channels of communication (how the message will be disseminated)
- Target audiences (the recipients)
- Timing of the initial launch and frequency of updating
- Mechanism for updating the message

Although different people can promote the uptake of research findings—including policymakers, commissioning authorities, educators, and provider managers—it is largely clinicians and their patients who will implement findings. A number of steps need to be taken in order to get research findings into practice (box previous page). The characteristics of the message should also be considered; they may influence the degree to which the message is incorporated into practice (box above).

The choice of key players—those people in the organisation who will have to implement change or who can influence change—will depend on the processes to be changed; in primary care, for example, nurses and administrative staff should be involved in many cases, in addition to general practitioners, since their cooperation will be essential for organisational change to be effective. If the innovation involves the acquisition of specific skills, such as training in certain procedures, then those who organise postgraduate and continuing education are also key players.

The identification of barriers to change and the development of strategies to overcome them are likely to be of fundamental importance in promoting the uptake of research findings. Some examples of barriers to the application of research findings to patients are given in the box on the next page. A future article will propose a conceptual framework for analysing and overcoming barriers.<sup>25</sup> Since some of the strongest resistance to change may be related to the experiences and beliefs of health professionals, the early involvement of key players is essential in identifying and, when necessary, overcoming such impediments to change. Barriers need to be reviewed during the process of implementation as their nature may change over time.

Interventions to promote change must be tailored to the problem, audience, and the resources available. Educational outreach, for example, may be particularly appropriate for updating primary care practitioners in the management of specific conditions because they tend to work alone or in small groups. Guidelines based on research evidence may be developed and endorsed by national professional organisations and adapted for local use as part of clinical audit and educational programmes.

**Linking research with practice**

There need to be closer links between research and practice, so that research is relevant to practitioners' needs and so that practitioners are willing to participate in research. While there is evidence that some researchers can promote their own work,<sup>26</sup> in general researchers have not been systematically involved in the implementation of their own findings and may not be well equipped to do this. In the United Kingdom, the NHS research and development programme is seeking views about priorities for research through a broad consultation process.<sup>5</sup> Better methods of involving those who are most likely to use the results of research are needed to ensure that research questions are framed appropriately and tested in relevant contexts using interventions that can be replicated in everyday practice. For example, there is little point conducting trials of a new intervention in hospital practice if virtually all of the treatments for a particular disorder are carried out in primary care settings. Contextual relevance is particularly important in studies of the organisation and delivery of services,<sup>27</sup> such as stroke units, hospital at home schemes, and schemes for improving hospital discharge procedures to reduce readmissions among elderly patients. If unaccounted for, differences in skill mix and management structures between innovative services and most providers can make it difficult for providers to have a clear view of how they should best implement findings in their own units.

*Interaction between purchasers and providers*—In the NHS, purchasers as well as providers should be involved in applying research findings to practice. Purchasers can help create an environment conducive to change, for example, by ensuring that health professionals have access to information, that libraries are financially supported, and that continuing education and audit programmes are configured to work together to promote effective practice. Purchasers could also ensure that the organisation and delivery of services takes into account the best available research evidence. However, it is clear that the degree of influence exerted by purchasers on the practice of providers is limited,<sup>28</sup> and that priority must be given to helping providers develop the capacity to understand and use research findings.

*Making implementation an integral part of training*—For many health professionals, involvement in implementation may be far more relevant to their careers and to the development of the NHS than undertaking laboratory research, yet pressures to undertake research remain strong. Greater encouragement should be given to clinicians to spend time learning to use and implement research findings effectively.

**Conclusion**

Learning to evaluate and use research findings in daily practice is an important and lifelong part of professional development. This requires not only changes in educational programmes, but also a realignment of institutions so that management structures can support changes in knowledge and the implementation of changes in procedures.

There are major structural difficulties that need to be overcome in the NHS. For example, better coordination at national, regional, and local levels is required between the education and training of health professionals, clinical audit, and research and development. This type of coordination should be a priority for the proposed national institute for clinical excellence in the United Kingdom.<sup>29</sup>

It has been suggested that financial considerations, rather than the potential for gaining useful knowledge, affect general practitioners' choice of continuing education courses.<sup>30</sup> One of the aims of continuing education should be to ensure that practitioners stay up to date with research findings of major importance for patient care and change their practice accordingly. Continuing education activities need to take into account evidence about the ineffectiveness of many traditional approaches. To develop a more integrated approach to promoting the uptake of research findings, health systems need to have coordinated mechanisms that can manage the continuing evolution of medical knowledge.

The advent of research based information that is available to patients<sup>31</sup> and the increasing accessibility of information of variable quality through the internet and other sources suggests that doctors have the potential to act as information brokers and interpreters for patients. Doctors could also work together with user groups representing patients or their carers, a number of which have demonstrated an interest in and commitment to providing quality research based information to their members.<sup>32</sup> The pace of change in knowledge is unlikely to slow. As health systems around the world struggle to reconcile change with limited resources and rising expectations, pressure to implement research findings more effectively and efficiently is bound to grow.

Funding: None.

Conflict of interest: None.

- Campbell NC, Thain J, Deans HG, Ritchie LD, Rawles JM. Secondary prevention in coronary heart disease: baseline survey of provision in general practice. *BMJ* 1998;316:1430-4.
- Sudlow M, Rodgers H, Kenny RA, Thomson R. Population based study of use of anticoagulants among patients with atrial fibrillation in the community. *BMJ* 1997;314:1529-30.
- NHS Centre for Reviews and Dissemination. *The management of menorrhagia*. York: University of York, 1995. (Effective health care bulletin no. 9.)
- Enkin M. The need for evidence-based obstetrics. *Evidence-Based Med* 1996;1:132-3.
- Jones R, Lamont T, Haines A. Setting priorities for research and development in the NHS: a case study on the interface between primary and secondary care. *BMJ* 1995;311:1076-80.
- Advisory group to the NHS Central Research and Development Committee. *Methods for the implementation of the findings of research: priorities for evaluation*. Leeds: Department of Health, 1995.
- Buxton M, Hanneley S. How can payback from health services research be assessed? *J Health Serv Res Policy* 1995;1:10-8.
- Mulrow CD. Rationale for systematic reviews. *BMJ* 1994;309:597-9.
- Davis DA, Thomson MA, Oxman AD, Haynes RB. Changing physician performance: a systematic review of continuing medical education strategies. *JAMA* 1995;274:700-5.
- NHS Centre for Reviews and Dissemination. *Implementing clinical guidelines*. York: University of York, 1994. (Effective health care bulletin no. 8.)
- Johnston ME, Langton KB, Haynes RB, Mathiew A. The effects of computer based clinical decision support systems on clinician performance and patients' outcome: a critical appraisal of research. *Ann Intern Med* 1994;120:135-42.
- Prescott K, Douglas HR, Lloyd M, Haines A, Rosenthal J, Watt G. Awareness of and attitudes towards research based information. *Fam Pract* 1997;14:320-3.
- Cimprl K. Clinical medical librarianship: a review of the literature. *Bull Med Libr Assoc* 1985;73:21-8.
- Hyde CJ. Using the evidence. A need for quantity, not quality. *Int J Technol Assess Health Care* 1996;12:280-7.

## Potential barriers to change

### Environmental

#### *In the practice*

- Limitations of time
- Limitations of the organisation of the practice (for example, a lack of disease registers or mechanisms to monitor repeat prescribing)

#### *In education*

- Inappropriate continuing education and failure to connect with programmes to promote better quality of care
- Lack of incentives to participate in effective educational activities

#### *In health care*

- Lack of financial resources
- Lack of defined practice populations
- Health policies which promote ineffective or unproved activities
- Failure to provide practitioners with access to appropriate information

#### *In society*

- Influence of the media on patients in creating demands or beliefs
- Impact of disadvantage on patients' access to care

### Personal

#### *Factors associated with the practitioner*

- Obsolete knowledge
- Influence of opinion leaders (such as health professionals whose views influence their peers)
- Beliefs and attitudes (for example, a previous adverse experience of innovation)

#### *Factors associated with the patient*

- Demands for care
- Perceptions or cultural beliefs about appropriate care

Factors which in some circumstances might be perceived as barriers to change can also be levers for change. For example, patients may influence practitioners' behaviour towards clinically effective practice by requesting interventions that have been proved to be effective. Practitioners might be influenced positively by opinion leaders.

- Sackett DL, Haynes RB, Rosenberg W, Haynes RB. *Evidence-based medicine: how to practice and teach EBM*. London: Churchill Livingstone, 1997.
- Evidence-based Medicine Working Group. Evidence-based medicine: a new approach to teaching the practice of medicine. *JAMA* 1992;268:2420-5.
- Oxman A, Flotorp S. How to implement the evidence: an overview. In: Silagy C, Haines A, eds. *Evidence-based general practice*. London: BMJ Publishing Group (in press).
- Grol R. Beliefs and evidence in changing clinical practice. *BMJ* 1997;315:418-21.
- Mittman BS, Tonesk X, Jacobson PD. Implementing clinical practice guidelines: social influence strategies and practitioner behaviour change. *Qual Rev Bull* 1992;18:413-21.
- Lidstone J. *Market planning for the pharmaceutical industry*. Aldershot: Gower, 1987.
- Bero L, Freemantle N, Grilli R, Grimshaw J, Harvey E, Oxman A, et al. Closing the gap between research and practice. *BMJ* 1998 (in press).
- Oxman A, Davis D, Haynes RB, Thomson MA. No magic bullets: a systematic review of 102 trials of interventions to help health professionals deliver services more effectively or efficiently. *Can Med Assoc J* 1995;153:1423-43.
- Rogers EM. *Diffusion of innovations*. New York: Free Press, 1983.
- Haines A, Jones R. Implementing findings of research. *BMJ* 1994;308:1488-92.
- Haynes B, Haines A. Barriers and bridges to evidence based clinical practice. *BMJ* 1998 (in press).
- Gouws D, ed. *Case studies with a view to implementation*. Pretoria: Human Sciences Research Council, 1994.
- Haines A, Iliffe S. Innovations in services and the appliance of science. *BMJ* 1995;310:815-6.
- Hopkins A, Solomon JK. Can contracts drive clinical care? *BMJ* 1996;313:477-8.
- Secretary of State for Health. *The new NHS*. London: Stationery Office, 1997. (Cm 3807.)
- Murray TS, Campbell LM. Finance, not learning needs, makes general practitioners attend courses: a database survey. *BMJ* 1997;315:353.
- Stocking B. Partners in care. *Health Manage* 1997;1:12-3.
- Stocking B. Implementing the findings of effective care in pregnancy and childbirth. *Milbank Q* 1993;71:497-522.

The articles in this series are adapted from *Getting research findings into practice*, edited by Andrew Haines and Anna Donald, which will be published in July.