Solving the quality conundrum in the NHS: will public reporting help?

Public outcome reporting has been hailed as a magic bullet for improving quality in the NHS. Is this optimism justified or will the scheme simply create confusion?

The *NHS Next Stage Review* makes clear the government's intention to create an NHS that is 'based less on central direction and more on patient control, choice and local accountability'. One of Lord Darzi's most contentious proposals has been the requirement for health-care providers working for or on behalf of the NHS to publish 'quality accounts' (Darzi, 2008): from April 2010, comparative information about both outcomes and patient satisfaction will be made available on the NHS website to provide greater transparency and facilitate choice.

However, defining quality is a notoriously difficult task. There is a danger that public reporting will create perverse incentives for manipulating outcome measurements or denying care to high-risk patients. Moreover, it is doubtful whether patients are appropriately positioned to interpret outcome data or indeed whether they will pay attention to it at all. Thus, the extent to which this measure will facilitate choice remains unclear. Is public reporting effective at raising quality? And is it an appropriate strategy for the NHS to pursue?

Evidence from outcome reporting in cardiothoracic surgery

Individual hospital mortality data for cardiothoracic surgery were made publicly available in the UK in 2001, prompted by concern over events at Bristol Royal Infirmary earlier that year. Retrospective analysis of over 25 000 patients pre- and post-public disclosure found a decrease in risk-adjusted mortality with a fall in the observed to expected mortality ratio from 0.8 in 1997–8 to 0.51 in 2004–5; moreover, there was no evidence of fewer high-risk patients being accepted for surgery (Bridgewater et al, 2007). In the USA, where coronary artery bypass graft surgery outcome data for individual surgeons have been available since 1990, a 41% decrease in risk-adjusted mortality was observed over the first 4 years following introduction of the scheme in New York (Hannan et al, 1994). However, while these statistics are impressive, there are a number of causes for concern.

There is convincing evidence that reporting schemes in New York and Pennsylvania did in fact induce selection against higher risk patients (Dranove et al, 2003), resulted in the referral of patients to non-reporting states and led to gaming of the risk-adjustment system: for example, after the introduction of public report cards, the prevalence of emphysema in surgical patients increased from a few per cent to more than 50% (Jauhar, 2003). Moreover, the state of Massachusetts experienced a similar decline in mortality to New York over the same period despite the absence of reporting. Without adequately accounting for these factors, it is difficult to infer that public reporting raises quality – but perhaps a more troublesome concern as we seek to extend reporting to other specialities is how to decide which outcome measure we should be using.

The problem of defining quality

Unlike cardiothoracic surgery, whose immediate and often fatal consequences make mortality an appropriate metric for defining quality, outcomes in other specialties are more ambiguous. Quantifying the recovery in mobility after orthopaedic surgery or improvement in mental health following psychotherapy is difficult enough in itself, but with the added complexity of attributing quality ratings to each member of a multidisciplinary team including nurses, physiotherapists, occupational therapists and primary care physicians, all of whom play an integral role in determining outcomes, the task becomes almost impossible to perform in any meaningful sense.

Moreover, outcomes in chronic illnesses hinge critically upon a variety of lifestyle choices whose impact cannot be accurately quantified: in an analysis of a range of potential profile measures for the management of diabetes within three American hospitals (profiles being based upon hospitalization rates, laboratory utilization and glycaemic control), 4% or less of the overall variance was attributable to differences in physician practice and the reliability of the median physician's case-mix-adjusted profile was never better than 0.40 (Hofer et al, 1999).

The difficulty of defining outcomes also has implications for the ability of public reporting to enable patient choice, the use of different indicators yielding different conclusions regarding which hospital is of the highest quality. Rothberg et al (2008) found a lack of consistent agreement between five leading American health rating services in their evaluation of nine institutions in a single metropolitan area. Indeed, hospitals ranked first or second by one system were often ranked seventh or eighth by another. Which system should the NHS use? If promoting choice is the objective of public reporting (and if not we must question why we are reporting outcomes publicly at all), the government must decide which ranking system is correct: failing to do so will create myriad conflicting options that leave patients even more confused than before.

How will patients respond to the data?

Evidence from the USA suggests that while patients clearly want more information about health-care provider performance, the information has only a limited impact on their decision making, patients continuing to use hospitals with high mortality rates and appearing more strongly influenced by anecdotal reports of unseemly deaths in hospitals than by risk-adjusted mortality data (Mennemeyer et al, 1997). Analysis by Schneider and Epstein (1998) reveals just how striking this lack of awareness can be: in a survey of 474 patients who had undergone coronary artery bypass graft surgery, only 12% reported awareness of a 'prominent report on cardiac surgery mortality' before undergoing the surgery themselves and 'fewer than 1% knew the correct rating of their surgeon or hospital and reported that it had a moderate or major impact on their selection of provider'.

The failure of public reporting to impact on patient decision-making highlights a grave problem of the scheme for the NHS. Since patients exercise the choice available to them to varying extents, inequalities are widened: the elderly woman living at home by herself seems far less likely to surf the internet for the top hospital than the young professional. Moreover, evidence suggests that the introduction of public reporting has increased levels of racial and ethnic disparity (Werner et al, 2005).

Just as other attempts to empower patients were undercut by the inequalities they evoked (most notably the internal market and GP fundholding of the early 1990s), the sticking point for public reporting in the NHS may well be the inequalities caused by patient choice – relying on patients to monitor quality may therefore be an imprudent strategy. On the flip side, the shocking events at Stafford which came to light earlier this year are to many a clear demonstration that the medical profession cannot be relied upon to regulate itself. So, where are we to go? Quality appraisal by external agencies or performance-related pay represent viable approaches, but even then the problem of defining quality remains. Furthermore, many argue that additional guidelines are the last thing the NHS currently needs, as the deaths at Stafford are believed to be a direct consequence of excessive attention being paid to government targets.

Conclusions

As medical innovation expands the range of treatment options available to clinicians and changes the outcomes we expect, defining a metric for quality will become increasingly difficult. Moreover, without a risk-adjustment mechanism that doctors can have confidence in and the use of outcomes that reflect quality accurately, public reporting may simply muddy the waters and prevent doctors from focusing on the underlying problem: what has gone wrong with the training and regulatory systems that create underperformers in the first place? **BJHM**

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Bridgewater B, Grayson AD, Brooks N et al (2007) Has the publication of cardiac surgery outcome data been associated with changes in practice in northwest England: an analysis of 25,730 patients undergoing CABG surgery under 30 surgeons over eight years. *Heart* **93:** 744–8

Darzi A (2008) *High quality care for all: NHS Next Stage Review final report.* Department of Health, London

Dranove D, Kessler D, McClellan M, Satterthwaite M (2003) Is more information better? The effects of 'report cards' on health care providers. *J Polit Econ* **111:** 555–88

Hannan EL, Kilburn H Jr, Racz M et al (1994) Improving the outcomes of coronary artery bypass surgery in New York State. *JAMA* **271:** 761–6

Hofer TP, Hayward RA, Greenfield S et al (1999) The unreliability of individual physician 'report cards' for assessing the costs and quality of care of a chronic disease. *JAMA* **281:** 2098–105

Jauhar S (2003) When doctors slam the door. *New York Times* **March 16:** 6

Mennemeyer ST, Morrisey MA, Howard LZ (1997) Death and reputation: how consumers acted upon HCFA mortality information. *Inquiry* **34:** 117–28

Rothberg MB, Morsi E, Benjamin EM et al (2008) Choosing the best hospital: the limitations of public quality reporting. *Health Aff* **27:** 1680–7

Schneider EC, Epstein AM (1998) Use of public performance reports: a survey of patients undergoing cardiac surgery. *JAMA* **279:** 1638–42

Werner RM, Asch DA, Polsky D (2005) Racial profiling: the unintended consequences of coronary artery bypass graft report cards. *Circulation* **111:** 1257–63

KEY POINTS

- Outcome reporting may lead to gaming of the risk-adjustment system, particularly if individual practitioner outcomes are made available.
- It is unclear which outcomes most accurately reflect quality.
- Quality-rating individual members of a multidisciplinary team is extremely difficult.
- Outcomes in chronic diseases are strongly influenced by non-quantifiable lifestyle factors.
- Public reporting may precipitate inequality since not all patients will use the data.