

Will financial incentives and penalties improve hospital care?

The effects of pay for performance schemes on healthcare systems are still unclear. **Alan Maynard** and **Karen Bloor** argue that the English NHS should proceed cautiously in implementing such schemes

Policy makers around the world are seeking to increase the productivity of health services and there is enthusiasm for using financial incentives to improve clinical and organisational behaviour. In England, the NHS quality and outcomes framework in primary care quickly reduced variation in practice activities.¹ Following on from this a new commissioning for quality and innovation payment framework (CQUIN) is being introduced to improve the quality of care in hospitals and other healthcare organisations.² It's not yet clear, however, whether incentive schemes, particularly those aimed at improving the processes of care, will result in improved patient outcomes and so justify the cost of implementing them.

Current financial incentive schemes

The NHS quality and outcomes framework is an innovative example of a system which provides incentives to clinical teams. It attaches points to target levels of achievement on processes of care and clinical indicators of health outcomes. Rewards are linked directly to the number of points achieved.

Although the framework produced rapid changes in behaviour, particularly with respect to improvements in processes,¹ the system is costly. Total annual expenditure on the scheme is around £1bn (€1.1bn; \$1.6bn), and the relation between some of its performance targets and population health improvements has been questioned.³ Evidence is also emerging that setting targets for some areas may have reduced performance in other areas of the service.⁴ Overall, the health outcomes may not have been sufficient to justify the substantial opportunity cost of the system.

The new scheme that is being introduced for NHS hospitals, the commissioning for quality and innovation framework,² will also offer rewards for meeting targets based on process measures and clinical and patient reported outcomes, but the incentives are aimed at hospital trusts rather than the clinical team. Implementation of the scheme will vary as each region is developing its own targets. NHS North West region is leading the process, and has already introduced its "Advancing Quality" scheme. The scheme has been designed in partnership with Premier healthcare alliance (a US organisation which analyses and disseminates clinical and financial information from US

hospitals and other healthcare providers) and is modelled on a US pilot scheme, the Center for Medicare and Medicaid Services Hospital quality incentive demonstration, that Premier designed and implemented.⁵

The US pilot scheme focuses on five clinical areas: acute myocardial infarction, heart failure, pneumonia, coronary artery bypass grafts, and hip and knee replacement surgery. Hospitals are obliged to report on an agreed set of quality indicators—for example, rates of prophylactic antibiotics for hip, knee, and coronary bypass surgery, the number of patients discharged on aspirin, and inpatient mortality for acute myocardial infarction and coronary artery bypass surgery. Hospitals are then given a composite quality score. The top 10% of performers are rewarded by an incentive payment of 2% of their annual Medicare tariff payments, and the second 10% get a 1% payment. After three years, hospitals which did not achieve a quality score above the ninth and tenth decile thresholds established in year one were threatened with a reduction in their tariff payments of 1% and 2% respectively.

In the NHS North West scheme, which focuses on the same clinical areas, hospitals in the top two performing quartiles are offered 4% and 2% increases in tariff payments and there are no penalties for those with low scores.⁶

In a parallel programme, the Centers for Medicare and Medicaid Services listed a set of

hospital acquired conditions, such as severe pressure sores and catheter associated urinary tract infections, that are "reasonably preventable."⁷ These include some serious complications that should never occur in a safe hospital, called "never events." Hospitals providing Medicare services had to measure such events in 2007-8, and since October 2008 treatment of these preventable complications has not been reimbursed by the purchaser.⁸

In the UK, the National Patient Safety Agency has drawn up a similar list of never events, and NHS primary care trusts are required to monitor and report them for services they commission.⁹

Do financial incentives work?

Evidence of the effectiveness of the US incentive schemes is weak. There has been no randomised controlled trial, and most published reports lack any control group. Studies with non-equivalent control groups have reported modestly improved quality of care scores in participating hospitals compared with non-participants.^{10,11} They also report converging hospital performance. The highest performing hospitals improved by a modest 1.9% but the lowest improved by 16.1%, presumably as a result of striving hard to avoid the financial penalties.¹¹ These improvements were only in process measures, however, not outcome indicators, and a further study found no evidence of effect on mortality or on costs.¹² A systematic



review of all hospital pay for performance schemes found that relatively few had been evaluated and that there were methodological flaws in the studies of the eight that had been.¹³

A formal evaluation of the NHS North West scheme will be published later this year.¹⁴ Meanwhile, early data show good clinical engagement, but there is still uncertainty about the impact of rolling out the new scheme for NHS hospitals.¹⁵

The general practice quality and outcomes framework rewarded all practices who met absolute performance targets, which is one of the reasons why the scheme was so costly. In the US, the Premier model rewards only the best performers. This requires ranking healthcare providers in a league table. But research has shown that there are problems where ranking is based on composite measures and that the position of organisations may be being determined by chance not performance.¹⁶ This suggests that the impact of the new hospital performance scheme that is being implemented in the NHS is not predictable. The relative aspect of the scheme could inspire competition between providers striving for higher quality. But if rankings and consequent rewards and penalties fluctuate over time in a manner that is partially or even largely attributable to chance, this could undermine motivation. It would also increase financial instability in a time of increasing financial constraint in the NHS.

There is also uncertainty about who should be given incentives. The general practice reward scheme was based on giving money directly to clinical teams. The new scheme rewards institutions, and this may result in less, or slower, change. An alternative approach might be to share the rewards by distributing them to clinical directorates or paying consultants for performance—for example, by amending the clinical excellence awards scheme in a way similar to that used in general practice.

The size of incentive may also be an important determinant of change. In the primary care scheme, the reward system represents around 25% of practice income.⁴ There is evidence that organisations respond to smaller incentives than individuals,¹⁵ but this seems to be from surveys of private sector practice rather than evaluative studies.¹⁷ In the first year of the new hospital performance scheme the payment framework will cover only 0.5% of a provider's annual contract income.² But there is discussion of increasing this proportion substantially. Indeed, from 2011-12 primary care trusts may be given the power to withhold up to 10% of contract payments if providers fail to meet agreed goals.¹⁸ Whether these larger incentives will be any more effective than the smaller ones used in the US system is unclear.

The balance between rewards and penalties in these schemes is not straightforward. In the US schemes the threat of penalties seemed to motivate substantial improvement in performance. This may be because a threat of reduction of income is a higher motivation for change than the promise of obtaining a slightly increased one.¹⁹ That said, past experience in the NHS of introducing financial sanctions provides little evidence to suggest they will work in the UK. When they were suggested to impose waiting time guarantees in the 1990s, informal negotiation between purchasers and providers, in some cases, resulted in penalty clauses not being enforced.²⁰

Implementation in the NHS

The NHS roll-out of commissioning for quality and innovation initially took a cautious approach, putting the focus on collection of data on the quality of the services provided in the areas under study.² Organisations (particularly primary care trusts and provider trusts) are being encouraged to develop locally agreed targets, although in practice strategic health authorities are leading the process. Both composite scores and the frequency with which “never events” occur are being used to determine payments. The parallel development of patient reported outcome measures provides another source of data that can be included in schemes, supplementing self reported data from hospital and other providers.²¹

The regional variation in the implementation of the scheme makes it essential to look carefully at its design in each area in order to inform future policy. Experience from the US suggests that a balance needs to be struck between the motivational effects of potential penalties and the possible costs of destabilising organisations. In addition, unless penalties are a real possibility and are on occasions levied, their motivational effects are likely to be short lived.

Clearly, the costs and benefits of using rewards and penalties alone or in combination to induce clinical and organisational performance improvement needs to be evaluated. This should include consideration of the possible problems of bias or gaming, as well as inadequate data collection.²²

Finally, the lesson learnt from the quality and outcomes framework⁴ is that we need to establish the opportunity costs of implementing the new scheme. If clinicians and hospitals allocate scarce resources to incentive schemes aimed at improving a particular set of conditions there is a risk that other clinical conditions and procedures will get less attention and their outcomes could deteriorate. Financial incentives can have unpredictable effects, and should be used with caution.

Alan Maynard director, York Health Policy Group, University of York, UK

Karen Bloor senior research fellow, Department of Health Sciences, University of York

Correspondence to: A Maynard akm3@york.ac.uk

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