

# Can we save money by improving quality?

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After years of unprecedented growth, the National Health Service (NHS) in the UK faces a major financial challenge. The cuts which providers will have to make to achieve savings will be dramatic.<sup>1</sup> The UK is not alone: most health systems are challenged to 'do more with less' to meet the immediate funding crisis, but also the longer-term financial pressures resulting from changing demographics, new technologies and increased demand.<sup>2</sup> This will require both immediate and sustained efforts.

The challenge for the NHS is to act in such a way that does not damage the significant gains in quality that have been achieved in the last decade<sup>3</sup> and, ideally, is able to build on them. This will require the Department of Health and the NHS to respond to this financial crisis in ways that are different from those of the past. Too often, indiscriminate cuts were made without considering the longer-term costs, and often in ways which save little but irritate staff greatly.<sup>4</sup> Those who work in and comment on the health service are aware of the risks to patient care of such 'slash and burn' policies, and of the need for a more considered approach to the current financial crisis. A number of recent reports by

leading institutions have proposed an alternative approach by suggesting that improving quality and safety can help to address both the short- and long-term financial challenges.<sup>5–8</sup>

This paper uses research evidence to assess the contribution that quality-improvement can make as a central component of cost reduction. It draws on this evidence to suggest realistic strategies and changes that might help to improve both the quality and the efficiency of healthcare provision.

## PROPOSED FINANCIAL BENEFITS OF QUALITY AND SAFETY IMPROVEMENT

Savings of £15–20 billion are said to be required of the NHS in England over the next 4 years.<sup>1</sup> It has been estimated that this requires an increase in productivity of over 7%.<sup>7</sup> This figure is compared with productivity savings that have run at less than 0.5% in the NHS for a number of years.<sup>9</sup> There is a degree of consensus among policy makers, improvement experts, independent commentators and management consultants about the contribution of improvement approaches to increasing productivity and maintaining or raising quality at the same time.<sup>5–8</sup> The case is presented by itemising examples of waste, inefficiency, ineffective interventions and avoidable errors. These examples and actions to address them are categorised under themes such as improved commissioning ('allocative efficiency'), better organisational and clinical business processes, and more effective and efficient delivery of clinical care ('technical efficiency')

(table 1). In some cases, the financial costs of the quality problems are estimated.

Some reports examining cost and quality describe case studies of successful initiatives at a local level.<sup>10</sup> The estimate of financial benefits to the whole health system is made by scaling up the benefits seen in these case studies. The conclusions are appealing to those looking for less painful ways of reducing health expenditure and improving value for money, but are the savings proposed really achievable across the whole NHS?

## RESEARCH EVIDENCE

Two recent comprehensive reviews of the empirical research carried out by the Karolinska Institutet in Sweden, provide support for some of the claims made by those who advocate improvement solutions to the financial challenges.<sup>11 12</sup> The evidence suggests that there is great potential for making savings by addressing deficiencies in quality, and that these changes can be made in practice. But the evidence also suggests that realising the savings at the scale required will not be possible in the short term, and that the savings are unlikely to be released without major changes to the ways in which healthcare is financed, structured and delivered.

Evidence of the existence of waste, inefficiencies and errors in the healthcare sector is plentiful and largely uncontested, but published empirical evidence of the costs of these deficiencies is limited and mostly derived from research undertaken in the USA. There is even less and weaker evidence of the 'spend cost' of the changes that would be required to address these problems.

The evidence from the studies which is reported in the two reviews shows that caution is called for in drawing conclusions about savings. This is especially so when extrapolating

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JO conceived and designed the work on which this paper is based. Both authors contributed to the development of the ideas in this paper and to its writing. MM is the guarantor.

**Table 1** Savings that could be made by improving quality

| Category                                 | Specific areas for savings  | Examples, where available, of claimed value of interventions or examples of possible savings <sup>5–8</sup>  |
|--|---|--|
| Improved commissioning                   | Better prioritisation of what will be purchased and improved selection of patients for interventions<br>Reduced unplanned admissions<br>Promoting self care and case management | 5–7% reduction in NHS spend in 2013/2014 in comparison with 2008/2009  |
|  | Shift care to more cost-effective settings<br>Better integration of care<br>Better end-of-life care   | 3–4% reduction in NHS spend in 2013/2014 in comparison with 2008/2009  |
| Better organisational business processes | Better use of estates   | 20% reduction in estate costs, realising approximately £500 m/year   |
|  | Sharing of business services to reduce support costs<br>Better procurement  | 20–30% lower costs for same level of service   |
|  | Staff productivity  | There is a 100% variation between the highest and lowest prices paid for common items<br>Nurses in the UK spend about half as much time in direct patient contact as their US counterparts |
|  | Sickness absence  | Up to 40% reductions in sickness absence have been achieved by some organisations  |
|  | Skill mix   | Costs could be reduced by 8% by adjusting skill mix of service line staff  |
| Better clinical business process         | Implementation of NHS Institute's productive ward series  | £1300m savings   |
|  | Reduced length of stay  | £1230m savings   |
|  | Reduced new to follow-up ratios for outpatients   | £249m savings  |
|  | Reduced Did Not Arrive rates  | £207m savings  |
|  | Reduced readmission rates   | £108m savings  |
| Improved quality of patient care         | Better management of leg ulcers   | £1050m savings   |
|  | Reduced Health Care Acquired Infections   | £1000m savings   |
|  | Reduced drug errors   | £750m savings  |
|  | Implementation of NICE guidelines   | £600m savings  |
|  | Improved nutritional care   | £130m savings  |
|  | Adherence to stroke pathways  | £36m savings   |
|  | Reduction in falls in hospitals   | £15m savings   |
|  | Better management of patients with diabetes when in hospital  | £105m savings  |

savings from specific projects in one or a small number of organisations to a large number of organisations, whole health systems or nations. Indeed, there is little evidence that the results achieved in experimental or best-practice projects can be reproduced on a large scale. The small-scale examples cited often have the benefit of project resources, expertise and favourable conditions not available across the health

service. In addition, savings are usually theoretical, rather than being actual cash savings identified in end-of-the-year financial reports. The latter often requires the time and materials theoretically saved to be followed by a second 'cash change,' involving the closure of beds, redeployment of staff and/or reduction in procurement activity, or changes to ensure increased production and income. The challenges of making

these changes—and, indeed, the costs of doing so—are often not considered, though they are well known to managers.

The research also shows that savings may be made by different parties to those who spend on the improvement, and that savings often only accrue over a long timescale. Whether savings are made and by whom depends on the nature of the financing system. First, under most

item-of-service financing systems, including some elements of the tariff payments in the UK, many of the changes that improve quality and reduce waste result in the provider losing money. In the USA and the UK, changes are being made to measure and reward quality that are beginning to correct this, including refusal to pay for 'never' events such as 'object left in patient during surgery'.<sup>13 14</sup> Second, the failure of funders or commissioners to invest in prevention and demand-management programmes often costs providers money if they have fixed budgets and have to respond to increased demand. Third, new financing systems are critical for the more transformational changes such as supporting self-care and reducing preventable admissions. Possibly the most important finding from the two reviews was of the changes needed in regulation, financing systems and purchaser strategy which are necessary to enable providers to use improvement approaches to save money and improve quality. Regulators and others need to agree together how to invest in and reward the necessary changes, and they need to adopt a system-wide strategic approach. The evidence suggests that they rarely do so.

### ACTING ON THE EVIDENCE

The conclusions of these reviews are that savings cannot be made of the magnitude required without other and additional changes to financing and support to providers to make the changes. Advocates of quality-improvement approaches assume that because there is evidence of deficiencies in quality that incur financial costs, addressing these deficiencies will inevitably save money. Evidence from case studies or small-scale pilots are used to show implementable solution exist and, in some cases, that savings are made in practice.

However, the research shows that achieving change in complex health systems is not so simple.<sup>15</sup> Not only does there need to be evidence of deficiencies in quality (which there is) but also there needs to be evidence that there are effective interventions which work at scale (which there is less of), a highly supportive environment and infrastructure in which the intervention is implemented (which is uncommon) and, finally, clarity about where and when the potential savings will accrue in the budget (which is rare). Unless all these are present, real savings at scale will be difficult to realise.

### IMPLICATIONS FOR POLICY AND PRACTICE

The strength of the emerging Science of Improvement is that it is fact-based. The future development of the science depends on building a strong evidence base which then allows the selection of effective changes and strategies with a knowledge of their benefits and their costs. The approach proposed in this paper represents a realism which is sometimes at odds with the evangelism and optimism of some improvement advocates. It is not intended to discourage organisations from continuing to examine how they can make savings by improving what they do and how they do it. Rather it aims to draw attention to the context and support which is needed for successful improvement

in ordinary services. If the research about the conditions needed for successful improvement is not used as part of future strategies, then it is all the more likely that most of the savings required in coming years will be achieved through familiar and conventional cost-cutting measures.<sup>16</sup> The practical implications of this research are:

1. While the evidence is weak, it can nevertheless be useful. The questions presented in **box 1** help to assess the evidence in relation to local circumstances before it is used to guide decision-making.
2. Prioritise those areas of practice where there is good evidence that deficiencies in quality are expensive and where there are effective evidence-based interventions to address these deficiencies. Examples are the management of leg ulcers, some interventions for healthcare acquired infections and some interventions to reduce adverse drug events.
3. Remember that implementation is key. Do not assume that good ideas will work without committed leadership to create a conducive environment, the active involvement of clinicians who are responsible for making many of the spending decisions and, most importantly, persistence and continual adjustment of the change to respond to the changing situation during implementation by staff.
4. When starting local improvement and cost-saving initiatives, think

#### Box 1 Factors that should be taken into account when assessing research relating quality improvement to cost savings

- How strong is the evidence describing the relationship between quality and cost?
- At the study site(s), what was the investment and expertise available to make the change, and was this costed?
- Were the savings theoretical, in terms of staff time or materials, or presented as real cash in end-of-year budgets? If the latter, what was the cost of any second 'cash change' to realise the savings?
- Who made the savings and when?
- How much do the savings depend on the financing and regulation system: are investment resources available, what is the revenue payment system, and do purchasers or regulators assess, reward quality or penalise for poor quality?

## Commentary

about how these might be spread from the design phase, and do not leave scale-up as an after-thought.

5. Clarify from the start where savings will accrue and to whom, and hold all parties to account for realising these savings.

### CONCLUSION

The evidence suggests that there are ways of saving money at the same time as improving quality. But doing so on a large scale requires changes in how services are financed, and increasing the capability of ordinary services to make changes. Approaches that look effective in theory rarely seem to have the same impact when implemented in practice and on a large scale. In this respect, the challenges of achieving real financial savings by improving quality and reducing waste are no different from any other attempt to change a complex system. The evidence suggests that more realism is needed in claims about the extent to which improving the quality of care can contribute cash savings from the health service over the next few

years. Realism need not dampen enthusiasm but can help build a solid foundation for responding in a more constructive way to the challenges, and can avoid wasting money on well-intentioned but not evidence-based changes.

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