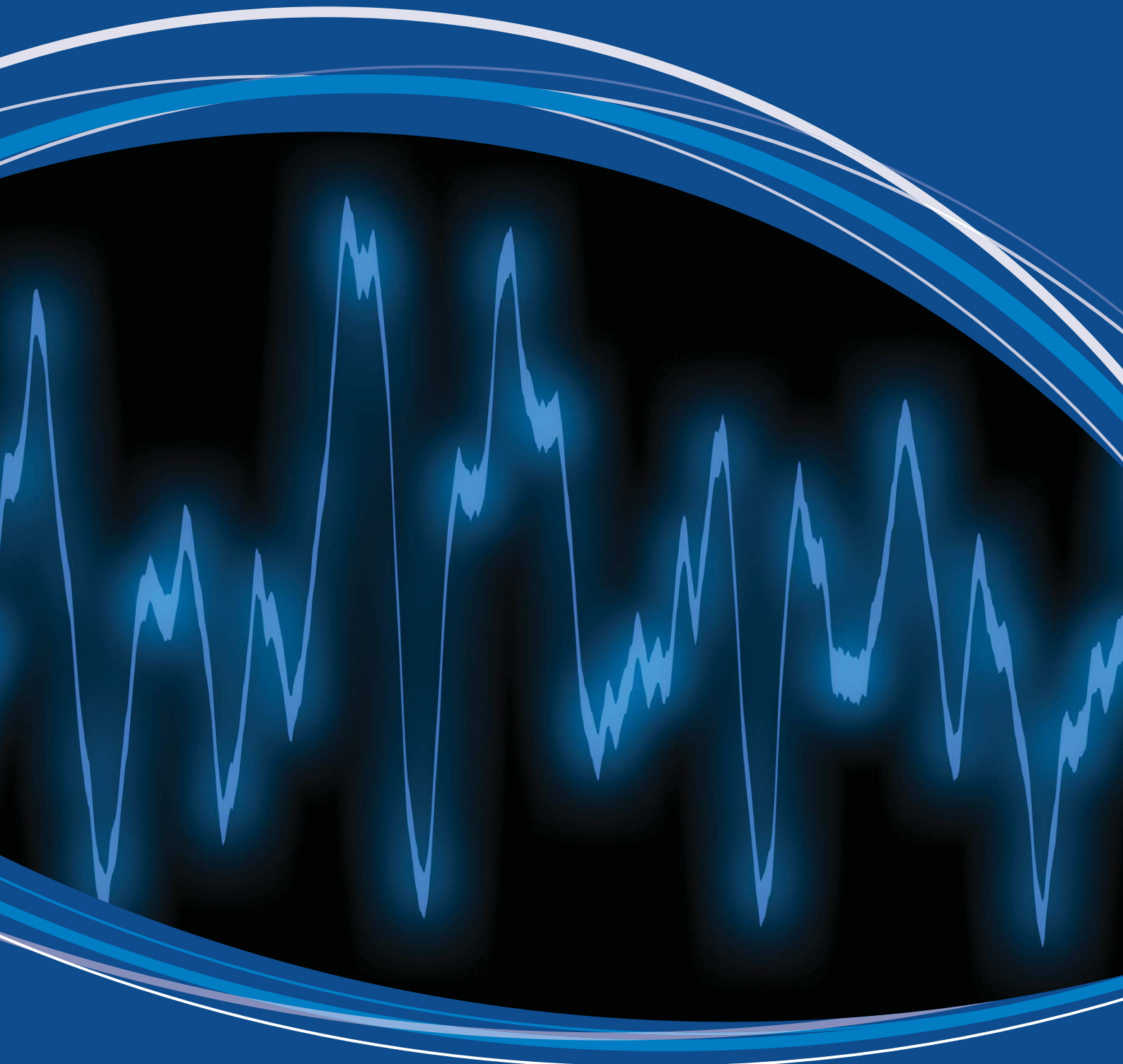


Dealing with the downturn: using the evidence



by Nigel Edwards

The voice of NHS leadership

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Introduction

In *Dealing with the downturn: the greatest ever leadership challenge for the NHS?* the NHS Confederation was the first to predict that the NHS faces a contraction in its finance to the tune of £8–10 billion in the three years from 2011. Published in June 2009, the paper was clear about the need for strong leadership and courageous decisions and that, while the NHS is unlikely to survive the impending spending squeeze unchanged, we should avoid letting waiting lists grow, diluting quality and unnecessary structural change.

Since then, our discussions with members have shown a lot of good ideas about how to respond to the downturn in NHS finances. However, the wider debate is characterised by some uncertainties, mythology, assertions that don't stand up to critical appraisal and a few ideas that simply won't work. This is partly due to the complexity of the issues and partly to the misuse of research, and also because information about context, qualifications,

special conditions and other caveats are often stripped away, leaving a headline which may well be misleading. This report looks at some of the issues that need to be thought about when considering how to approach the financial challenges and the misunderstandings, pitfalls and problems with some of the evidence.

The report looks at the size and scale of the problem we face and explores a number of areas for reducing costs: providing care closer to home; managing long-term conditions; reducing variation; skill mix and substitution; improving quality; and integration and organisational mergers. We also set out some of the myths and misconceptions associated with cost savings and reiterate the need for brave leadership.

We look forward to further debate and to hearing about other ideas that we may have missed.

Just how big is the problem?

The NHS undoubtedly is facing a very significant problem, but there is now some uncertainty about its exact size and nature.

The original £15–20 billion savings target identified by NHS chief executive David Nicholson in his annual report appears to have been based on the assumption of a ‘flat cash’ settlement (see box below)¹ and is not very far from the historic long-term growth in NHS finances. Flat cash means that the NHS would have to absorb inflation, pay awards, the rising cost of the Clinical Negligence Scheme for Trusts (around 10 per cent), and a 0.5–1 per cent increase in employers’ National Insurance. This is as well as the pressure of rising demand – particularly for emergency care and ambulances, the ageing population, the net effect of new technologies and other

healthcare-specific pressures. This adds up to around £15–17 billion but depends crucially on what happens to the 2–3 per cent identified by Derek Wanless as the cost of medical advances* and, to a lesser extent, to changes in pay and prices.² The £3–5 billion gap in the original savings target seems to relate to policy developments and the regional visions set out in Lord Darzi’s NHS Next Stage Review, published in 2008. However, these were to some extent discretionary and it is not clear that the visions were costed in detail. Strategic health authorities have since been asked to revise them in line with the savings targets.

In addition to David Nicholson’s annual report, other developments have affected the £15–£20 billion figure. The 2009 Pre-Budget Report set out “a package to ensure that, in 2011/12 and

David Nicholson at the Health Select Committee, January 2010³

“...Financially, we are in a much better position, the finances are much better managed than they have been at certainly any time in the history of the NHS, and we have ... 5 per cent growth this year and 5 per cent next. What would happen if expenditure stood still? Well, what we know is that, even if expenditure stands still, the NHS does not and the expectations of our patients and the nature of disease goes on, so what we did is we made some broad assumptions, and they are broad assumptions, hence the £15–20 billion which is a pretty broad assumption to make, about the impact of demography, the impact of an historic increase in demand of services in the NHS, we made some assumptions about NICE and ... NICE guidance and the rest of it, ... about workforce

and pay, pay in particular, and assumptions about policies which had been announced, but have not yet been implemented. If you took all of that together, in order to deliver all of that with a position of expenditure standing still, we calculated that we need between £15–20 billion worth of efficiency and productivity gains in the NHS over those three years to deliver that position, so that is the way we did it. It is pretty broad-brush. It was not meant to be scientific, but it was meant to give the NHS a signal that we had better use the next 18 months/two years or so to plan ourselves so that, when we get into that period, we have put all the things in place which will enable us both to improve the service for our patients, but also to stay within the means that we were given.”

*Note that Wanless used a complex method to calculate the effect of medical advances – he treated them as a residual: i.e. what is left when other price, demand and demographic factors are controlled for, rather than being the price effect of identifiable advances. The analysis was undertaken in 2001 and, as it is expressed in percentage terms, this now represents a very much larger absolute amount and it could be that this cost driver is lower now as a proportion of total spend as some of the backlog of introducing technology and of waiting has been dealt with.

2012/13, NHS front-line spending – the 95 per cent of spending that supports patient care – rises in line with inflation.” The message in the 2010/11 Operating Framework was that primary care trusts should plan for their allocations to remain ‘flat’ in real terms for the next three years.” And the coalition agreement between the Conservatives and the Liberal Democrats says: “The parties agree that funding for the NHS should increase in real terms in each year of the Parliament, while recognising the impact this decision would have on other departments”.⁴ This raises the question of whether NHS resources will be used to assist health-related issues in other sectors such as social care, criminal justice and early years.

The Department of Health (DH) seems to be taking an appropriately pessimistic view of the extent to which the NHS will hit the target across the board, or is assuming that there will be significant transition costs or additional policy requirements.

Recent King’s Fund and Institute for Fiscal Studies analysis took a different approach and suggests pressures of £11 to £24 billion to 2013/14 which will continue in the three years beyond this.⁵ They looked at the projections made by Derek Wanless for what the NHS would need in different scenarios for productivity improvement and engaging the public in their own health.

There has also been some confusion about how much of the saving needs to be realised as cash and how much represents savings that will be reapplied to developing new services. This very much depends on pay and price changes compared with the effect of medical advances and new policy. These are volume changes rather than price changes; in other words there is an option to deal with them through the redeployment and increased efficiency of

existing resources rather than through making cash releasing savings. There is also an option to introduce less national policy or fewer Operating Framework requirements. However, it seems likely that up to half of the efficiency gain will need to be cash-releasing.

Capital

Capital is more of a problem. Those who traditionally back private finance initiatives are now less willing to enter into 25-year deals and the rates on shorter term finance are unattractive. Perhaps the UK Government does not look like the secure backer of investments it once was. Public sector capital in the NHS in 2010/11 will be reduced by £700 million and further, very significant, reductions are expected over the spending review period to 2014. This is because, although revenue is protected to some extent, capital is not, and overall public sector capital is set to halve over the next period. It is likely that once depreciation, revaluations, minor schemes and central reserves are accounted for, there will be very little available for any other purpose.

Unfortunately, foundation trust capital spending is treated as a call on the DH expenditure limit. At the time, the decision to treat foundation trust spending in this way seemed inconsequential as the DH never came close to over-spending its capital allocation. But with a much tighter limit the potential impact on foundation trusts’ ability to invest in major capital will represent a significant constraint. The combined effect of this is that cost reduction through reconfiguration that requires major capital investment may not be available without some very imaginative approaches. And the lead time on most capital means that, unless plans are almost complete, large-scale capital-led change is not going to be of help beyond the next three to four years.

Does providing care closer to home reduce costs?

Patients value care that is provided closer to where they live, and the evidence suggests that there is generally no loss of quality where this is done well and the staff taking on the work are appropriately trained and supported.⁶ But a key question is whether it really reduces costs and, crucially, how it can release cash from elsewhere in the system; we know that this is possible but it needs to be done carefully.

To some extent, the debate about care closer to home is constrained by the artificial and largely historic division between primary and secondary care. The objective should be to design care around the needs of the patient so that services are well coordinated and provide patients with the most appropriate care in the best place, rather than simply changing the location.

Not just to another location

Moving an activity from one location to another in itself does not produce savings unless it is significantly redesigned and costs are shifted out of the system, or the new model reduces the overall level of activity.^{7,8} Similarly, substituting a GP specialist service for traditional outpatient care can be significantly more expensive⁹ and may be seen by many GPs as an additional outpatient service rather than a substitute.¹⁰

Studies in this area tend to examine the costs of treating small groups of carefully selected patients. They measure the effect of introducing a new treatment or changing the treatment setting and compare the full costs of the new service with those of the usual approach, and the difference between the two is the saving available. The impact on the cost of caring for individual patients is relevant to commissioners but, from the point of view of dealing with the overall financial pressure, the more important question is what happens in the wider system. This is less frequently considered in the research literature and we cannot assume that simply because costs in one part of the system fall the total cost will also fall.

Moving work to new settings or using disease management interventions that keep people out of hospital may show savings in the cost of treating groups of patients, but the effect at the system level may be very small. In some cases, costs may increase and economies of scale can be lost. This is because, to make savings, the new service must eliminate semi-variable and fixed costs. Using the full cost of care, or measures such as the extended stay payment as a proxy for costs, can significantly over-estimate the actual savings available to a provider and at the system level. This may be the reason for the surprisingly limited evidence that intermediate care such as step up and step down enables a shift from hospital¹¹ or that hospital at home is more cost-effective than hospital care.¹² The scale, design and execution of these types of scheme are very important and of course it is important that the relevant hospital services close at the same time as new schemes are implemented.

See the box on page 6 for an example of the problems related to fixed and semi-variable costs that remain in the system when activity is relocated.

Other dynamics can also undermine the potential for savings. Examples include the following:

- Reducing the number of inpatients can increase the average cost of caring for those who remain. These patients are likely to be sicker and have more conditions and will therefore be significantly more expensive to look after. This could also be true of outpatient departments.
- Large reductions in admissions and length of stay require lower occupancy rates because of the greater vulnerability of small bed pools to random fluctuations in demand.
- The spare capacity must not be filled by other patients – we know that emergency admissions are sensitive to the supply of beds – and reductions in outpatient work can lead to specialists developing new interests and services.

- Services that are more accessible may generate increased demand. This seems to have been a particular issue for urgent care and walk-in centres.
- Alternative services can develop a new market or provide a service that was not part of the original substitute service. For example, in the evaluation of the Advanced Primary Nurses programme (Evercare) it was found that as their knowledge of available services increased over time the nurses referred patients to an increasing range of resources for support.¹⁴
- Additional and alternative services can add complexity and, therefore, cost to already complex systems.

The concerns we present here do not change the fact that systems with high-quality primary and community care provide more equitable, cost-effective and efficient healthcare and produce better population health.¹⁵ Nor should the challenges be seen as insurmountable. In its recent review of the evidence, the Health

Services Management Centre in Birmingham identified a number of approaches that are worth pursuing and the careful evidence-based design and skilled implementation of these programmes can offer significant savings opportunities.¹⁶ Much of this relates to how demand is shaped and managed and the way the system responds to it. Relocating services without redesigning them is unlikely to succeed, including necessary and significant redesign of professional roles.

These changes require much greater scale than is usually attempted and are easier to achieve if overall expenditure is rising or if it is necessary to contain increasing demand without additional costs. If not, a very large proportion of fixed and semi-variable costs must be shed and, once the services have moved, the hospital-based services need to be removed. This means that beds and wards need to be closed but also entire buildings and, possibly, whole sites.

Beds, bays and wards – the full cost problem¹³

A rough estimate of the direct annual costs saved by closing acute capacity is that a four-bed bay costs £110,000 and a 24-bed ward costs £900,000. Costs vary, with surgical wards being more expensive than medical (on average 15 per cent higher). These costs are direct ward costs and do not include any contribution to overheads or associated staffing structures in clinical and non-clinical support departments, nor do they include medical staff. Simply closing the capacity does not liberate these costs until they are done at a large scale.

Assume a four-bed bay running at 90 per cent occupancy. For simplicity assume it only treats patients with chronic obstructive pulmonary

disease without complications and the average length of stay is five days. This is approximately 262 patients in a year @ £1,849, generating £459,000. Price is not the same as cost but most of the difference between the income generated and the direct costs represents semi-variable costs and a contribution to overheads. These cannot be easily shed and so if the cost of the alternative service designed to reduce admissions is greater than £420 per prevented admission then total costs in the whole system will increase. Even so, in a scenario with growing resources or demand this means that more patients could be treated without expanding the capacity of the hospital and so average costs would fall even though total costs were increasing.

Managing long-term conditions to reduce cost

More than 15 million people have long-term conditions and there are significant opportunities to improve their care. Investment in this area is likely to be cost effective, reduce admissions, improve efficiency and quality and reduce mortality.¹⁷ However, as with moving services, we need to ensure that focusing on the cost of individual patient care does not obscure the effects on the wider system. These system dynamics can undermine the effectiveness of the model and the opportunities for cost savings and we need to bear the following lessons in mind.

- In its review of the evidence in this area the National Primary Care R&D Centre Manchester concluded that self-care can have significant impact on individuals' health, including: better symptom control; reduction in pain, anxiety and depression; improvement in quality of life, level of independence and sickness absence from work; and increased life expectancy.¹⁸ However, the researchers point out that interventions to support self-care based on short training courses for patients are not associated with significant cost savings. The impact on utilisation is inconsistent and the effect modest, even increasing costs in some cases.¹⁹ Systematic interventions (such as the Chronic Care Model²⁰ and WISE²¹) that treat self-care as closely integrated with other services as possible, and make use of the resources that patients bring with them to the consultation, offer greater potential for reduced service utilisation. And in *The innovators prescription*, Christensen argues there is an untapped resource of communities of patients who provide support, advice and even services to each other.²²
- Unless patients are identified very early there is a tendency for groups of patients selected for intensive support to have recovered or died before the intervention can produce results.²³ There has been progress in methods to do this early identification more effectively.
- Disease management services may not outperform very good, extended primary care, which has the capability to provide remote support, visit patients at home and offer longer consultations. Because of the way the GP contract works, adding a care management service may mean paying twice for only marginally better results. Disease-specific management may be a useful adjunct to poor quality primary care and/or areas with very high levels of need.
- The costs of providing care increase sharply the more conditions a patient has, which means that the average cost of care overestimates the savings if the service targets less complex patients.

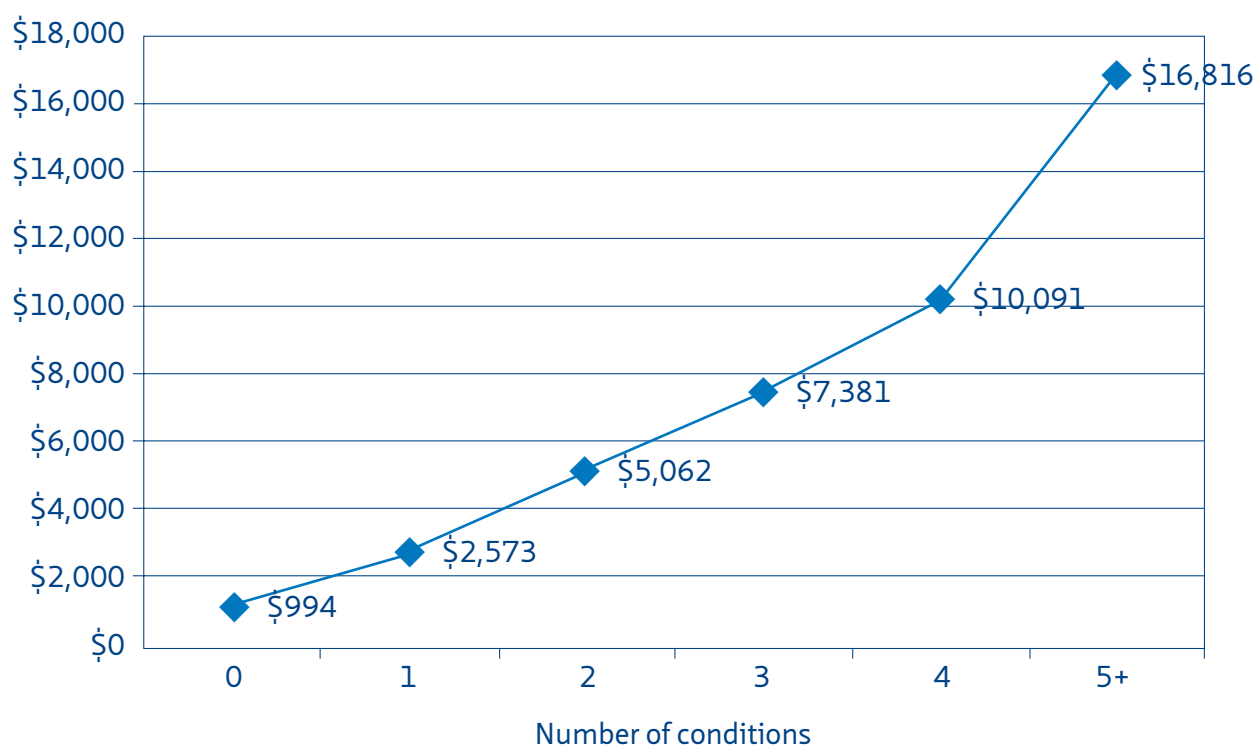
Case management may also identify additional cases of specific conditions and, while this is almost certainly a good thing for patients, it has the effect of offsetting any savings in the short term.¹⁴

This provides an insight into another potential problem in our approach to pathways. It has been fashionable to talk about commissioning pathways or even organising supply chains on pathways. In some cases this is entirely appropriate and the use of pathway-based approaches such as Map of Medicine can yield very positive results. But in many others this is not appropriate. As shown in Figure 1 on page 8, the most expensive patients to care for have more than one condition. For example, a very significant proportion of older people, especially the over-85 age group, 35 per cent of whom have two or more conditions,²⁵ and frail older people with complex needs do not necessarily fit on a single disease pathway. Starfield et al argue that even in a non-elderly population, single-disease management does not appear promising as a strategy and that "new paradigms of care that acknowledge ... patterns of comorbidities as well as the need for close

coordination between generalists and specialists require support.”²⁶ Carving out individual pathways or parts of pathways runs the risk of increasing overheads and the costs of complexity and costly interfaces between services, meaning that individual parts of the system are cheaper but the whole is more expensive.

Nevertheless, there is significant scope to intervene in long-term conditions earlier, reduce admissions, reduce hospital stay and improve outcomes, and a range of carefully planned and implemented approaches can have an important effect. The biggest gain seems to be in preventing patients entering the secondary care system unnecessarily.

Figure 1: Average cost in Medicare by number of chronic conditions (USA)²⁴



Source: Robert Wood Johnson Foundation Research Synthesis Report, December 2009

Variation

There are many reasons to reduce variation; unexplained variation is also a good indicator that there is a need for investigation and an opportunity for improvement. There are a number of areas in which reducing variation will improve care, avoid potential harm to patients and reduce costs. For example, there is a 2.6-fold variation in the level of minor skin procedures and a nearly 4-fold variation in hysterectomy between London primary care trusts, both procedures where there is some debate about their clinical value.^{27 28}

The different types of variation we need to look at include:²⁹

- that which arises from the underuse, overuse or misuse of treatments
- that arising from differences in the supply of services. A lot of demand for healthcare is driven, in part, by supply
- variation in preferred approaches to treatment among clinicians. Where a choice of investigation and treatment approach exists, there may be opportunities to move to a lower-cost approach of similar clinical effectiveness.

Failure to tackle variation means that resources are wasted, opportunities to improve care are missed and, even more seriously, there is the potential for patients to be harmed. However, there are some important traps to beware of: variation may be much harder to eliminate than is often assumed; not all variation is an indicator of an improvement opportunity; and removing it does not always reduce costs. Two examples below illustrate these points.

One common way of identifying savings is to say, if length of stay improved to the standard of the top decile, then we would save X amount.

This is perfectly legitimate as long as we are sure that:

- the targets used for modelling savings have not been cherry-picked. For example, the short stay in one specialty could be achieved by transferring patients to another, perhaps a short stay in medicine or orthopaedics may be because the rehabilitation phase is being dealt with elsewhere. It is not legitimate to select the best length of stay from one hospital for orthopaedics and for rehabilitation from a second without a detailed understanding of how the services operate and inter-relate. This is generally not done in the sort of high-level modelling exercises used to identify savings
- the variation is caused by factors that are in the control of the organisations rather than an external factor such as poor social care or housing, or higher levels of investment in alternative services.

And the way we examine referral rates illustrates a second set of problems. While there is certainly significant scope for looking at referral rates, there is a tendency to assume that high = bad and low = good. This is an over-simplification as a high rate might indicate better decision-making where GPs are identifying problems which need specialist advice that less insightful ones might miss. Alternatively, it might mean that the clinicians are referring unnecessarily to secondary care or have difficulty managing uncertainty. Low rates might mean that GPs have the ability to manage more patients locally or that they are missing important cases. Within any group of clinicians all of these interpretations, and others, are likely to be true, so reducing the rates of some referrers might well need to be accompanied by increasing the rates of others.

Since the 1980s many claims have been made for big savings if poor performers could achieve the standard of the best. This sort of comparison is a useful spur to improve performance but is unhelpful as a way of calculating savings. It ignores the fact that innovation and improvement will generate variation naturally and it may not be possible for every organisation to be excellent at everything all the time. Furthermore, unless there is a clear understanding of the underlying reasons for variation, how the best performing areas are achieving their results, the context in which the service is set and to what extent the lessons from this are transferrable, simply identifying variation adds little to our knowledge about what to do about it. There are particular hazards in making international comparisons because, not only is the context very different, there are often significant differences in data definitions, methods of collection and nomenclature that can greatly distort the results.

One area that is often highlighted is the scope to reduce procedures of low clinical value. There is a relatively small number of these and some progress has been made in many areas in dealing with these. But the potential for dealing with the more subtle differences in interpreting evidence, the choice of procedure, the threshold for intervening and other aspects of preference-sensitive care looks much more significant. For example, there are clear and significant differences in the point at which the decision is taken to do a joint replacement and there are costs involved in intervening too early or late. However, the methods for supporting these decisions are not very well

developed, nor is it clear that we have the necessary clinical support for adopting this sort of approach. Most of the emphasis has been on elective care and this is certainly an important area. But we need to ask similar questions about interventions at the end of life, 'heroic surgery' and other high-cost interventions with a low quality-adjusted life year (QALY) and high risk.

Using decision support aids for patients appears to be effective in areas where there is more than one treatment option and outcomes that affect patients differently. There is good evidence that these are effective in helping inform choices, increasing participation and raising knowledge of risks.³⁰ But there is also an argument that, where these exist, not using them is unethical and means that fully informed patient consent is not obtained. A bonus finding is that a significant number of patients choose more conservative options than their clinicians advise, with no harmful effect on outcomes.³¹ These methods may be even more powerful when backed up with patient-reported outcome data or patient testimony such as that found at www.healthtalkonline.org

So, we need to deal with unwarranted variation but remain careful about bold claims derived from simple assumptions about changes in performance based on poorly chosen indicators. And the usual caveat about the ability to release the full cost applies. A range of demand management techniques can help but, like interventions to shift care, this is another area where the evidence requires careful handling and implementation.

Skill mix and substitution

While there are a number of important opportunities to redesign roles and substitute staff to create savings or provide additional services at lower cost, the obvious routes to savings and quality improvement may not always be the best. For example, it may be best for patients with an uncertain diagnosis or treatment plan to see the most qualified professional who can provide this, rather than more junior and less qualified clinicians who need to escalate and require detailed supervision.

In primary care, nurses provide high-quality first contact care, routine chronic disease management and ongoing care. Research shows they often provide higher levels of patient satisfaction, largely connected to longer consultation times, but patients do not necessarily prefer nurses to doctors.³² The National Primary Care Research and Development Centre, Manchester reviewed 24 studies and found that the lower cost of nurses was often offset by lower productivity, higher recall rates and higher levels of tests and investigations. Larger

teams in primary care tend to be the result of increased skill mix substitution, which brings advantages in terms of higher quality care and, if carefully designed, lower costs.³³ Costs can rise, however, where the transaction and coordination costs of multi-disciplinary teams start to outweigh the benefits.³⁴

In the acute sector, the research evidence suggests that diluting skill mix may have adverse effects on morbidity and mortality and that a higher ratio of qualified and skilled nursing staff is associated with reduced length of stay. There may also be benefits in reduced stress and burnout.^{35 36}

A better approach is to look at whether or not staff are doing work that adds value. Eliminating waiting, duplication, unnecessary movement and other sources of waste is a necessary first step. Improving appraisal, supervision, sickness management and other basic processes is also important. But both of these need to be completed before the true scope of the potential for job redesign can be identified.

Does improving quality reduce cost?

John Øvretveit recently explored this issue for the Health Foundation and found that, like the other issues in this report, broad statements have to be treated with caution, and that we need to keep in mind that intuitively appealing propositions often conceal complexity.³⁷ However, improving quality has many benefits and, while it may not in itself save money, it has an important role in creating a strong purpose within an organisation and avoiding increased costs in the future.

Some of the highest quality healthcare providers in the US have some of the lowest costs and many of these focus their efforts on reducing adverse events, errors and poor quality care; the under-use, over-use and misuse of treatments; poor patient experience; and other defects that create very significant, avoidable costs. It seems likely that one key determinant is their approach to high-cost care at the end of life, in particular using aggressive interventions that may damage the quality of care for patients and carers and increase cost.³⁸

Failed transfers, poor coordination and communication and other problems at the interfaces between organisations are all areas with significant avoidable costs and the opportunity for cash-releasing savings. The evidence about how to achieve the savings at clinical level is less well developed, but quality improvement methods, collaboratives, and plan-do-study-act cycles do seem to be effective.

There is less evidence about these types of quality problems outside of hospitals, but no reason to assume that the level of problems or opportunities for improving costs are any less.

There is limited evidence about the quality and cost equation for organisations and more complex processes where the potential for reducing waste and poor quality is greater, for example emergency care. The risks and uncertainties are also greater and the potential to generalise one successful implementation to other sites appears more limited. Øvretveit has

found that the research evidence in this area is relatively weak: the studies do not thoroughly assess quality, often do not report the cost of the intervention, use inadequate or incomplete approaches to the calculation of savings, and generally fail to report on whether the change was sustainable or whether it could be easily spread. The research is often poor at describing the context in which changes are made, making it difficult to make judgements about whether improvements can be generalised. He cites a number of evidence-based examples of quality improvements reducing costs and releasing resource in his report but, again, we need to be careful to make high-quality changes. This means experimenting on a significant scale with rigorous management and a scientific approach to evaluation.

There are questions about the extent to which improvement programmes are scalable and how many can be sustained simultaneously within any one organisation. Most improvement programmes in the NHS have been aimed at improving the quality of care rather than releasing resources. In a *BMJ* article in November 2009, Bernard Crump argued there is more to do to convince senior managers and finance directors that this is possible. He also argues that incentives in the NHS are often not aligned, particularly where quality improvements made in one sector release costs in a different sector or at a later time.³⁹ This view is mirrored in a study by Leatherman et al who identify a number of obstacles to creating a business case for quality in the US health system.⁴⁰

Local health communities need to ensure that the particular design of incentives and performance management does not get in the way of ensuring that the most cost-effective and high-quality care is delivered. This may also require more collaboration and gain-sharing within and between organisations and a willingness to take some risks and modify some of the current system rules without losing the transparency they require.

Organisational mergers: triumph of hope over experience

There is a significant body of experience that tells us mergers in the NHS have generally failed to deliver the benefits that were promised, cost more than expected, take much longer than predicted to properly implement, and have a number of unwanted side-effects.⁴¹⁻⁴² Frequent organisational change has often led to a loss of momentum, some significant risks of harm to staff⁴³ and risks creating cynicism among staff, particularly clinicians. Big projects such as mergers and poor integration following a merger were implicated in Healthcare Commission investigations of serious lapses in hospital quality and safety at Stoke Mandeville Hospital and Maidstone and Tunbridge Wells Hospitals,⁴⁴⁻⁴⁵ and more generally in financial failure by the Audit Commission.⁴⁶ The evidence outside healthcare is not encouraging, suggesting that no more than 25–30 per cent of mergers and acquisitions succeed.⁴⁷ The international evidence for changes in healthcare reviewed by Braithwaite shows a similar picture.⁴⁸ The 2,497 mergers of US healthcare

organisations between 1999 and 2003 decreased competition and led to price increases of up to 53 per cent.⁴⁹ Fulop et al's NHS study found some positive effects in terms of staffing, training and influence in the local healthcare system, but few savings and significant problems persisted for a considerable time after mergers were completed.⁴¹

However, anecdotal evidence suggests that merging mental health and ambulance trusts has been less fraught. While a few have been implicated in later organisational failures, there seems to be less concern about the outcomes of mergers in these areas. There is no obvious reason for this but it might be because they are less tied to individual institutions and sites, they have fewer service lines to integrate, or that they have been less subject to external management intervention and therefore have more space to dedicate time to change management and organisational development.

Integrating services

There is evidence that certain types of healthcare organisation produce lower cost care than their less integrated comparators. Most of the US examples are multi-specialty group practices such as General Health Co-operative, Kaiser Permanente and Geisinger Health System. Unfortunately, these have proved difficult to recreate and most attempts at hospital-led vertical integration in the USA have been unsuccessful and found few synergies or economies of scope or scale.⁵⁰ The lesson from the successful groups is that true vertical integration needs to include primary care as a key component and may need to evolve from multi-specialty group practices rather than be created as new organisations.⁵¹ European studies have shown less impact from integration; and the Nuffield Trust has produced a series of discussion documents which make a powerful case for this broader form of vertical integration but with important caveats.⁵²

Much of the discussion about vertical integration in the NHS refers to incorporating community services into acute trusts. But there is a real question about how much of this is really vertical integration as community services are made up of a number of complex activities, only some of which have any direct relation to the work of an acute hospital or to each other. While some activities relating to admission prevention, early discharge and some specialist roles – for example, HIV care and tissue viability – have some synergy with acute services, many other community services are quite distinct areas and unrelated to acute care, for example the management of chronic disease and the end of life. Taking on activities which do not form part of the core business of the organisation is not vertical integration. Rather, it is unrelated diversification and the evidence suggests that this is much less successful. Problems of focus, complexity, managing

different cultures, management capacity and expertise can mean that it is difficult to create highly efficient organisations across a wide range of activities. Experience in the integrated trusts in Wales and Scotland has not been published in the form that allows any conclusions to be drawn about whether this model has been successful. However, rates of admission and length of stay in these systems do not suggest a major impact. Research by King et al into integrated trusts in England in the 1990s found that there was little true integration and a tendency to run services in traditional silos, and that the benefits of integration were difficult to identify.⁵³

It is quite likely that concentrating on structural solutions to community services will get in the way of asking more fundamental questions about whether they are organised in the most appropriate way, whether their activities are making the best possible contribution, and whether there are opportunities for significant productivity improvement.

Leutz's five laws of integration

Leutz's five laws of integration are very relevant in avoiding some of the most significant hazards in integrating health and social care.⁵⁴ He says:

- You can integrate all of the services for some of the people, some of the services for all of the people, but you can't integrate all of the services for all of the people.
- Integration costs before it pays.
- Your integration is my fragmentation.
- You can't integrate a square peg and a round hole.
- The one who integrates calls the tune.

Lessons about integration

Ramsey et al propose a set of similar lessons about integration based on the research literature, including some important predictors of success. They also warn about the need to be patient in waiting for results:⁵⁵

- Integrate for the right reasons – cost reduction is probably not one of these.
- Don't start by integrating organisations. Integration that focuses mainly on bringing organisations together is unlikely to create improvements in care for patients.
- Ensure that the local context is conducive and local cultural differences are understood – these can not be ignored.
- Ensure that community services don't miss out.
- Set up the right incentive structure.
- Don't assume economies of scope and scale.

The Nuffield Trust and others make a strong case for integration with some significant opportunities for productivity and quality improvement, particularly where primary care is the starting point. But the scale of the task, the culture change and the redesign required to do this well makes the task very challenging. Because of the organic nature of the process,

the need to adapt it to local circumstances and different starting points, mandating change nationally is not practical. The timescales required are long and the careful planning, skilled execution, clinical involvement and attention to the difficult cultural issues makes integrating services a challenging leadership project.

Missing evidence: economies of scope and scale

Many of the arguments for rationalising services and organisational restructuring are based on claims that there will be economies of scale. There is also a belief that bundling related activities together allows greater efficiency – economies of scope.

Clearly some basic economies of scope and scale mean that hospitals, multi-disciplinary teams, GP practices etc are used to deliver healthcare rather than just individuals practising alone. However, the evidence that additional economies of scale and scope can be realised by organisational change is not particularly impressive.^{42,50} Some recent unpublished research does show a positive relationship between cost efficiency and scale in some specialties. The evidence of a relationship between quality and scale is a little better but again needs to be used carefully at procedure and diagnostic group level.⁵⁶ However, very little consideration is given to the possibility that in some cases increasing size and number of areas of activity increases the costs associated with complexity and coordination. It seems at least plausible that in a number of cases the benefits from increased scale have been wiped out by the higher costs that come with increased complexity.

Often the term 'economies of scale' is used to describe the problem of needing a minimum size to create a viable service. Generally this means that any cost saving is in the form of avoiding additional expenditure rather than releasing cash. The difficulty is that much of the evidence on which these ideas are based is weak, based on opinion and assertion, and is sometimes at odds with the models of care in other European hospitals. The reasons for these differences are not well understood and there may be good reasons why the NHS is taking a very different direction from other European systems.

There are probably savings to be made by sharing of some PCT functions which work on

a larger scale, but beyond this there is limited evidence that there are any major economies of scale beyond the more obvious back office functions and possibly in some aspects of commissioning and exceptional case processes. There appears to have been no relationship between PCT size and World Class Commissioning or Annual Health Check results. Previous research has suggested that the different roles of PCTs have different optimal sizes. This means that where PCTs get bigger, sub-PCT structures and systems often need to be developed.⁵⁷

One particularly perplexing issue is the tendency to dismiss organisations as too small when in most other industries and all other health systems they would be seen as medium sized or even large. This view seems to be based on how to live with the managerial overhead; it does not consider the possibility that this could be configured differently.

Just wrong: assumptions about behaviour

A number of behavioural issues need close attention, namely:

- In most cases an optimal state for the system will not be achieved by optimising the performance and strategy of individual organisations. In many health systems the level of mutual dependence means that pursuing individual objectives is likely to produce a globally bad outcome. Creating approaches that are collaborative and coordinated without being collusive is a challenge.
- Activity growth and demand management is someone else's problem – in an environment with fixed or shrinking funding, demand management is a shared issue.
- The reason that a solution which is the right thing for the patient and the health system

cannot be adopted because of the tariff or because some other aspect of the current rules do not allow it.

These rules change and so basing a strategy on them is unwise. Secondly, taking action which is

against the interest of patients because of a set of rules about the wider system is at least ethically dubious, if not indefensible. High calibre senior managers need to feel empowered to make sure the right thing for patients is done.

Just wrong: assumptions about the system

A number of assumptions made about cost savings are prone to error, detailed below.

Myth	Reality
Savings will largely come from changes in acute services.	In fact, they will have to be found across the whole NHS including primary care and prescribing. The balance in efficiency improvements and cash-releasing savings may vary across these sectors.
Letting waiting lists grow will save money.	Only variable costs can be saved on a one-off basis and there are costs to running extended waiting lists as well as significant risks for patients.
We can make savings with no impact on front line staff.	Of course every effort should be made to protect front line services but the changes that will be required are so significant that it is almost certain that front line services will be affected.
We are already efficient so there is no option but radical change, or radical change is required, so there is no point making year-on-year efficiency improvements.	Radical change takes time and the gap will need to be filled in the meantime. The argument that there are no further efficiencies to be made is not credible.
Management cost savings will make up the majority of the savings and this will have no effect on the ability of the system to deliver.	While there are significant opportunities to improve administrative, procurement and other back office costs, and to reduce management costs significantly, there are large savings to be found.

Ideas that work

Ideas that work

There are far too many good ideas for redesigning care to list here, but this is a selection of some of the more important lessons that come from the evidence.

- Whether it is redesigning care or improving long-term condition management, large-scale change is inevitable. Full cost savings only result from large-scale change and not when only marginal changes in activity are made.
- Preventing the need for secondary care or high-cost intervention and ensuring that patients get the right care as rapidly as possible is a much more productive strategy than simply shifting care between settings. Demand management has significant potential to reduce costs.
- Social care commissioned alongside healthcare has significant potential to reduce demand and cost.
- It is important to keep things as simple as possible. Remove complexity from the system and avoid add-on schemes and measures that create additional steps in the process of patient care.
- Use primary care as the platform for improving long-term condition care and managing demand.
- Look for multiple complementary interventions rather than single projects.
- Use clinical expertise to examine variation.
- Make use of the most expert opinion (supported with diagnostics) as early in the care process as possible, for example consider skilling up rather than down.
- Look at frailty as well as disease pathways.
- Integrating services is a useful idea but start with clinical processes, systems and values before reorganisation and ensure primary care is a key part of it.
- Pay attention to the large change management investment required.
- Involve patients and professionals in major service redesign from the outset.

Conclusion

Although we face an unprecedented challenge but it is possible to remain optimistic. Many of the basic ideas that underpin the areas for improvement we've listed are robust or at least offer significant opportunities for managing increasing demand without increasing cost. Releasing cash is more difficult but can be done, particularly where change is on a sufficiently large scale.

There is a strong tendency for well evidenced research findings to be diluted by opinion or to evolve and be stripped of context, qualifications and other important information that would otherwise allow the findings to be properly interpreted and applied. Complex ideas can get reduced to simple assertions, and research and experiment designed for one purpose inappropriately adapted and used to draw conclusions which go well beyond what the original research supports. For example, many of the ideas to reduce the use of hospital, improve long-term conditions management, and reduce variation require a number of different and complex interventions across different areas of activity; there is no one single magic bullet. There is often a non-linear relationship between inputs and outputs, meaning that implementing some of the measures may produce very little change unless supported by a wider programme of change.

There is no doubt that to be most effective we need to change the way that parts of the system work. This includes major changes to hospitals and community services but also significant redesign of primary care in terms of its ability to offer longer appointments, immediate responses to crises, care planning for care

home residents, and much better access to diagnostics.

A major hazard to watch out for is top down modelling based on broad assumptions and a poor or incomplete understanding of the way the system works. This problem is even worse where static analysis is used to model dynamic problems, particularly those that have complex feedback loops or where adaptation and other behaviour change is not captured by simple assumptions about performance, referral, admission and discharge practice.

A sophisticated understanding of costs and how they work for providers and the system, using the research and a questioning approach to well known facts, are useful defences against some of the commonest errors. It is also important to be aware of the dangers of optimism bias; plans always take longer, cost more and save less than we tend to predict.

For the future, evaluating change, setting quantifiable targets and systems to capture learning should help us be more definite about what works and less reliant on hunches.

Releasing cash on the scale required, whether or not made up of several smaller schemes, calls on significant ambition and leadership. But we must bear in mind that, while there are many opportunities to improve efficiency and quality, careful planning and skilled execution is required to make them work.

For more information on the issues covered in this paper, contact nigel.edwards@nhsconfed.org

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Dealing with the downturn: using the evidence

The NHS Confederation was the first to predict the extent of the financial challenge for the NHS in the three years from 2011. Published in June 2009, *Dealing with the downturn: the greatest ever leadership challenge for the NHS?* set out the scale of the challenge and necessary cost savings and was clear about the need for strong leadership and courageous decisions.

Discussions with our members have shown many good ideas about how to respond to the downturn, including providing care closer to home, managing

long-term conditions to reduce costs, reducing variation, skill mix and substitution, organisational mergers, and integrating services.

This report discusses the upsides and pitfalls associated with some of them, looks in detail at the challenge facing the NHS, and attempts to unpick the uncertainty in the wider debate. It also sets out the myths versus reality about saving money in the system and includes a reminder of the positives in these challenging times.

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