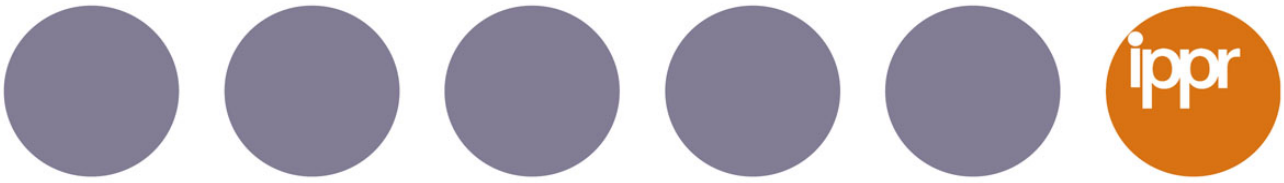


The Future Hospital

The progressive case for change

Joe Farrington-Douglas
with Richard Brooks

January 2007
© ippr 2007

Institute for Public Policy Research
www.ippr.org

The Institute for Public Policy Research (ippr) is the UK's leading progressive think tank and was established in 1988. Its role is to bridge the political divide between the social democratic and liberal traditions, the intellectual divide between academia and the policymaking establishment, and the cultural divide between government and civil society. It is first and foremost a research institute, aiming to provide innovative and credible policy solutions. Its work, the questions its research poses, and the methods it uses are driven by the belief that the journey to a good society is one that places social justice, democratic participation, and economic and environmental sustainability at its core.

The views expressed in this report are those of the authors and do not necessarily reflect the views of the directors or trustees of ippr.

This report was first published in January 2007 © ippr 2007

30-32 Southampton Street, London WC2E 7RA

Tel: 020 7470 6100 Fax: 020 7470 6111 www.ippr.org

Registered Charity No. 800065

Acknowledgements

ippr would like to thank the project funders, without whom our independent research would not be possible. They are Wyeth, Prime PLC, the Royal College of Nursing and the British Medical Association.

The authors would also like to thank all the experts and stakeholders who have contributed at ippr seminars, meetings and interviews. We would like to thank Howard Reed and Tom Smith for providing comments on the draft report, and to John Cannings and Georgina Kyriacou for their support.

Contents

Executive summary

As health and healthcare change, hospitals inevitably need to respond and adapt. However, hospitals are popular local institutions, and implementing changes can be politically difficult. This project focuses on the objectives and the process of hospital change. We are interested in why and how hospitals should change. It is for local decision-makers to work out the details of local health service provision – the 'what' of the future hospital.

At present, in part because of the political barriers to change, the NHS is not achieving the best outcomes from reconfiguration in terms of improving quality and access to services. Nor is it maintaining public trust and confidence in the process of change. This situation needs to be reversed if the NHS is going to succeed for future generations.

This paper sets out the objectives for hospital change that a progressive health system should aim to achieve.

What are hospitals for?

The role of hospitals is not a simple, agreed function. Different stakeholders have varying priorities. The public values a range of roles for hospitals, which can compete and have to be traded off against one another.

Outcomes: Hospitals should contribute to improving health and reducing inequalities, as part of the wider health system. However, their overall impact on public health is limited. Hospitals provide a highly valued 'rescue' function for life-threatening conditions, and can improve outcomes from treatment by concentrating technology and expertise where necessary. Hospitals also need to provide care cost-effectively and efficiently, in order to ensure an optimum benefit from finite resources. The health system needs to be sustainable – ready to meet the needs of the future – and hospitals will continue to play an important, but changing, role in improving health and reducing inequalities.

Services: As a public service, hospitals also need to meet desires of patients and the public, providing a decent and dignified experience. Hospitals need to be responsive to individual needs and preferences – and need to be flexible in order to do so. They also need to be accessible so that patients – particularly those with limited mobility – are able to obtain the care they need.

Trust: Public value is broader than technical or utilitarian objectives. Hospitals should improve equity of access to healthcare and confidence and trust in the NHS.

The progressive reasons for hospital change

Safety: The public often assumes that the local hospital provides a full range of services that are clinically safe. However, this is often not the case. As healthcare advances, more can be done to treat people who have what were previously disabling or life-threatening conditions. But, in order to provide complex healthcare safely, professional teams need to see sufficient volumes of patients with a particular condition. The potential benefits from specialisation are greater for some life-threatening conditions like heart attacks and major injuries, but the safest treatments cannot be provided at every district general hospital because there are not enough patients for teams to maintain their skills.

This argument would apply even in a health system with unlimited resources. In a real, resource-limited health system, we need to make the best use of financial, technological and human resources. Changes in the way that professionals work – including working time regulations – mean that we need to make more efficient use of specialist clinicians' time. It is not sustainable to maintain some services in smaller district general hospitals with locum staff or doctors working unsafe and illegally long hours. More lives can be saved if some services are centralised in more specialist hospitals.

Access: Changing hospitals should not lead to worse overall access to healthcare. While, for the safety of patients, some services need to be centralised, other services should continue to be provided at the district hospital or, even more locally, in community hospitals or GP surgeries. Outpatient diagnostic and routine surgery could also be provided more locally. While some life-saving emergency care needs to centralised, urgent care for minor injuries and health problems – which currently make up the majority of A&E cases – could still be provided locally.

More important than local access to hospitals is ensuring that primary care is easily accessible, particularly for disadvantaged groups. Local primary and community care, providing a wider range of traditionally hospital-based services, are key to improving outcomes and equity, with support to access hospital care when it is needed.

Efficiency: As healthcare and health needs change, more care can be provided in the community or at home. People should only be kept in hospital for the minimum time necessary for their treatment. However, at present, there are wide variations in length of stay, which cannot be explained by clinical factors. There is significant potential to improve efficiency in the use of hospital beds – and allow patients to go home earlier. For example, more patients could be seen as day cases, rather than being admitted the day before or staying in hospital after their operation. A hospital with more beds tends to fill them with more admissions and longer lengths of stay. Therefore, improving efficiency and productivity is likely to lead to – and require – some reductions in hospital bed numbers.

Prevention: Health needs have changed since the NHS was established, and since many of the district general hospitals were planned. People are living longer and are less likely to become acutely ill, requiring hospital care. However, people are more likely to live with long-term conditions. By definition, these changing long-term health needs are not well met by hospitals focused on short-term treatment. Providing ongoing support and management of long-term conditions in the community and at home is a better approach than waiting for acute flare-ups and regular emergency readmission. Shifting resources from hospitals to community services will ensure that the NHS can care better for the future patient, preventing the need for hospital care and improving wellbeing.

Responsiveness: As needs, technology and preferences change, the NHS and hospitals need to be more flexible. Preserving current configurations of hospitals will not allow the NHS to meet the personal needs of individuals. Creating a more demand-led health system, using choice and some competition, will require providers of healthcare – including hospitals – to respond to changes in needs and preferences more rapidly. Although not enough patients are choosing alternative hospitals to have had much impact so far, in the future some hospitals will need to expand or contract, depending on the movement of patients around the healthcare system. Even where patients do not significantly switch between hospitals – and where patient choice is more restricted in Wales, Scotland and Northern Ireland – hospitals will need to respond to changing needs and to challenges to hospital configuration (as described in this paper).

Equity: Looking at the bigger picture, the progressive aims of the NHS should be maintained and advanced by hospital change. The NHS should improve the health of the nation, and reduce inequalities. So far, it has not done enough to further these aims. The NHS should do more to prevent ill health, by being more proactive and helping people avoid the need for hospital treatment. A preventative, equitable NHS would prioritise primary and community care, with a more flexible hospital sector providing more complex treatment at a safe and efficient level of specialisation.

Barriers to achieving progressive change

Improving the accessibility of primary care, particularly out of hours, so that people do not go to hospital unnecessarily, will be a key success factor. In order to shift from an acute to a primary and community-led health service, the current disproportionate reliance on hospitals needs to be reversed. While not all community facilities are in the right place or the right buildings, staff, patients and the public need to be able to see improvements in community services to justify changes to their district hospital.

Change is difficult and controversial. All the relevant stakeholders involved in delivering change need to be engaged in the process. Staff will need to be adaptable to changes in working environment, and will require support. The journey of transition needs to be clearly mapped out, and care pathways need to be maintained in the interim so that people can trust that there will not be a short- or long-term failure to deliver.

Some competition in healthcare may improve efficiency, responsiveness and quality. Competition should not prevent the collaboration that is required to achieve the progressive goals for hospital change, but some approaches may undermine local communities' ability to redesign healthcare systems in the way that best meets their needs.

Hospital change is not a technical, managerial problem. Voters and taxpayers need to trust the process, and change can only succeed if it is understood as a political issue. The management of change is complex and challenging, but agreeing on the progressive goals should be the first step.

Introduction

Healthcare systems across the developed world face a challenging paradox, which is currently being played out in the media and in communities across the UK. In order for healthcare to meet changing needs and to improve health, the traditional district general hospital needs to change. However, hospitals are also popular local institutions, attracting the loyalty of voters and staff, making changes to existing services difficult to implement. Add to this dilemma the practical pressures of working time regulations, distrust of health reform – and of government generally – and genuine fears about family members dying in ambulances, and a complex public policy problem emerges.

These policy challenges, and the current controversial high-profile debates, provide the context for ippr's project on the Future Hospital. The project focuses specifically on the politics of hospital policy. Rather than taking sides in decisions, we are concerned to improve the process of reconfiguration.

At present, the process and politics of reconfiguration are dysfunctional. The need to change hospitals is real: failure to evolve the way healthcare is delivered would lead to worse outcomes. In short, preserving hospitals in their current configuration would mean more people living in pain or dying unnecessarily with unsafe care; resources wasted on unsustainable services would be better spent on improving health and wellbeing.

However, at present the barriers to hospital change mean that we are not achieving the outcomes we should be from the health system. Neither are politicians, public, patients and professionals engaged in change. Public confidence in the NHS is declining (although statistics on patient satisfaction, access and outcomes are improving). Our project, therefore, aims to explore how these negative outcomes and distrust could be transformed into better health services and public confidence.

The Future Hospital aim

Current process leads to:		Future process should lead to:
Sub-optimal outcomes and inefficient configuration		Better outcomes and efficiency from whole system redesign
Poor quality patient environment in unfit buildings with poor access to community services		Improved environments in healthy buildings with locally accessible services
Political distrust of reconfiguration and lack of confidence in the NHS		Political and public engagement and trust, confidence in the NHS

The aim of this paper is to provide the theoretical framework for the project. The first section explores what hospitals are for, using an approach that asks what the public values in hospitals and the health system. The second section discusses the objectives of hospital change, setting out the arguments for reconfiguring healthcare systems.

Having established this framework, future papers will look in more detail at the process and politics of reconfiguration. Using new data from interviews with people involved in recent reconfigurations, we will analyse the problems. The third and final paper will explore how the politics and process of hospital change could be improved to achieve the transformation to improved outcomes, services and trust.

1. What are hospitals for?

It will be difficult to conduct a sensible debate on hospital change without a clearer understanding of the policy goals of hospitals within the health system and wider society. The answer is not a simple technical output, measurable by a set of Treasury targets. Hospitals serve a range of objectives and functions. Different stakeholders will prioritise their objectives for hospitals in reconfiguration debates, as will be explored in a forthcoming ippr paper on hospital politics.

Public value approach

The public value approach provides a useful lens through which to consider the objectives for hospitals. Rather than seeing public institutions as fulfilling technical functions, as evaluated by either the state or the market, this approach considers what the public values.

Public value allows us to consider the role of hospitals in meeting objectives related to outcomes, service and trust. Public value thus goes beyond utilitarian objectives of outcomes and efficiency. The diverse 'public' values wider, ethical objectives like equity, due process and stewardship for future generations. Public services, therefore, aim to enhance public value, rather than just compensate market failure.

However, what has public value should not be narrowly interpreted as what is popular, according to surveys, focus groups, votes or choices. Public opinion, rather than public value, can be short-termist and conservative. Hospital change is an obvious example, cited by Kelly *et al* (2002), where the immediate popularity of a local building may conflict with the wider public values of efficiency and quality of care; diffuse and long-term benefits compete with the concentrated and short-term attractiveness of preserving existing models of care.

Kelly *et al* (ibid) highlight three independent but interrelated components of public value: outcomes, service and trust. These components can be reinforcing or conflicting. Public value is not a particularly scientific approach, but is a useful framework through which to examine the reinforcing or conflicting objectives of social policies and institutions. As an organisation promoting progressive social justice values, ippr sees part of its role to affect what the public values, by intervening in public debate and shaping attitudes, rather than passively reflecting what is popular. This will be explored further in the next paper, looking at the politics of reconfiguration.

Using the public value approach, this section explores the potential objectives hospitals should aim to achieve.

Outcomes

Improving health outcomes

As part of the health system, hospitals should actively promote community health and reduce inequalities. These health improvement objectives go further than just improving healthcare.

Hospitals tend to focus on the very sick, sometimes using very expensive interventions to extend or improve life for a small number of individuals. This means that their potential to actively promote health can sometimes be limited. The main determinants of community health lie upstream from hospitals, in primary care and social factors. Some studies have suggested that medical care has a relatively marginal impact on community health, when compared with sanitation, nutrition and quality of life (for example, see McKeown 1976). This is why it is important that health systems achieve a suitable balance of resources between rescuing and extending life for the few, and improving outcomes in reducing inequalities for the majority. A hospital-dominated health system can overemphasise medical interventions at the expense of public health and primary care.

'Rescuing' the severely injured or ill

Nevertheless, hospitals do, of course, play an important role in reducing mortality from life-threatening conditions, and by improving people's functionality and quality of life. Even though, pound for pound, spending on smoking cessation or traffic calming might have a greater impact on community health, opinion polls and experiments in deliberation about healthcare priorities suggest the public places a high value on 'rescue' services that hospitals provide (Mechanic 1997). Hospitals concentrate expertise and technology so that, for example, severe injuries can be treated following a major traffic accident.

As well as the actual provision of specialised care, hospitals also provide people with peace of mind, so that, if they, a friend, family member or stranger has an accident or contracts a dangerous illness, then they will have access to the necessary care. This is a particular concern of people affected by proposed changes to emergency care, even though changes might improve real chances of survival. In fact, the public has an underdeveloped notion of the constraints on health systems against providing a gold standard service within finite resources. There is constant pressure on the health system to meet rising expectations. This forms the subject of a recent ippr paper (Rankin 2006) and a forthcoming ippr report on expectations in the NHS.

Improving treatment outcomes

The NHS aims to provide the best quality healthcare, free at the point of need. Hospitals are an important part of achieving these objectives. Hospitals allow a concentration of resources so that more specialist services and high technology can be provided. Hospital change should, therefore, aim to provide services at the right level of concentration to allow services to be suitably specialist.

Allied to this are clinical quality and safety objectives. For example, hospitals have variable surgical success rates, although little data is published.[1] This can partly be explained by the experience that teams have in particular specialties (Posnett 2002). Variations in safety and quality between hospitals are not well understood, nor publicised. Given the importance of clinical outcomes, the low prioritisation of safety as a measured objective for hospitals does not, arguably, reflect public values.

Improving cost-effectiveness and efficiency

All health systems, regardless of their funding levels, have a challenge to ensure an effective balance between primary and secondary care, as well as prevention and rehabilitation. As health needs change and technology and expectations create pressures on spending, it is important to ensure that health systems are economically sustainable. There is a tendency for healthcare resources to be sucked into hospital funding, as will be discussed in Section 2. Therefore, hospitals may need to change in order to control their share of health resources.

In some cases, hospitals are running services at much higher costs than the national average. This may indicate inefficiency or excess capacity. The public places an implicit value in efficiency through the resistance to indefinite increases to public spending. A pound that is not spent efficiently and cost-effectively has opportunity costs, no matter what level of overall funding is available to the system. Other parts of the system that are more effective are starved of resources. Needs that could be met with existing resources are not, resulting in poorer quality services, and unnecessary disease and death.

Meeting the needs of the future

The concept of sustainability is useful to understand the case for change. Healthcare does not operate in a stable environment. The context in which healthcare operates – a world of changing social norms, disease patterns and demographics – requires constant adaptation. An unadaptive, inflexible health system is not sustainable.

[1] Cardiac surgery success rates are published by the Healthcare Commission at www.heartsurgery.healthcarecommission.org.uk

The health needs of developed countries like Britain have changed dramatically since the Second World War, with falling rates of infectious diseases, and increasing chronic conditions. As health needs change, so too will the role of healthcare providers. For example, people living longer with long-term conditions might require more long-term home care, rather than inpatient hospital stays, as discussed in Section 2. This is important both for economic efficiency – it would be financially unaffordable to keep admitting people to hospital with long-term conditions – and for quality and service reasons, as hospitals offer a poor quality of life and risks of infection.

Service

Improving service quality

Quality objectives other than outcomes are also important. The NHS is a service, and needs to meet the desires of the public and patients. Therefore, it is important to ensure that hospital services contribute to improving the patient experience. The quality improvement programme in the NHS aims to develop safer care with a better experience for patients, including a major programme of hospital and health centre building to replace outdated or poor quality care environments. Initiatives to improve cleanliness respond to patient surveys highlighting dirty wards. The 'dignity challenge' in care for older people reflects the concerns expressed by users of health and social care services about abuse, respect and privacy in their care.

Environment and staff-patient interactions are important, and need to be taken into account in changing hospital services, if public services are to reflect what the public values.

Choice and personalisation

The Government's reform programme aims to transform the service ethos of the NHS to put patients at the centre. People have higher expectations and more 'consumerist' attitudes, no longer satisfied with a passive role. Choice and voice policies aim to create incentives for providers to personalise services to the needs of the individual, and to give users more control over the care they receive. In order for health services to respond to patient preferences, they need to be more flexible about the services they deliver and the locations in which they deliver them. If people choose to have treatment outside hospital, then acute-based services may need to be transferred to the community.

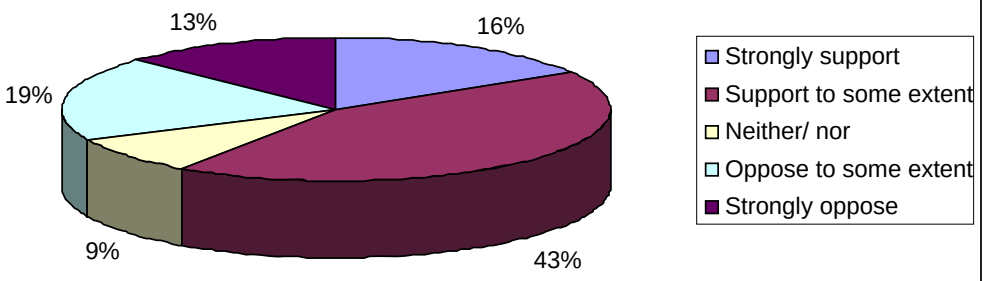
Choice and voice have also been used in the reform programme to try to drive improvement in quality and efficiency by encouraging providers to compete (Department of Health 2005a). While the various objectives of choice and voice – empowering users, allowing more personalised services and driving improvement – may coincide to some extent, there is potential for conflict between the different functions.

Accessibility

Ensuring services are accessible to all citizens is another important goal for hospitals. This means taking into account the geographical distribution of the population to ensure that more remote populations, or people with less mobility, have fair access to health services. Where more services could be provided closer to home, rather than in district general hospitals, then the public would value the improvements in access that this would provide.

However, this example exemplifies the trade-offs in hospital change. After debate, the majority of participants at the 2005 Citizen's Summit on *Your Health, Your Care, Your Say* supported providing services more locally in order to improve access and convenience, although three out of 10 opposed devolution because of mistrust and perceived impact on hospitals (see Figure 1.1).

Figure 1.1: To what extent do you support or oppose moving services, including community hospitals closer to home, if this means some larger hospitals concentrate on specialist services and some larger hospitals merge or close?



Source: Opinion Leader Research (2006)

Trust

The public does not only value the 'utilitarian' objectives – improving health outcomes and service quality, it also values ethical objectives, such as equity and accountability.

Improving equity

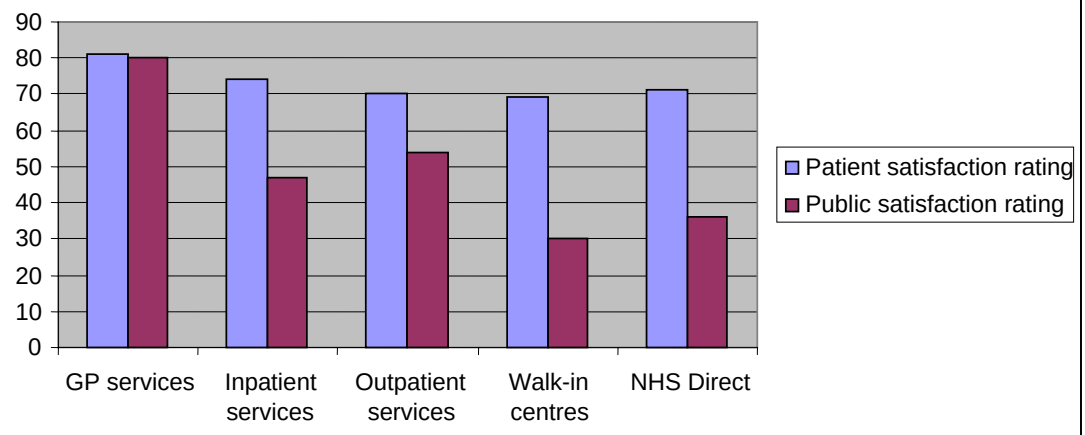
The public places a high value on the equity principles of the NHS. The NHS was founded on the principle of equal access for equal need, regardless of ability to pay. However, a review of the evidence (Dixon *et al* 2003) found that the NHS is not equitable, and that higher socio-economic groups received more care according to need than people from poorer backgrounds. There are also geographic differences in resource use across the country, partly reflecting differential demand from different socio-economic groups, and also the number of healthcare providers that have traditionally been located in each area. Ensuring a fair distribution of healthcare resources according to need may, therefore, mean reducing hospital capacity in areas where there are overspends on acute services.

Confidence and trust in the NHS

The NHS does more than just deliver outcomes and services. It is an important social institution that contributes to our national and local identity. Its continuing existence is also dependent on the consent of the voting and taxpaying public, to whom it must be accountable.

The NHS, therefore, needs to engage the public in changes to its health services. The processes of change are important, as well as the outcomes and services that result from change. At present, as access and quality generally improve, patient satisfaction – measured by surveys of patients who have been treated by the NHS – is improving. However, public trust and confidence in the NHS nationally is falling (Page and Nicholls 2006) – see Figure 1.2.

Figure 1.2: Patient versus public satisfaction with NHS services



Source: Mori 2006

Falling public confidence is partly due to rising public expectations, distrust of the Government and negative presentation of the NHS in the media. It is also due to staff disengagement in processes of change (Edwards, 2006). The result is that, if staff and the public are not engaged in healthcare change, then trust will continue to fall and the political and economic sustainability of the health system will be threatened (through the ballot box and willingness to fund the NHS through taxation).

Public value, therefore, presents a complex set of objectives for the NHS. Healthcare does not have one or two simple objectives. The public values healthcare for a variety of reasons, which may, at times, be in conflict. Hospital reconfiguration provides a particularly stark example of the complexity of public value objectives. The goal of improving outcomes and efficiency, for example by centralising some specialist acute services and devolving other services into the community, can conflict with the objective of maintaining public trust and confidence, because people may perceive service change as cuts to services, or feel that the decision-making process was not fair.

Healthcare change, in particular hospital change, involves making difficult trade-offs between objectives that the public value. 'Reconfiguration' is not just a technical process of making optimal decisions based on a set process. It requires that the public is engaged so that decisions for change are legitimate and politically sustainable. Hospital change is, therefore, intrinsically political in the sense that, in practice, the outcome of a reconfiguration process will depend on the power resources of different interest groups, and their preferences for trading off one objective against another (Perri 6 2005).

However, this does not mean that policymakers should sit back and allow the political process to run its course. Hospital change is political in the sense that it is based on value judgements, rather than technical considerations. Public value is contestable, rather than fixed, and changes to reflect the influences in public discourse. It is not just a relativist approach that sees all publicly valued objectives as equally valid. We need to shape and lead a progressive political debate about hospital change to deliver the values we support. The next section summarises the reasons for which we believe hospitals should change, and which should underpin plans for local reconfiguration and national policy.

2. The progressive reasons for hospital change

In order to achieve the public value aims explored above, hospitals need to change. This section does not aim to explore the *causes* of hospital change. Hospital change is not just a matter of adding up the various external factors and calculating the result. As has been pointed out, hospital change is a political rather than a technical process (Perri 6 2005). However, we also reject a pluralist approach, which sees the politics of reconfiguration as a contest between interest groups with different public interest claims and power resources. We are interested in why hospitals should change, rather than just how they might change. Therefore, this section builds on the public value approach to set out the objectives that hospital change should pursue, and the *reasons* why.

These reasons should provide the basis of reconfiguration discussions locally. It is important that those involved in planning and discussions about hospital change think about the positive reasons for change, rather than just thinking in terms of the technical factors that may constrain or enforce change. You cannot engage the public, politicians and professionals simply by referring to regulations and balance sheets. Nor will a reactive approach to health system reform lead to real improvement to meet the needs and improve the public value of healthcare. The complex communities of hospital change need to be engaged at the start of the process, and an agreement of values and objectives is the best way to do this.

However, a value-led approach to change may conflict with the technical factors and constraints. These conflicts will be discussed in this section. Sometimes hospital change will need to adapt to the policy environment. In other cases, it may require a rethink of external factors and constraints, where they are amenable to change. If a previous policy decision constrains hospital change to the extent that valued objectives – and the case for reconfiguration – are undermined, then the earlier decision, rather than the reconfiguration, may need to be adapted. Policymakers and politicians need to be open to these potential trade-offs, and be prepared to adapt.

Safety: because patients deserve safer care

Patients and the public tend to trust that the care delivered by their local hospital is of high quality and safe. Although the profile of healthcare-associated infections like MRSA has increased, infection is only one, relatively minor factor in patient safety and clinical outcomes. The skills and experience of the professionals who treat you are a significant factor in whether your treatment is successful, particularly in specialist surgery. More broadly, as the Bristol Inquiry found, the systems and processes in place to improve quality and develop a culture of safety are crucial to the protection of patients and the improvement of healthcare outcomes. However, the public's consciousness of the risks and variations in quality and safety is low.

Ensuring teams are appropriately experienced and specialist

Healthcare has changed drastically since the NHS was established 60 years ago, particularly in the 40 years since many of the district general hospitals in Britain were built. There is much more that medicine can do to cure or alleviate what were previously fatal conditions. Some conditions are now treatable with drugs or support in the community, when previously they would have required admission to hospital. At the same time, some types of healthcare have become more complex, as advances have been made in surgery and technology. Professionals have become more specialist in one particular condition or technique.

The increasing specialisation and complex skills required place greater demands on the expertise of doctors and teams of healthcare professionals. However, the current distribution of hospital and surgeons is not based on need for specialisation, nor on health needs. There are wide variations in the provision of hospitals across the country. Many district general hospitals provide services for small populations that do not allow for safe specialist skills to

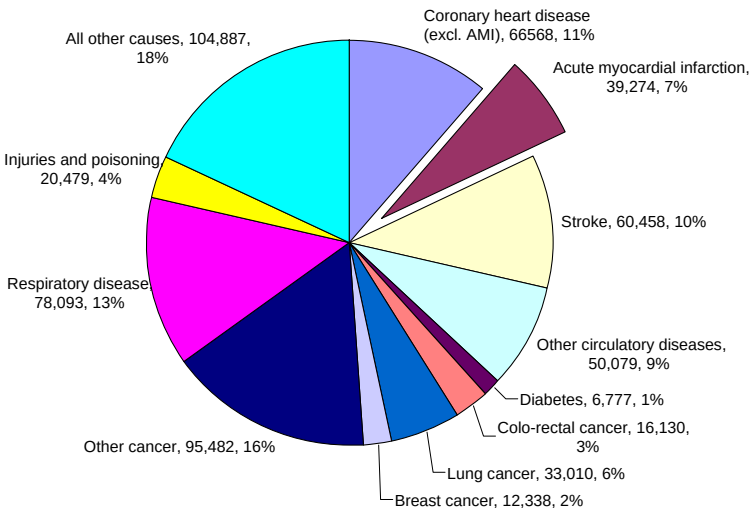
be developed. There can no longer be a full range of services for every condition in every town. Clinicians need to have a sufficient flow of patients in order to maintain and update their skills.

This section summarises the case for concentrating a small amount of hospital care. We have selected treatment for heart attack, major injury and vascular surgery as examples of life-saving services that people are concerned they will not be able to access if their local accident and emergency department is closed. As the evidence shows, these are particular examples where better outcomes are achievable from more centralised services. However, the arguments also apply to other hospital services where there is a need to provide more specialist services to improve patient safety.

Case study: treatment of patients following heart attack

The treatment of patients who have had a heart attack, or acute myocardial infarction, has developed radically in recent decades and years. Survival rates for people who suffer heart attack have improved, as a result, by about 1.5 per cent per year. However, coronary heart disease is the most common cause of death and premature death in the UK (see Figure 2.1).

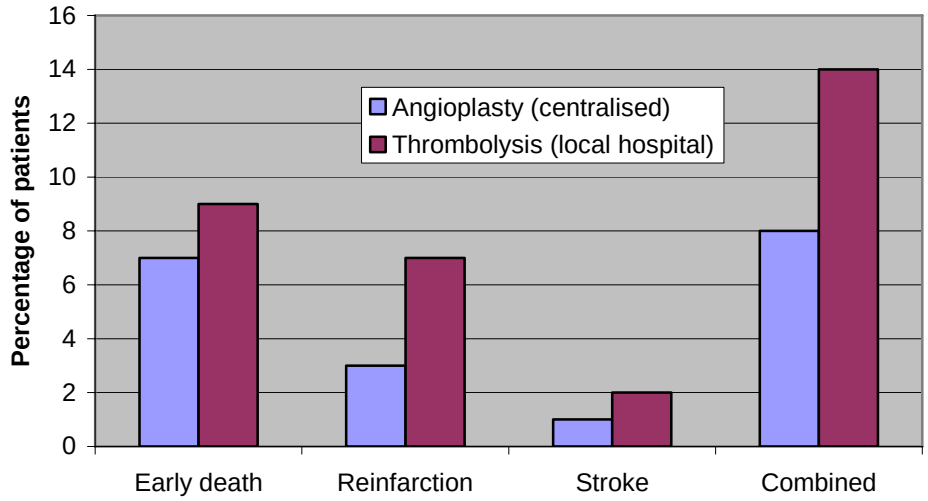
Figure 2.1 Death by cause, all ages (2004)



Source: Office for National Statistics 2005

A new treatment for heart attack, known as angioplasty, is being piloted in certain areas of the country. Tiny balloons are inserted into the bloodstream to unclot patients' blocked arteries, which reduces the death rate and complications from heart attack. Studies have found that angioplasty has a higher success rate than the current use of clot-busting drugs (thrombolysis). One-quarter fewer heart attack victims die, half as many have repeat heart attacks (or reinfarction), and half as many have strokes following angioplasty. However, the treatment is more complex and can only be provided at specialist hospitals. So, if heart attack victims are taken by ambulance past their local hospital to a specialist centre, then they will be more likely to survive.

Figure 2.2 Comparison of thrombolysis and angioplasty outcomes



Source: Keeley *et al* 2003

At present, most of the 61,000 heart attack patients per year treated by the NHS in England as emergencies are still seen at their local hospital, of which 26,000 are suitable for emergency treatment. In 2005-06, only 1,605 patients received angioplasty treatment. Extrapolating from the research evidence on outcomes, if heart attack services were centralised so that all heart attack patients could receive angioplasty, about 550 fewer patients would die per year. There would also be about 1,000 fewer repeat heart attacks and 250 fewer strokes, meaning a longer and better quality of life for heart attack victims[2] (see Table 2.1). Rehabilitation, with drugs and advice on staying healthy, would still be provided locally.

Table 2.1: potential impact of centralising heart attack care on patient outcomes									
	Incidence	Early death	%	Reinfarction	%	Stroke	%	Combined negative outcome	%
Angioplasty (centralised)	26,000	1820	7	780	3	260	1	2080	8
Thrombolysis (local hospital)	26,000	2340	9	1820	7	520	2	3640	14
Difference		**520**		**1040**		**260**		**1560**	

In order to achieve these improved outcomes, however, many local hospitals would effectively stop treating patients suffering a life-threatening heart attack. Ambulance services are able to provide ECG and defibrillation in case a patient's heart stops. With angioplasty, the window for effective treatment is longer than for thrombolysis. The traditional 'golden hour' target from call-to-needle for thrombolysis would be extended to a 'golden three hours' from call-to-balloon for angioplasty, allowing ambulances longer to drive past the local

[2] These are estimated figures only. Not all emergency heart attack patients currently receive thrombolysis within the target of 60 minutes; in the proposed model some patients would still receive thrombolysis under a hybrid model of care if they were not able to access angioplasty within three hours. There were 61,423 emergency acute myocardial infarctions recorded in the NHS hospital episode statistics in 2004-05. Data for 2005-06 was not available at the time of publication.

hospital to a centralised angioplasty facility. In most cases, higher quality care would be delivered at a more centralised hospital, rather than at a local hospital. Continuing the provision of services in local hospitals would lead, by contrast, to more unnecessary deaths.

Case study: major injury

The analysis also looks at people who have suffered severe injury and concludes that they are more likely to survive if they are treated in specialist centres, rather than local hospitals. International evidence from countries with regionalised trauma systems shows that treating people in specialist centres is safer, and that taking people with severe injuries past their local hospital direct to a specialist centre means they are more likely to survive (see Table 2.2).

Table 2.2 Summary of evidence on the impact of trauma centre on mortality[3]
(cont. next page)

Source	Description	Findings
Bulger *et al* (2002) – USA	Severe head injury care – 'aggressive' vs 'non-aggressive' centres.	'Aggressive' management of head injury associated with decreased risk of mortality (hazard ratio 43%).
Coats *et al* (2000) – UK	Modelling development of trauma system in London.	Modelled the theoretical proportion of patients with intracranial haematoma who would have reached specialist trauma surgeon within 4 hours = 20% if taken to local hospital, vs 90% if taken direct to specialist centre.
Cooper *et al* (1998) – Australia	Comparison of management of road traffic fatalities at trauma centres vs non-trauma hospitals in Victoria.	Preventable deaths less frequent in trauma centre (20%) vs other hospital groups (40%-62%); similar trends for high severity injuries. Recommends trauma system with bypassing arrangements.
Cornwell *et al* (2003) – USA	Comparison of process and outcomes before vs after implementation of trauma service.	Faster treatment and throughput of patients in emergency departments; overall mortality rates reduced from 4.5% to 3.4%; for severely head-injured patients from 23.8% to 17.2%. Risk adjusted 31% decrease in overall mortality; 42% decrease in severe head injury mortality.
Demetriades *et al* (2005) – USA	Effect of trauma centre designation on outcomes for severe injuries.	Trauma centres had lower mortality (25.3%) than other hospitals (29.3%), and lower severe disability; lower severe disability at discharge 20.3% vs 33.8%.
Demetriades *et al* (2006) – USA	Relationship between trauma centre designation and mortality for severe trauma.	Higher mortality in undesignated and level II hospitals than level I trauma centres (adjusted odds ratio 1.14 and 1.09).
MacKenzie *et al* (2006) – USA	National evaluation of trauma centre vs non-trauma centres.	After adjustment for case mix, in-hospital mortality rate in trauma centre was 7.6% vs 9.5%; one-year mortality rate was 10.4% vs

[3] Note these studies are a sample of evidence on the impact of centralised trauma systems. They are not from a systematic review of the evidence.

		13.8%; primarily for more severe injuries. Argues for continued regionalisation.
McConnell *et al* (2005) – USA	Mortality benefit of transfer of head-injured patients from rural centres to level I or II centres.	Transfer to a level I vs a level II centre reduced absolute mortality risk by 10.1%. Distance travelled to hospital was not significant.
Mullins *et al* (1998) – USA	Before vs after comparison of outcomes of a state trauma system (Oregon), contrasted with neighbouring state without trauma system (Washington).	Both states had similar risk-adjusted odds of death before Oregon introduced trauma system. Risk of death for severely injured in Oregon fell by more than Washington after trauma system introduced (adjusted odds ratio 0.80).
Nathens *et al* (2001) – USA	Impact of volume on outcomes for patients with penetrating abdominal injury.	Concluded that a strong association exists between trauma centre volume (over 650 cases per year) and outcomes (reduced mortality and length of stay).
Patel *et al* (2005) – UK	Trends in specialist care for head injury.	England and Wales head injury outcomes have not improved since 1994. 26% increase in mortality and 2.15-fold increase in odds of death adjusted for case mix if treated in non-neurosurgical centre.
Sampalis *et al* (1997) – Canada	Comparison of patients directly transported to trauma centre (bypassing DGH) vs patients transferred via local hospital.	Directly transported patients had 4.8% overall mortality; transferred patients had 8.9% mortality. Argues for direct transportation of patients to trauma centre.
Sampalis *et al* (1999) – Canada	Evaluation of Quebec regionalised trauma system.	Mortality rate for major trauma fell from 52% (pre-regionalisation, 1993) to 18% (after regionalisation). Prehospital time decreased from 62 to 44 mins. Primary success factors were treatment at tertiary centres, reduced prehospital time, direct transport from scene to tertiary centre.
Sethi *et al* (2002) – Malaysia	Comparison of the effectiveness of major trauma services provided by tertiary and secondary hospitals	Logistic regression of odds of dying found that admission to district general hospital was associated with increased offs of fatality (odds ratio 9.8).

The Royal College of Surgeons' and British Orthopaedic Association's 2000 report *Better care for the severely injured* argues for the implementation of a trauma system in the UK. Extrapolating from a retrospective study of avoidable deaths, they estimate that universal access to specialist trauma centres could save around 770 extra lives every year. However, this number could be larger. The fact is that there is a lack of good research based on outcomes from trauma in the UK.

Case study: vascular surgery

Surgery for people with blood clots has also become more complex in recent decades. Like heart attack care, techniques have improved outcomes, but require a greater level of specialist expertise.

There is relatively good evidence, in research on surgery outcomes, that the volume of patients treated in a particular hospital has an impact on the survival of patients. Because of the complexity of the surgery and the equipment required, centres and teams that only perform a few procedures per year are not able to maintain specialist skills. Some centres with little expertise in vascular surgery may be less likely to perform complex procedures, also reducing patients' chances of survival. A review of the evidence published by the NHS Health Technology Assessment programme found that there was evidence of a positive relationship between the volume of patients treated and the outcome for each patient for un-ruptured abdominal aortic aneurism repair at the hospital and physician level (Michaels *et al* 2000).

Other literature reviews have also found positive volume-outcome relationships for vascular surgery (Nuffield Institute for Health and NHS Centre for Reviews and Dissemination 1996). Findings of these reviews are summarised in Table 2.3.

Table 2.3 Summary of reviews of abdominal aortic aneurism repair outcomes

Study	Evidence from reviewed studies
Nuffield Institute for Health and NHS Centre for Reviews and Dissemination (1996)	- Standardised mortality rates 30% lower in hospitals with more than 14 patients per year. - 12% mortality for hospitals with fewer than six procedures compared to 5% in those with more than 38 per year. - Mortality declines by 1% for an increase in four operations per year per hospital. - 2% increased odds of dying if in hospital with less than 21 cases compared to more than 21. This risk difference greater for ruptured aneurisms.
Health Technology Assessment programme (2000)	- Six out of eight studies found a relationship between volume and outcome for unruptured aneurisms. - Two out of seven studies found a relationship between volume and outcome for ruptured aneurisms.
Note: risk-adjusted and statistically significant results only	

Where surgery has become more specialised, the continuing provision of services in hospitals serving smaller populations means that some patients treated in more localised district general hospitals for more complex problems are less likely to survive. In short, failure to reconfigure some services will mean more people will die.

> 'The services of vascular specialists are in demand to treat common vascular emergencies – patients with acute ischaemia of the limbs and leaking aortic aneurysms. The management of these problems has become increasingly complex, often involving a team approach with specialists in interventional vascular radiology. General surgeons who do not perform elective arterial surgery have become concerned about dealing with difficult vascular emergencies because clinical governance will no longer support surgeons practising outside their normal sphere of work. The public expects treatment by specialists, and in vascular emergencies this is justified by outcome data.' Campbell and Chester 2002: 1167

Relationship between volume and outcomes

The relationship between improved clinical outcomes and bigger hospitals with higher volumes of activity is a matter of some controversy among experts and we would not advocate a policy of centralisation of all services. For many procedures, services or conditions, the quality of research evidence of a direct relationship between volume and quality is debated, especially after controlling for other risk factors (Posnett 2002).

Government reconfiguration guidance emphasises that many procedures could be carried out locally, rather than in major specialist centres (Department of Health 2003; 2004a). For example, spreading good practice in neonatal intensive care treatments from larger to smaller hospitals eliminates differences in outcomes; pancreatic surgery can be performed safely in small hospitals; hip fracture and cataract surgery can be safely performed at lower volumes (from citations in the above sources). Advances in telemedicine, ambulatory care and collaboration between hospitals can also allow more services to be provided locally.

The implication of these findings is that much work currently conducted in general hospitals could either continue at that level, or be devolved further to local community hospitals and clinics. The 2006 White Paper *Our Health, Our Care, Our Say* (Department of Health 2006a) sets out the Government's objective to move more services out of hospitals into treatment centres and community facilities. This means we need more, smaller community hospitals to provide these more routine services closer to home, with a greater emphasis on keeping people healthy.

However, there is also evidence that points towards greater centralisation for certain specialties. In particular, there is strong evidence that major surgery, such as cardiology, neurosurgery, liver transplantation, some cancer surgery, and (as discussed) major vascular surgery, is more safely provided in larger hospitals. This is reflected in guidance for hospitals, although, in the White Paper and reconfiguration guidance, this has been given less prominence.

Where relationships between concentration and outcomes are evident, this is probably due to a combination of individual physician experience, the performance of surgical teams, and the availability of support services on site in bigger units. In order to provide a safe emergency service around the clock, the British Association of Emergency Medicine recommends that there needs to be immediate access to intensive care, anaesthetics, acute medicine, general surgery and orthopaedic trauma (British Association for Emergency Medicine and Faculty of Accident and Emergency Medicine 2005). In turn, other hospital departments need A&E as a back-up in case surgery goes wrong. The interdependencies of services create pressures to concentrate in order to improve safety.

In summary, these arguments suggest that some services could be further devolved to community levels to improve access, while for safety reasons other services should be concentrated to improve outcomes as a function of individual and team experience and support facilities.

Ensuring that services are safely and sustainably staffed

Even if the volume of patients seen by a particular team was not a factor in clinical safety, the practical constraints of limited specialist clinical expertise and financial and technological resources would create a need to concentrate some services. There is no health system that does not have limits on resources. The combination of specialisation and resource constraints places further pressure on hospital configuration.

The size of population that a hospital serves also relates to the number of staff that can be 'sustainably' employed. By sustainable, we mean that the staff can be recruited and retained, that they can be afforded within the necessarily limited budget of the area, and that they can deliver services safely within regulated working hours.

In the NHS, many hospitals have not been sustainably staffed. Either there have not been enough staff of a particular speciality to go round – for example, shortages of radiographers have meant that diagnostic equipment has been underused, limiting the capacity to reduce

waiting times and improve outcomes for patients – or more staff have been employed than the budget can afford, meaning that resources have been taken away from other services in the area, or from other parts of the country. Or a service in a smaller hospital has been kept going by using inexperienced trainees or unfamiliar locums, or by doctors working up to 100 hours per week, in breach of their rights as employees, and seriously endangering patients who may be treated by an exhausted junior doctor. All these scenarios are unsustainable.

Ensuring that healthcare is sustainably staffed is, therefore, not an optional luxury. We can no longer expect doctors and nurses to work unsafe long hours, with unstable teams of locum staff; nor can we draw resources away from other parts of the service to cross-subsidise inefficiencies. Therefore, safety and sustainable staffing of acute services are intrinsically linked. In order to protect patients and deliver the safe care that they expect, in some areas hospitals serving smaller populations will no longer be able to provide a full range of services around the clock, in particular more complex acute surgery.

Changes to the ways that professionals, particularly doctors, work and train increase the pressure for centralisation of specialist services. The protections of working time regulations mean that more consultants and junior doctors are needed to provide a round-the-clock rota. Trainee doctors are specialising earlier in their career, reducing the capacity for generalist professionals who could manage a range of patient needs in a smaller hospital. The quantity of frontline clinical practice incorporated into medical training is also reducing, so that newly qualified doctors have less experience when they start work. The combination of these changes – the benefits and costs of which this study does not aim to assess – is to create further pressure to centralise specialist hospital services in fewer centres in order to protect patient safety and provide high quality healthcare.

This does not mean the closure of smaller hospitals. As will be discussed, there is greater need for smaller community and locality hospitals, and existing hospitals can work in networks where functions are shared across different sites. Scarce specialist expertise may have to move between hospitals to provide scheduled care, rather than be tied to one institution.

However, acute emergency services do need to be concentrated in order to for hospitals to see enough patients to achieve safe volumes and to be sustainably staffed. For example, A&E departments currently provided in small hospitals may receive patients who have been involved in a major road accident, or had a heart attack or stroke. While urgent care departments in smaller hospitals can provide a good service to most patients, they cannot work in isolation. As discussed above, A&E services are co-dependent on other back-up services in order to treat safely all high-risk patients. While people campaigning to save hospital services are often most concerned about access to emergency care, particularly in the event of a life-threatening heart attack or major trauma, these are the services that are most in need of centralisation in order to improve patient safety.[4]

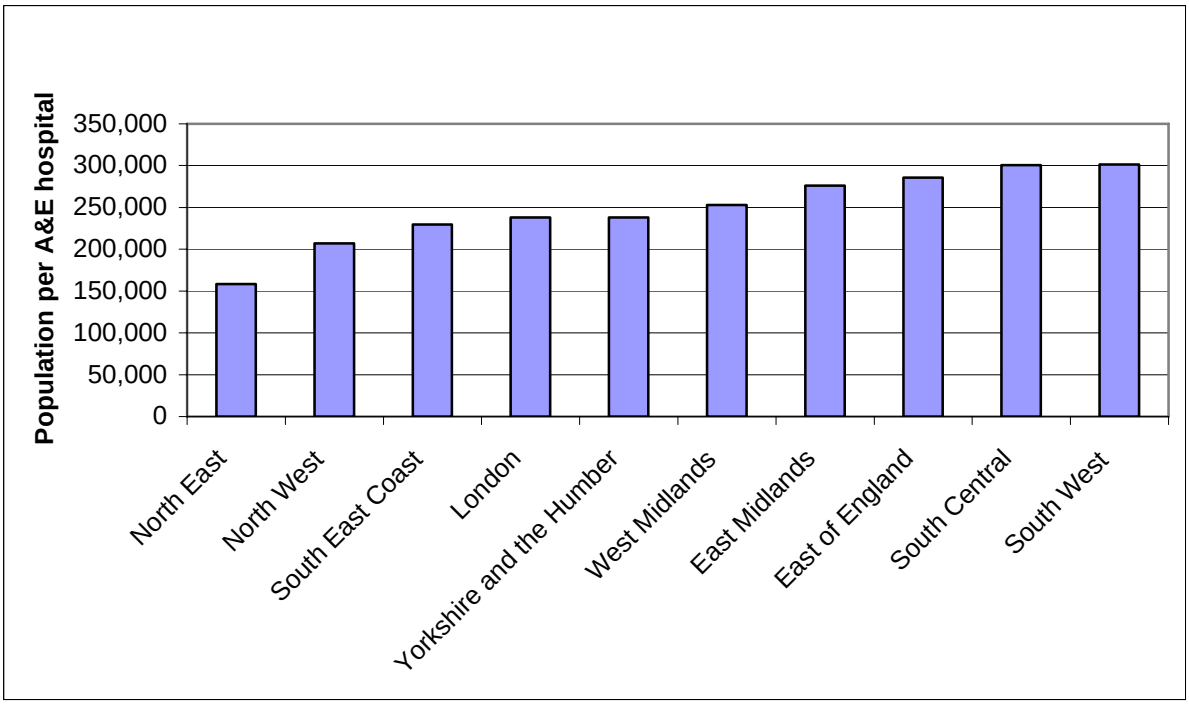
The degree of reconfiguration and the solutions adopted locally will be different in every area. But the Royal College of Surgeons of England, which regulates the training of surgeons, recommends that the preferred catchment area population for an acute hospital – or alternatively a network of hospitals, with emergency services concentrated on one site – would ideally be 450,000–500,000 people. However, since that scale of reconfiguration would be politically and financially unlikely – and undesirable from other perspectives, including access – the Royal College recommends a minimum catchment population of 300,000 people (Royal College of Surgeons of England 2006).

An ippr briefing paper, published in September, illustrated the effect on hospital reconfiguration that this recommendation would imply, suggesting that 57 A&E hospitals would need to be merged in order to reach the minimum catchment population (ippr 2006). Figures 2.3 and 2.4 illustrate the current population per hospital in different NHS regions,

[4] A forthcoming ippr paper will analyse the perceptions and attitudes of stakeholders to hospital reconfiguration in more detail.

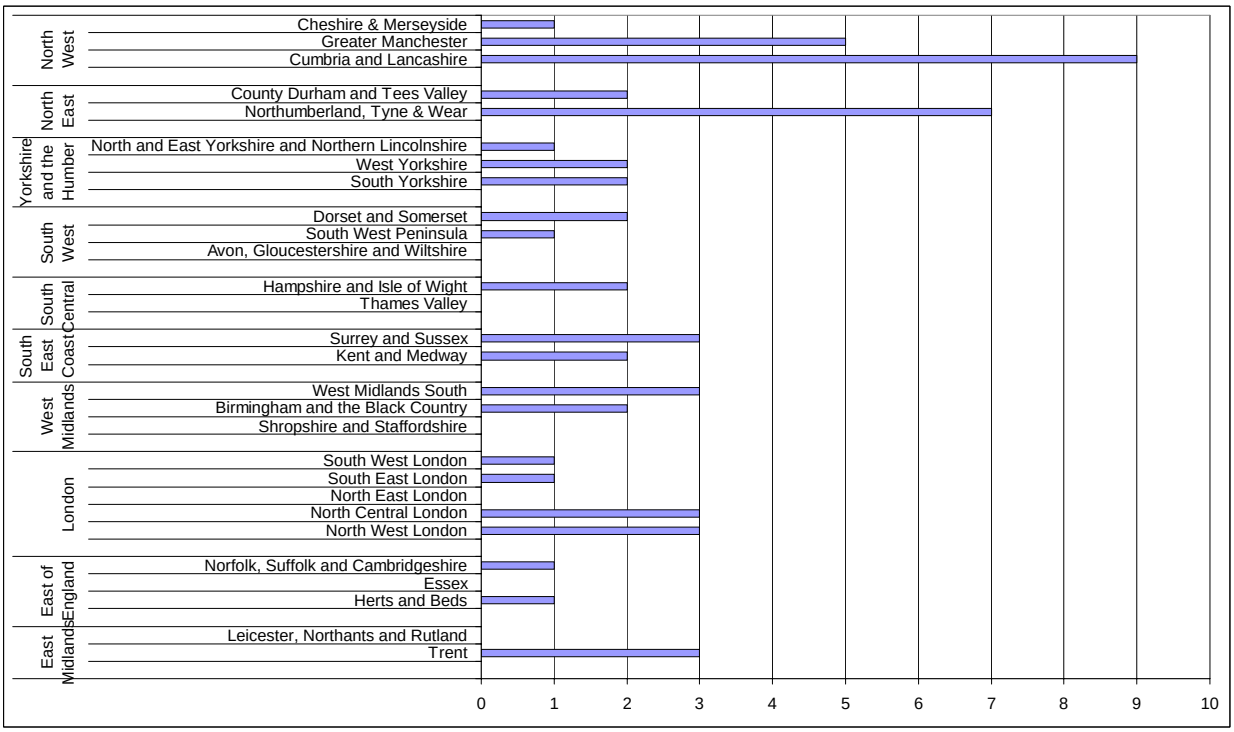
and the hypothetical number of mergers that would be required to reach a level of one A&E hospital per 300,000 population.

Figure 2.3: Distribution of A&E hospitals in England



Source: ippr

Figure 2.4: Hypothetical 'excess' A&E hospitals



Source: ippr

In summary, therefore, the first reason for reconfiguration should be to improve safety of acute care by concentrating specialist services where necessary in order to reach safe volume thresholds and sustainable staffing levels.

Access: because patients need more appropriate care locally

The future hospital should not lead to worse access to healthcare. Although the debate is usually framed in terms of moving services away from existing district general hospitals, with local campaigns to defend access, the argument for reconfiguration should be about improving access to healthcare. While there is a need, described above, to concentrate specialist surgery in fewer specialist acute hospitals providing A&E departments, there is also much greater capacity for more traditional, general hospital-based services to be provided more locally. The move towards more care being provided outside hospitals was signalled in the White Paper *Our Health, Our Care, Our Say*. Reconfiguration of healthcare services is needed in order to make this vision a reality.

Providing outpatient and routine surgery more locally

Improvements in technology, for example, do not only mean more expensive equipment that has to be housed in big, centralised buildings. Much of the outpatient services, including diagnostics and treatments that have traditionally been provided in district general hospitals, could be devolved to community hospitals or general practice clinics. The White Paper provides some examples of where this is done already, and a series of demonstration sites have been established to redesign care pathways so that they offer safe and effective care in settings that people want. Two examples are provided below.

Providing diagnostics locally

'In Somerset, a team of health care scientists in a community hospital are running a diagnostic service for urinary tract infections. The patients are tested and treated appropriately on the same day, with a reduction in referrals to secondary care of 85 per cent. Before the service started, 66 per cent of patients were receiving unnecessary antibiotics, whereas now only 11 per cent receive antibiotics for proven infection.' Department of Health 2006a: 133

Providing treatment locally

'The Fenland Anticoagulation Nursing Service (FANS) covers 423 square miles and is staffed by specialist anticoagulation nurses who see all patients who need medication to stop their blood clotting. FANS provides its service in a variety of settings: community hospital-based clinics, GP surgery-based clinics and home visits to the housebound and nursing home residents. Nurses can test patients on-site and will know the results within minutes. The specialist nurse can provide medication on-site using computerised technology.

'[Patient] Peter Carré is delighted with the service: "I've been taking anticoagulants since I had a heart valve operation in 1975, and for most of that time I've had to make long journeys to hospitals and sometimes wait hours to be seen."' Department of Health 2006a: 131

Much more surgery can also be provided outside big hospitals as well, as the following example shows.

Providing routine surgery locally

'In Stockport, responding long waiting times for vasectomies, a GP with a Special Interest (GPwSI) service was set up by two GPs, trained with re-accreditation provided by a lead urology consultant. Within the first nine months of the service commencing, 288 procedures were undertaken within six weeks, with only three onward referrals. This service has reduced the total day-case waiting time for urology by 45 per cent. The cost per case has been reduced from £463 to £150.' Department of Health 2006a: 133

Whereas patients previously had to undergo invasive surgery and long inpatient rehabilitation, many more can now be treated with keyhole surgery as day patients in specialist treatment centres, without the need for a long period of rehabilitation in hospital.

Urgent care provided locally

Furthermore, while emergency care for people with severe illness or injury needs to be concentrated in acute hospitals with the necessary specialist staff and equipment, much of the urgent care currently provided by A&E hospitals could also be provided more locally. For example, most of the people who attend A&E do not need emergency surgery or the back-up of a large hospital. While the numbers of people attending A&E departments has been increasing, many patients could be safely – and more conveniently – treated closer to home in consultant-led urgent care centres, nurse-led minor injuries units, or in primary care.

The trend has, however, been towards increasing admissions via A&E. While some of these are, of course, necessary, studies have shown that many admissions via A&E are not the best route. Again, this is an area of some debate. While there are estimates of non-urgent or 'inappropriate' A&E visits constituting up to 80 per cent in some studies, lower-end estimates are that only eight per cent of patients who arrive at A&E could have been diverted in advance.

A review of the evidence noted that, although retrospective reviews of patient notes identified many patients who did not need acute treatment, this was not necessarily predictable in advance (Cooke *et al* 2004). This caveat does not mean that more appropriate treatment of patients should not be attempted, but illustrates that there are challenges in identifying and prioritising patients who really need hospital care, while treating less severe conditions in other settings.

The Department of Health's Ambulance Service vision, *Taking Healthcare to the Patient* (2005b), aims to train ambulance service professionals to respond appropriately to the 90 per cent of calls that do not require emergency acute treatment, identifying those that can be treated in alternative settings. Ambulance services are also beginning to look at how they can help people closer to home, rather than taking them to big hospitals. Ambulance equipment has been improved so that patients can be treated at the scene, rather than just taken to the nearest hospital. Emergency Care Practitioners, more highly trained professionals, are able to deal with more people at home or where they called the ambulance, rather than taking them to hospital. As hospitals become more specialist centres, there will be more need for better local services for people with relatively minor injuries and illnesses.

Providing urgent care locally through ambulance services

'Non-urgent (Category C) 999 callers to Kent Ambulance Service NHS Trust are transferred to an unscheduled care desk where an Emergency Care Practitioner or paramedic nurse can assess the caller's needs and provide them with the most appropriate service. This could include a GP appointment, either in or out of hours, rapid response nursing or a 24 hour emergency mental health team amongst other options. Data for the period May 2004-February 2005 show that 3,609 patients were dealt with by the desk. Of these, 39% accepted an alternative to the A&E at the time of

the call. Before the desk, 90% of patients were taken to A&E.' Department of Health 2005b: 20

A&E departments are at the border of primary and secondary care. Many patients require primary care, while a full A&E service is geared towards the needs of patients with acute conditions that need the facilities of a hospital. Primary Care Trusts, Ambulance Trusts and Acute Trusts, therefore, need to work together to provide joined-up services meeting the needs of all patients at the appropriate level. Some hospitals are providing more primary care at the same site as A&E departments, so that patients who do not need hospital care can be seen by a GP or a nurse, rather than an emergency hospital doctor.

When, in order to maintain patient safety and sustainable staffing, full A&E departments are centralised to acute hospitals, most of the patients who currently attend A&E would still be treated at the old A&E site, or another location closeby. Urgent Care Centres, incorporating Minor Injuries Units and Walk-In Centres are already being provided in some areas as an alternative to attending a fully-equipped A&E. In practice, many of these new services have been additional, rather than alternatives, to hospital care. Walk-In Centres, for example, have not significantly reduced demand on A&E services (Salisbury *et al* 2002). The following example illustrates how UCCs can improve access and reduce pressure on existing A&E services.

Providing urgent care outside hospitals

The Loughborough NHS Walk in Centre and Minor Injuries Unit sees patients presenting with minor injury and Illness for assessment, advice and treatment. About 55 per cent of attendances are for minor illness and 45 per cent for minor injury. It acts as the base for the Out of Hours Service during the GP Out of Hours period and for Emergency Care Practitioners employed by East Midlands Ambulance Service, who will work with the centre staff when not engaged on call. There is an agreement with the Ambulance Service to take patients who have dialed 999, but are triaged as a Category C non-urgent call. There is also a phlebotomy service, a fracture clinic, a hand injuries clinic, and an X-ray facility staffed Monday to Friday, 9.00 am-4.30 pm.

The unit sees approximately 68,000 patients per year for minor injury or illness, 21,000 of whom attend through the Out of Hours service. 99.84 per cent of patients are being treated within four hours, with the vast majority being seen within one hour. The unit has seen steadily increasing demand since its inception and the changing role of out of hours care has brought it to the attention of even more patients, who then use it in hours.

Comparison of activity at A&E and 999 calls with other local PCTs would seem to indicate that at a local level the centre may have slightly reduced A&E attendance, but not impacted significantly on 999 calls. The main comparator on the basis of population type would be Southern Leicester. It is possible that the proximity of southern Leicester to A&E means that patients present there rather than dial 999.

Source: NHS presentation to Urgent Care Centre conference, available at www.dh.gov.uk/assetRoot/04/12/36/65/04123665.pdf

In the future healthcare system, Urgent Care Centres will be available as a genuine alternative. Only patients with acute needs will be treated in full A&E departments, although facilities will probably be available to treat lower-risk patients who present at A&E, for example with a See and Treat service or a GP on site. The large proportion of patients who do not need trauma, resuscitation or emergency surgery could be treated in more local centres or at home.

Providing more care in community hospitals

Community hospitals will play an increasingly important role in the new model of care, where more local facilities to keep people healthier are backed up by fewer acute hospitals. Community hospitals can provide a range of services between major acute and primary care, as the following example illustrates.

> **Example of community hospital providing acute services**
>
> 'Braunstone Health and Social Care Centre became fully operational in April 2006, bringing dozens of Leicester's health and social care professionals under one roof and providing local communities with a single, convenient point of access to a range of services.
>
> 'Services include a GP surgery, pharmacist, community nurses, mental health workers, health screening, vaccinations and family planning advice, outpatients clinics in areas such as dermatology and diabetes, physiotherapy and speech and language services. More clinics are planned in areas such as podiatry and ENT services. In addition, the Social Services Department provides Adult services and the centre includes a community café.
>
> 'The aim is to treat patients in a coordinated and holistic way so that, for example, an unemployed, mentally-ill asthmatic patient, estranged from family, does not have to deal with four different teams working in isolation.' Department of Health 2006c: 9

However, if more care is to be provided locally, there is an important trade-off with acute hospitals. The pot of money for healthcare will always be limited. With more drugs and treatments being made available every day, it is important that the health budget is used efficiently and fairly. Therefore, if more local services can be provided that are more accessible and keep people healthier, then it is not possible or desirable to keep every district general hospital also providing services that should either be provided more locally, or should be centralised in order to improve patient safety and efficiency.

For example, the White Paper estimates that, of the 45 million outpatient appointments provided by the NHS every year, up to half in some specialities could be provided in the community. At present, there is a huge regional variation in the numbers of outpatient appointments provided in hospitals, rather than in the community. Testing and evaluating care pathways in demonstration sites that devolved services appropriately to the community could help spread good practice across the NHS. This would reduce the facilities required in acute hospitals, and allow some hospital buildings to close as care moved to the community.

Improving appropriate access to healthcare

Debates about changes to hospital services are dominated by access concerns. However, distance to hospitals is a small factor in determining people's overall access to healthcare. As Posnett (2002) explains, the costs (in time, effort and money) to the individual will affect their decision to seek healthcare in relation to the perceived benefits. Higher costs of access are likely to have greatest impact on the initial decision to consult, or on the use of diagnostic services, where there is least perceived benefit.

From a health improvement perspective, however, identifying illness early and providing preventative care in a primary setting are the most effective functions of the health system. Once a need has been identified, and referrals have been made to secondary care, patients are more likely to perceive the benefits of care after diagnosis than in symptomatic or pre-symptomatic stages.

In order to improve appropriate access to healthcare – rather than simple cost reduction for secondary care – the best policy is to improve access to primary care. Travel time and

distance are only one aspect of access, proper measurement of which should take into account the benefit of access and patients' likely willingness to travel. There is evidence of a deterrent effect of increasing distance to primary care consultations. However, the evidence for secondary care is less clear (Posnett 2002). As will be discussed below, evidence on equity in the NHS suggests that factors other than distance – particularly related to unequal referrals – are more significant than distance in determining access to secondary care (Dixon *et al* 2003). In order to improve access, reduce inequalities and improve health, therefore, increasing distances to some secondary services in order to improve access to more preventative primary care services would seem to be a reasonable trade-off.

Nevertheless, individual-borne costs are a factor in accessibility. If there are proposals to increase the distance to some acute services, there also need to be strategies to ensure that increased costs of access do not reduce the cost-benefit ratio to patients so that utilisation is reduced, particularly if disadvantaged, less mobile groups are disproportionately affected.

As discussed in ippr's recent work on patient choice and equity (Farrington-Douglas and Allen 2005), the local NHS needs to work with transport planners and commissioners to ensure that access plans are produced as part of the proposals for reconfiguration. The NHS also needs to demonstrate how proposals for change will affect overall accessibility of health services. The net effect of hospital change should improve access to the majority of services, with more provided in the community and at existing sites, and only a minority of specialist services being centralised in order to improve quality.

At present, the hospital-centred health system means that care is less accessible than it should be. Provision of more services in the community would reduce the need for services based in hospitals. While improving access for patients, this also means that need for beds and buildings is reduced. In order for these improvements to access to be implemented, staff and communities will need to embrace changes to existing hospital services.

Efficiency: because patients should be able to go home sooner

As mentioned above, the patterns of healthcare that we are used to are changing. More diagnostics, outpatient services and day surgery can be provided outside hospitals, closer to home.

People should only be kept in hospital for the minimum time necessary for their treatment. Being in hospital for shorter periods is better for patients for a number of reasons:

- They are away from home and family for less time.
- They are less likely to contract a hospital-associated infection, like MRSA.
- More patients can be treated, so people have shorter waits and resources can be used to improve services for other patients.
- Rehabilitation at home can help ensure patients adapt to living safely in their normal routine, rather than staying in hospital and being sent home without support.
- Keeping people in a hospital bed can be very expensive, both in terms of the cost of looking after them and the overheads of a hospital building, and in terms of not treating another patient in their place.

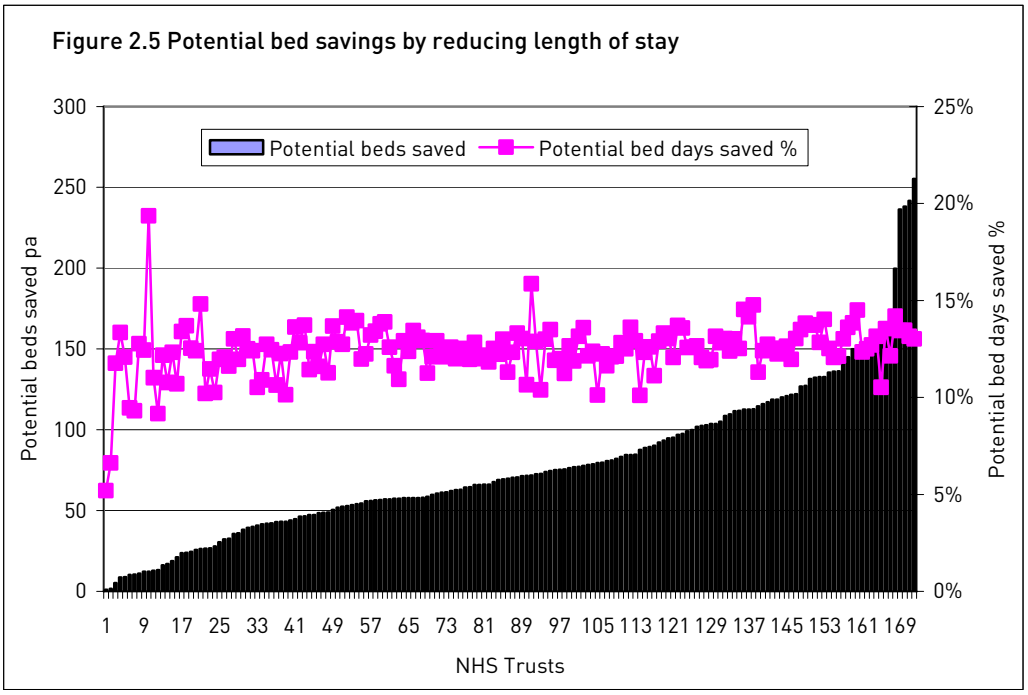
However, these opportunities are not available to patients across the country. There are wide variations in lengths of stay in hospitals across the country.

In a new piece of analysis for ippr, Dr Foster Intelligence has analysed the spells of care for all patients treated by the NHS between April and June 2006 (Q1 2006-07). From this, it is possible to work out where the most efficient hospitals are, with the shortest lengths of stay, and also the shortest, longest and median lengths of stay for each type of patient and treatment.

Although, in the long run, the NHS should aim to spread best practice throughout the system, for this analysis Dr Foster has calculated how much capacity would be freed up if hospitals where lengths of stay were longer than average reduced the amount of time patients were kept in hospital. In order to show an achievable target, they have only supposed that longer than average lengths of stay *move 25 per cent closer to the median*. In other words, what would happen if one in four patients who were kept in hospital longer than average were discharged after the normal number of days? To make the numbers fair, Dr Foster has controlled for possible factors that might increase length of stay, including the particular condition, the age of the patient and their socio-economic status.

The results are shown below in Figure 2.5.

Figure 2.5 Potential bed savings by reducing length of stay



Source: Dr Foster Intelligence analysis 2006

This suggests that there could be significant improvements in the use of beds in some parts of the country, where patients stay in hospital for several days longer than in the 'good practice' areas. In areas with longer lengths of stay, more hospital beds are used than necessary, increasing waiting times and the cost of keeping them in hospital. The average potential bed saving was 13 per cent of the total hospital capacity. Although this chart arranges bed savings by hospital, 138 Trusts had between 12 and 14 per cent potential bed savings, suggesting that most hospitals had significant capacity to improve.

If improvements were made to the patient experience, then waiting times could be reduced for other patients who need treatments. In many cases, reducing length of stay will also mean that fewer beds are needed overall. According to Dr Foster's analysis, for example, over 13,000 beds could theoretically be 'saved' simply by reducing excess stays by a quarter – the equivalent of 26 500-bed hospitals.

In practice, a bed can only be closed if it is unoccupied for a whole year. NHS Trusts would only make efficiency savings if they were able to close down a whole ward and stop staffing, heating and paying capital charges for the land and equipment. This is an argument for assessing potential long-term savings and implementing whole ward closures, rather than maintaining lots of unoccupied beds. However, this data suggests that the majority of hospitals would be able to save over 50 beds, suggesting excess capacity of several wards. Greater efficiencies could be made by reducing long stays by more than a quarter, or by aiming to reach below the median.

Using these beds more efficiently would enable more patients to be treated where there is the need, and for hospital capacity to be reduced where commissioners decide resources could be better spent elsewhere, for example in community services. Again, it should be emphasised that this is not an argument for 'closing' 26 hospitals, but for using current resources more efficiently to treat more patients and to shift some resources out of hospitals into the community.

The potential benefits of day surgery are described below in more detail.

Example of reduced length of stay

The Modernisation Agency identified increasing day surgery and managing discharge as two of its ten high impact changes that NHS Trusts should introduce to improve quality and efficiency of care.

Treating day surgery as the norm for elective surgery suggests a shift in the way we think about elective care within hospitals. This is because hospitals predominantly organise themselves as providers of inpatient care. Rather than asking 'is this patient suitable for a day case?', we should ask 'what is the justification for admitting this patient?'. The hospital's systems, processes, design and physical space should be organised on this basis. Addressing a clinical practice variation would also greatly increase the potential for day surgery. This principle is also about moving care to the most appropriate setting based on clinical judgement.

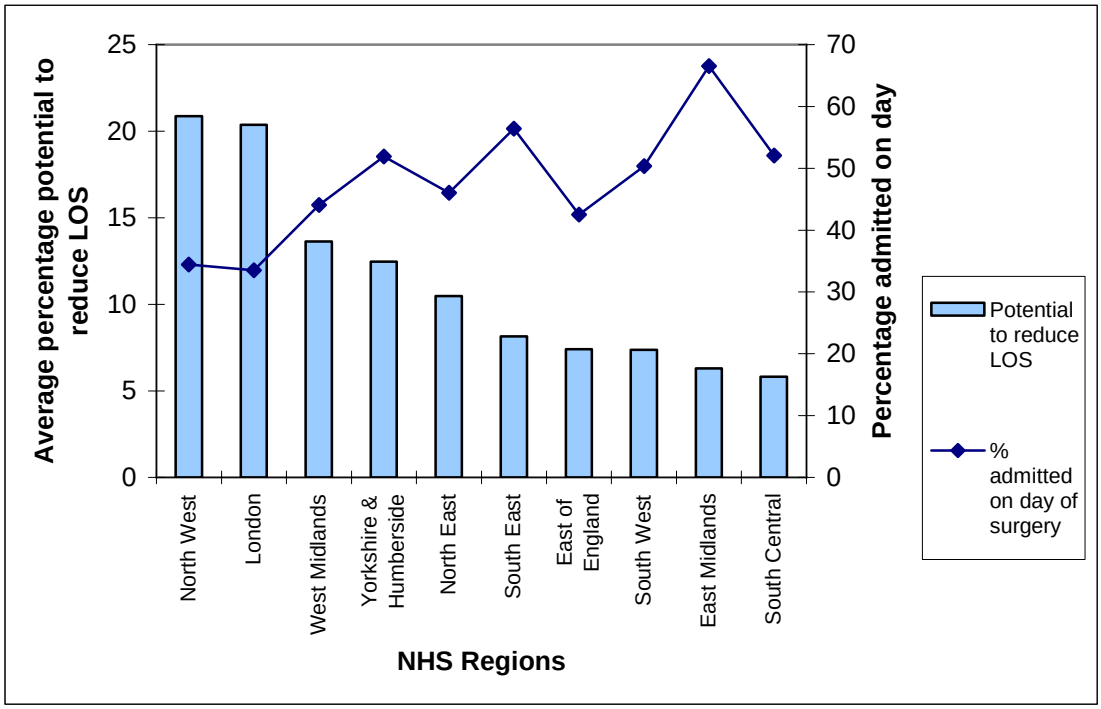
Many Trusts that have participated in the Modernisation Agency Day Surgery Programme have improved the proportion of patients being treated as day cases by 6-10 per cent in a single year.

As a result of the way we manage patient discharge, patient length of stay is highly variable and unpredictable. Not only is there variation in discharge rate from day to day but also by the hour of the day. Trusts working with the Modernisation Agency as part of the Emergency Services Collaborative have found that matching discharge times to the times that beds are required for transfer from A&E has had significant impact on A&E waiting times.

Source: Modernisation Agency *10 High Impact Changes* www.wise.nhs.uk

Figure 2.6, taken from analysis by the Healthcare Commission, compares the capacity to reduce length of stay for five major procedures with the current proportion of patients admitted on the day of their operation. It suggests that North West England and London appear to have the greatest potential to reduce surgical length of stay. One relatively easy way that hospitals with longer lengths of stay could improve would be by admitting more patients on the day of surgery, thus freeing up beds to be used by other patients, or releasing resources for other health needs. These regions were also identified by ippr as having 'excess' hospitals compared to their populations.

Figure 2.6 Capacity to reduce length of stay (LOS) and increase percentage admitted on the day of surgery, by region

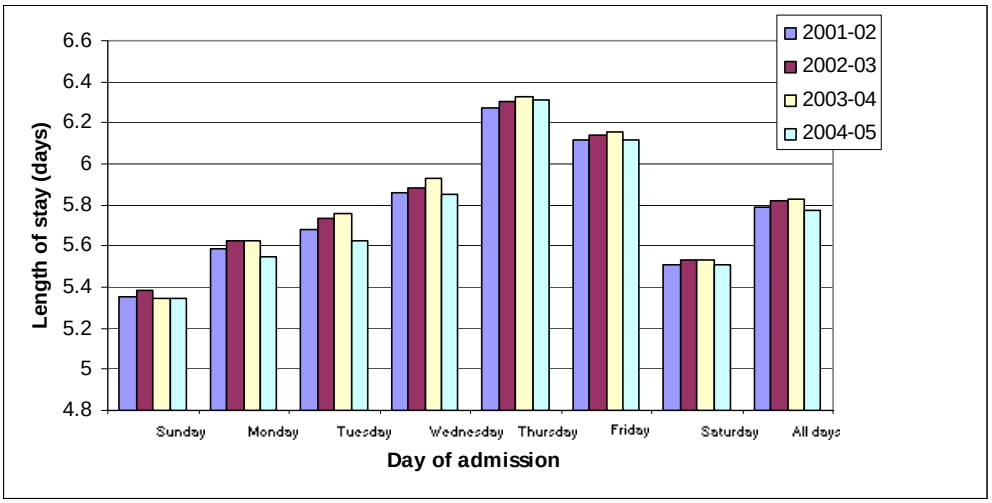


Source: Healthcare Commission (2006). Note: Data based on lengths of stay and admissions rates for six procedures, compared to the top-performing quartile.

There is also capacity for improved efficiency in treatment of emergency patients, who take up the majority of hospital beds. For example, patients who are admitted at the beginning of the week are more likely to have a shorter length of stay than those admitted at the end of the week, as Figure 2.7 shows. This is because many hospital services are reduced at the weekends, creating delays for patients who spend the weekend in hospital waiting for assessment or treatment.

Improving hospital efficiency may free up capacity to treat more patients. But it does not necessarily mean that more patients can be treated indefinitely. There are limits to what can be afforded within any health system's resources, and other priorities such as community care may be higher priority than treating more elective patients. If patients stay for less time in hospitals, then beds and wards could be closed. This would signal success, both in terms of improving efficiency and patient experience. However, the public, politicians, staff and the media would need to be more flexible about the number of wards in a hospital, and not perceive any reduction in beds as a cut in services.

Figure 2.7 Average length of stay by day of week of admission (emergency patients)



Source: Healthcare Commission (2006)

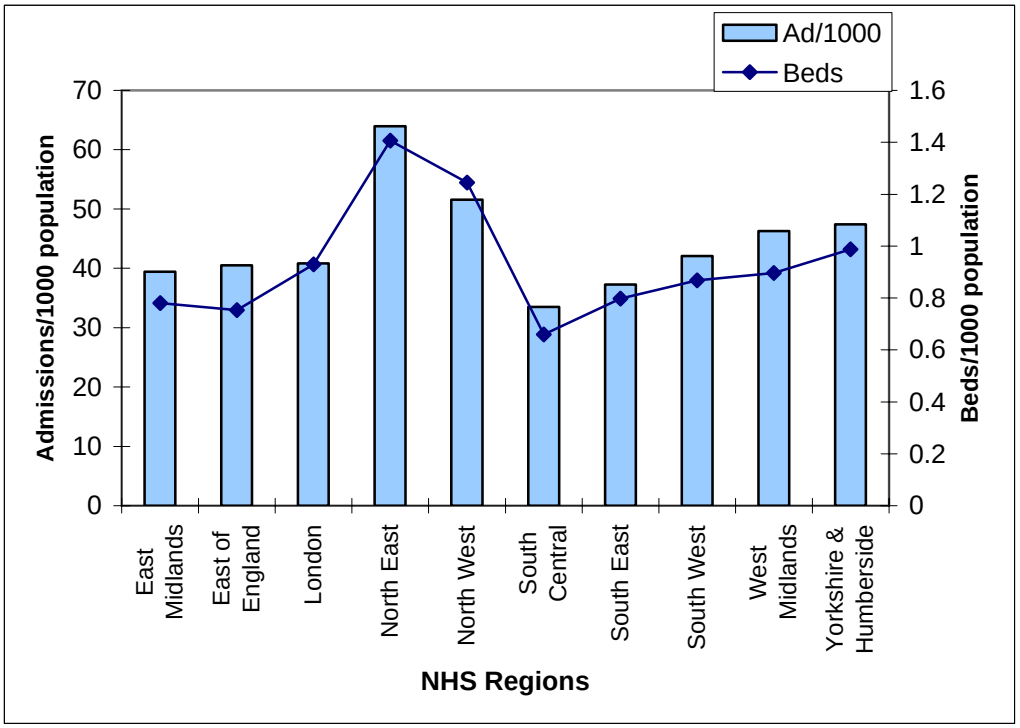
It is important that having a shorter length of stay is safe for patients. Reducing excess length of stay is not just about sending patients home. Patients need more integrated care, so that they are safely rehabilitated after being in hospital. This may require rehabilitation as an inpatient staying at a community hospital nearer their home, or as an outpatient visiting a community hospital to see nurses and therapists, or at home, with support from community health and social care professionals. So improving length of stay cannot necessarily be achieved overnight, nor will reducing acute bed-days produce short-term cash savings, although it may be more efficient in the long run. In order to improve patients' experience and safety by reducing length of stays, the NHS may need to improve intermediate and domiciliary care.

Nevertheless, the acute-centred model of care does appear to have inefficiencies that could be reduced. As ippr's analysis has shown, there is significant variation in the number of hospitals proportionate to the populations they serve.

The fact that there is 'excess capacity' in the hospital sector in some areas is illustrated by the Healthcare Commission's *Acute Hospital Portfolio* analysis, which found that variations in numbers of medical beds per 1,000 population served correlated with variations in the number of patients admitted per 1,000 population (see Figure 2.8). Length of stay was also correlated with bed numbers. Although factors including clinical need and availability of community alternatives may have contributed, the Healthcare Commission concludes:

> 'It was interesting, however, that regardless of how many beds a trust had, it always appeared to fill them, either by admitting more patients or by keeping them in longer… if there are too many beds, a trust may be inefficient, allowing expensive hospital services to substitute for primary care service' (Healthcare Commission 2006: 39).

Figure 2.8 Admissions and beds per 1,000 population served



Source: Healthcare Commission (2006)

The reconfiguration of local health services should, therefore, aim to make more efficient use of hospital capacity, as well as shifting some services to the community and specialist centres for more acute care.

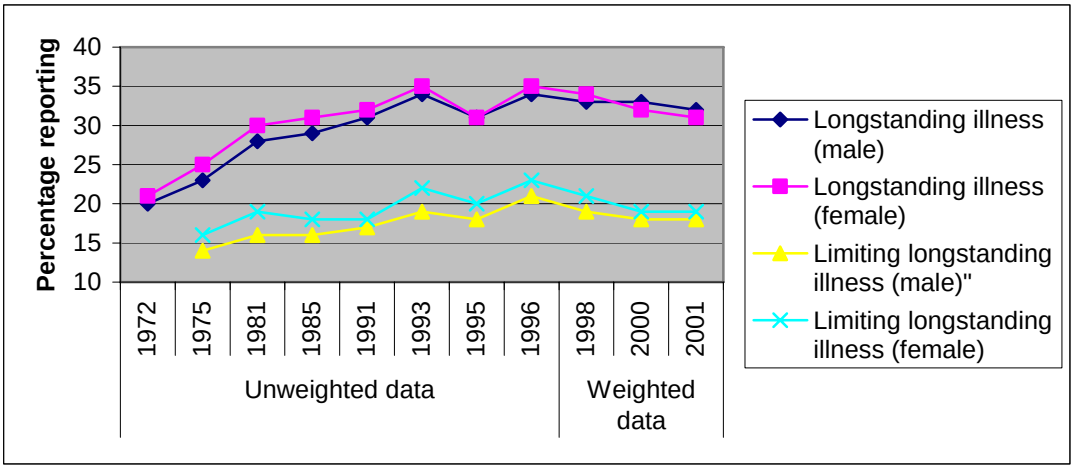
Prevention: because patients should be kept healthier outside hospital

Epidemiological change

The NHS was established in the 1940s, and many district general hospitals were built in the 1960s, in an acute-centric system with powerful hospital consultants. Many patients stayed for long periods in hospital, before and after operations. Acute illnesses, for which there were no effective treatments, meant that long inpatient stays were common. Surgery was dangerous and required long stays in hospital.

The health needs of 2006 are very different. Life expectancy is increasing, and, as people live longer, they are also living with one or more long-term conditions (see Figure 2.9). Healthy life expectancy is not increasing as fast as life expectancy. Previously fatal conditions, like some cancers or respiratory problems, are now treatable, but may last or recur for many years. The combination of demographic and lifestyle changes (increasing obesity, reduced exercise, poor diet, ageing of smokers) means that the risks of long-term conditions are increasing, and are likely to be major burdens on the health system in the future (and disproportionately so for disadvantaged groups, contributing to increasing health inequalities).

Figure 2.9. Chronic illness – 1972–2002



Source: Office for National Statistics 2002

Table 2.4: Changes in life expectancy and healthy life expectancy

	Life expectancy at 65		Healthy life expectancy at 65	
	Males	Females	Males	Females
1981	12.97	16.92	9.95	11.89
2001	15.94	19.03	11.62	13.17
Change	2.97	2.11	1.67	1.28

Source: Office for National Statistics 2006

Hospitals will play an important role in treating the patients of the future, but it is not affordable or desirable to continue with an acute-led health system for long-term conditions. Hospitals provide essential back-up in case people become very ill. However, nobody wants to go to hospital if they can possibly avoid it. Fortunately, people are living longer and suffering fewer acute illnesses that require a short spell of hospital care.

Holman and Lorig (2000) contrast acute and chronic diseases, concluding that hospital-centred health systems designed for curing acute ill health 'drove expenditure higher and higher without evidence of commensurate improvement in health status' (ibid: 526). Table 2.5 illustrates the differences between acute and chronic diseases, showing that a new approach to healthcare is required.

Table 2.5 Differences between acute and chronic diseases (cont. next page)

	Acute disease	Chronic illness
Onset	Abrupt	Usually gradual
Duration	Limited	Lengthy, indefinite
Cause	Usually single	Usually multiple and changes over time
Diagnosis and prognosis	Usually accurate	Often uncertain

Technological intervention	Usually effective	Often indecisive; adverse effects common
Outcome	Cure	No cure
Uncertainty	Minimal	Pervasive
Knowledge	Professional knowledgeable; Patients inexperienced	Professionals and patients have complementary knowledge

Source: Holman and Lorig (2000)

As society ages – and as lifestyles change – long-term conditions are becoming more prevalent, and will continue to do so in the coming decades. Long-term conditions, including diabetes, coronary heart disease and hypertension, are increasing. Sixty per cent of adults in England report a chronic health problem, and 8.8 million people have a long-term illness that seriously limits their day-to-day ability to cope. In some age groups, having more than one long-term condition is the norm (Department of Health 2004b). These changes in health needs should be reflected in changes in healthcare. At present, however, our hospital-led health system does not provide the best model of care for many people.

The mismatch between health needs and healthcare provision is shown in the fact that many people with long-term conditions end up being admitted to hospital as emergency patients. Not only is this inconvenient and disruptive to patients, but it indicates that the care for people with long-term conditions too frequently fails.

Half of hospital bed-days in the NHS are accounted for by only 2.7 per cent of all medical conditions, most of which are chronic diseases. Around a third of emergency admissions among the over-65s are for long-term conditions, and many of those people keep on returning to hospital with the same complications. A small number of patients end up accounting for the majority of hospital bed-days. If better care was provided for people with long-term conditions, then many of the admissions to hospital could be prevented. This would improve the use of resources, but, more importantly, it would improve the lives of people living with long-term conditions.

Many people do not need hospital care so much as ongoing long-term conditions management, including self-care and personal support outside hospital, for example from their GP and local community staff.

In order to provide a better service to people with long-term conditions, and to make better use of healthcare resources, the point of care needs to be moved 'upstream' to improve the health and wellbeing of people with long-term conditions and prevent avoidable admissions to hospital. Of course, hospitals will still be necessary as a back-up for people with long-term conditions, but, if we can improve the prevention of acute 'flare-ups' for people with long-term conditions, then the outcome should be less demand for emergency admission to hospital beds.

The NHS Institute has shown how 'high intensity users', who were admitted to hospital three times or more during the year, cost a high proportion of total hospital costs – from nine per cent to as much as 24 per cent in some PCTs. It calculates that proactive management of potential high intensity users could reduce hospital admissions and costs – by £2.46 million per PCT if the higher quartile PCTs reduced admissions to the average. Targeting people with conditions for which community-based care or treatment can avoid the need for hospital admissions would also improve wellbeing and reduce the need for hospital beds (NHS Institute for Innovation and Improvement 2006).

The Government, NHS, healthcare professionals and patients have been working hard to develop better services for people with long-term conditions, in order to improve their

quality of life and reduce their need for emergency hospital care. Examples include the Expert Patients Programme, and pilots of case management for people at highest risk of hospital admission. However, the problem of avoidable admissions for people with long-term conditions is still a major challenge for the NHS.

Resources for prevention are often squeezed by the demands of hospitals for funding, which are seen as more immediate. If we want to improve the care for people with long-term conditions outside hospital, then we need to be more flexible about the provision of hospital services. If we want to move to a model of care where hospital is the last resort, rather than a frequent part of life, then we need to accept that we may need fewer beds and fewer hospitals, but many more resources for the management of long-term conditions.

Responsiveness: because hospitals need to be able to respond to patients

This paper has already described some of the changes in society, our health needs and medical technology that mean we should move away from an acute district general hospital-focused system to one that prioritises safety, prevention and community care. Like many countries, our health system – with too many acute hospitals and not enough preventative community and primary care – is not well-suited to the demands of the 21st century. This demonstrates, in part, a weakness of the way health systems have been run, with a combination of central planning and medical autonomy, or ill-functioning quasi-markets. While the health system may have worked well enough for the acute diseases of the second half of the 20th century, it was not able to respond to changing needs and technology.

Health services of the future will need to be more responsive to what patients need, and to the ways that medical technology and clinicians can deliver care. Not only are the types of care and health needs of patients changing faster than the health service, but expectations are changing rapidly.

This does not mean that health planning is less important, nor that the 'invisible hand' of a market in healthcare provision will be able to respond to the speed of change. Commissioners of health services, together with professionals, patients and the public, will need to do more to predict the health needs of their populations and to match them with appropriate services that improve health outcomes. However, in order for demand and commissioning to work, the supply of healthcare needs to be more flexible than it has been in the past. Rather than tying healthcare resources to long-term, fixed buildings, healthcare provision needs to be more flexible and mobile to meet patient needs.

Developments in technology are already allowing more care to be delivered outside the hospital setting, as discussed. Routine surgery is also becoming more 'footloose', being provided in treatment centres specialising in high-volume provision to reduce waiting times and improve productivity. Other hospital services will also need to become more flexible, so that they can respond to changing patterns of need.

Choice in healthcare

In England, the quasi-market system of payment by results deliberately challenges the stability of big hospitals with interdependent specialities, high overheads and inflexible services. By paying providers according to the number of patients treated for different conditions, by setting the tariff for payments and by strengthening commissioning capacity, the reforms in England aim to improve efficiency, quality and local responsiveness to health needs (Department of Health 2005a).

ippr has explored the role of choice in healthcare and other public services in previous and forthcoming publications (see, for example, Farrington-Douglas and Allen 2005). This paper will not assess the costs and benefits of choice. However, it is clear that the creation of a more demand-led health system will have implications for the supply of care, much of which is located in hospitals. From the point of view of hospital change, choice could have a range of

impacts on the shape of healthcare services. In fact, hospitals not changing could be a sign of policy failure, as the typology below suggests.

Potential impacts of choice on hospitals

Possible choice scenario	Low impact on hospitals	High impact on hospitals
1. Changing health needs due to demographics, new drugs and technology, changing lifestyles.	Commissioners maintain current referral patterns; long waits and poor standards of care for emergent conditions. Providers are not aware of changing health needs. Hospital services stay the same but do not respond to changing needs. Increasing inequalities.	PCTs and practices commission new services specialising in long-term conditions, including in GP surgeries and community hospitals closer to home. Acute hospitals specialise in high-tech care, with rehab in the community. Services like cardiothoracic surgery are closed in some hospitals as prescriptions of statins improve heart health.
2. Changing preferences of patients. Patients switch in significant numbers between providers on the basis of perceived quality and convenience.	Waiting lists grow at more popular hospitals. Popular hospitals are able to select which patients they want to treat. Unpopular hospitals cut costs to maintain services for which there is less demand (and income). Quality declines in unpopular hospitals. May lead to regulatory action including take-over or closure.	Hospitals respond by improving their services, as measured by performance data. Hospitals attract new patients (or maintain loyalty of existing ones) by developing networks in the community and building their brand. Unpopular services which cannot be turned around are down-scaled or withdrawn. New providers enter the market offering a different or better service. Successful providers may take over some services in other hospitals.
3. No or little switching of patients between providers, due to lack of information or perceived benefit, or poor systems.	Existing pattern of services maintained in the short term. Unresponsive services could be sustained. Quality could deteriorate as providers could drift.	In the longer term, changing health needs would still lead to changing referral patterns and financial flows, so hospitals would have to change.

This typology is by no means exhaustive. In fact, a criticism of choice policies is that their impact on the system is relatively unknown. However, it is clear that choice could lead to a range of both desirable and adverse outcomes. In order for choice to succeed, it is important that policies are developed and implemented to control the risks of unintended consequences. Policies are continually being developed by the English Department of Health to regulate and manage the changing health system.

However, despite the potential pitfalls of choice, one of the conditions for its success will be the ability of the supply side – hospitals and other healthcare providers – to respond to changing needs and preferences of patients. It would be the worst outcome for patients if the provision of healthcare did not respond to change.

The fact that we are still talking about possible scenarios also illustrates the fact that patient choice is not yet a very powerful driver in the English health system. The main use of choice, so far, has been to help reduce waiting times by switching long waiters to other providers, including treatment centres, with shorter lists. Choice at the point of referral was only introduced as a policy in January 2006; the most recent patient surveys found that only a third of patients recalled being offered a choice of provider (Department of Health 2006b). For better or worse, patients' choices of hospital have not yet had a major impact on the incomes of providers. Therefore, although choice is likely to have an impact on providers in the future, at present other policies like payment by results are more important in driving hospital income.

In Scotland, Wales and Northern Ireland, different approaches, which place less emphasis on choice, are being taken to reform. Although there are differences in the development of health policy after devolution (Greer 2006), there are similarities in the challenges that their health systems face.

In all the UK countries, the challenge of innovating and adapting the health service to changing needs and expectations means that hospital configurations need to be more flexible than they have been in the past. Whether the mechanism is choice, a regulated quasi-market, local elections, technical planning, managerial independence or professional autonomy – or, more likely, various mixtures of different approaches – the end goals should be similar. In order to respond to the challenges of modern health systems, hospital change will become the norm. Local people need to engage in these changes and understand that hospitals need to change to respond to their needs.

Equity: because more and better primary and community care would improve health and reduce inequalities

Local, day-to-day arguments about health service change often lose sight of the bigger picture. The National Health Service is a source of pride and solidarity for the UK. Its creation was a great achievement, the progressive role of which should not be forgotten.

The NHS should aim to improve the health of the nations of the UK. In particular, the aim should be to reduce the inequalities in health that are reflected in an 11-year life expectancy gap between the richest and poorest areas of the country (eight years within England). However, despite nearly 60 years of free healthcare, health inequalities are rising, and the improvements in health seen as a result of rising living standards are under threat.

ippr has long argued that the health service should more proactively aim to prevent ill health and reduce inequalities, rather than only provide a safety net of emergency care for people when they become ill. Hospitals provide an important back-up and a setting for highly specified care, and their importance to a preventative health system is paramount. However, a preventative health system would be primary- and community-care led, with a shift in resources from hospitals to community and primary care. This approach to health policy has been promoted by the World Health Organization since the Declaration of Alma-Ata in 1978, recently re-endorsed in 2003:

> 'All governments should formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a comprehensive national health system and in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilize the country's resources and to use available external resources rationally.' WHO Declaration of Alma-Ata (1978: paragraph 8)

Hospital reconfiguration is not simply a managerial response to health economics. Changes to the health system should be driven by a desire to create a health system that is more preventative and equitable. As discussed above, as the entry points to the health system, primary healthcare services are the most important part of the health system to get right. Inaccessible or ineffective primary healthcare leads to inequity and ineffectiveness elsewhere

in the health system. Within a system of limited resources, the propensity of acute care to dominate is unsustainable, and will, if it continues, lead to increasing inequities as primary and community services are constrained as a result.

The need to reconfigure health services around primary and community care, rather than around hospitals, remains an important long-term goal. Health managers, politicians, professionals, patients and the public need to recognise the wider goals of improving health and reducing inequalities when debating the future of hospitals.

3. Barriers to achieving progressive hospital change

This paper sets out progressive objectives for hospital change. These objectives should – and, in some cases, already do – form the basis for local discussions about hospital change. By setting out the objectives of change, those involved in hospital change can evaluate proposals on the basis of how well they would achieve the goals of improving quality, appropriate access, efficiency, prevention and reducing inequalities. However, there are risks and barriers to the development of hospital change along these lines. This section highlights some of the issues that need to be addressed in order to ensure that hospital change can be developed, and the various stakeholders engaged in proposals for change.

Ensuring people are cared for in the best setting

To achieve the best outcomes from the health system, patients need to be able to access care at the earliest time to prevent their health getting worse, and to ensure the best use of resources. Hospitals should be a last resort for the most acutely ill or injured requiring complex specialist care. Incentives via commissioning and payment by results should be used by PCTs to ensure that the local NHS identifies need before it becomes acute, provides urgent and planned care locally, and reduces the need for hospital services. However, as discussed, the trend is towards increasing admissions via A&E, which are less amenable to demand management. The reasons for this trend will vary, but there are perverse incentives for hospitals to admit patients in order to meet the four-hour A&E waiting time target and to earn tariff payments.

The tariff 'uplift' for 2006 aims to counter this trend by underinflating the payments for emergency admissions, so there will be a reduced financial incentive for hospitals to admit patients as emergencies, where they could be more appropriately (or cost-effectively) treated elsewhere. This should incentivise more effective management of patients in A&E, but could lead to increased financial deficits if hospitals fail to manage emergency admissions, or undertreatment of unprofitable patients. Reducing payments for emergency admissions may also, perversely, discourage commissioners from preventing emergency demand through more accessible primary care, although, in the longer term, secondary prevention should still be financially wise for PCTs.

Stronger commissioning by PCTs and GP practices is needed to ensure that the local NHS uses resources for the greatest benefit of all patients. The majority of NHS activity, however, comes from consultant-to-consultant referrals, and emergency, rather than elective, admissions, which are harder for commissioners to affect through referral management and contestability. This is why improving primary care and disease management are of paramount importance to prevent people – particularly those with long-term conditions who frequently end up in hospital – from becoming acutely ill and going to A&E in the first place.

The increasing use of A&E is, therefore, also an expression of unmet need for urgent primary care services. Access to primary care needs to be improved so that people who feel an urgent need for care but do not need the facilities of a hospital can be treated effectively and economically in the community. In particular, as the White Paper acknowledged, there are inequalities in the availability of GPs across the country. For example, many of the most deprived PCTs are 'under-doctored', which overspills into increased reliance on A&E, as well as poorer access to preventative care and the front door of the NHS.

A&E services have also seen rises in patients presenting outside GP opening hours, including patients who have minor needs that could otherwise be met by primary care services. Interviews with patients suggest a link to perceived inaccessibility of primary care (GP) services (Mannion and Street 2005).

Out-of-hours GP services are not easily accessible in some areas. Many GPs have opted out of providing round-the-clock coverage under the new GP contract. The National Audit Office report (2006) on out-of-hours GP services found that, although most patients were satisfied with the service they receive, one in five were not; and the national standards are not being

universally met, in particular relating to response times. There is limited progress in integrating out-of-hours care with other services. Although the previous system was unsustainable, difficulties in accessing primary care contribute to the problem of people with primary care problems presenting at acute hospitals.

Protecting community services

In theory, the current financial difficulties would require the NHS to review the configuration of services it is currently experiencing, providing an opportunity to drive through the redesign of care in a more community-focused, cost-effective way. The Government has provided guidance on developing community hospitals that calls for the local NHS to reconsider community hospital closure or reductions in services (Department of Health 2006c). The provision of £750 million capital to invest in community hospitals over five years is welcome, and would help to develop the model of care described in this paper.

However, the financial pressure on PCTs is to reduce revenue expenditure. Because of the difficulties in effecting long-term strategic reconfigurations of the whole health system, community services may be an easier target for financial solutions. The risk is that deficits in some areas will lead to savings being sought in community services as well as, or instead of, reconfiguration of acute services. If staff and the public are going to be engaged in the reconfiguration of the health system towards community services, then they need to be able to see improvements in community services to justify reductions in hospitals. Not all existing community hospitals are modern and fit-for-purpose, but, with the direction of travel towards devolved services, there are good arguments for sustaining some community services on most existing sites, even if bed numbers are reduced.

Managing the transition

As is the case in any major effort at change, managing the transition from acute-centred, reactive healthcare to a more community-centred, preventative health system will be difficult. The process of change needs to ensure not only that health needs are met, but also that trust in the process is earned and maintained. While new community services are being set up, existing hospital services will need to continue to ensure that patients are not left without an adequate and established care pathway. If there is a perceived gap in service continuity then service quality may be threatened, and trust is likely to be lost.

Staff will have to be more flexible about their location of work, moving between acute and community settings. Workforce development policies are in train, for example the Modernising Nursing Careers initiative led by the Chief Nursing Officer. However, the changes expected from staff will not be achieved overnight. Reconfigurations need to plan the journey from acute- to community-focused services in order to engage staff, patients and the public. The transitions described in the White Paper and in this paper will need time and resources to ensure they can be implemented safely and sustainably. Reconfiguration will not provide quick financial fixes, although it is necessary for the long-term economic sustainability of health services.

Collaborating, commissioning and engagement

This paper argues that the health system needs to be responsive and flexible to meet changing health needs. As the National Leadership Network (2006) has argued, acute providers in the future will need to collaborate in networks, as well as compete. The competitive aspects of NHS reform do not necessarily preclude the kind of collaboration that would be needed to deliver integrated care pathways and networks.

With payments, as with targets, agents do not always react in the way predicted by system reform designers. For example, some revenue-losing hospitals may resort to short-termist cost savings, rather than redesigning their services according to best practice. Other providers will cross-subsidise loss-making areas of their business, nullifying the financial incentives of a fixed tariff. But the implementation of payment by results has not led to as much manipulation as feared. Early evidence indicates that health economies are apparently

working collaboratively, rather than in competition, to make the new system work (HERU, OHE and University of Dundee 2006).

Nevertheless, there are conditions where the choice and plurality agenda can create barriers to effecting whole-system change. NHS and independent sector treatment centres have been introduced in many parts of England to provide extra capacity to help reduce waiting lists and provide competition to existing providers. The care provided has been of comparable quality and efficiency. However, the ability of local health service commissioners and stakeholders to debate and shape the future of health services in a particular community may be limited by the fact that the orthopaedic service in the local hospital has become unviable due to a lack of patients, and, therefore, income, through payment by results.

This limits the capacity for stakeholders to make collective choices about the location of the elective service – which could be justified on the basis that patients were choosing to go to the treatment centre. But some nationally procured treatment centres provide unneeded capacity, and are protected from changes in demand or preferences. The closure of an elective service like orthopaedics could undermine the viability of emergency care in that hospital, if the orthopaedic facilities and staff are needed to provide trauma care for emergency patients.

While this paper argues for the centralisation of specialist acute care, including high-level accident and emergency, where it is best for patient safety, the protected carve-outs that may undermine emergency service viability add unwelcome complications to already-complex commissioning and engagement processes. This does not mean that carve-out and competition are undesirable in all cases, but that commissioners should at least have the capacity to determine what services are commissioned where, according to need.

Similarly, if commissioners and communities are expected to work out long-term, whole system strategies for the future of local services, with a supply side that is adaptable to local need, then all providers should be part of the process, and subject to adaptation if necessary. The inflexibilities of the Private Finance Initiative, which commit some hospitals to 30-year contracts for facilities that may need to change in response to changing health needs, patterns of service and demand, are likely to create practical and political problems for health communities. This requires clarification and guidance on how to manage change within PFI, and how to develop future projects with greater flexibility.

Despite their independence, Foundation Trusts (FTs) are, nonetheless, part of our health system, and it is the system as a whole that is subject to the challenges and objectives set out in this report. FTs and non-Foundations alike should also take part in reconfiguration debates, in order to allow a broad discussion on all services, to take advantage of FTs' community networks, and to ensure that the public and other stakeholders can trust that the process of decision-making is fair.

The politics of hospital change

The issues of perceived fairness and engagement in the process of change will be explored further in the next phase of this project. A forthcoming ippr paper will examine in more detail the local politics of reconfiguration, and will make recommendations on how the processes could be improved to achieve the public value objectives set out here.

As discussed in Section 1, hospital change is not a purely rational or technical process, whereby the optimum solution is calculated and implemented. Public trust in hospitals and healthcare is intrinsic to its sustainability, economically and politically. The public values change when it trusts the process. Thus, the public value approach places particular emphasis on the process of political change, rather than simply the final outcome. It would be possible, in the short term, to implement change against public will, but, in the long term, the political viability (via the ballot box) and economic sustainability (via the taxpayer) would be undermined, unless the public can be engaged in change.

The 'public' is only one of many interest groups that have a stake in hospital change. Health politics consists of a complex set of power relationships that have a long history of influencing local and national decisions. Managers, doctors, other health professionals and staff within hospitals have their own concerns and priorities. External stakeholders, including

government departments, strategic health authorities, non-departmental public bodies, training bodies and regulators have roles in bringing forward or constraining change.

'Commissioners' in Primary Care Trusts and, increasingly, in GP practices, are expected to have greater leverage in what services are provided by hospitals. More disparate interest groups, including patients and the public, are also afforded more formal roles through governance arrangements and forums, and through consumer choice. Local authorities and elected councillors and MPs have formal and informal roles in scrutinising and holding health services to account.

The management of change in this complex environment of multiple objectives, external constraints and important stakeholders is undeniably challenging. Without agreement on the principles of change, the politics of reconfiguration will degenerate into a destructive battle of claim and counterclaim, distrust, and positional bargaining based on power and resources. The first step to engagement and change management, therefore, is to agree the end goals with which stakeholders can engage or negotiate. This paper aims to begin this by setting out a set of objectives that can underpin hospital change. Our next paper will explore the process of change, towards a more constructive hospital politics.

References

Note: web references correct at December 2006

British Association for Emergency Medicine and Faculty of Accident and Emergency Medicine (2005) *Way Ahead 2005*, London: BAEM/FAEM

Bulger E, Nathens A, Rivara F, Moore M, MacKenzie E and Jurkovich G (2002) 'Management of severe head injury: Institutional variations in care and effect on outcome' in *Critical Care Medicine* Vol. 30, No. 8

Campbell and Chester (2002) 'Emergency vascular surgery: Patients need to travel for specialist treatment' in *BMJ* 324: 1167-1168

Coats T, Robbins S, Lowdell C and Damiani M (2000) 'Mathematical modelling in the development of a trauma system' in *Emergency Medicine Journal*, Vol. 17

Cooke M, Fisher J, Dale J, McLeod E, Szczepura A, Walley P and Wilson S (2004) *Reducing attendances and waits in emergency departments: A systematic review of present innovations*, London: NCCSDO

Cooper J, McDermott F, Cordner S and Tremayne A (1998) 'Quality assessment of the management of road traffic fatalities at a level 1 trauma center compared with other hospitals in Victoria, Australia' in *Journal of Trauma: Injury, Infection and Critical Care* Vol. 45, No. 4

Cornwell E, Chang D, Phillips J and Campbell K (2003) 'Enhanced trauma program commitment at a level I trauma center' in *Archives of Surgery* Vol. 138

Demetriades D, Martin M, Salim A, Rhee P, Brown C and Chan L (2005) 'The effect of trauma center designation and trauma volume on outcome in specific severe injuries' in *Annals of Surgery* Vol. 242, No. 4

Demetriades D, Martin M, Salim A, Rhee P, Brown C, Doucet J and Chan L (2006) 'Relationship between American College of Surgeons trauma center designation and mortality score in patients with severe trauma' in *Journal of the American College of Surgeons* Vol. 202

Department of Health (2003) *Keeping the NHS Local – a new direction of travel*, London: DH

Department of Health (2004a) *The Configuring Hospitals Evidence File*, London: DH

Department of Health (2004b) *Chronic Disease Management: A compendium of information*,

available at www.natpact.nhs.uk/uploads/Chronic%20Care%20Compendium.pdf

Department of Health (2005a) *Health Reform in England: Update and Next Steps*, London: DH

Department of Health (2005b) *Taking Healthcare to the Patient*, London: DH

Department of Health (2006a) *Our Health, Our Care, Our Say: A new direction for community services*, London: The Stationery Office

Department of Health (2006b) *Report of the National Patient Choice Survey May/June 2006*, London: DH

Department of Health (2006c) *Our Health, Our Care, Our Community: Investing in the future of community hospitals and services*, London: DH

Dixon A, Le Grand J, Henderson J, Murray R and Poteliakhoff E (2003) *Is the NHS equitable? A review of the evidence*, London: LSE Health and Social Care

Edwards N (2006) *Lost in Translation?* London: NHS Confederation

Farrington-Douglas J and Allen J (2005) *Equitable Choices for Health*, London: Institute for Public Policy Research

Greer S (2006) 'The Politics of Health Policy Divergence' in Adams J and Schmuecker K (eds) *Devolution in Practice*, Newcastle: ippr north

Healthcare Commission (2006) *Acute Hospital Portfolio Review: Management of admissions in acute hospitals*, London: Healthcare Commission

Health Economics Research Unit (HERU), Office of Health Economics (OHE) and University of Dundee (2006) *'Payment by Results' Evaluation Newsletter*, Aberdeen: HERU

Holman H and Lorig K (2000) 'Patients as partners in managing chronic disease' in *British Medical Journal* 320: 526-527)

Institute for Public Policy Research (2006) *Hospital reconfiguration: An ippr Briefing*, London: Institute for Public Policy Research, available at: www.ippr.org.uk/publicationsandreports/publication.asp?id=494

Keeley E, Boura J and Grines C (2003) 'Primary angioplasty versus intravenous thrombolytic therapy for acute myocardial infarction: a quantitative review of 23 randomised trials' in *The Lancet* Vol. 361, No. 9351

Kelly G, Mulgan G and Muers S (2002) *Creating Public Value: An analytical framework for public service reform*, London: Cabinet Office

MacKenzie E, Rivara F, Jurkovich G, Nathens A, Frey K, Elgeston B, Salkever D and Scharfstein D (2006) 'A national evaluation of the effect of trauma-center care on mortality' in *New England Journal of Medicine* Vol. 354, No. 4

Mannion R and Street A (2005) *Payment by Results and Demand Management: Learning from the South Yorkshire laboratory*, York: Centre for Health Economics

McConnell J, Newgard C, Mullins R, Arthur M and Hedges J (2005) 'Mortality benefit of transfer to level I versus level II trauma centers for head-injured patients' in *Health Services Research* Vol. 40, No. 2

McKeown T (1976) *The role of medicine: Dream, mirage or nemesis?* London: Nuffield Provincial Hospitals Trust

Mechanic D (1997) 'Muddling through elegantly: Finding the proper balance in rationing' in *Health Affairs* Vol. 16, No. 5

Michaels J, Brazier J, Palfreyman S, Shackley P and Slack R (2000) 'Cost and outcome implications of the organisation of vascular services' in *Health Technology Assessment* Vol. 4, No. 11

Mullins R, Mann N, Hedges J, Worrall W and Jurkovich G (1998) 'Preferential benefit of implementation of a statewide trauma system in one of two adjacent states' in *Trauma: Injury, Infection and Critical Care* Vol. 44, No. 4

Nathens A, Jurkovich G, Maier R, Grossman D, MacKenzie E, Moore M and Rivara F (2001) 'Relationship between trauma center volume and outcomes' in *Journal of the American Medical Association* Vol. 285, No. 9

National Audit Office (2006) *The provision of out of hours care in England*, London: The Stationery Office

National Leadership Network (2006) *Strengthening Local Services: The future of the acute hospital* London: Department of Health

NHS Institute for Innovation and Improvement (2006) *Delivering Quality and Value: Focus on productivity and efficiency*, Coventry: NHS Institute and DH

NHS presentation to Urgent Care Centre conference, available at www.dh.gov.uk/assetRoot/04/12/36/65/04123665.pdf

Nuffield Institute for Health and NHS Centre for Reviews and Dissemination (1996) *Hospital volume and healthcare outcomes, costs and patient access*, York: University of York

Office for National Statistics (2002) *Living in Britain – 2001* Norwich: HMSO

Office for National Statistics (2005) 'Deaths by age, sex and underlying cause, 2004 registrations' *Health Statistics Quarterly* No. 26

Office for National Statistics (2006) 'Health expectancies in the UK and its constituent countries' *Health Statistics Quarterly* No. 29

Opinion Leader Research (2006) *Your Health, Your Care, Your Say: Research report*, London: Department of Health

Page B and Nicholls J (2006) 'Patients' views are lost in translation' available at www.mori.com/publications/other/nhs-confederation.shtml

Patel H, Boramra O, Woodford M, King A, and Yates D (2005) 'Trends in head injury outcome from 1989 to 2003 and the effect of neurosurgical care: an observational study' in *The Lancet* Vol. 366, No. 9496

Perri 6 (2005) *Technocracy or Politics? The politics of hospital reconfiguration*, Birmingham: HSMC

Posnett J (2002) 'Are bigger hospitals better?' in McKee M and Healy J (eds) *Hospitals in a Changing Europe,* Buckingham: Open University Press

Rankin J (2006) *Public expectations and the NHS*, London: Institute for Public Policy Research

Royal College of Surgeons of England and the British Orthopaedic Association (2000) *Better care for the severely injured*, London: RCS

Royal College of Surgeons of England (2006) *Delivering High-quality Surgical Services for the Future*, London: RCS

Salisbury C, Chalder M, Manku-Scott T, Nicholas R, Deave T, Noble S *et al* (2002) *National Evaluation of NHS Walk-In Centres, Final Report,* Bristol: University of Bristol, available at www.epi.bris.ac.uk/wic/pdf/WIC%20Evaluation%20Report%20-%20Final.pdf

Sampalis J, Denis R, Frechette P, Brown R, Fleiszer D and Mulder D (1997) 'Direct transport to tertiary trauma centers versus transfer from lower level facilities: Impact on mortality and morbidity among patients with major trauma' in *Journal of Trauma: Injury, Infection and Critical Care* Vol. 43, No. 2

Sampalis J, Denis R, Lavoie A, Frechette P, Boukas S, Nikolis A, Benoit D, Fleiszer D, Brown R, Churchill-Smith M and Mulder D (1999) 'Trauma Care Regionalisation: A process-outcome evaluation' in Journal of Trama: Injury, Infection and Critical Care Vol. 46, No. 4

Sethi D, Aljunid S, Saperi S, Zwi A, Hamid H, Mustafa A and Abdullah A (2002) 'Comparison of the effectiveness of major trauma services provided by tertiary and secondary hospitals in Malaysia' in Journal of Trauma Injury, Infection and Critical Care Vol. 53, No. 3

World Health Organization (1978) *Declaration of Alma-Ata: International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September 1978* Geneva: WHO