2 THE HEALTH SERVICE IN 2022

Summary

This chapter sets out the Review's vision of a high quality health service in 2022, delivering a high level of clinical standards and meeting the rising expectations of patients and the public. It describes how the Review has gone about defining and estimating the cost of closing the gap between this vision and today's reality.

The Review has identified the following areas which need to be addressed, first to 'catch up' with best practice and then to 'keep up':

- delivering best practice in the five National Service Framework (NSF) disease areas – coronary heart disease (CHD), cancer, renal disease, mental health and diabetes;
- extending the NSF approach to other areas of the NHS over the next 20 years;
- capturing the costs and benefits of increased clinical governance activities;
- assessing the costs of meeting current targets for waiting times and going beyond them; and
- estimating the cost of better accommodation through modernisation of the hospital and primary care estates and improving the quality of hospital food.

The chapter describes the assumptions which have been used in modelling the cost of delivering this high quality vision.

INTRODUCTION

2.1 The aim of the Review is to assess the resources required over the next two decades to "ensure the NHS can provide a publicly funded, comprehensive, high quality service available on the basis of clinical need and not ability to pay."

2.2 Such a health service will have two main characteristics. First, it will be delivering high quality clinical standards across the whole of the service. Second, it will meet the rising expectations of those who use and those who pay for the service. The costs of delivering a safe, high quality health service which meets the expectations of patients and the public are at the heart of the Review's projections.

2.3 This chapter sets out the Review's vision of a high quality health service in 20 years' time that meets these rising expectations. It draws on the evidence presented in Chapters 7 and 8 of the Interim Report and the subsequent consultation. It sets out how the Review has estimated the resources required to achieve this vision over the next 20 years.

EXPECTATIONS

2.4 The ethos of the NHS – comprehensive care available to all – commands universal support. Over 90 per cent of people believe that the NHS should be available free of charge when they need it[1]. The Review has assumed that, even though people will expect ever more from the health service over the next 20 years, public support for the values of the NHS will remain firm. Whether this is right will depend on the achievement of both the improvements promised and a general belief that money is being well spent.

2.5 The Interim Report outlined what the Review believes patients and the public will expect of the NHS in 2022[2]:

- safe, high quality treatment;
- fast access;
- an integrated, joined-up system;
- comfortable accommodation services; and
- a patient-centred service.

2.6 The consultation generated a broad consensus that meeting current and future patient expectations will be vital to the future of the NHS. Standard Life Healthcare, for example, felt that the importance of assessing, setting and then meeting consumer expectations cannot be emphasised enough, while the Association of British Insurers agreed that a more patient-centred service and improving patient information will be major drivers of expectations and choice.

2.7 Standards of health care in the UK do not currently meet expectations, especially in terms of access and waiting times. The NHS Confederation noted that "the gaps between the public's expectations of the service and its delivery are widely documented and well understood". The first priority must be to catch up with current expectations.

2.8 Respondents' focus was not just on meeting individuals' expectations. Many also emphasised society's expectations. Glaxo SmithKline argued that the public should take a greater responsibility for their own health care and the NHS Confederation emphasised the importance of maintaining social solidarity.

2.9 There was widespread agreement with the Interim Report's conclusions. In the future, patients and the public will expect better access, higher quality care in comfortable surroundings and a more patient-centred service, including the availability of greater choice. The following sections describe the Review's vision of the health service in 2022 and then compare it with the reality of the health service today.

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[1] ICM (2002), 1,000 adults aged 18+ interviewed between 14 and 15 March 2002.

[2] See also Annex C to this Report for a summary of the analysis in the Interim Report.

THE HEALTH SERVICE IN 2022

2.10 Patients are at the heart of the health service of the future. With access to better information, they are involved fully in decisions – not just about treatment, but also about the prevention and management of illness. The principle of patient and user involvement has become ever more important and the health service has moved beyond an 'informed consent' to an 'informed choice' approach.

2.11 The health service is able to recruit and retain the staff that it requires with the right levels of skills. No longer do chronic shortages among key staff groups act as a constraint on the timely delivery of care. Health care workers are highly valued and well motivated as a result of better working conditions and the opportunity to develop their skills to take on new and more challenging roles for which they are appropriately rewarded.

2.12 Modern and integrated information and communication technology (ICT) is being used to full effect, joining up all levels of health and social care and in doing so delivering significant gains in efficiency. Repetitive requests for information are a thing of the past as health care professionals can readily access a patient's details through their Electronic Health Record. Electronic prescribing of drugs has improved efficiency and safety. Patients book appointments at a time that suits them and not the service.

2.13 In this vision, patients receive consistently high quality care wherever and whoever they are. It is appropriate, timely and in the right setting. Different types of care are effectively integrated into a smooth, efficient, hassle-free service. With support from the NHS, people increasingly take responsibility for their own health and well-being. Through media such as the internet and digital TV, people receive more information and interactive advice on the management of their and their family's health.

2.14 When patients need to see their GP, or seek other forms of primary care, they get appointments quickly with staff who are pro-active in identifying what care is required and who is best placed to deal with it. Primary care delivers an increasingly wide range of care, including diagnosis, monitoring and help with recovery. There is a focus on lifestyle, disease prevention and screening. Choices are explained in a clear, jargon-free way. Patients seek more advice from pharmacists who handle routine prescribing and help patients to manage their medication effectively. Current service innovations such as NHS Direct, Walk-in Centres and telemedicine are commonplace, enabling people to receive an initial diagnosis in a variety of settings, moving beyond the traditional visit to the GP surgery.

2.15 The majority of general and less specialised medical and surgical care has moved out of large hospitals. Hospitals focus almost solely on specialist treatments. There is a new 'whole systems' relationship between self-care, primary, secondary, tertiary and social care.

2.16 Patients who need hospital care wait within reason – weeks not months, days not weeks, hours not days and minutes not hours. They get the best treatments with minimum variability in outcomes, supported by up-to-date and effective use of technology. Treatment is provided in clean, modern surroundings with less than four patients per room in most hospitals. Patients have access to healthy, high quality food at the time they want it.

2.17 Social care is no longer a bottleneck preventing the NHS from working well. Patients leave hospital quickly when they are medically fit to do so and are transferred speedily to the most suitable setting. In many instances they will return home. If the need is there, they are supported by health care professionals and paid carers, allowing people to enjoy independent lives in their own homes for longer. They are monitored by regular GP check ups designed to assess their all round needs. If necessary they move to a high quality residential or nursing placement of their choice, or another quality 'intermediate care' setting.

TODAY'S REALITY

2.18 Despite all its problems, satisfaction with today's health service is often high. A recent survey found that 83 per cent of people are satisfied with their GP and recent users are more satisfied than the general public[3]. While satisfaction with GPs is generally higher than with hospitals, patients are satisfied with the friendliness of hospital staff and the quality of care provided. In 1999, the National Survey of NHS Patients consulted 112,000 patients who had been discharged in 1998 after being diagnosed as suffering from CHD. It found that 83 per cent of hospital patients had confidence and trust in doctors and 79 per cent in nurses[4].

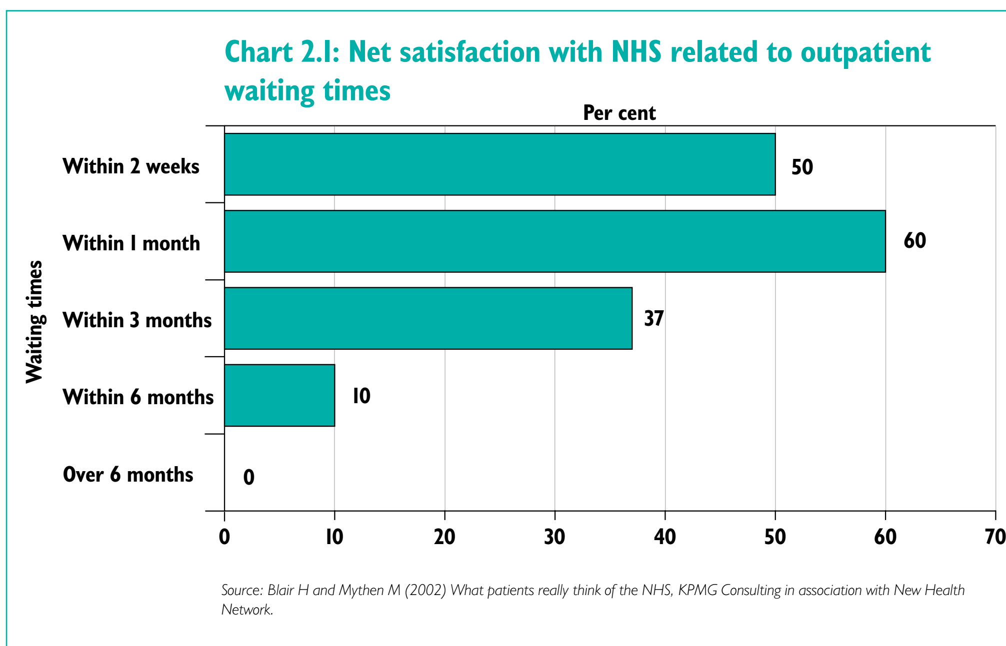
2.19 At the same time, there is undoubtedly a growing gap between expectations and reality. More people think that the overall state of the NHS is bad than good and three quarters think that it has had insufficient investment[5]. Today's reality falls a long way short of tomorrow's vision.

[3] Blair H and Mythen M (2002), What patients really think of the NHS, KPMG Consulting in association with New Health Network, MORI surveyed 2,012 adults aged 16+ across Great Britain between 24 and 28 February 2002; Mulligan J and Appleby J (2001), The NHS and Labour's battle for public opinion in Park A, Curtis J, Thompson K, Jarvis L and Bromley C (eds) (2001), British Social Attitudes: 18th Report, Sage, London.

[4] Department of Health (2000), National Survey of NHS Patients, April 2000. www.doh.gov.uk/public/nhssurveyrs.htm

[5] ICM (2002), 1,000 adults aged 18+ interviewed 14 and 15 March 2002. 44 per cent said the NHS is in a bad state, 30 per cent in a good state.

2.20 NHS waiting times are a major source of public and patient dissatisfaction. Chart 2.1 suggests that patient satisfaction with the NHS tends to fall as length of wait rises. As at 31 December 2001, there were just over 1 million people in England waiting for admission to hospital, of whom around 30,000 had been waiting for more than 12 months[6]. 24 per cent of UK patients currently wait more than three months for outpatient treatments, compared with virtually no waiting for patients in Germany. There is clearly a long way to go before people only have to 'wait within reason'.



Source: Blair H and Mythen M (2002) *What patients really think of the NHS*, KPMG Consulting in association with New Health Network.

2.21 The health service is not yet sufficiently patient centred. The Interim Report included survey evidence showing that patients commonly feel that they have insufficient involvement in decisions, there is no one to talk to about anxieties and concerns, tests and treatments are not clearly explained, insufficient information is provided to family and friends and there is not enough information about recovery[7].

2.22 One of the main reasons why people have to wait is that the health service faces significant capacity constraints, in terms of its workforce, its capital estate and infrastructure, reflecting past inadequate investment in the NHS. These capacity constraints severely restrict patient choice. SCOPE noted in its consultation response that there is "limited space for the expression of individual preferences and choice". Box 2.1 considers this further.

[6] Department of Health (2002), NHS waiting list figures 31 January 2002, press release 2002/0123.

[7] Coulter A (2001), Measuring and Improving Patients Experience: How can we make health care systems work for patients?, Presentation to the OECD Conference Measuring Up: Improving Health Systems Performance in OECD Countries, 5–7 November, www.oecd.org/els/health/canconf/coulter.pdf

Box 2.1: Choice in the health service

Public priorities for the health service are improving safety, increasing capacity and reducing waiting times. But expectations are rising fast and the evidence suggests that people will expect to have more choice in the future.

In some areas choice already exists in the NHS. For example, patients can choose their GP, their hospital for treatment (in consultation with their GP) or how to access the NHS (e.g. choosing, where appropriate, between NHS Direct, NHS Direct On-line, Walk-in centres and GPs).

However, capacity is a pre-requisite for choice; today's severe capacity constraints therefore limit choice in reality. For example, it is difficult to change your GP to one already heavily oversubscribed.

There are some specific initiatives which will facilitate choice. For example, the booked admissions programme should mean that by 2005 every hospital appointment will be booked for the convenience of the patient, making it easier for patients and their GPs to choose the hospital and consultant that best suits their needs.

However, in every health care system, clinical choice is inevitably limited in some way. There are finite resources and decisions have to be made about where these resources should go to ensure value for money and equity.

Nevertheless, over the 20 years of the Review, the substantial increases in capacity that the Review's assumptions deliver should increase the clinical choice available to patients. Whether the NHS can increase choice for non-clinical services and if they should be offered free of charge is considered in further detail in Chapter 6.

2.23 The UK has low levels of health care professionals per head of the population compared with many other countries. Progress is being made as a result of the steps outlined in the NHS Plan to increase both the number and skills of the workforce, but many parts of the service still experience significant difficulties in recruiting and retaining the staff they need. This can have serious consequences for patient care, for example, where the use of newly installed equipment for cancer treatment is restricted by a shortage of suitably trained staff. The skills and potential of many health service workers are not being used to the full.

2.24 The health service makes very poor use of ICT. There are examples of successful use of ICT at local level, but systems have typically been developed and installed in a piecemeal fashion. This prevents the effective integration and sharing of information across a wide range of health care providers.

2.25 The standard of NHS accommodation and food frequently falls below expectations. Around 30 per cent of the NHS estate pre-dates 1948 and there is a cumulative maintenance backlog in excess of £3 billion (see Chart 2.2). It is rare for more than 20 per cent of a hospital's beds to be in single rooms and there are still mixed sex wards of eight or more[8]. 60 per cent of the primary care estate is over 30 years' old and nearly 80 per cent is below the current recommended size[9]. Social care has a similar investment backlog. NHS hospital food is much criticised and despite recent efforts to improve it, spending is significantly lower than the amount spent by private health care providers and there is often little choice for patients about when to eat[10].

2.26 The UK has fallen significantly behind other countries over many years, as detailed in Chapter 5 of the Interim Report and summarised in Annex C of this Report. On a wide range of measures, health outcomes in the UK fall well short of those in the best performing countries. The UK currently spends a significantly smaller proportion of its national income on health than comparator countries; has fewer doctors, nurses and other health care professionals per head of the population; and invests significantly less in health care technologies.

2.27 As the Interim Report highlighted, a safe system is an integrated system where there are effective links and good communications between different parts of the service and beyond. This was highlighted by many respondents in consultation, who especially pointed to problems in social care impacting on the effectiveness of the NHS.

2.28 As illustrated in Chart 6.1 in Chapter 6, the number of places in residential care homes and private nursing homes has been falling in recent years. Various reasons have been given, the most common being rising property prices resulting in buildings being developed for other uses, relatively low fees and the costs of meeting increased regulation.

2.29 While some of the reduction may reflect previous over-expansion, it is evident that social care expenditure has failed to keep pace with the growth of NHS spending and figures on 'bed blocking' suggest that there is a genuine capacity problem in the social care sector. Help the Aged says that "limitations in spending on social care have resulted in a failure to develop alternative models of care, leaving only a minimalist service of social and home care despite evidence that shows that such services can greatly reduce dependency in later life." This shortfall must be addressed. The balance between health and social care is considered further in Chapter 6.

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[8] Department of Health and NHS Estates estimates.

[9] District Valuer sey 1998-99. See in the Departmental of Health (2002), Departmental Investment Strategy, November, www.doh.gov.uk/dis.

[10] McKinsey & Company (2001), *Expectations of the 2020 UK Healthcare system.* Health Trends Review: Proceedings of conference held at the Barbican Centre, London on 18 and 19 October 2001, HM Treasury, November 2001.

CLOSING THE GAP

2.30 The NHS Plan sets out the Government's strategy in England for closing the gap between today's reality and what patients will come to expect over the next decade. The NHS Plan is underpinned by 10 core principles (see Box 2.2). Similar plans have been established by the Devolved Administrations. The Plan, while only covering 10 years, is an attempt to meet many of the issues discussed above. The Review has modelled the resource requirements for the NHS on the belief that the Plan's core principles will remain valid in 20 years' time.

Box 2.2: The NHS Plan

The NHS Plan, published in July 2000, sets out 10 core principles for the health service:

1. The NHS will provide a universal service for all based on clinical need, not ability to pay.
2. The NHS will provide a comprehensive range of services.
3. The NHS will shape its services around the needs and preferences of individual patients, their families and their carers.
4. The NHS will respond to different needs of different populations.
5. The NHS will work continuously to improve quality services and to minimise errors.
6. The NHS will support and value its staff.
7. Public funds for health care will be devoted solely to NHS patients.
8. The NHS will work together with others to ensure a seamless service for patients.
9. The NHS will help keep people healthy and work to reduce health inequalities.
10. The NHS will respect the confidentiality of individual patients and provide open access to information about services, treatment and performance.

2.31 The Plan, like its equivalents in the Devolved Administrations, seeks to "universalise the best" by establishing clinical and wider quality standards for the NHS as well as the framework for delivering this quality.

NATIONAL SERVICE FRAMEWORKS

2.32 At the heart of the Plan's quality strategy is the development of National Service Frameworks (NSFs), which set out national standards for 'catching-up' to a high quality, integrated service in key areas. The Department of Health in England has already published or is developing NSFs in the following areas: coronary heart disease (CHD), cancer, renal disease, mental health, diabetes, older people and children. Building on this work, the Review has set out to estimate the cost of delivering world class standards over the next 10 years in the five disease-based NSF areas: CHD, cancer, renal disease, mental health services for adults and diabetes. In some cases this has involved going beyond the standards in the published NSFs and assuming a more ambitious programme of implementation. Scotland, Wales and Northern Ireland have similar clinical priorities to those identified in the NSFs for England, although policies to tackle these priorities may be different.

2.33 The Review welcomes the Government's intention to extend the NSF approach to other disease areas and its projections assume that NSFs will be rolled out across the rest of the service in a similar way to the disease areas already covered. The importance of NSFs are discussed further in Chapter 6.

2.34 The five NSF disease areas on which the Review has focused[11] are important, both in terms of the resources required and their impact on the well being of the population. Collectively they cover around 16 per cent of total NHS expenditure and 12 per cent of morbidity (measured in terms of disability or consulting behaviour), but between 40 and 70 per cent of mortality (depending on the age group considered).

2.35 The NSFs aim to reduce health inequalities by improving access to care for those most in need and currently least likely to receive it. A range of sources suggest that, although need for treatment often increases with the level of deprivation, the chances of receiving treatment decrease[12]. This so-called inverse care law, as described in the Interim Report, is likely to be the result of people from lower socio-economic groups having less access to care facilities, presenting at a later stage of disease development and being less demanding of medical professionals. Action by the health service alone may not eradicate the inverse care law, but it should contribute to substantial reductions. The NSF for CHD, for example, states that "resources will be targeted at those in greatest need and with the greatest potential to benefit". The expenditure on wider access incorporated into the NSF costings described here will therefore go towards tackling the inverse care law.

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[11] The Review has not separately estimated the cost of improving quality in the two client group NSFs – older people and children. It would have required more time to fit these into a disease-based modelling approach. However, some if not all of the costs of improving quality in these areas are picked up implicitly in other parts of the modelling work.

[12] For example, see Chart 9.10 in the Interim Report; and MacLeod MCM, Finlayson AR, Pell JP, et al (1999), Geographic, demographic and socio-economic variations in the investigation and management of coronary heart disease in Scotland, Heart, 81:252-256.

2.36 Chapter 8 of the Interim Report set out in some detail what improvements would be required to deliver a world class service for each of the five disease areas and also gave provisional estimates of what this might cost. Since then, the Review (with input from the Department of Health) has refined these estimates to identify what it would cost to 'catch up' with best practice in other countries, over and above the impact of demography. (Because the estimates quoted in the following sections do not include population changes, they are lower than the figures presented in Chapter 5 which include the impact of the rising population on the cost of delivering the NSFs.) Improvements in quality have been defined in terms of access, technology and other aspects of quality.

Coronary heart disease (CHD)

2.37 CHD kills more than 110,000 people a year in England (41,000 of whom are under the age of 75). More than 1.4 million people in the UK suffer from angina and around 300,000 suffer a heart attack each year. CHD accounts for around 3 per cent of all hospital admissions in England. The burden of CHD is higher and has fallen by less in the UK than in many other countries, yet CHD is largely preventable.

2.38 The NSF sets standards for every stage of CHD, from primary prevention through to treatment and cardiac rehabilitation. The Review has estimated that to implement the NSF as currently stated and to go further in raising quality in certain areas would cost an additional £2.4 billion a year by 2010-11. This would roughly double existing NHS expenditure on CHD. These costs arise largely from the implementation of recommendations by the National Institute for Clinical Excellence (NICE), revascularisation and the cost of statins (see Box 2.3).

2.39 The health impact of successfully implementing the NSF is very substantial – 40,000 lives a year saved through a reduction in CHD deaths alone[13].

Cancer

2.40 Deaths from cancer account for 26 per cent of all male deaths and 22 per cent of all female deaths each year. Cancer survival rates are significantly lower than those of other European countries (see for example Charts C.4 and C.5 in Annex C). The Government has pledged that, by 2010, it will cut the cancer death rate by one fifth among people aged under 75.

[13] Department of Health estimate.

Box 2.3: Statins

A significant part of the cost of improving quality in the treatment and prevention of CHD is new and more effective drug treatments, including statins. The NHS currently spends over £500 million a year on statins and these costs are rising rapidly. Statins help to reduce cholesterol and other risk factors and are already being widely used in the primary and secondary prevention of CHD.

The Review projects a further increase in expenditure on statins from around £700 million in 2002-03 to £2.1 billion by 2010. These projections are highly sensitive to assumptions about how many people currently have heart disease, how many might develop it in the future (which depends on preventative strategies around lifestyle factors such as diet, exercise and smoking), whether people take the drugs they are prescribed and the cost of the drugs (which partly depends on when their patents expire).

The Review has assumed that statins should be made available to all those with at least a 15 per cent risk of developing CHD over the next 10 years, and that a compliance rate of 80 per cent is achieved. This is consistent with the latest evidence on cost effectiveness and goes beyond the standards set out in the original NSF, where a 30 per cent risk threshold was assumed. The Review has also allowed for some offsetting impact on costs in future resulting from both reduced prevalence of smoking (see Chapter 3) and the impact of statins in preventing hospital admissions for CHD. It has been assumed that all statin patents expire by 2010 and that this results in price reductions of around 50 per cent as a result of competition. 75 per cent of those on statins are assumed to switch to generic alternatives.

Although statins play a key role in managing the risk of CHD for those who are considered to be at risk, it is lifestyle choices around diet and smoking that create this risk in the first place. US estimates suggest that high cholesterol, which is due mainly to diet, accounts for 43 per cent of CHD and smoking accounts for a little over 20 per cent[14]. In absolute cost terms, the NHS currently spends around ten times as much on statins as it does on smoking cessation programmes. In cost effectiveness terms, smoking cessation has been estimated to cost between £212 and £873 per quality-adjusted life year (QALY)[15] compared to a range of £4,000 to £8,000 per QALY for statins.

The link between statins and smoking demonstrates the importance of taking a 'whole systems' approach to health care: the need to strike the right balance between focusing on prevention and treatment and recognising how the focus on one may affect the cost of the other. So good progress in reducing smoking prevalence would have a beneficial impact on the use and cost of statins in the service. These interactions are explored in the scenarios described in Chapter 3 of this Report.

[14] McPherson K, Britton A and Causer L (forthcoming), Monitoring the progress of the 2010 target for coronary heart disease mortality: estimated consequences on CHD incidence and mortality from changing prevalence of risk factors, A report for the Chief Medical Officer, The Stationery Office.

[15] The quality adjusted life year (QALY) is a measure of the health gain from an intervention. An intervention can produce QALYs by extending life expectancy or improving the quality of life or both.

2.41 The NHS Cancer Plan aims to match England with the best European standards through extending screening, employing more specialists, investing in palliative care and tackling health inequalities – particularly by reducing smoking prevalence. In the short term, it aims to ensure that by 2005 no one waits for more than two months from urgent referral for suspected cancer to the beginning of treatment. In the health service of 2022, these waiting times will need to be much lower if the treatment of cancer is to match the best in the world.

2.42 The Review has estimated that to deliver the standards set out in the Cancer Plan would require the NHS to spend an additional £1 billion a year by 2005–06 in resource terms. This compares with existing spending on cancer services of around £2.5 billion a year. In cash terms, the additional outlay required would be £1.3 billion a year because of the capital costs of improving equipment for diagnosis and treatment. This would deliver improvements in screening, equipment for diagnosis and treatment, better drugs, faster access to treatment and improved support and community care.

Renal disease

2.43 The number of patients in England being treated for end-stage renal failure (ESRF) has risen by 35 per cent in five years, with the level of incidence highest among the elderly. ESRF is fatal in a few months if not treated. The UK compares relatively favourably with other European countries on transplant rates, but less well on rates for renal dialysis. The NSF aims to close this gap.

2.44 It is estimated that it will cost an extra £370 million a year to implement the NSF by 2010-11, on top of current spending of £445 million a year. This will be a result of several technological improvements in haemodialysis and developments in primary and palliative care, which are likely to be the major cost drivers by the time the NSF is fully implemented.

Mental health

2.45 At any time, one in six adults has a mental health problem such as anxiety or depression, although less than 2 per cent of the population suffers from severe mental illness. Suicide is now the most common cause of death among those under 35[16].

2.46 Adult mental health (covering those under the age of 65) was the first fully-fledged NSF to be published. Its implementation will involve increasing preventative interventions in primary care or in the community, increasing uptake of drugs such as atypical antipsychotics, a significant increase in the number of staff and addressing past under-investment in capital. The additional annual cost of implementing the NSF for mental health is estimated to be £3.1 billion a year by 2010-11, roughly doubling existing spending on mental health services for adults.

[16] Quoted by Professor Louis Appleby, National Director of Mental Health, in response to the consultation.

2.47 Chapter 8 of the Interim Report set out how this extra cost could be offset by savings from reductions in the costs of mental illness and crime.

Diabetes

2.48 An estimated 3 to 5 per cent of the adult population has diagnosed diabetes, a group of chronic disorders which involve a raised level of blood glucose and increase the risk of heart disease and kidney failure. This number is expected to rise, not least because there is thought to be significant current under-diagnosis, with estimates of the number of people unaware they have the disease ranging from 600,000 to 1 million.

2.49 The resulting cost to the NHS is currently around £1.3 billion a year, with most of this cost arising from the long-term complications resulting from diabetes not being managed properly. The NSF for diabetes aims to reduce the risk of complications, particularly through improving the integration of care.

2.50 The Review has estimated that it would cost an additional £600 million a year to implement the diabetes NSF and provide a world class service by 2010-11. This assumes a moderate increase in diagnosed prevalence of diabetes. The additional costs are primarily a result of expanded programmes to manage diabetes complications and increase optimal glucose control. This financial cost, however, is partly offset by a reduction in hospital admissions of those with complications from diabetes. Assuming that the improved standards of quality in the NSF are fully implemented, this could save the health service over £200 million a year in 10 years' time.

2.51 The long-term cost of the NSF will, however, be substantially affected by the success of public health policies, for example, in tackling obesity. Obesity is a key factor causing diabetes and is currently rising, especially among children. The impact of developing a greater role for public health and details of how the Review has modelled the impact is discussed in Chapter 3.

2.52 Box 6.3 in Chapter 6 considers diabetes as a case study in a 'whole systems' approach to health care.

Bringing together the five disease-based NSFs

2.53 The estimates summarised above suggest that delivering best practice in these five disease areas will add between 5 and 9 per cent a year in real terms to the cost of treating these diseases. Weighted by their shares of expenditure, this represents an average real terms increase of approaching 8 per cent a year. This is equivalent in total across the five disease areas to an additional £7.5 billion a year in NHS spending by 2010-11 (excluding additional spending beyond 2005-06 for cancer). The estimates are summarised in Table 2.1 below.

2.54 The cost of catch up can be broadly split between the costs associated with wider access (over and above general waiting times), greater uptake of technology and higher quality. The Review's estimates indicate that on average across these five specific areas (weighted according to expenditure shares), technology accounts for around 3 percentage points of the increase and access and quality around 2½ percentage points each.

Table 2.1: Implementing the NSFs

	CHD	Cancer	Renal	Mental health	Diabetes
2002-03					
Spending (£ billion)	2.4	2.5	0.4	3.3	1.3
2010-11[1]					
Additional annual spending (£ billion)	2.4	1.0	0.4	3.1	0.6
Total annual spending (£ billion)	4.8	3.4	0.8	6.4	1.9
Average annual estimated growth 2002–03 to 2010–11 (per cent)	8.9	6.2[2]	7.9	8.8	5.3

[1] Cancer figures are to 2005–06.

[2] Comprises growth of 11.5 per cent a year to 2005-06 and a 3 per cent 'keep up' assumption thereafter.

EXTENDING THE APPROACH TO OTHER DISEASE AREAS

2.55 Ideally the Review would have applied this same disease-based approach to estimating the resource implications of meeting similarly high standards in other disease areas. As further NSFs are developed, that will be possible, but at present it is difficult to project the potential costs of delivering high quality in areas for which NSFs are yet to be designed. The Review has therefore had to make some broad assumptions in order to generalise from the current NSF areas to other diseases. These assumptions are critical to understanding the likely overall cost to the health service of improving quality to internationally comparable standards.

2.56 As a first step, the Review has attempted to extrapolate the costs of improving access, technology and quality in the existing NSF areas to other specific diseases, under varying assumptions.

2.57 Although sensitive to the detailed assumptions made, the estimates suggest that, for these disease areas, spending might typically have to increase by 6 to 8 per cent a year in real terms over a period of 10 years to deliver high quality. For modelling purposes, the Review has used a central figure of 7 per cent. An important assumption in this approach is that, on average, other disease areas lag behind internationally comparable standards to a similar extent to the five disease areas discussed above. In the absence of a detailed NSF-type analysis it is difficult to establish conclusively that this is the case, but there seems little reason to believe that there are not similar shortfalls across the NHS.

2.58 The uptake of technology is assumed to contribute 3 percentage points a year to the growth rate over the 10 year period, while improved access and better overall quality each contribute 2 percentage points to the 7 per cent total. These figures are broadly in line with average estimated contributions of technology, access and quality in the five existing disease areas.

2.59 The Review has also had to make an assumption about how quickly standards might realistically be improved across these other disease areas. The Review, following advice from the Department of Health, has assumed that additional NSFs are rolled out across other disease areas in phases, at an average rate of two additional NSFs each year, ensuring complete coverage over the two decades of the Review period.

2.60 However, extending this disease-based approach to other areas cannot provide a complete assessment of the resources required to deliver the Review's vision. In particular:

- the NSFs only cover a 10 year period. A view must be taken about what resources will be required beyond the implementation period for each NSF to 'keep up' – to ensure that the NHS maintains high standards in an environment where what is medically possible and what patients expect is continually evolving; and
- the NSFs could be delivered without meeting fully the expectations of the public and patients as there are other aspects to quality not covered by NSFs.

2.61 The Review has assessed the impact of delivering some of the broader components of high quality beyond the NSFs and meeting a number of the key patient expectations: safe and high quality care, fast access and better accommodation. These are considered below. The cost of 'keep up' in terms of the uptake of technology is discussed in Chapter 3.

Safe and high quality treatment: clinical governance

2.62 The central element of the NHS Plan's quality focus is an improvement in clinical governance: a range of structures and schemes which aim to ensure that the NHS continually improves the quality of the health care it provides. The Review has assessed both the financial costs and benefits of such an improvement.

2.63 The Review has accounted for the financial costs by estimating the impact of increasing the amount of 'protected time' which staff devote to clinical governance. The Interim Report included estimates that medical staff in hospitals and primary care currently devote around 5 per cent of their time to clinical governance, while for nursing staff in hospitals and primary care and other professional staff the figure is currently around 2 per cent.

2.64 The Review has assumed that all health service staff will need to devote 10 per cent of their time to clinical governance by 2010-11, if its full benefits are to be realised. This assumption was supported in consultation by the Academy of Medical Royal Colleges which noted that "the pace of scientific advances, the fast changing expectations of patients, and the ever changing structure of the NHS itself, all have implications for doctors working in the service. The Academy is therefore pleased to support the proposal that in future planning the doctors should be freed from immediate service work for 10 per cent of their time to devote to quality assurance work including CPD (continual professional development) and clinical governance".

2.65 The costs have been accounted for in the Review's model through higher workforce unit costs, arising from the additional staff required to deliver the same level of care as a result of more time being devoted to quality improvement. The Department of Health has estimated that these higher unit costs equate in total to an additional £2.9 billion a year in staff costs up to 2010-11[17].

2.66 The Interim Report proposed to account for the financial benefits of improved clinical governance through the 'price of non-conformance', which measures the cost to the NHS of not providing care to the required standard at the first attempt.

2.67 The Review has concluded following consultation that using the price of 'non-conformance' to capture the benefits of clinical governance would constitute double counting with the Review's wider estimates of the potential scope for productivity improvements (see Chapter 3). The Review has, however, maintained the assumption that the benefits of introducing clinical governance will start to come through after five years in attempting to quantify the effect of quality improvements in four specific areas:

- a reduction of 15 per cent in hospital acquired infections (HAIs) in acute care by 2012-13, equivalent to around 100,000 admissions at 2000-01 levels. This reduction is based on what was considered feasible by the National Audit Office in a recent report on HAIs[18]. Achieving this reduction could lead to a fall of 2.8 per cent in all inpatient activity, saving around £300 million a year (in 2000-01 prices);

[17] These estimates are based on staff costs from: Cooley R E, Slight A, Netten A, Knight J and Dennett J (1998), A 'Ready Reckoner' for Staff Costs in the NHS, Volume I, Estimated Costs, PSSRU, University of Kent, Canterbury, Kent, December 1998.

[18] National Audit Office (2000), The Management and Control of Hospital Acquired Infection in Acute NHS Trusts in England, The Stationery Office, London. The NAO calculations are based upon Plowman R, Craves N, Griffin M, Roberts J, Swan A, Cookson B and Taylor L (2000), The socio economic burden of hospital acquired infection, Public Health Laboratory Service, London. See www.nao.gov.uk/publications/nao_reports/9900230.pdf.

- a reduction of 10 per cent in other adverse incidents in acute care, such as preventable medication errors, also by 2012-13. Such a reduction could lead to a fall of around 0.6 per cent a year in inpatient activity on top of that as a result of reduced HAIs, saving around £70 million a year – £50 million of which would be as a result of reduced medication errors[19];
- a significant improvement in avoidable emergency admissions in the worst performing 25 per cent of Health Authorities on this measure by 2012-13. Raising the performance of these to the level of the next worst performing 25 per cent would avoid around 120,000 admissions each year, saving £220 million a year (in 2000-01 prices)[20]; and
- potential reductions in the clinical negligence bill resulting from reductions in the number of negligent incidents in obstetrics and gynaecology by 25 per cent by 2005[21], and assuming that the reduction in the number of adverse events by 10 per cent implies an equivalent reductions in the number of negligent incidents. The Department of Health estimates that by 2012-13 this could save around £225 million a year.

2.68 The Review recognises that the costs and benefits accounted for above will not represent the full range of potential costs and benefits of improved clinical governance. It agrees with the Department of Health that the costs associated with improving protected time is just one element of the clinical governance agenda for improving quality, albeit an important one. However, other aspects of the Review such as improvements in ICT and the NSF standards will indirectly capture other elements of clinical governance, such as clinical audit, clinical effectiveness and research data, risk management processes and effective information systems.

2.69 It is also possible to identify a range of other improvements associated with the effective implementation of a system of clinical governance, such as improving the number of generic drugs prescribed, reducing the number of readmissions in secondary care and a reduction in inappropriate prescribing in primary care. However, data limitations and the fact, in some instances, that evidence is mixed as to whether such measures do indeed capture quality improvement has meant that the Review has limited its focus to the four areas discussed above.

2.70 In addition to the cost savings associated with clinical governance, the Review has also attempted to capture the direct benefits to patients. It has been estimated that the direct quality improvements accounted for by the Review could contribute to saving over 12,000 lives a year by 2012-13[22].

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[19] These estimates were supplied by the Department of Health and are based upon Department of Health (2000), An Organisation with a Memory, The Stationary Office, London. The report draws on the study documented in Vincent C, Neale G and Woloshynowych M (2001), Adverse events in British hospitals: preliminary retrospective record review, British Medical Journal, 322: 517-519.

[20] Based on estimates from Performance Assessment Framework (2000-01).

[21] Department of Health (2000), An Organisation with a Memory, The Stationery Office, London.

[22] The Department of Health estimates 9,600 fewer deaths from reduced HAI (based on Plowman et al (2000)) and 2,600 fewer deaths from reduced adverse events (excluding HAI; based on Vincent et al (2001)). It should be stressed that these estimates do not mean that HAI and adverse events cause death, but rather that having an HAI increases the probability that someone is likely to die. The actual cause of death is likely to be different.

Fast access

2.71 The length of time patients currently wait is a major source of public concern. The Review has taken account of expectations of fast access in two stages. First, by assessing the likely impact on activity of meeting the reduced waiting times targets outlined in the NHS Plan; and second – in line with expectations of only 'waiting within reason' – achieving further reductions in the long term. The waiting time assumptions, which form the basis of the Review's cost estimates, are set out in Table 2.2.

Table 2.2: Reducing waiting times in hospital[23]

	Maximum inpatient waiting time	Maximum outpatient waiting time (excludes cancer)
Today	15 months	6 months
2005-06	6 months, with all admissions booked	3 months
2008-09	3 months	3 months
2022–23	2 weeks	2 weeks

2.72 The Review's analysis has focused mainly on the cost of reducing hospital waiting times for elective surgery. There will also be significant resource implications of improving access in primary care and delivering more responsive emergency services but in the time available the Review has not been able to account for these.

2.73 In modelling the likely costs of reducing waiting times for surgery, two alternative approaches have been considered. First, the Department of Health's own model and standard queuing theory results have been used to simulate the impact of delivering a maximum waiting time of two weeks by the end of the Review period. However, this model was not designed with such long-term projections in mind. Second, the Review has examined the cost of increasing activity to levels where treatment rates in the UK would be similar to those in countries such as France where waiting times are very low. There are, however, difficulties in comparing the available data on treatment rates across countries. The Review has adopted a straightforward assumption that procedure rates (per head of the population) in England for most surgical interventions would have to double in order to match the best performing comparator countries.

2.74 The results of such analysis are highly sensitive to different assumptions and thus a range of different projections are possible. As a central estimate, the Review has concluded that it is reasonable to assume that waiting times could be reduced to very low levels if the health service were to deliver increases of around 5 to 6 per cent a year in the number of inpatients treated over the next five years, and increases averaging 3 to 4 per cent a year for the remainder of the 20 year period. But the degree of uncertainty involved is large.

[23] NHS Plan targets and the Review's future vision.

2.75 What is absolutely clear is that additional activity will not be enough on its own. Service redesign, improvements in information, better management of referrals and changes in incentives must accompany it. The Review recognises the important changes already underway in this respect, including the booked admissions programme and the collaborative programmes, run by the NHS Modernisation Agency. They attempt to help clinical teams work together to review their services, learn from others and develop new ways of working[23]. For example, such collaboratives have reduced the duplication of work (such as blood tests and scans) and cut down the number of appointments patients are required to attend, reducing waiting times in the process.

Better accommodation

2.76 The Interim Report described the main cost drivers in raising the quality of NHS accommodation to meet patient expectations over the next 20 years. These were the need for new hospitals and the modernisation of the NHS estate, reducing hospital room sizes to four beds or fewer and improving the quality of hospital food.

2.77 The NHS currently provides around 300 million meals a year, at a cost of around £500 million a year. McKinsey and Company reported that while the NHS currently spends around £2.50 per person per day, hospitals in Germany spend £4.10 and BUPA currently spends £5 a day[25]. The Review has extrapolated to 2022-23 the McKinsey projections of how much the average person is likely to spend on food over the next five years. It has assumed that in 20 years' time the NHS will be spending around £4.80 per person per day on food (in 2002-03 prices). This would raise the amount the NHS spends on food to around £1 billion a year by 2022, double the current level.

2.78 As described earlier in this chapter, the NHS estate is in urgent need of modernisation. In many cases the poor state of buildings undoubtedly impacts not only on the comfort of patients and staff but also on the quality of care delivered. This is unacceptable. It reflects the past failure to rebuild or substantially refit buildings at the appropriate time.

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[24] Department of Health (2001), The NHS Modernisation Board's Annual Report 2000-2001, The Stationery Office, London. www.doh.gov.uk/modernisationboardreport

[25] McKinsey & Company (2001), Expectations of the 2020 UK Healthcare system, Health Trends Review: Proceedings of conference held at the Barbican Centre, London on 18 and 19 October 2001, HM Treasury, November 2001.

2.79 The Review has assessed the annual resource costs[26] to the NHS of modernising its estate, based on the following assumptions:

- over the next 20 years, one third of the hospital and community health services (HCHS) estate will be replaced, with those buildings with most maintenance backlog being replaced first (see Chart 2.2 which shows cumulative, end-year levels of backlog maintenance in current prices);
- equipment (excluding ICT) is replaced every eight years;
- in new hospitals, 75 per cent of beds are in single en-suite rooms and the maximum number of beds per room is four; and
- the entire primary care estate will be upgraded or replaced over the next 10 years.

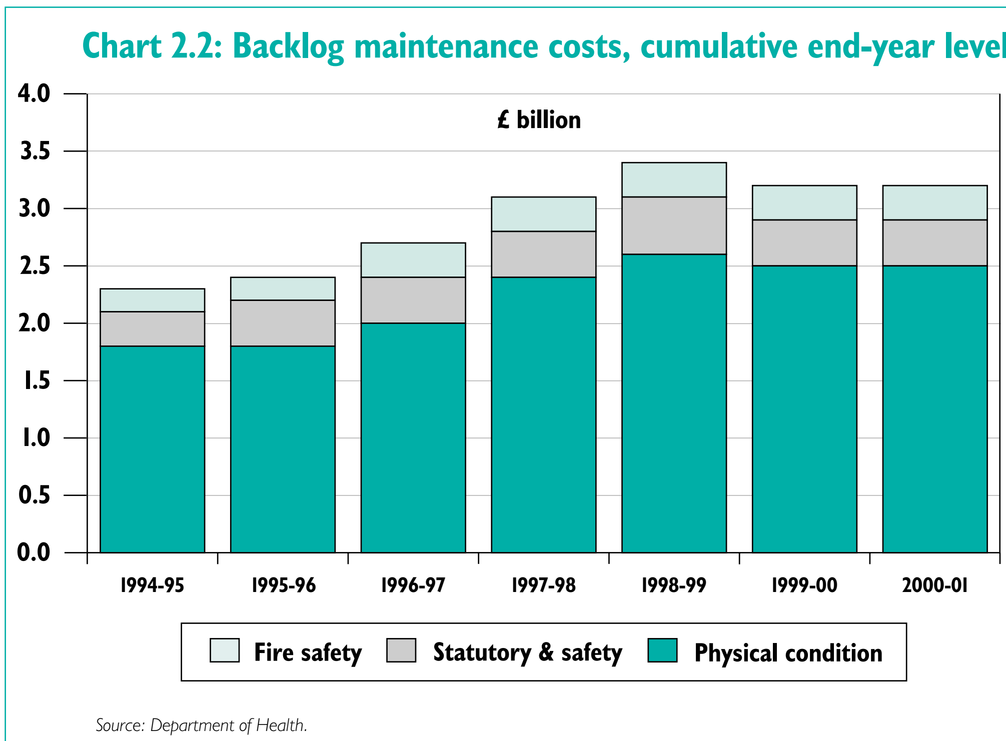

Chart 2.2: Backlog maintenance costs, cumulative end-year level

Source: Department of Health.

2.80 The cost of replacing the HCHS estate is estimated at £1,650 per square metre, compared to £1,500 for the standard described in the NHS Plan or for a private hospital. The difference with the private hospital figure is principally due to the higher engineering costs associated with the more complex emergency care administered in NHS hospitals. The increase on the NHS Plan building estimates mainly reflects the cost of reducing room sizes to four beds or fewer[27]. The extra space that will be needed for the en-suite rooms and associated equipment increases the replacement costs of a new hospital by approximately 15 per cent.

[26] Capital charges include an accounting charge for the cost of using capital at 6 per cent and depreciation.

[27] It is estimated that to convert a ward to 50 per cent single rooms costs an average of £300,000 per ward, plus the additional cost of new wards at over £30 million each to re-provide beds lost in the conversion. Depending on the ward design, as many as one new ward may be required for every four converted. This implies a service-wide cost of around £5.5 billion. This would effectively mean renovating the whole of the capital estate over the next 20 years, which the Review does not believe would represent value for money. The Review has therefore assumed that this standard will be achieved as part of the wider modernisation of the estate.

2.81 The NHS has not replaced and refurbished its assets at an appropriate rate. The Review has estimated the additional resource costs to the health service (in the form of capital charges) by 2012-13 of achieving an age profile for the HCHS estate consistent with an average age of 30 years. Thereafter, it is assumed that the estate is replaced at the required rate each year in order to maintain this age profile. All the replacement or refurbished buildings are assumed to be of the higher specification outlined above. This is estimated to add around £700 million a year to NHS capital charges, on top of current spending of £2.5 billion[28]. Further details are provided in Box 5.2 in Chapter 5.

2.82 It is more difficult to be certain about the condition of the primary care estate, because of the position of GPs as independent contractors. A survey by the District Valuer in 1998-99 suggested that:

- nearly 80 per cent of primary care premises are below the current recommended size. Only around 40 per cent are purpose built. Almost half are either adapted residential buildings or converted shops – and over 60 per cent are over 30 years old;
- a fifth of premises are in the private rented sector, almost two thirds are owner occupied and the remainder are health centres, owned by NHS trusts or Primary Care Trusts (PCTs); and
- although most surgeries are located within a quarter of a mile of a pharmacy, less than 5 per cent of premises are co-located with a pharmacy and around the same proportion are co-located with social services.

Overall the quality of the primary care estate and the range of services provided varies markedly from area to area. In particular, the most deprived areas tend to have the worst primary care facilities.

2.83 Current plans assume that two thirds of the primary care estate will be upgraded or replaced by 2006, generally using private finance in line with current practice. The Review has gone further by assuming that the entire primary care estate will have been modernised by 2010-11. To gauge the maximum cost and assuming that it costs on average £560,000 to replace a unit, the cost of upgrading or replacing all 10,500 primary care premises over the next decade would be £5.9 billion, corresponding to an annual revenue cost of around £550 million by 2010-11. This compares with a current figure of around £320 million.

[28] This is higher than the estimated £435 million discussed in the Interim Report because of the assumed 15 per cent higher replacement costs and the rate at which assets are replaced.

2.84 It is even more difficult to ascertain the condition of the social care estate as it is largely within the private sector. The estimated value of the social care estate is £13.3 billion (of which only £3.3 billion is in the public sector)[29]. The Review has not included estimates of the cost of modernising the social care estate, as the majority of it is owned by the voluntary and private sectors. It appears certain, however, that such costs would be substantial.

CONCLUSION

2.85 This chapter has defined a broad vision of the health service in 2022 and the costs which might be associated with delivering its high quality and meeting rising expectations. But there are many other factors which will impact on the health service over the next 20 years and affect the cost of delivery. Chapter 3 describes these factors and how the Review has incorporated them into different scenarios. The definition of the vision of the health service in 2022 set out in this chapter is common to each scenario, but the cost of delivering it, the way in which it is delivered and the health outcomes achieved will differ.

[29] Price Waterhouse Coopers (PWC) estimates for the Department of Health.