King's Fund

Briefing

JULY 2008

Celebrating the NHS at 60

This year the NHS celebrates its 60th birthday. This briefing looks at key health care issues over the last 60 years - the determinants of health, NHS spending, waiting lists, staffing and maternity services. It ends with a look forward; what might the next 60 years hold in store for the NHS? How much might we spend on health care? What trends could we expect in staffing and mortality?

Determinants of health[1]

It was in the 'ninth year of austerity' – with the end of full rationing of everything from food to petrol and clothing still six years away – that the NHS came into existence on the 'Appointed Day', 5 July 1948.

For the Chief Medical Officer, reporting on the state of the public's health at the end of 1948 (Ministry of Health 1950) it had been a memorable year. Not only had the NHS 'began its colossal task' but

> *[It] was one of struggle against economic adversity in the shadow of international gloom intensified in June by the blockade of Berlin... and growing tension in the Near and Far East. But all these and many other depressing circumstances, the British people took with their usual good-tempered grumbling and the cheerful confidence in ultimate success which has never yet deserted them.*

While current concerns about climate change and recent surges in food prices grab the headlines, the CMO's 1950 report begins, typically, with a rather more parochial account:

> *[1948's] weather was generally very favourable both as regards the incidence and the fatality of the more prevalent diseases, thus forming an almost complete contrast with 1947. It opened with five exceptionally mild and sunny months.. despite the bad weather in August and early September, the grain harvest was above average and the yields of potatoes and sugar beet were exceptionally good.*

So good in fact that flour, bread and potatoes were removed from the ration book in 1948, but other foodstuffs, including tea, sweets, butter, cream, cheese and cooking fats were still restricted. The CMO reports from the period reveal a major preoccupation with nutrition as a determinant of both health and national productivity and a sense of relief that public health had held up under the pressure of wartime. A retrospective report on public health during

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[1] This briefing is based on a series of Data briefings by John Appleby and Ruth Thorlby and published in the Health Service Journal between January and July 2008.

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the war published in 1946 remarked that 'the state of public health should be as good as it is today is indeed a miracle' (Ministry of Health 1946). 'Nutrition' the Chief Medical Officer noted 'is the very essence and basis of national health' and declared the policy of rationing had been a success, not least because it seems to have redistributed good quality food. Rationing ensured:

> *...that those foods which contained nutrients which might be in short supply were not consumed solely by those with the longest purse. In fact it soon became apparent that, thanks to this policy, combined with a general increase in the purchasing power of the working classes, the average diet of all classes was better balanced than ever before.. and more evenly distributed.*
>
> (Ministry of Health 1946)

The CMO's report for 1950 noted that rationing had an upside:

> *...even the dark cloud of continued austerity may have its silver lining. The high price of spirits must somewhat discourage excess in their use, and encourage the substitution for them of beer, of which austerity has reduced the alcoholic content.*
>
> (Ministry of Health 1952b)

Overall, he remarked, progress was being made against mortality from some of the worst infectious diseases:

> *Increased wages, greater sobriety, more food, better housing, wiser education in the care of children, smaller families and some probably diminution in the virulence of the infecting organism brought down the case fatality of some diseases, such as measles, scarlet fever and whooping cough.*
>
> (Ministry of Health 1952b)

Even though the spectre of war-induced starvation had disappeared in 1948 (and the nation's health found to be 'well-maintained'), the relationship between food, health and production remained a preoccupation. The report for 1948 announced new research into 'diet and industrial output' to investigate the factors that might influence production (Ministry of Health 1950).

It would have been difficult for anyone writing in 1948 to predict just how much the purchasing power (of all classes) would increase over the next 60 years and what this would mean for people's health. It would have been impossible, too, to predict the enormous change in people's work and lifestyles that could see a decline in calorific consumption but an increase in average weight.

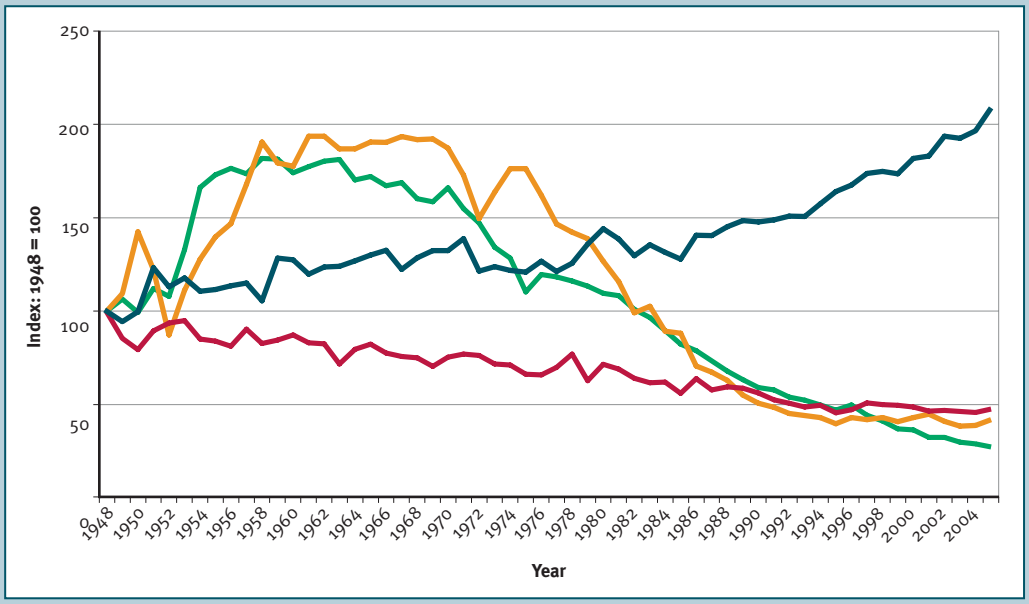
One lifestyle-related illness does begin to emerge in this period. The CMO's report for 1950 discusses for the first time the possible link between smoking and cancer:

> *The very heavy taxation of tobacco may in time lessen its enormous consumption and the ever increasing habit of smoking, which [is suspected] of being a factor and possibly an important factor in the aetiology of lung cancer, the standardised death rate of which has increased many times since 1920.*
>
> (Ministry of Health 1952b)

The 'State of Public Health' report for the 1951 report also heralded perhaps the first intimation of the idea that individual behaviour might need to change for further health gains to be made. The point, the CMO argued, had been reached when:

...the average Briton can now enjoy a much healthier and more agreeable life than his ancestors. It is not important to realise that most of this improvement has been effected without his having to exert himself or put himself to any great inconvenience. A silent army of sanitary technicians has unobtrusively worked this miracle on his behalf. But we have now reached the point where further improvement in the physical environment is likely to show diminishing returns and the tendency during the present century has been for the public health worker to transfer the emphasis of his attention from the environment to the person. We have, in fact, arrived at a time when the citizen must actively participate in the campaign for better health if further substantial progress is to be made.
(Ministry of Health 1953b)

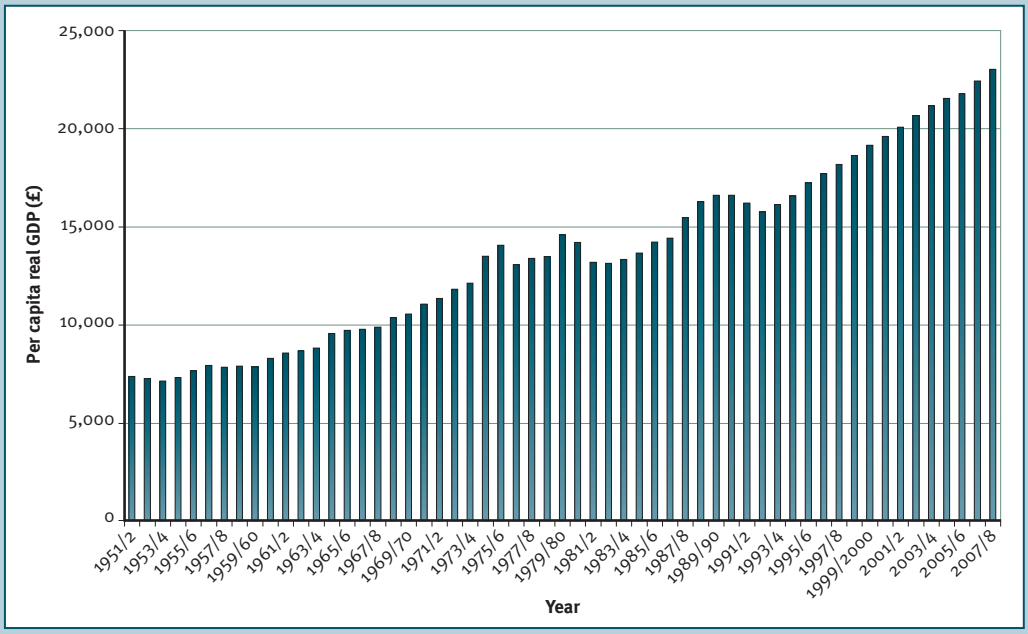
1 FRESH FRUIT, VEGETABLE, BUTTER AND SUGAR CONSUMPTION (INDEX, GRAMS PER PERSON PER WEEK), 1948–2005



KEY
- Total fresh fruit
- Fresh vegetables
- Butter
- Sugar

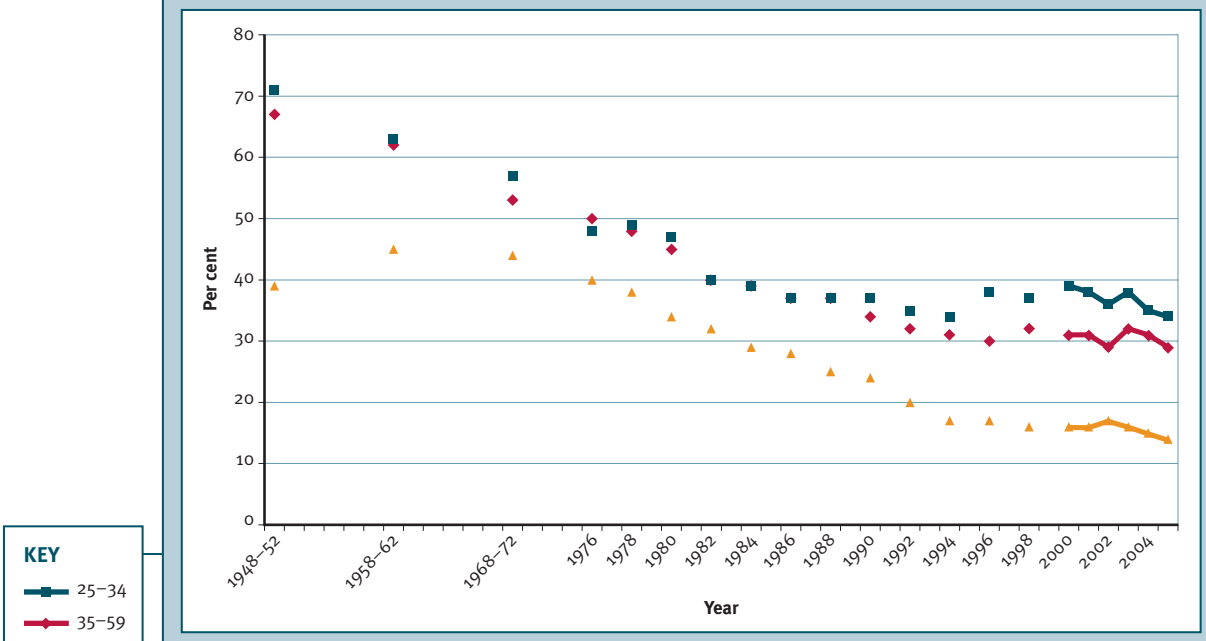
Source: Department for Environment, Food and Rural Affairs, National Food Survey and Family Food (various).

2 PER CAPITA UK GDP (2007/8 PRICES), 1951/2–2007/8



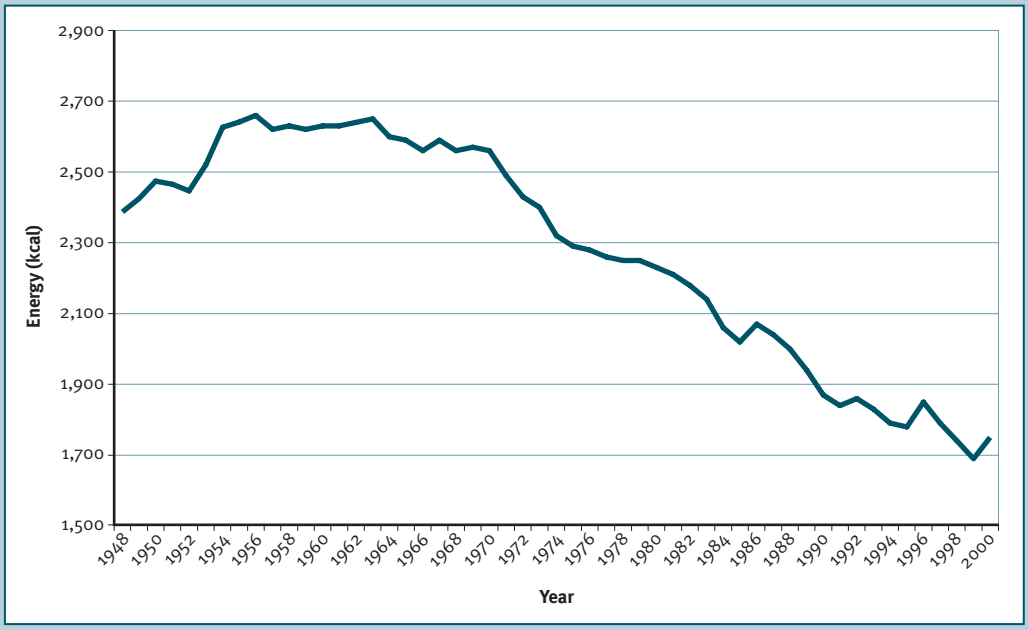
Source: Office of Health Economics (2008); HMT (2008) and The King's Fund calculations.

3 SMOKING PREVALENCE IN MEN



Source: Information Centre, Statistics on Smoking (various).

4 ENERGY INTAKE PER PERSON PER DAY (KCAL), 1948–2000



Source: Department for Environment, Food and Rural Affairs, National Food Survey and Family Food (various).

NHS spending: the same old worries?

Setting the first NHS budget in 1948 was not an easy task. Charles Webster's history of the early period of the NHS records that estimates varied considerably: the Beveridge Report suggested £130 million, but as the Appointed Day grew closer the estimates rose, from £108 million in the 1944 White Paper, then £122 million in various Cabinet papers, and then £134

million in the NHS Bills laid before Parliament. Some independent estimates put the cost at nearer £230 million (Webster 1988).

In fact, increases in prices, higher standards and simple errors in forecasting demand and its impact on costs meant that for the full financial year the actual spend turned out to be £373 million – in today's prices this was equivalent to around £10,500 million, around a tenth of the NHS budget in 2007.

The need for extra money prompted the start of Treasury worries about the financial sustainability of the new service and lack of control over public finances. Hospital spending was considerably over budget; spending on dentistry was three times higher than estimated and for ophthalmic services nearly five times higher. But a key contributor to the increases in costs in the first few years of the NHS was pay and staffing. As Charles Webster put it, pay increases were 'streaming through the negotiating machinery'; nurses received a 30 per cent pay rise in 1949 and many more staff were being employed than anticipated (Webster 1988). The NHS pay bill rose by 22 per cent in one year.

For the Treasury, part of the answer to these growing costs was patient charges, which were eventually introduced in 1951.

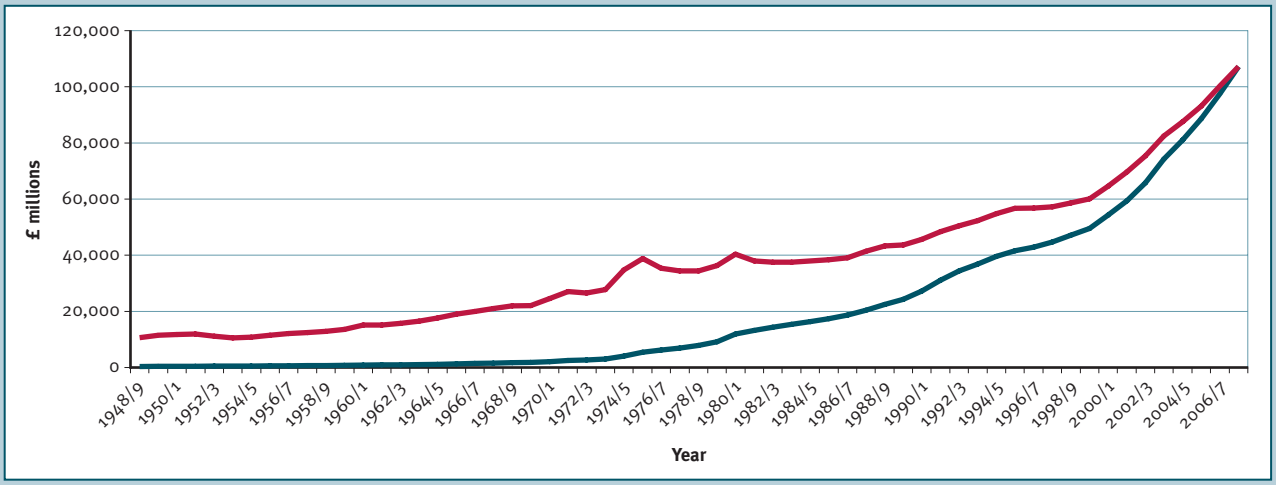
While charging provided some offsetting income for the NHS, concerns about rising costs persisted. Five years after the inception of the NHS the Conservative government set up a committee, chaired by the Cambridge economist, Claude Guillebaud, to look into the current and prospective cost pressures on the NHS (Ministry of Health 1956).

Brian Abel-Smith and Richard Titmuss provided the technical support to the committee and put some of the anxiety about cost increases in perspective. Far from showing that the NHS was financially out of control and wasteful, they demonstrated otherwise. Although there had been an 8 per cent real rise in spending by its second year, by 1953/4 real spending on the NHS had in fact fallen back to its 1948/9 level. And when looked at as a proportion of national income or in per capita terms, as Abel-Smith and Titmuss noted, 'Contrary to public opinion, the net diversion of resources to the NHS since 1949/50 has been of relatively insignificant proportions.' (Ministry of Health 1956).

The committee – following a recommendation from a 1952 King's Fund report on NHS costing – endorsed what they termed 'departmental costing' – in today's money, service line budgeting and reporting – as a means to '…promote increased efficiency and a fuller sense of responsibility for spending among all those concerned with the running of hospitals.'

Remarkably – and perhaps uniquely in the history of reports on the NHS – they also concluded that 'no major change is needed in the general administrative structure of the NHS' and that the 'service now requires a period of stability(Ministry of Health 1956).

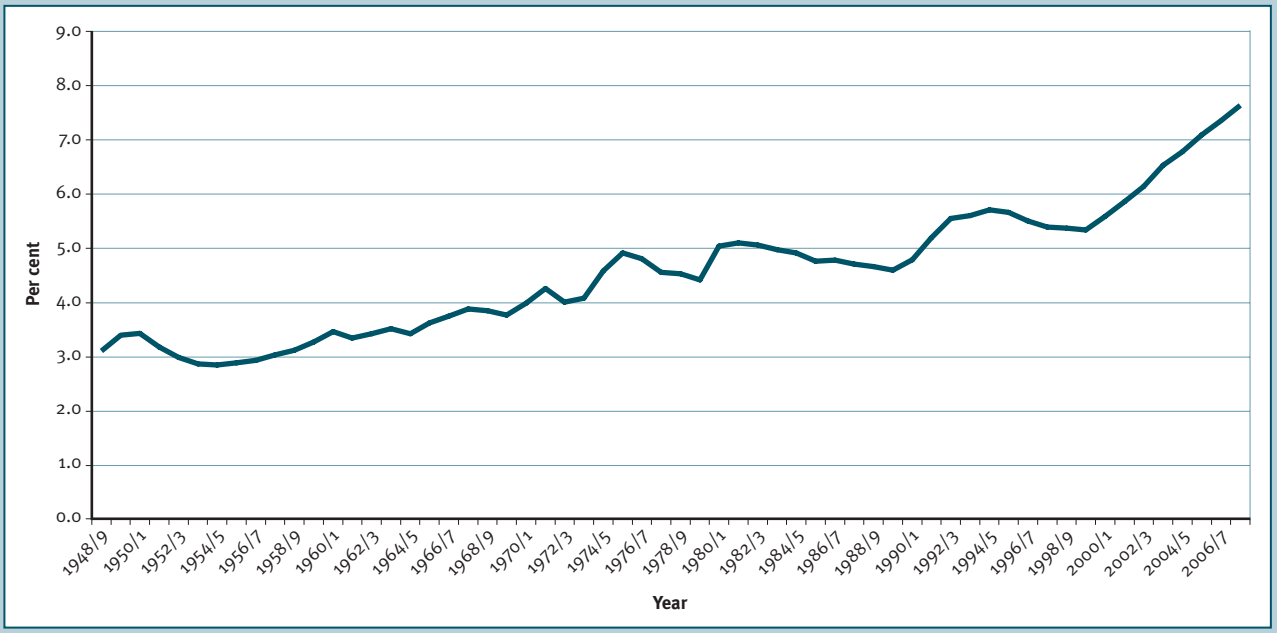
5 CASH AND REAL (2007/8 PRICES) SPENDING ON THE UK NHS, 1948/9–2007/8



Source: Office of Health Economics (2008); HM Treasury, Public Expenditure Statistical Analyses (various); HM Treasury (2007); The King's Fund calculations.

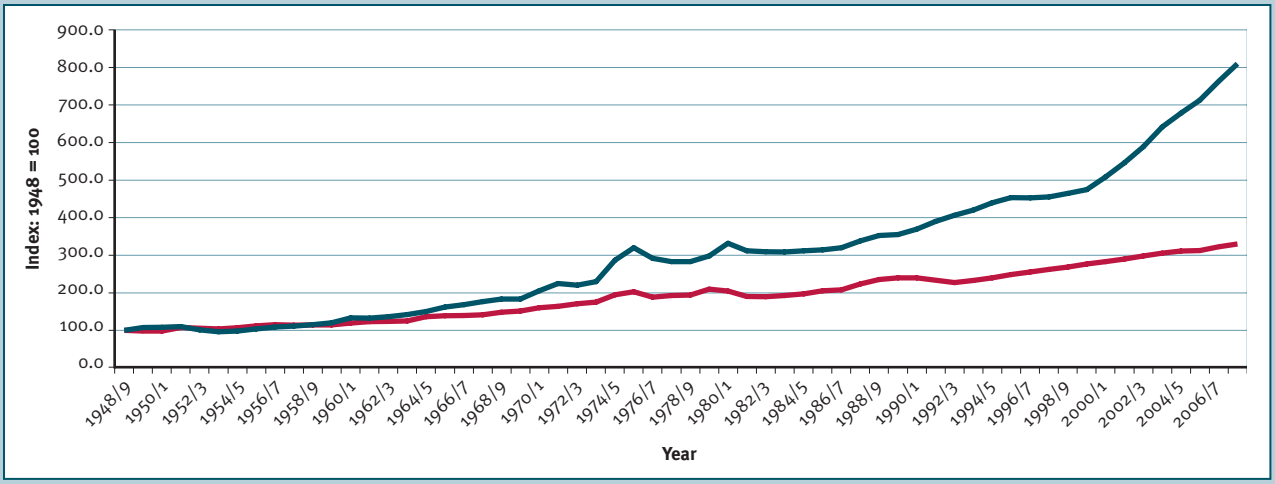
KEY
- Cash
- Real

6 UK NHS SPEND AS A PERCENTAGE OF GDP, 1948/9–2007/8



Source: Office of Health Economics (2008); HM Treasury, Public Expenditure Statistical Analyses (various); HM Treasury (2007); The King's Fund calculations.

7 **INDEX OF REAL (2007/8 PRICES) UK NHS SPEND AND GDP PER HEAD, 1948/9–2007/8**



Source: Office of Health Economics (2008); HM Treasury, Public Expenditure Statistical Analyses (various); HM Treasury (2007); The King's Fund analysis.

KEY

- NHS spend per capita
- GDP per capita

Why were we waiting?

As waiting times hit an all-time low in the NHS, anecdotal evidence suggests a need to revise the view that waiting continues to be a substitute for prices as a rationing mechanism. Otherwise, what do we make of stories of some outpatient clinics facing a rise in patients failing to turn up for appointments as waiting times reduce? Is the NHS on the verge of solving what has traditionally been the public's number one complaint about the service?

If so, it's taken a long time, effort, money, an understanding of the phenomenon of waiting and a realisation that long waits were not an inevitable price to pay for a zero-priced health service.

In 1948 the NHS took on a waiting list of more than 476,000 patients but no mention of waiting was made in the Ministry of Health annual reports until 1951, when an increase in the number of patients waiting was reported, up to nearly 504,000 on 31 December 1951 (Ministry of Health 1952a). The report for that year saw the problem primarily as a function of limited investment in facilities such as beds.

Reports in subsequent years begin to grapple with the underlying cause of waiting lists. In 1952 it was noted that ear, nose and throat (ENT) had the longest waiting list of any specialty despite an increase of 26 per cent in the number of ENT beds since 1949 (Ministry of Health 1953a). The same report noted, with approval, an increase in the turnover of beds – up by 15 per cent to 11.2 'discharges per bed' per year (Ministry of Health 1953a).

By 1953 the waiting lists were up again, after falling for three years in a row, leaving officials puzzled: 'when it is realised that the number of available beds, the number of patients treated in each bed and, therefore, the total number of patients treated have all increased between 1952 and 1953, it is not easy to explain the sharp increase' (Ministry of Health 1954). Greater

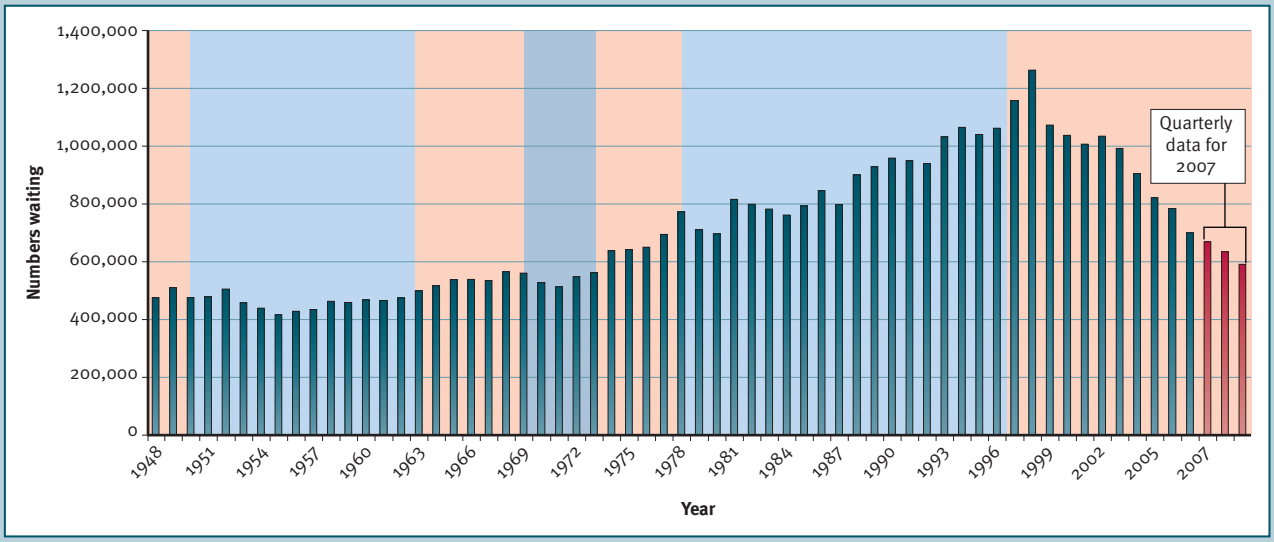
efficiency in the use of hospital beds was seen as the solution: not just length of stay but the length of time that beds stood empty between patients (nearly three days for surgery). The 1953 Ministry of Health reports that 'if with one in every seven patients admitted, hospitals had saved one day on the turnover interval, the waiting list would, on the face of it, not have increased between 1952 and 1953.' (Ministry of Health 1954)

By 1956, a policy of using hospital beds more intensively appears to have paid off, as the annual report announced that the waiting list had fallen to the 'lowest number since the beginning of the National Health Service' (Ministry of Health 1957) – a false dawn as the figures for the next few decades show.

It was not until the mid-1950s that data became available on waiting times. In 1956 average inpatient waiting times for the worst specialty – ENT – was 'four and a half months at non-teaching hospitals and provincial hospitals and some three months at London teaching hospitals' (Ministry of Health 1957)– around double the median wait today.

No data on waiting times were collected for outpatients until the 1990s. However, reports from the 1950s express concerns about the length of time patients waited on the day for their appointment. In the 1954 report hospitals were reminded of the criticisms, which included '...late arrival of consultants in charge of clinics and badly organised appointments systems'. Hospitals were warned that 'patients often suffer from bewilderment or acute anxiety and it is essential that their needs and comfort should be given attention all the time they are in the out-patient department.' (Ministry of Health 1955)

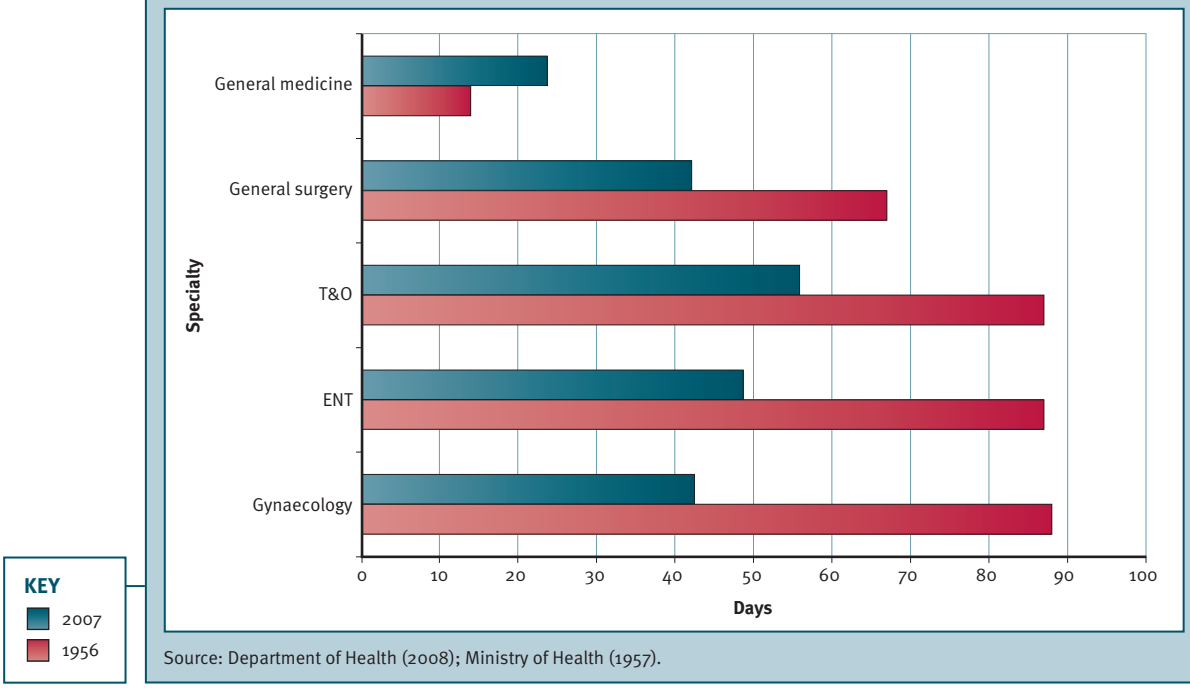
8 INPATIENT WAITING LIST IN ENGLAND, 1948–2007



Source: Department of Health (2008); Martin *et al* (2003).

KEY
- Labour government
- Conservative government

9 **AVERAGE INPATIENT WAITING TIMES IN ENGLAND, 1956 AND 2007: SELECTED SPECIALTIES**



Source: Department of Health (2008); Ministry of Health (1957).

Staffing

In 1948 the NHS opened its collective doors to be faced not only with an inherited waiting list of around half a million patients and a clamour for spectacles and false teeth, but also an almost immediate shortage of staff.

Six months after the Appointed Day, a shortage of nurses, affecting 'small general hospitals' and the 'female wings of mental hospitals' meant more than53,000 beds were unoccupied through lack of staff (Ministry of Health 1951). The Ministry of Health estimated that the NHS lacked nearly 48,000 nursing and midwifery staff – around 30 per cent of the actual numbers employed. Despite increasing the ranks of whole-time staff by more than 4,000 and part-time staff by 2,250 by the first quarter of 1949, rising demand and better working conditions meant that the service was still short of 48,000 nurses. Even with higher nursing school intakes a Ministry report noted that 'wastage, many due to marriage, was as great as ever.' (Ministry of Health 1950)

Reports from subsequent years show a gradual improvement in the supply of nursing and midwifery staff, but staffing in 'mental deficiency' hospitals and in midwifery was still giving 'cause for anxiety' some five years later.

While the number of nurses has increased by nearly 170 per cent since 1948, as a proportion of the total workforce they have reduced from 46 per cent to 42 per cent. Most striking, however, is the fall in the proportion of domestic and ancillary staff – from 40 per cent in 1951 to 12 per cent in 2005.

Dentists – perhaps not surprisingly given the unleashing of an enormous amount of unmet need for dental work with the arrival of a free service – were also in immediate short supply. In 1949 there were around 9,200 dentists on NHS lists dealing with 8.5 million cases a year

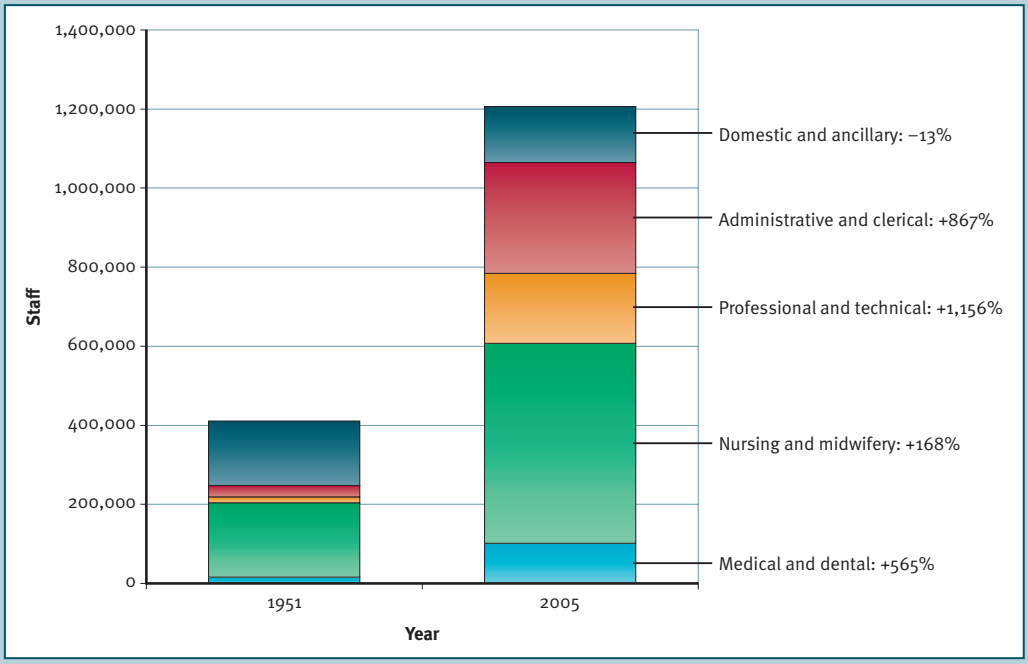
at the peak of demand. A shortage of supply and a fee for service payment system ensured high earnings for dentists. The Ministry of Health reported in 1949 that 'a number of dentists were earning sums very much higher than had been foreseen' and imposed an emergency check on excessive earnings in early 1949, halving the incomes of those earning in excess of £4,800 (equivalent to around £140,000 in 2008 prices) a year, while a new scale of fees was calculated (Ministry of Health 1950).

Early Ministry of Health reports seem less concerned about the overall number of GPs and more worried about whether GPs would be swamped by people with 'seemingly trivial ailments... with the risk of developing a disease-conscious frame of mind' (Ministry of Health 1951). Happily, the government was able to conclude in 1950 that a 'state of equilibrium' in surgery attendances had been achieved. In fact, GP numbers only rose very gradually, and it was not until the mid-1970s that they started to increase at any pace.

In hospitals, meanwhile, the medical and dental workforce – initially accounting for just under 4 per cent of all NHS employees – started increasing immediately. By 2005 numbers had increased from just less than 15,000 to more than 100,000, doubling its share of the NHS workforce.

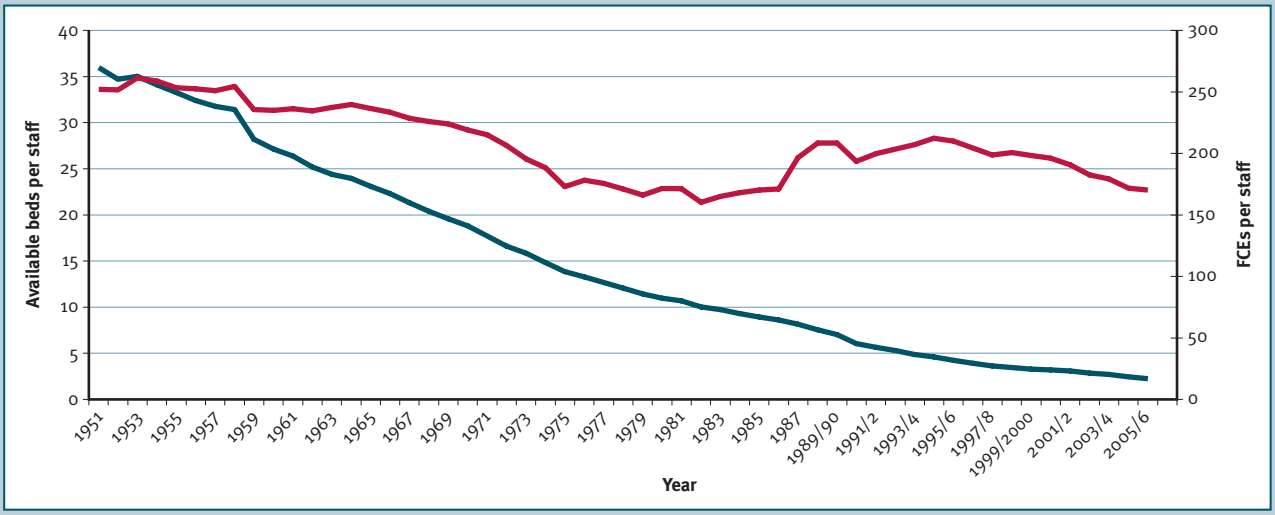
Concern about hospitals (and their staff) absorbing an ever-increasing share of the NHS budget surface regularly in reports from the time, leading one of the authors of the 1956 Guillebaud Report to conclude that the public were ultimately to blame: 'The patient and his relatives, freed from any anxiety about the cost of the treatment, welcome what they naturally regard as the superior treatment of the hospital doctors.' (Ministry of Health 1956)

10 UK NHS STAFF 1951 AND 2005



Source: Office of Health Economics (2008).

11 FCES AND AVAILABLE BEDS PER STAFF (UK NHS), 1951–2005/6

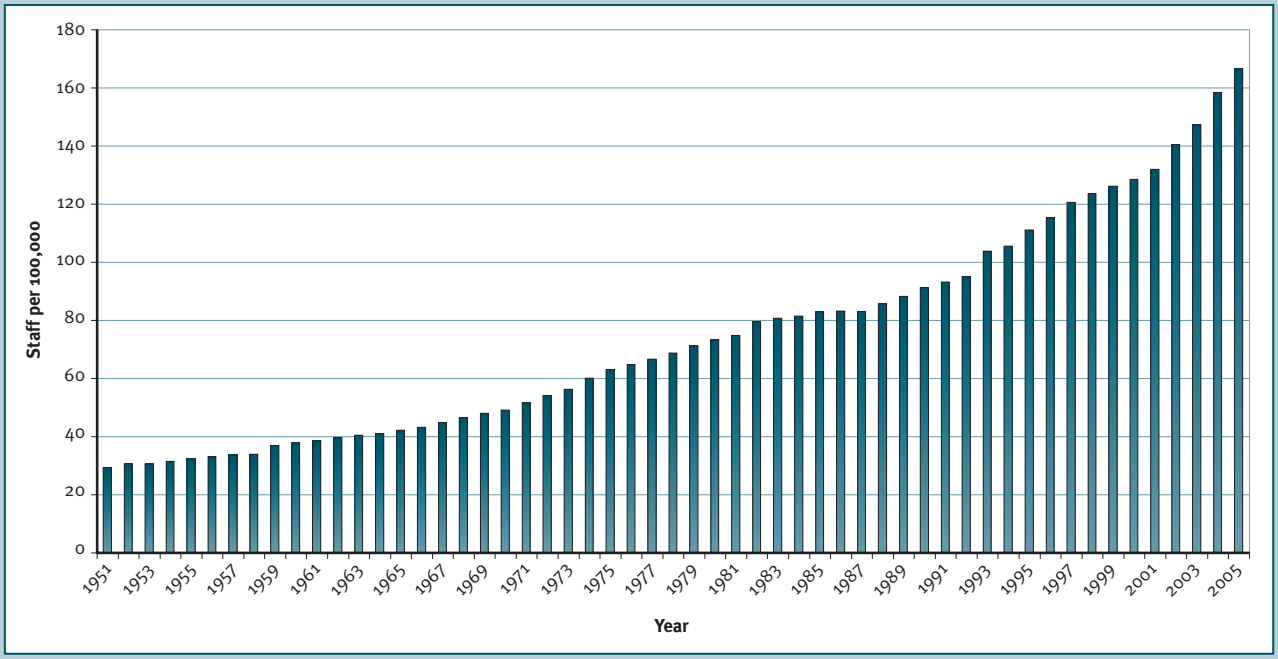


Source: Office of Health Economics (2008).

KEY

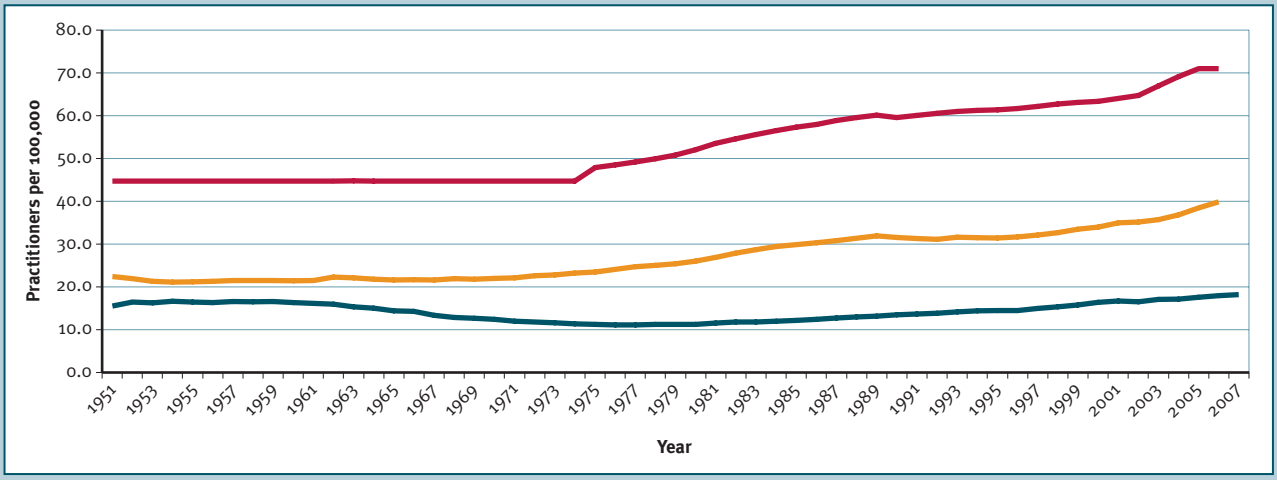
- Available beds per staff
- FCEs per staff

12 UK NHS MEDICAL AND DENTAL STAFF PER 100,000 POPULATION, 1951–2005



Source: Office of Health Economics (2008).

13 **GPS, DENTISTS AND OPHTHALMIC PRACTITIONERS ETC PER 100,000 POPULATION IN THE UK, 1951–2007**



Source: Office of Health Economics (2008).

KEY

- Ophthalmic practitioners etc
- GPs
- Dentists

Maternity

For pregnant women the birth of the NHS meant that '..from now on the "family doctor" was a person whose advice could be sought freely without incurring the previously dreaded expense', according to the 1949 Ministry of Health Report (Ministry of Health 1950). This brought GPs (and hospitals) into a service that had been dominated by midwives – mainly employed by local authorities – whose role had evolved over the previous 40 years to 'conduct normal confinements and to summon medical aid when she finds or suspects any abnormality in the labour'.

While observing that access to GPs was a step forward for pregnant women, the Ministry of Health reported some early problems with poor co-operation between the different parties: easier availability of GPs, consultant obstetricians and hospital facilities was '...failing to produce that co-operation between doctor and midwife which was the object of those responsible for the [NHS] scheme'.

The challenge facing those delivering maternity services in the new NHS was neatly summarised in the 1949 report, and in language curiously reminiscent of the Darzi review: 'The task of the moment is... proper co-ordination of these various facilities and in developing a team spirit. If we consider this [somewhat complicated pattern of] service from the point of view of the patient's needs, everything falls into its proper place.' (Ministry of Health 1950)

Some preoccupations from the annual reports of the era are unrecognisably different to today: a programme of building new antenatal clinics was delayed because of a 'shortage of steel' and many pages were devoted to the question of how best to deal with the problem of 'the unmarried mother and her child'; 5.4 per cent of births were classified as illegitimate in 1948. Today around 45 per cent of all births are to unmarried women.

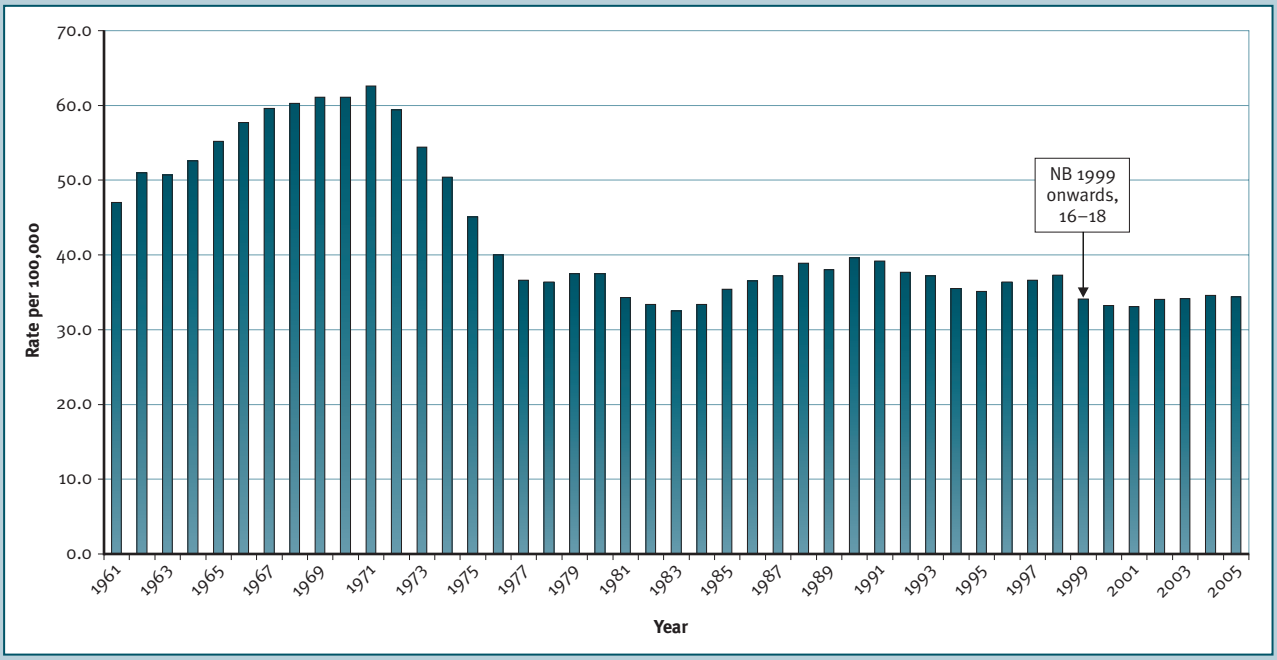
One theme that resonates from those years was a growing demand from mothers for 'institutional confinement'. The proportion of births in hospital had risen from nearly 40 per cent in 1937 to over 62 per cent in 1951. Today over 97 per cent of births occur in hospital.

The 1951 Ministry of Health annual report speculated in a somewhat cynical way that one factor driving these early trends to hospital births could be purely economic: 'Whereas the woman confined in hospital has all her attendance and treatment free, the one confined at home may incur additional expenses for attendance, bedding, equipment, fuel and has to provide her own food.' (Ministry of Health 1952a)

Getting a break from their families might also have been a reason. The 1951 report noted that ten days was regarded as a minimum time for 'confinement'. The average now is around 1.6 days. While hospital births rose, in part to deal with this demand, there were moves to reduce length of stay. 'Early ambulation' experiments in Scotland 'had been appreciated by the patients', although it was noted that the resulting increase in turnover of patients in hospital 'increases the strain on the nursing staff.'

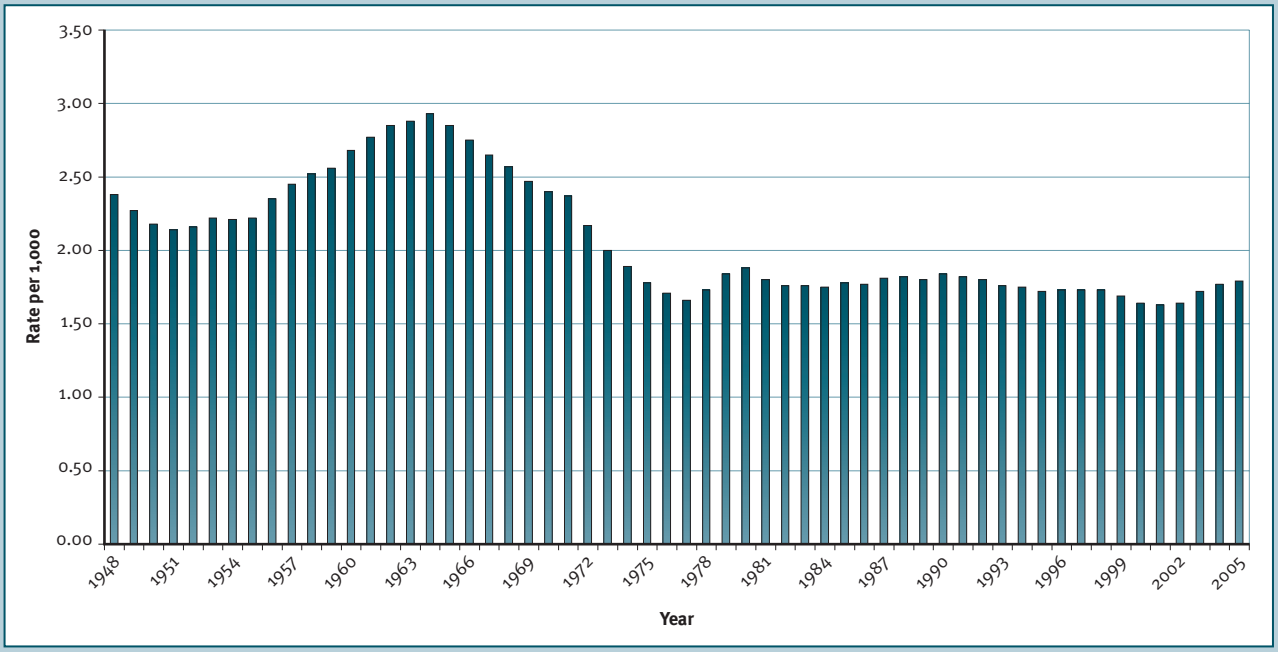
By 1951, the annual report on the nation's public health was able to reflect on 50 years of progress in reducing maternal mortality rates, which stood at 500 deaths per 100,000 births in 1899 and only 87 per 100,000 in 1950. This had been achieved by 'better management of pregnancy and childbirth by routine ante-natal supervision and greater obstetric care' coupled with the use of penicillin and blood transfusions from 1935 onwards (Ministry of Health 1952b). After 60 years of further improvement in care (and general health and education), the maternal death rate fell to 5.3 – one hundredth of the rate at the turn of the nineteenth century.

14 TEENAGE PREGNANCIES, WOMEN AGED 16–19 IN ENGLAND AND WALES, 1961–2005



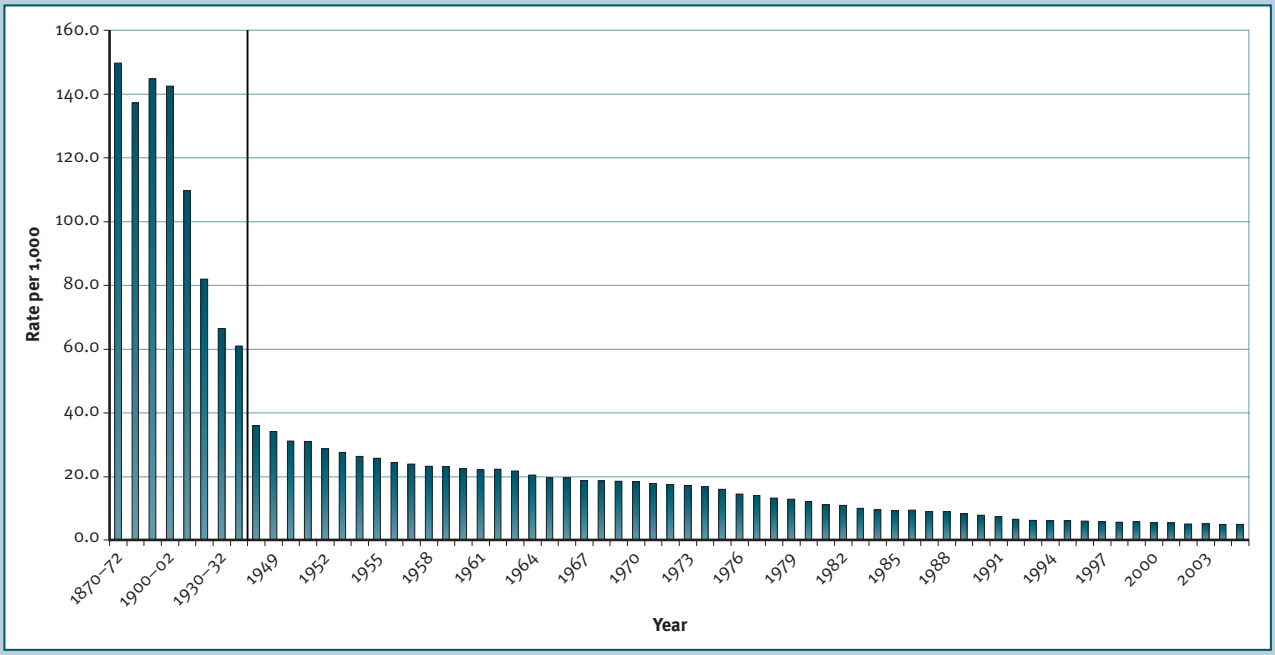
Source: Office of Health Economics (2008).

15 TOTAL FERTILITY RATE IN ENGLAND, 1998–2005



Source: Office of Health Economics (2008).

16 INFANT DEATHS PER 1,000 LIVE BIRTHS IN ENGLAND



Source: Office of Health Economics (2008).

The next 60 years...

Looking back over the last 60 years reminds us of many familiar and some not-so-familiar (or relevant) debates and issues in the NHS. Concerns about the financial sustainability of the NHS, worries about wastefulness and the ever-present need to grapple with how to ration resources are all familiar today.

But life, health and the new post-war NHS was very different in 1948. Concerns about infectious diseases loom large in the post-war public health reports. In 1946 the government noted that although deaths from diphtheria were falling 'it is a sad reflection that in this country during the war far more children under 15 were killed by this preventable disease than by enemy bombs' (Ministry of Health 1946). But the burden of mortality from infectious diseases continued to fall and in 1951 the Minister of Health was able to reflect on the previous 50 years as a 'brilliant picture of progress', declaring the decline in mortality 'remarkable' and even breaking into verse: 'We may go hopefully for forward and say (quoting the Victorian poet Swinburne) .. "the night/Wanes, and men's eyes win strength to see/Where twilight is, where light shall be" '(Ministry of Health 1952a).

But shedding light on the future demands on the new NHS was an eminently tricky task. No one compiling those Ministry of Health reports from the time, with their sections on nutrition and child health, could perhaps have predicted a situation of too much food as a threat to public health. Even the esteemed Guillebaud committee, reporting on the present and future costs of the NHS in 1956 (Ministry of Health 1956) could not have foreseen the change in family structure, based on the trends derived from the 1951 census, including 'the substantially higher rate of marriage which has now prevailed for several decades. It can thus be seen that among the group of old people who make the largest demands for in-patient care (single men and women) there is not likely to be any material increase in the population at risk during the next twenty five years.'

Despite Niels Bohr's famous warning that prediction is very difficult, especially about the future, anniversaries are not just about a review of the past, but an opportunity to look forward. So, what might the NHS look like 60 years from now?

A presumption of course is that there will be an NHS in 2068. And why not? Calamitous disasters aside, there seems no reason not to presume that, for example, public support for the idea and ideals of the NHS will not continue as they have done for decades up to now.

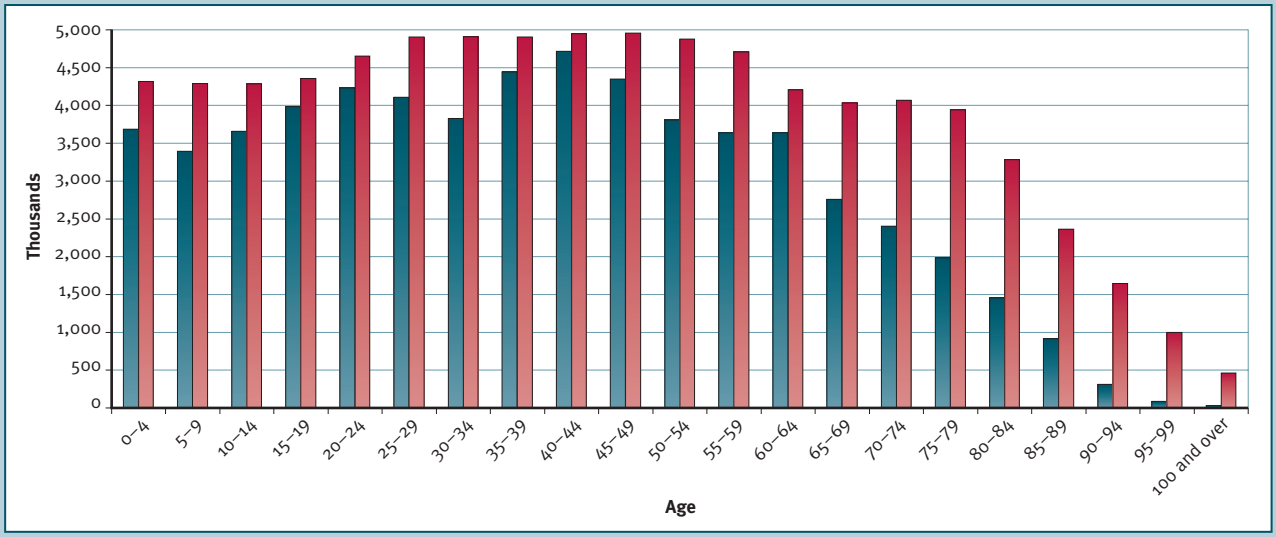
But while the ideals of collective funding according to ability to pay – but free and equitable access based on need may survive, organisationally, as we know from historical experience, the NHS may look very different.

One significant difference could be the divestment by the state of much of its ownership of hospitals except where direct ownership of the means of production make better sense for the health of the population. Politically a difficult process, nonetheless, a new mixed ownership of competitive health care providers is arguably the logical direction of travel on current trends.

By 2068, the NHS will be serving a population of more than 80 million people – a quarter of whom will be over 65. Complete economic collapse aside, this population will be much wealthier on average – a possible doubling of real GDP per capita – and indeed healthier than now. Mortality rates may not have declined to zero as the crude time series projections might suggest (see chart), but there will be significant reductions.

As for NHS spending, historic trends and the fact that as countries get wealthier they tend to devote a higher proportion of their wealth to health care suggests that in 60 years' time the NHS could easily consume around 16 per cent to 20 per cent of GDP (and double the number of its employees – to more than 2.6 million).

17 UK POPULATION BY AGE (2008 AND 2066)



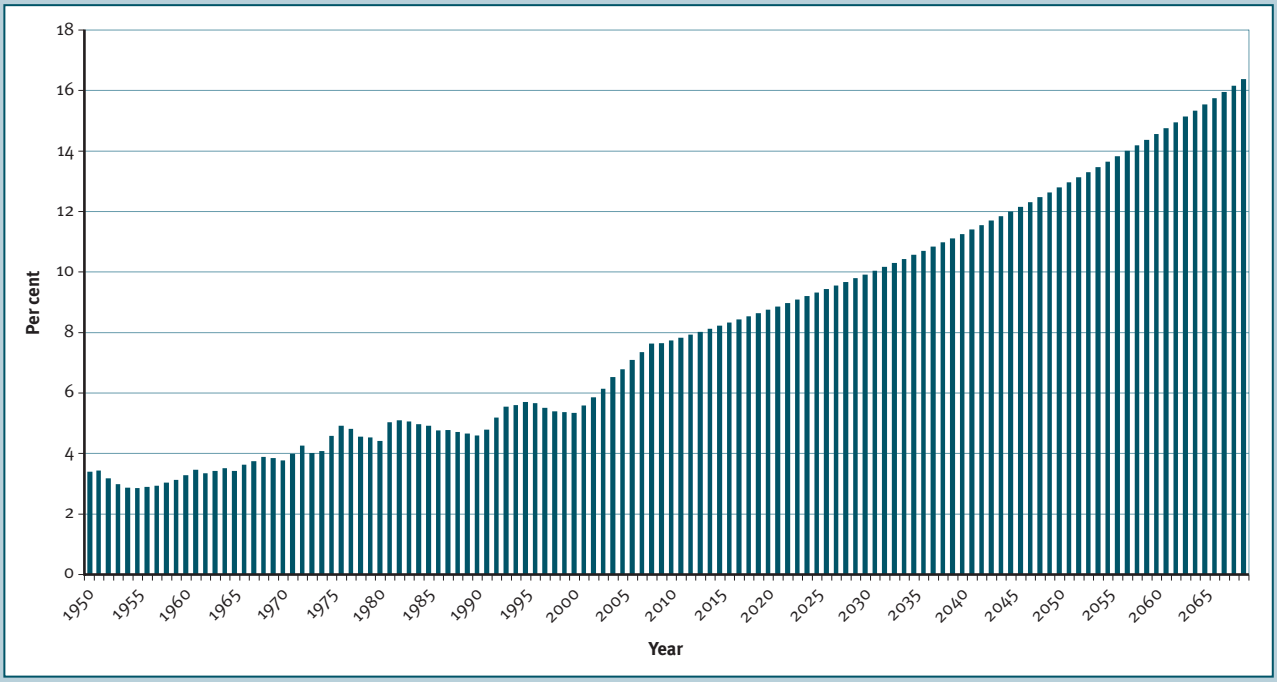
Source: Government Actuaries Department (2008).

KEY

2008

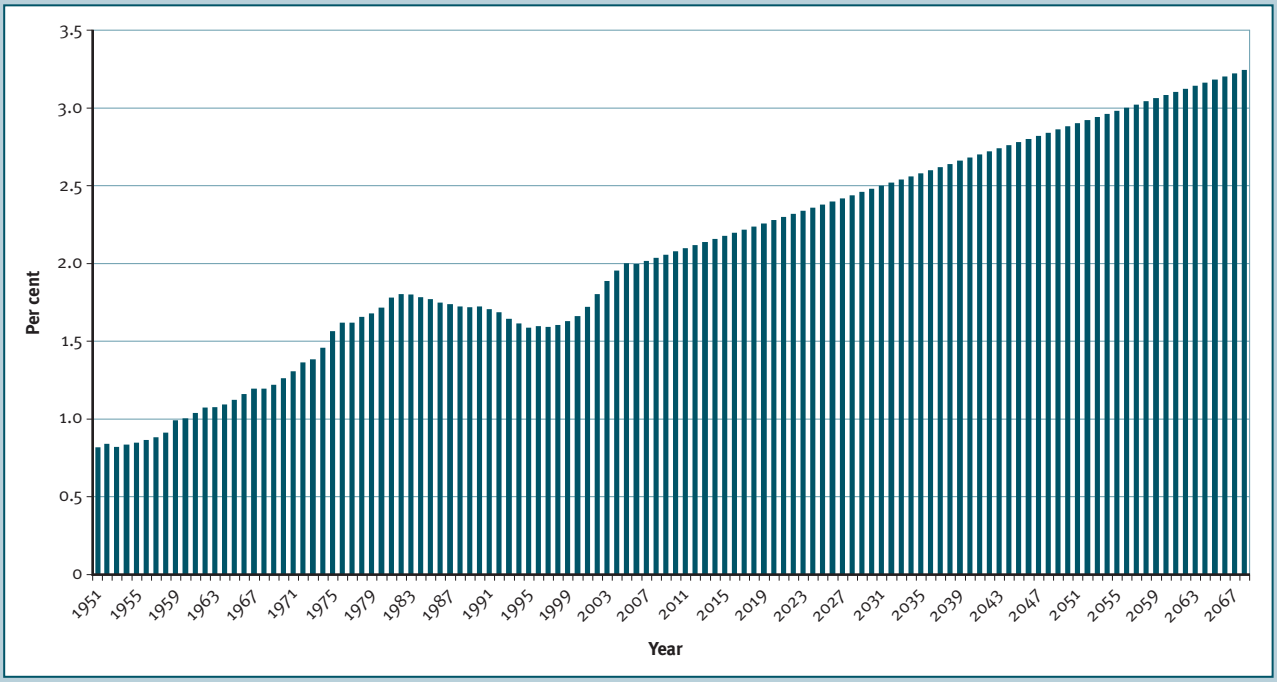
2066

18 UK NHS SPENDING, 1949–2068: PERCENTAGE OF GDP



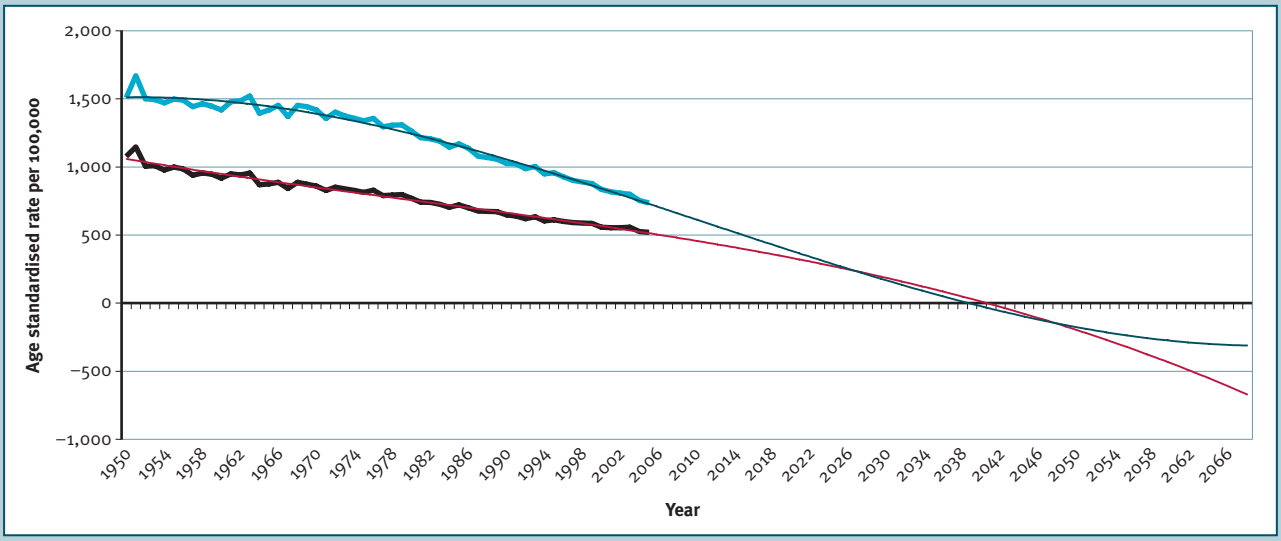
Source: Office of Health Economics (2008); The King's Fund projections.

19 NHS EMPLOYEES AS PERCENTAGE OF UK POPULATION, 1951–2068



Source: Office of Health Economics (2008); The King's Fund projections.

20 TRENDS IN ALL-CAUSE MORTALITY IN ENGLAND AND WALES, 1950–2068



Source: Office of Health Economics (2008); The King's Fund projections.

KEY

- Men
- Women

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