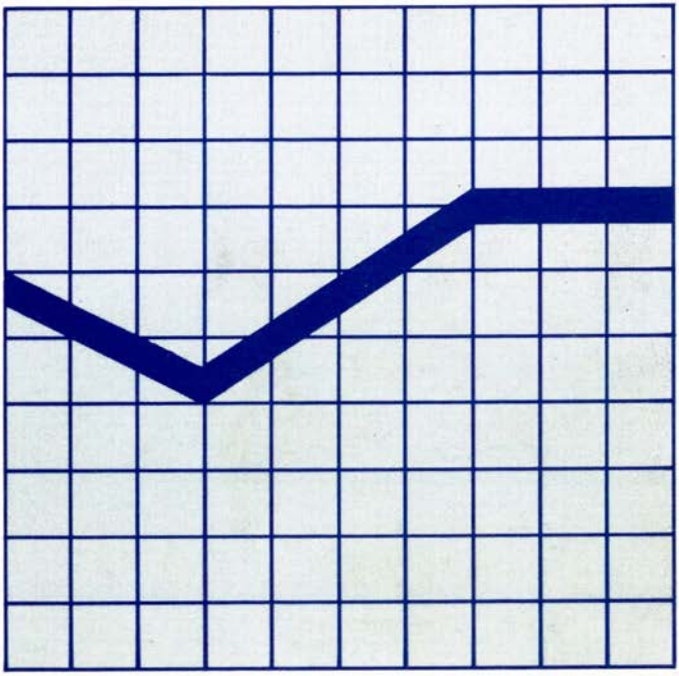
HEALTH EXPENDITURE



IN THE UK

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HEALTH EXPENDITURE

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Office of Health Economics
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This paper was researched and written by **Robert Chew**

Office of Health Economics

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To investigate other health and social problems.

To collect data from other countries.

To publish results, data and conclusions relevant to the above.

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HEALTH SPENDING IN THE UNITED KINGDOM

In the United Kingdom in 1984, the latest year for which information is available, the combined expenditure on health care services by both the public and private sectors rose to a record total of £19 billion, or an average spending of £335 on every person. **Table 1** shows that even when adjusted for general price increases, as measured by a Retail Price Index, per capita health expenditure has advanced in 'real' terms by almost 50 per cent over the amount recorded a decade earlier. In relation to the national output of all goods and services, the Gross National Product (GNP) at the factor cost, the rise was even more rapid, increasing from 5.1 per cent in 1973 to 6.8 per cent in 1984.

The provision of health care services in the United Kingdom is principally dominated by the NHS, as it has been since the inception of the service in 1948. This is reflected in the share of the overall expenditure of which the NHS accounted for some 92 per cent annually. Although the private sector (including consumer

1 UK total health care expenditure

	UK health expenditure				Per head health expenditure		
	NHS £m	Private £m	Other * £m	Total £m	Cash £	At constant prices 1973= 100	UK health spending as % GNP †
1973	3,052	104	208	3,364	60	100	5.06
1974	3,968	122	235	4,325	77	111	5.61
1975	5,301	148	276	5,725	102	118	5.93
1976	6,290	179	313	6,782	121	120	5.89
1977	6,978	220	349	7,547	134	115	5.84
1978	8,006	240	403	8,649	154	122	5.78
1979	9,293	297	484	10,074	179	125	5.85
1980	11,916	388	575	12,879	229	136	6.47
1981	13,729	501	638	14,868	264	140	6.80
1982	14,493	630	710	15,833	281	137	6.67
1983	16,375	700	775	17,850	317	148	6.86
1984	17,337	747	851	18,935	335	149	6.81

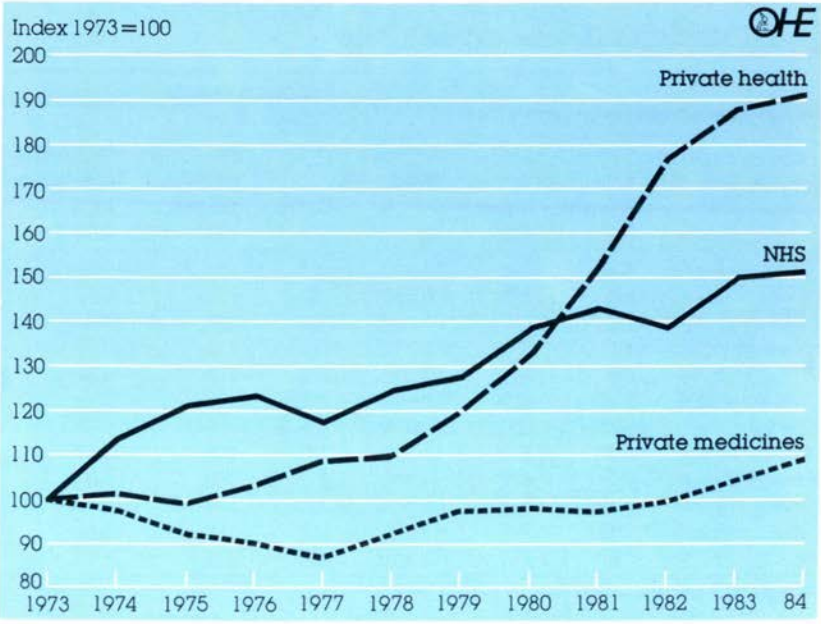
Notes: All figures relate to calendar year.
* Figures relate to consumer spending on non-NHS medicines and medical equipment other than health care.
† At factor cost.

Sources: CSO and NHS Summarised Accounts.

expenditure on medicines and medical appliances without prescriptions) has remained a relatively small section of the total health market, the annual growth of 'real' spending in these combined sectors has generally risen faster than the NHS as a whole. In 1984, their total expenditure in real terms registered an increase of 3.2 per cent as compared with 0.8 per cent in the NHS. In the case of private health (excluding consumer spending on non-prescription medicines), the rise was even more rapid, growing by almost twice the rate of the NHS over the period from 1973 to 1984 **(Figure 1)**.

By international comparisons, the growth of UK's overall health bill during the past decade has been impressive, both absolutely and relative to the general population. **Figure 2** demonstrates that allowing for the variations of health care systems between countries, the rise of health care spending in the UK between 1977 and 1983 has generally been faster than those reported in most of the countries listed. Even when comparing growth in 'real' terms,

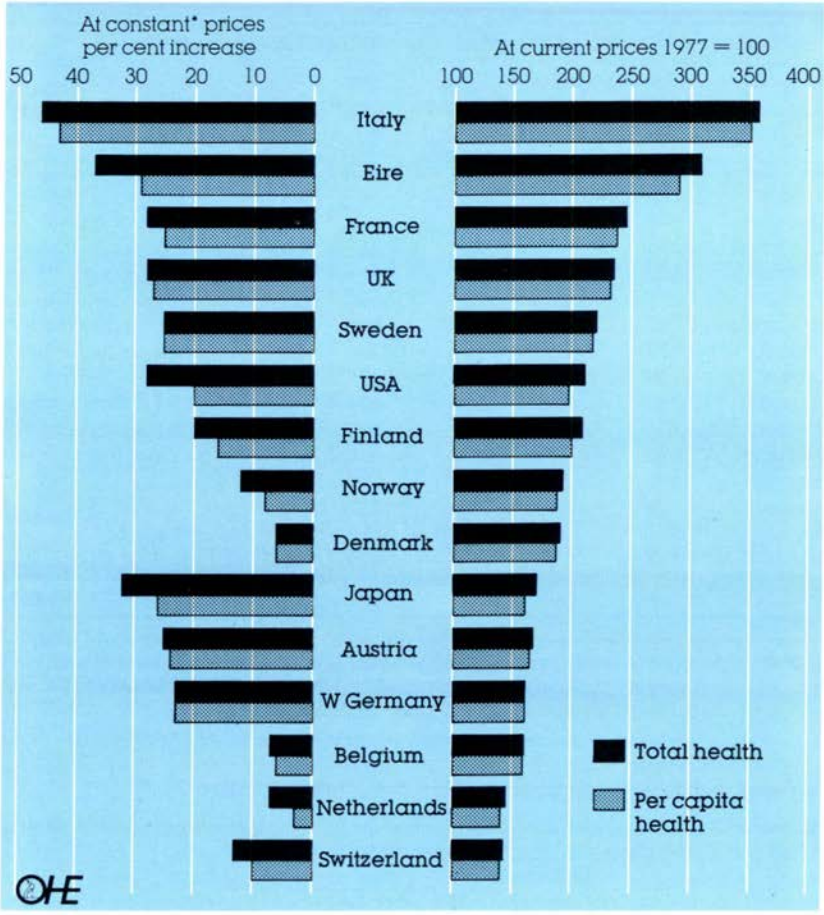
1 UK health care expenditure at constant* prices, index 1973 =100



Note: * All figures have been adjusted by a general price index and hence may include relative price effects.

Sources: CSO and OHE

2 Relative growth of total health care expenditure between 1977 and 1983



Note: * As adjusted by respective Consumer Price Index, in local currencies.

the increase in UK's per capita health expenditure was the greatest among the developed nations after Italy and the Republic of Ireland during the same period.

Yet despite this impressive growth, the United Kingdom continued to remain the smallest health care spender among the Western developed countries, both in relation to its population and to its national wealth. Internationally, this clearly reflects the low level of resource input into health care and the persistent lag recorded throughout the period under review highlights the extent to which other developed countries raised their spending

2 International comparisons of total health expenditure in selected OECD countries, 1983

	GNP at market prices			Health expenditure			
	Growth* 1977=100	per capita £	% change* over 1977	per capita £	% change† over 1977	As % GNP	% change† over 1977
Austria	112	5,818	11	387	24	6.6	9
Belgium	108	5,431	7	345	6	6.4	8
Denmark	106	7,006	6	537	6	7.6	5
Finland	138	7,212	33	441	16	6.7	−2
France	112	6,264	9	506	25	8.1	17
W Germany	110	7,035	10	689	23	9.8	14
Ireland	112	3,118	6	236	29	7.6	28
Italy	110	4,083	9	277	43	6.8	27
Japan‡	129	6,405	23	338	26	5.3	13
Netherlands	104	6,047	0	529	3	8.7	5
Norway	120	8,495	16	609	8	7.1	−8
Sweden	108	7,094	8	702	25	10.0	21
Switzerland	109	10,356	6	727	10	7.1	3
UK	108	5,370	7	315	27	5.8	14
USA	112	9,290	5	999	20	10.7	22
Average 1983 (excl. UK)	114	6,690	11	523	19	7.8	12

Notes: All figures relate to total health expenditure, ie public (or social security/sick funds) and consumer spending on health and drugs privately.
* As adjusted by domestic GDP deflator, in local currencies.
† In local currencies, after adjustment for domestic consumer price increases.
‡ Public expenditure only.

Sources: GNP and population – IMF International Financial Statistics Yearbook 1985.
Health care spending – private communications.

much more readily and swiftly at the same time than did Britain, resulting to an even larger share of their national wealth devoted to health care. The magnitude of such disparity is shown in **Table 2** which reveals that as a proportion of GNP (at market prices), outlay on health care in the United Kingdom in 1983 (5.8[1] per cent) was the lowest among the developed nations in the world, and more remarkably it has remained so since 1977. This means that at least for the past six years, relative spending in the UK has been consistently fallen behind the OECD as well as the European average by as much as 25 per cent annually.

[1]In order to maintain comparability between countries, it is necessary to relate health spending to GNP at market prices. Hence, this figure differs from those shown in **Table 1** which were related to GNP at factor cost.

2α Total health care expenditure expressed as percentage of Gross Domestic Product (GDP)

	1960	1965	1970	1975	1977	1978	1979	1980	1981	1982	1983
Austria	4.4	4.7	5.3	6.4	6.6	6.9	6.9	7.0	7.2	7.3	6.9
Belgium	3.4	3.9	4.1	5.5	6.1	6.3	6.3	6.3	6.2	6.2	6.5
Denmark	3.6	4.8	6.1	6.5	6.7	6.6	6.6	6.8	6.8	6.8	6.6
Finland	4.2	4.9	5.6	5.8	6.6	6.6	6.3	6.3	6.4	6.6	6.6
France	4.3	5.3	6.1	7.6	7.8	8.2	8.3	8.5	8.9	9.3	9.3
Germany W	4.8	5.1	5.6	8.1	7.8	7.8	7.8	8.1	8.3	8.2	–
Ireland	4.0	4.4	5.6	7.7	7.6	7.4	7.8	8.7	8.4	8.2	8.2
Italy	3.9	4.6	5.5	6.7	6.3	6.6	6.8	6.8	7.0	7.2	7.4
Japan	3.0	4.4	4.4	5.5	5.7	5.9	6.1	6.3	6.4	6.6	6.7
Netherlands	3.9	4.4	6.0	7.7	7.8	7.9	8.1	8.3	8.5	8.7	8.8
Norway	3.3	3.9	5.0	6.7	7.1	7.2	6.9	6.8	6.7	6.8	6.9
Sweden	4.7	5.6	7.2	8.0	9.2	9.3	9.1	9.5	9.6	9.7	9.6
Switzerland	3.3	3.8	5.2	7.1	7.2	–	7.0	7.2	–	7.8	–
UK	3.9	4.1	4.5	5.5	5.3	5.3	5.3	5.8	6.1	5.9	6.2
USA	5.3	6.1	8.0	8.6	8.9	8.9	9.0	9.5	9.7	10.6	10.8
Average (exl. UK)	4.0	4.7	5.7	7.0	7.2	7.4*	7.4	7.6	7.7*	7.9	7.9*
UK as % below average	(2)	(12)	(20)	(21)	(27)	(28)	(28)	(24)	(21)	(25)	(21)

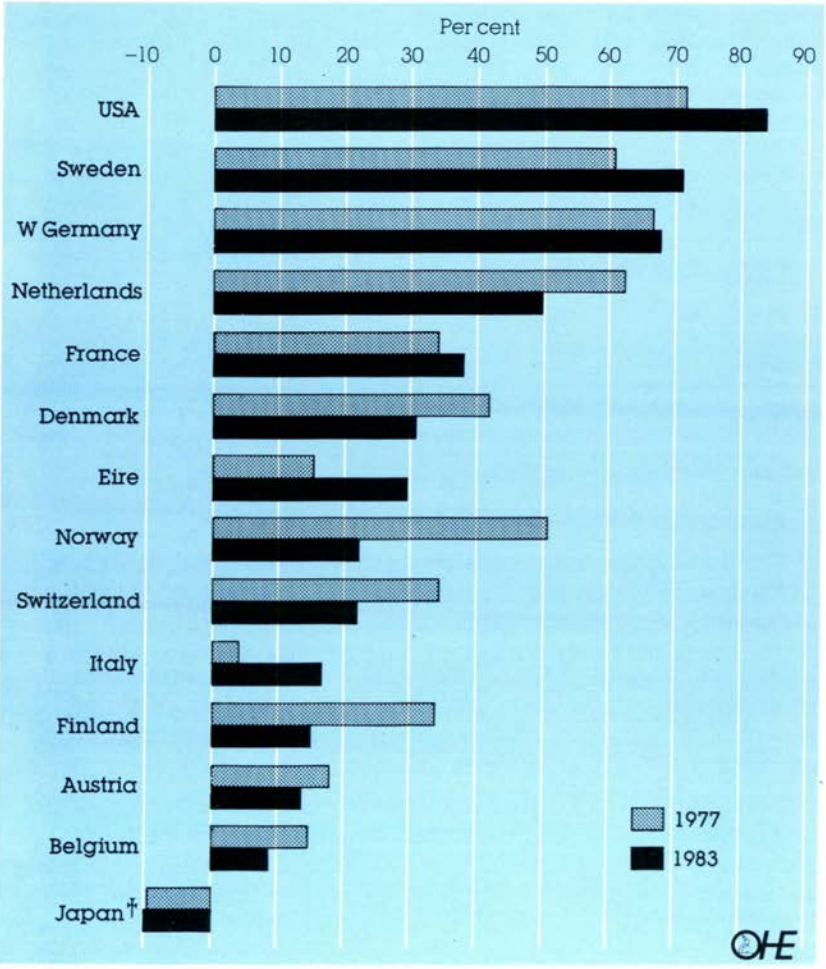
Notes: – indicates figure(s) not available.
* Average excluding country(ies) with no returns.

Source: 'Measuring Health Care 1960-1983', OECD Paris 1985.

This finding strongly correlates to the statistics published recently by the OECD office in a report entitled 'Measuring Health care 1960-1983', despite the fact that the criteria employed to obtain an aggregated total for health care expenditure in each of the countries under review may differ from that used by the OHE. The extent to which the figures varied between the two is also in part explained by relating expenditure to the Gross Domestic Product (GDP) as opposed to GNP. The former, as published in the OECD report, is set out in **Table 2(α).** It confirms that in every year since 1977 the share of GDP devoted to health care in the UK has remained the smallest among the countries listed. In relation to the overall average, the figures suggest that Britain spent proportionally (some 25 per cent annually) less of her wealth on health than her counterparts did in the developed world over the past seven years. This contrasts sharply with the situation recorded in the year 1960 when Britain was one of the nine largest spenders on health care.

The disparity was even more marked and to an extent progressive when compared with major industrialised countries like USA, Sweden, and West Germany where the average expenditure reached 10 per cent of the GNP in 1983, a proportion which was nearly one-half in excess of that in the UK **(Figure 3)**. In richer countries like the Netherlands, France and Denmark the annual

3 Health care expenditure as per cent of GNP* – percentage greater or less than UK's spending in 1977 and 1983



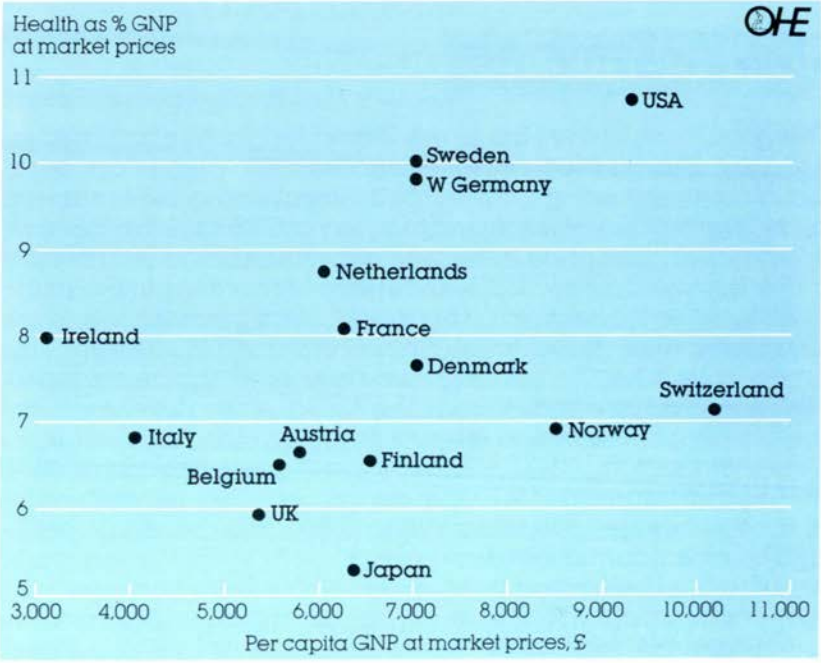
The above have been calculated from the information presented in Table 2.

Notes: * At the market prices
† Public expenditure only.

average allocation for health care rose to around 8.0 per cent of the GNP, one-third more than UK. In fact, Britain devoted considerably less of her GNP on health care than the Republic of Ireland and Italy, despite of her greater wealth (as measured by per capita GNP at market prices in sterling). The only country which apparently spent proportionally below that of the UK during the period was Japan but the reverse holds true if aggregate spending in Japan includes the private health sector (figures for Japan shown in **Table 2** relate to public expenditure only). Even so, in per capita terms, health expenditure there has always been greater than UK's average.

In part, the marked contrast between the level of resource allocation for health care in the UK and other developed nations can be closely linked to the comparatively poor performance of the British economy over the past six years which was also accompanied by the implementation in 1977 of strict control on the annual budget provided for the NHS–the principal supplier of health services in the country. In spite of a near eight-fold rise in revenue (in cash terms) provided by North Sea oil and gas to the

4 Relationship between Health as per cent of GNP and per capita GNP, 1983



national wealth between 1977 and 1983, UK's economy (as measured by the size of GNP) grew by only 8 per cent in 'real' terms **(Table 2)**, contrasted sharply with an average rise of 14 per cent recorded in other developed countries. After allowing for the effects of population growth, the annual rate of economic expansion of these countries still showed an averge increase which was more than 50 per cent greater than of that experienced in the UK during the same period. The relationship between increased wealth and health expenditure between countries is illustrated in **Figure 4** which shows that richer countries with relatively higher national income per head of population generally devoted a greater proportion of their wealth on health care.

An important point which should be emphasised is that the analysis presented above does not take into account of the variations of national purchasing power, differences in the structure, definition, funding and the level as well as quality of output of health care services between countries. All of these complex measures are beyond the scope of this paper whose main objective is to provide general comparisons on the extent to which developed nations have been supporting their health care services financially and in relation to their national wealth over time.

COST OF THE NHS

The gross costs of the NHS in the United Kingdom amounted to £17,337 million in 1984 and it is estimated this total rose to around £18,500 million during 1985. **Table 3** shows that the 1984's expenditure corresponds to an average outlay of £307 for every person. After allowing for price increases, as adjusted by a Retail Price Index, the annual growth of NHS per capita spending in 1984 represented a 'real' rise of only 0.6 per cent. This figure represents the smallest annual growth in NHS resources since the reorganisation in 1974. When comparing total outlay with that recorded in 1949, however, the 'real' costs of the NHS has risen by more than three-fold over the period **(Figure 5)**.

As a proportion of the GNP, the NHS accounted for 6.2 per cent in 1984 as compared with 3.9 per cent in 1949. This means that the NHS has increased proportionally its share of the national wealth by 59 per cent during the same period. In terms of public expenditure (before debt interest), however, NHS funding has risen by only one-tenth of the total from 12 per cent in 1950 to 13 per cent in 1984 **(Figure 6)**. By contrast, the share of public spending devoted

3 UK NHS expenditure as proportion of Gross National Product (GNP)

Year	GNP at factor cost	NHS expenditure			NHS as % GNP	Total NHS cost per head	Gross NHS cost (at 1949 prices)	
		Public	Patients*	Total			Total	Per head
	£b	£m	£m	£m		£	£m	1949=100
1949	11.14	437	—	437	3.92	9	437	100
1950	11.70	477	—	477	4.08	10	463	106
1960	22.88	866	36	902	3.94	17	588	128
1970	44.53	1,979	67	2,046	4.59	37	898	185
1974	77.11	3,865	103	3,968	5.15	71	1,173	238
1975	96.54	5,188	113	5,301	5.49	94	1,262	256
1976	115.13	6,151	139	6,290	5.46	112	1,285	261
1977	129.17	6,815	163	6,978	5.40	124	1,230	250
1978	149.53	7,823	183	8,006	5.35	143	1,303	265
1979	172.34	9,074	219	9,293	5.39	165	1,334	271
1980	199.03	11,620	296	11,916	5.99	212	1,450	294
1981	218.58	13,371	358	13,729	6.28	244	1,493	303
1982	237.24	14,075	418	14,493	6.11	257	1,451	294
1983	260.33	15,904	471	16,375	6.29	290	1,568	318
1984	277.88	16,822	515	17,337	6.24	307	1,581	320

Notes: All figures relate to calendar year.
* Figures relate to NHS charges paid by patients for items such as prescription medicines, dental treatments and glasses, etc.
— Not applicable.
b = Billion (ie thousand million). m = Million.

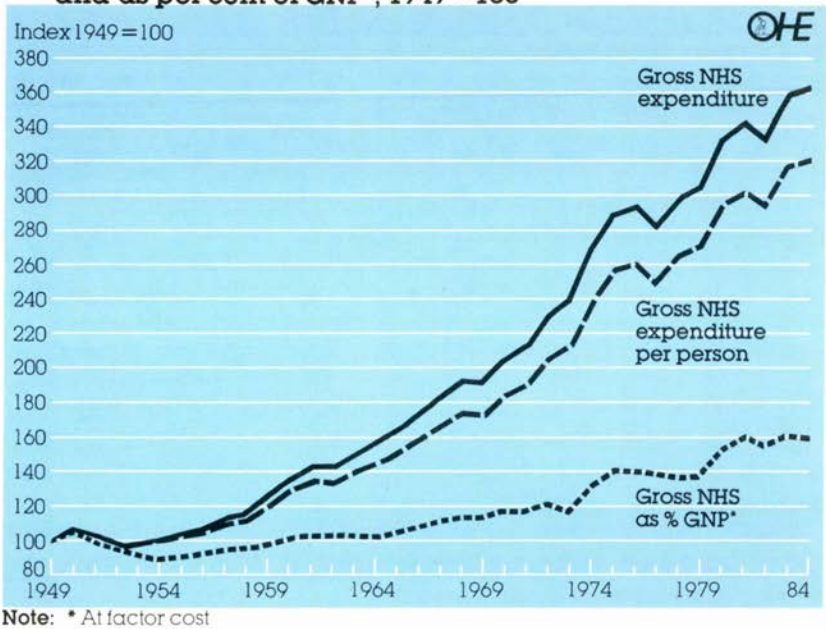
Sources: CSO and Annual Abstract of Statistics.

on education and social security services (eg pensions etc) has increased relatively by nearly 50 per cent and 100 per cent respectively at the same time.

Of the gross NHS cost in 1984, about 86 per cent (£14,947 million) was funded through direct taxation, 11 per cent (£1,875 million) was raised from the NHS contribution (that is via national insurance contributions) and 3 per cent (£515 million) was paid for directly by patients in the form of charges for such items as prescription medicines, dental treatment, spectacles and private treatments in hospitals. Generally, the method of funding the NHS has remained the same for the past three decades or so with nearly all of its resources coming from public funds, that is central taxation.

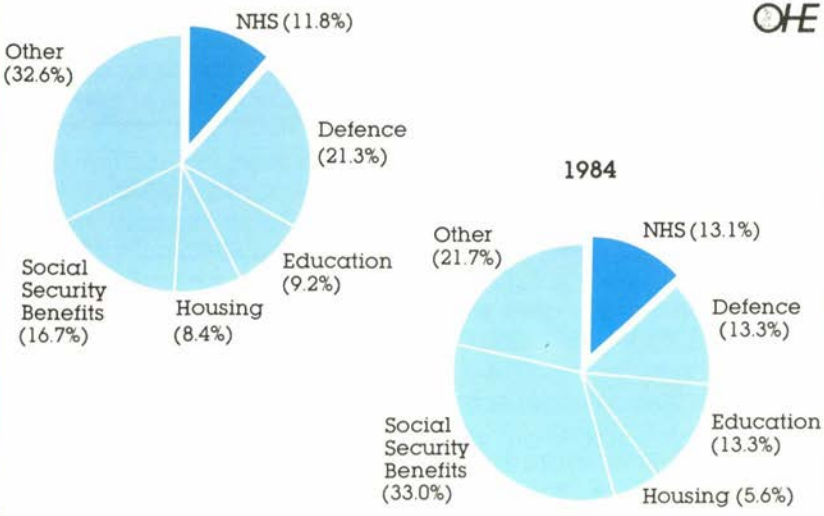
Although income from charges has remained a relatively small contributor to the overall cost of the NHS since they were first introduced in 1951, the amount of revenue raised has grown by

5 Growth of UK gross NHS expenditure at constant prices and as per cent of GNP*, 1949 – 100



Note: * At factor cost

6 UK public expenditure in 1950 by selected sectors



Source: CSO

more than three-fold in 'real' terms between 1952 and 1984. Nearly half of this growth occurred during the past six years and most of the rise has resulted from successive increases in the basic rates beginning in 1979. In the case of prescription medicines, for example, there were six new charges introduced between 1978 and 1984, rising steadily in each year from 20p to £1.60 (£2.00 in 1985 and £2.20 in 1986) for every item dispensed under the NHS. This represents a cash increase of eight-fold during the same period, or a 'real' rise of more than four-fold when adjusted for general inflation. In terms of revenue raised, the effects of new charges introduced were more pronounced in the Family Practitioner Services than in the Hospital and Community Health sector, as reflected in their rising share of the overall contributions which has advanced from 66 per cent in 1978 to 75 per cent in 1984.

About 52 per cent (or £9,014 million) of the gross NHS cost in 1984 went to meet salaries and wages of the labour force directly employed by the health authorities (that is excluding FPC contractors such as family doctors, dentists and opticians etc). This compares with a relative spending of 45 per cent recorded in 1954 and 51 per cent in 1974. To an extent, the recent expansion of NHS pay bill reflects the growth of manpower engaged in the health services which was in part associated with the reduction of the number of working hours in certain categories of hospital staff.

According to the Central Statistical Office (CSO), the direct employed labour force of the NHS, in terms of headcount, reached a record total in 1983 to 1.227 million people. Although there was a slight reduction on this figure in 1984, the NHS continued to remain the largest employer of a publicly run service in the country after education, employing nearly twice as many people as in 1964. **Table 4** shows that the numerical expansion of manpower in the NHS has been the fastest among the major public sectors during the past two decades.

The great majority of staff employed directly by the NHS worked in the hospital and community health sections. **Table 5** presents a general breakdown of the labour force directly employed in England as whole-time equivalents. It shows that between 1974 and 1984, every department in the health service increased its staff numbers. Among those listed, nurses and midwives recorded the greatest increases with 83,400 new staff added to the work force, a net gain representing more than half of the total of 157,500 additional NHS staff. (Part of this growth has resulted from the reduction of working hours per week introduced in 1980). Marked rises in staff numbers also occurred in the

4 UK public † employees (central government and local authorities)

Thousands

Mid-Year	Defence	NHS	Education	Social Services	Con-struction	Police	All public*
1964	424	627	925	200	124	116	3,860
1974	345	963	1,496	272	135	168	4,930
1979	314	1,152	1,539	344	156	176	5,384
1980	323	1,174	1,501	346	152	181	5,349
1981	334	1,207	1,454	350	143	186	5,318
1982	324	1,227	1,434	352	132	186	5,265
1983	322	1,227	1,434	360	130	187	5,263
1984	326	1,223	1,430	368	126	187	5,242
% change							
1974-1984	−6	27	−4	29	−2	11	7
1964-1984	−24	96	55	76	6	60	36

Notes: All figures relate to headcount.
† Excluding employees in public corporations (ie nationalised industries)
* Figures include certain public departments not listed.

Source: CSO

5 NHS directly employed staff (WTEs), England (30 September)

	1974	1984	Net gains 1974-1984	Salaries & wages 1983/4†
Medical & dental	31,500	40,200	8,700	13.7%
Nursing & midwifery*	314,100	397,500	83,400	44.5%**
Professional & technical	43,600	72,700	29,100	9.2%
Works professional	4,700	6,000	1,300	0.6%
Maintenance	17,000	20,200	3,200	2.9%
Administrative & clerical	82,800	110,300	27,500	11.2%
Ambulance	16,600	18,100	1,500	2.7%
Ancillary	163,400	166,200	2,800	15.3%
Total employed	673,700	831,200	157,500	£6,352 million‡

Notes: WTEs = Whole-time equivalents.
† Financial year ending 31 March.
* Including agency staff and health visitor students (not adjusted for reduction in working hours in 1980, from 40 to 37.5 hours per week).
** Excluding agency staff.
‡ Excluding chairman's remuneration.

Sources: NHS Summarised Accounts 1983/4 and Health Service Report 1985.

departments of administrative and clerical, and professional and technical staff. Together with nurses and midwives, they accounted for 70 per cent (65 per cent in 1974) of all the staff directly employed in the health service in 1984. In terms of the overall NHS pay bill, their combined total accounted for 64 per cent during the financial year 1983/4. The smallest rises in staff numbers were in the ambulance and ancillary services. The latter have over the past three years been subjected to competition from outside organisations offering contractual services to hospital authorities. In part, this has resulted to a steady decline in the ratio of ancillary staff to NHS total manpower, dropping from 24 for every 100 persons employed to 20 between 1974 and 1984.

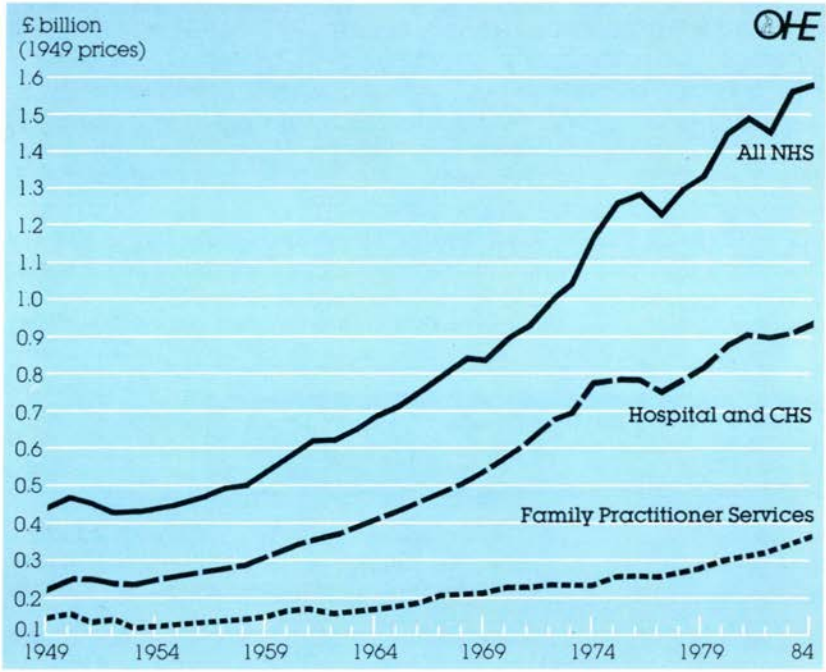
HOSPITAL AND COMMUNITY HEALTH SERVICES

Since the beginning of the financial year 1976/77, expenditure on the hospital and community health services has been subject to a cash limit set by the Department of Health. Although this has brought about strict control on the growth of spending, the annual budget allocated to these combined services continued to account for the largest slice of all the resources made available to the health service every year. On average, they absorbed some two-thirds of the gross NHS expenditure annually.

In the hospital sector, excluding community health, the costs of providing patient care services in the United Kingdom during 1984 amounted to approximately £10,265 million, or a 'real' increase of four-fold over the total outlay recorded in 1949. This indicates that over the period the growth of the hospitals budget had risen at a faster rate than total NHS resources, as well as the aggregate expenditure on the Family Practitioner Services **(Figure 7)**. As a result, hospitals' share of the gross NHS expenditure advanced from 51 per cent in 1949 to 59 per cent in 1984. However, as **Table 6** shows, hospital spending in recent years has been frozen at a fairly steady level of around 60 per cent of the NHS resources, reflecting the marked success of a 'cash limit' programme on controlling its rate of growth.

Of the total amount spent by the hospital authorities in 1984, about 7 per cent was devoted to capital investment, e.g. building new hospitals to replace or extend existing ones. The bulk of the remainder went to revenue expenditure covering such items as salaries and wages and patient care services etc. On average,

7 Gross costs of NHS at 1949 prices, UK



Notes: All figures relate to calendar year and have been adjusted by a general price index. Hence they may include relative price effects.
CHS = Community Health Services

Sources: Annual Abstract of Statistics and NHS Summarised Accounts

the proportion of spending allocated between capital and revenue programmes has remained fairly constant since the implementation of a 'cash limit' in 1976 (1977 for capital), although in absolute terms capital funding has expanded considerably in recent years. According to figures published by the Social Services Committee, capital expenditure in volume terms (that is after adjustment for specific price increases) grew by 23 per cent in England between the financial years 1978/9 and 1983/4, contrasted with a 4 per cent rise in the revenue account.

The long term trend of NHS capital stock in the United Kingdom has generally been a declining one, dropping steadily every year since 1960 from a total number of more than 3,000 fully operational hospitals (both psychiatric and non-psychiatric hospitals) to around 2,500 in 1984. This represents a reduction of about 17 per cent during the period. It implies that capital resources have been used more on expanding or creating new

6 NHS gross expenditure–proportion spent on each services

Year	Hospital Services	Community Health Services †	Family Practitioner Services				Other Services*
			Pharmaceutical	General Medical	General Dental	General Ophthalmic	
	%	%	%	%	%	%	%
1949	51.3	7.3	7.6	10.1	10.3	5.3	8.2
1950	54.9	7.8	8.4	10.1	9.9	5.2	3.8
1960	57.2	9.1	10.1	10.0	6.3	2.0	5.3
1970	65.2	7.1	10.2	8.7	5.0	1.4	2.4
1974	66.3	5.7	8.6	6.5	4.3	1.0	7.3
1975	62.2	6.1	8.5	6.5	4.1	1.4	11.1
1976	60.9	6.1	9.0	6.1	3.9	1.2	12.8
1977	61.2	6.1	9.9	6.1	3.7	1.2	11.8
1978	60.0	6.0	10.3	5.9	3.5	1.1	13.2
1979	61.1	6.2	9.9	6.1	3.9	1.1	11.9
1980	60.4	6.3	9.4	6.3	3.9	1.0	12.7
1981	60.7	6.3	9.3	6.5	3.9	1.0	12.3
1982	62.0	6.5	10.1	6.9	4.1	1.1	9.2
1983	58.2	6.3	9.9	6.7	4.0	1.6	13.3
1984	59.3e	6.4e	10.1	7.1	4.1	1.1	11.9

Notes: Component items may not add up to totals because of rounding.
† Prior to 1974, figures relate to former Local Health Authority Services.
* Includes headquarters administration (RHAs, DHAs, Health Boards and Boards of Governors), central administration, ambulance services, mass radiography services, etc, and centrally financed items such as laboratory, vaccine and research and development costs, etc, not falling within the finance of any one service. Figures from 1974 onwards are not strictly comparable with earlier years.
e Estimated figures.

Sources: Annual Abstract of Statistics and NHS Summarised Accounts.

departments (eg accident and emergency unit) within existing hospitals than on building new replacement hospitals. The national experience was shared by the great majority of regional health authorities **(see Table 8)**.

For the country as a whole, the declining trend of the NHS hospitals was also accompanied by a 15 per cent reduction in the number of available beds between 1975 and 1984. In absolute terms, total UK NHS beds fell from around 497,000 to 431,000 beds during the same period, corresponding to a drop from 8.8 to 7.6 beds per 1,000 population **(Table 7)**. Even with fewer beds, there were record numbers of patients treated in NHS hospitals **(Figure 8)**. In terms of throughput, as measured by in-patients treated per available bed per year the ratio rose by one-third from 13 in 1975

7 UK hospital statistics

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	% change 1975-84
Per 1,000 population											
Available beds	8.8	8.7	8.5	8.4	8.2	8.1	8.1	8.0	7.9	7.6	−14%
In-patients treated	111	117	118	119	120	125	127	127	132	136	23%
Out-patients attendances	1,008	974	992	1,000	1,010	1,031	1,044	1,050	1,070	1,087	8%
In-patients per bed	12.5	13.4	13.9	14.2	14.5	15.4	15.8	15.8	16.7	17.8	42%
Nursing & midwifery staff (WTE)											
Per 100,000 population	743	757	757	774	790	813	848	854	855	850	14%
Per 1,000 available beds	840	870	885	923	958	1,000	1,051	1,064	1,079	1,114	33%
In-patients per staff	14.9	15.4	15.7	15.4	15.2	15.4	15.0	14.8	15.5	16.0	7%
Out-patients per staff	136	129	131	129	128	127	123	123	125	128	−6%
Medical & dental staff											
Per 100,000 population	62	64	65	68	70	72	74	75	76	77	24%
Per 1,000 available beds	70	73	77	81	85	89	91	93	96	100	43%
In-patients per staff	178	184	181	176	170	174	173	169	173	177	−1%
Out-patients per staff	1,627	1,530	1,515	1,479	1,437	1,429	1,419	1,403	1,403	1,418	−13%
Waiting list (Great Britain)											
Per available beds	1.4	1.5	1.5	1.7	1.8	1.7	1.7	2.0	1.9	2.0	39%
Hospital expenditure (net revenue + capital)											
Per UK population	£59	£68	£76	£86	£101	£128	£148	£160	£169	£182	210%
At 1975 prices*	£59	£58	£56	£59	£61	£65	£68	£67	£68	£70	19%

Note: * As adjusted by a general price index and hence may include relative price effects.

Sources: Annual Abstract of Statistics and NHS Summarised Accounts.

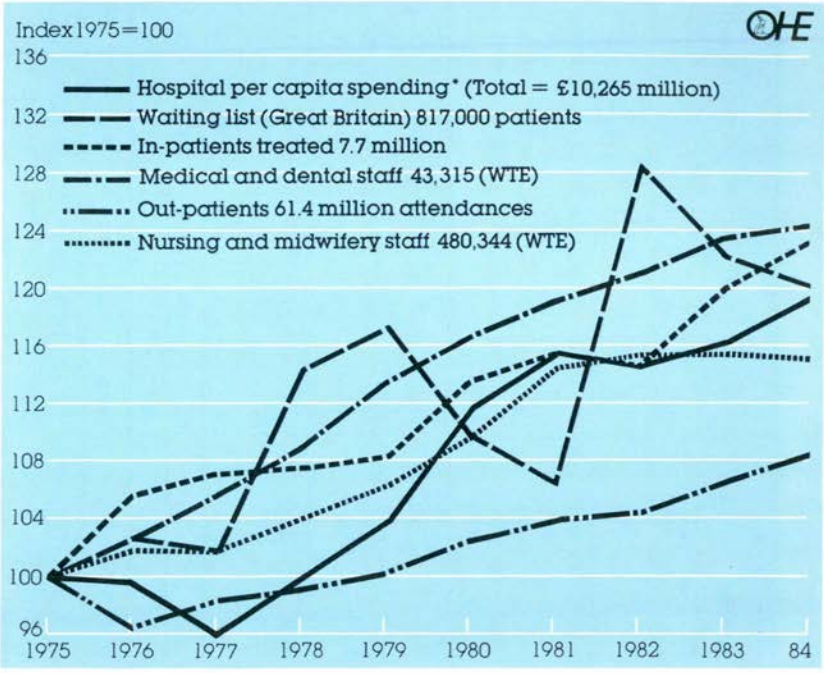
8 NHS hospital statistics, 1983 with percentage change 1975-83

	NHS hospital (Number)	% change 75-83	Available beds Rate ‡	% change 75-83	Doctors† /1,000 beds	% change 75-83	IP per doctor	% change 75-83	total cost†† £m	% change 75-83	% 'real' ‡‡ change
United Kingdom	2,508	−10%	7.8	−10%	103	35%	164	−1%	9,713	175%	10%
England*	1,923	−11%	7.3	−12%	105	36%	167	0%	7,721	171%	9%
Northern	128	−16%	8.0	−9%	97	42%	170	−8%	492	181%	13%
Yorkshire	155	−14%	7.8	−12%	88	48%	199	−6%	555	172%	9%
Trent	185	−11%	6.6	−7%	101	56%	176	−11%	675	185%	15%
E Anglia	90	−6%	6.8	−7%	101	33%	174	−1%	276	182%	13%
N W Thames	101	−24%	7.3	−19%	116	19%	139	12%	594	137%	−5%
N E Thames	121	−12%	7.7	−11%	130	36%	141	−1%	761	181%	13%
S E Thames	138	−13%	7.4	−16%	110	33%	164	6%	653	155%	3%
S W Thames	115	−10%	8.0	−22%	86	36%	161	2%	486	136%	−5%
Wessex	154	− 3%	6.5	−14%	93	28%	194	6%	411	191%	17%
Oxford	88	−15%	5.4	−19%	133	44%	163	−5%	310	161%	5%
S Western	223	−6%	7.6	−10%	87	39%	189	0%	488	187%	15%
W Midlands	203	−2%	6.7	9%	97	30%	185	4%	762	180%	13%
Mersey	74	−26%	8.2	−13%	92	41%	171	−2%	409	157%	3%
N Western	128	−10%	7.6	−4%	107	37%	180	0%	681	195%	19%
Wales	167	−10%	8.2	−7%	91	45%	188	−10%	498	183%	14%
Scotland	336	−6%	11.1	−5%	94	27%	145	−6%	1,146	184%	14%
N Ireland	82	−9%	10.8	−4%	117	38%	130	−14%	347	218%	28%

Notes: Due to lack of latest regional data, the reference year used is slightly inconsistent with other Tables. IP = In-patients treated. ‡ Per 1,000 population. * Including Boards of Governors. † Figures relate to numbers of medical staff, excluding hospital practitioners and Para. 94 appointments. †† Figures relate to net revenue and capital (including community health) expenditure in financial year. ‡‡ As adjusted by a general price index and hence may include relative price effects.

Sources: Annual Abstract of Statistics and NHS Summarised Accounts.

8 Hospital Services, 1975-1984, UK



Notes: WTE = Whole-time equivalent.

* Figures relate to gross cost and have to be adjusted by a general price index and may include relative price effects.

Sources; Annual Abstract of Statistics and NHS Summarised Accounts.

to 18 in 1984. In the out-patient departments, the total number of attendances increased during the same period by 8 per cent from 1,008 to 1,087 per 1,000 population.

However, the rise in hospital output over the past years has been achieved with more than proportional growth of manpower employed in every department. The number of medical and dental staff (in whole-time equivalents) employed in the UK expanded by nearly a quarter between 1975 and 1984 to reach a new record of 43,315 staff. In terms of hospital beds, their totals grew appreciably (partly as a result of reduction of working hours for junior doctors in recent years), increasing from 70 to 100 medical and dental staff for every 1,000 beds. This corresponds to a 43 per cent rise in the ratio of staff to NHS beds during the same period. Yet despite this rapid growth, the average output (as measured by the number of patients treated) of each medical

and dental staff fell by 1 per cent in the in-patient department and by 13 per cent in the out-patient department **(Table 7)**.

The number of nurses and midwives employed (in whole-time equivalents) in UK NHS hospitals grew at a slower rate than that of the medical manpower between 1975 and 1984. In total, they rose by 15 per cent from 417,542 to 480,344 (or a rise from 743 to 850 for every 1,000 population). Relative to the number of hospital beds, this represents an increase of 33 per cent from 840 to 1,114 staff for every 1,000 available beds. On balance, the number of in-patients under the care of each member of the nursing and midwifery staff rose by an average of 7 per cent, but between them they had 6 per cent fewer out-patients to attend to in 1984 than they did in 1975.

In terms of expenditure per patient, for the country as a whole, the average amount spent more than doubled in cash terms between 1975 and 1984. Even when adjusted for price increases, per capita hospital outlay registered a 'real' rise of 19 per cent during the same period. However this is overshadowed by the long waiting list which has grown from 660,000 to 817,000 patients (or a 20 per cent increase) betwen 1975 and 1984 in Great Britain. It has been calculated that such an expansion means that by the end of 1984, there were on average two patients awaiting for admission for each occupied bed in NHS hospitals, well over a third in excess of that reported in 1975. The persistently long waiting lists must mean that the demand for medical care from these patients will bring pressure on the family practitioner services including the pharmaceutical services.

FAMILY PRACTITIONER SERVICES

The Family Practitioner Services (FPS) normally provide the first point of access to health care in the NHS. They include the general medical (family doctors), pharmaceutical, dental and ophthalmic services. With the exception of the former which is entirely free at time of contact, there is a basic charge (or co-payment) for these services.

In 1984, the gross cost of FPS services amounted to about £3,881 million or 22 per cent of the total NHS outlay. **Table 9** shows that the share of the FPC expenditure had fallen proportionally by about a third compared to the figure recorded in 1949 when total FPS spending accounted for 33 per cent of all the NHS costs. This

9 Gross costs of Family Practitioner Services (FPS), UK

	FPS Services	FPS Per head	FPS costs as % NHS	Cost per head (£) at 1949 prices * Index 1949=100	
	£m	£		FPS	H&CHS
1949	145	2.90	33.2	100	100
1950	160	3.19	33.5	107	113
1960	256	4.89	28.4	110	145
1970	518	9.31	25.3	141	228
1980	2,458	43.65	20.6	183	335
1981	2,843	50.43	20.7	189	346
1982	3,236	57.44	22.3	198	344
1983	3,642	64.60	22.2	213	350
1984	3,881	68.70	22.4	216	357

Notes: All figures include patient payments.
* All figures have been adjusted by a general price index and hence may include relative price effects.
H&CHS = Hospital and community health services (formerly Local Health Authorities prior to 1969).

Sources: Annual Abstract of Statistics and NHS Summarised Accounts.

reflects a steady decline in the 'real' rate of growth in FPS outlay relative to other sectors of the NHS (see **Figure 7**). In 1949, FPS expenditure was equal to 57 per cent of hospital budget; by 1984 this had dropped to 38 per cent. As a result of the disparity in growth, hospitals now cost nearly three times as much to maintain as the FPS.

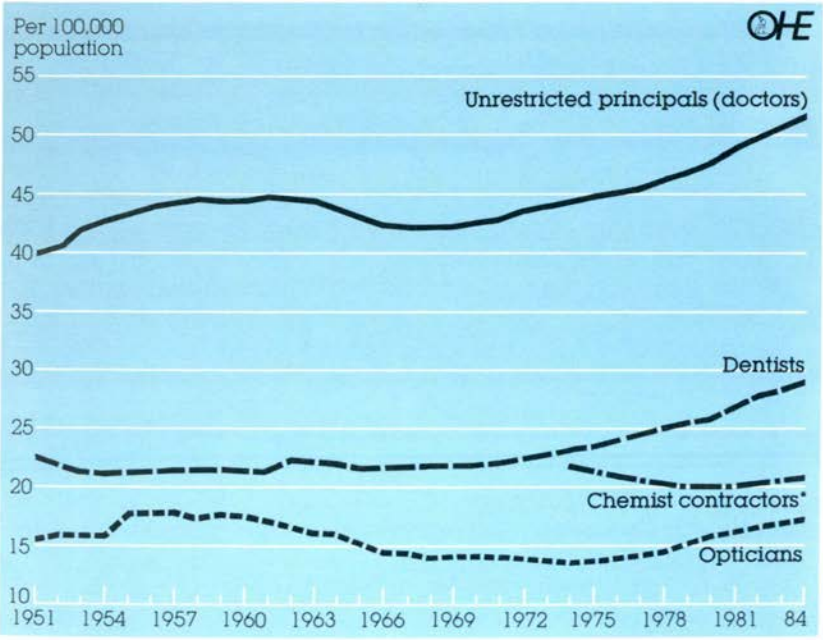
Of the total NHS expenditure in 1984, about 7 per cent (or £1,231 million) was absorbed by the general medical services. This compares with an annual average of around 6 per cent reported during the decade ended in 1983. But when comparing 1984's figure with the 10 per cent recorded in 1949, this means that the general medical services accounted for a third less of the NHS resources in 1984 than in 1949. In 'real' terms, however, expenditure on the general medical services has risen more than two-fold between 1949 and 1984.

About 31,700 family doctors (including principals, assistants and trainees) worked in the FPS sector in the United Kingdom in 1984. Some 92 per cent of them were contracted to provide unrestricted medical services to NHS patients. Between 1951 and 1984, the number of unrestricted principals (that is excluding assistants and trainees) has risen by 44 per cent from 20,179 to 29,152 doctors. This contrasted sharply with a four-fold expansion in medical and dental staff (WTEs) employed in hospitals during the

same period. Nevertheless, the rise has meant that the number of doctors accessible to the general public had improved by more than a quarter, as indicated by a rise in the ratio from 40 to 52 doctors per 100,000 population **(Figure 9)**. As a result, the average list size fell to a new record low of 2,080 in 1984, compared with 2,484 in 1951.

The number of dental practitioners grew at a slightly faster rate than family doctors, rising by 47 per cent from a total of 11,279 to 16,623 between 1951 and 1984. (The long term ratio of two doctors to one dentist has however remained unchanged). In terms of output, the number of dental treatments increased substantially from 12 million to 36 million courses. Even when allowing for the effects of population growth, total treatments given registered a three-fold increase from 23 to 64 courses for every 100 persons **(Figure 10)**. In 1984, the gross cost of these treatments amounted to £710 million in the United Kingdom, almost double the amount

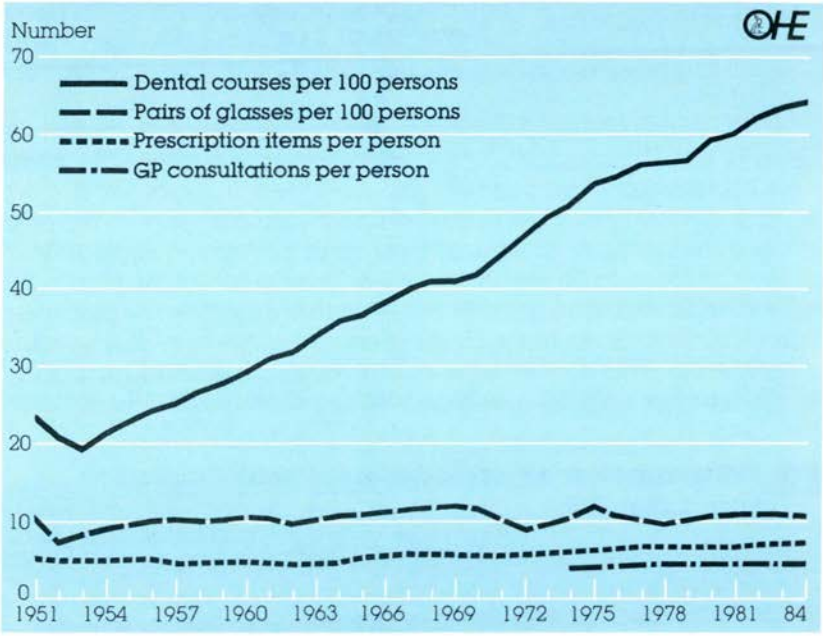
9 FPS manpower expressed as per 100,000 home population, UK



Note: An unrestricted principal is a family doctor who undertakes to provide unlimited medical services.
* Including drug stores and appliance contractors.

Sources: Annual Abstract of Statistics and Health Statistics in UK.

10 **Demand for FPC services expressed as per head/100 home population, UK**



Sources: Annual Abstract of Statistics, DHSS and General Household Survey.

spent in 1951 in 'real' terms. As a proportion of total NHS expenditure, however, the general dental services fell from 8 per cent to 4 per cent during the same period.

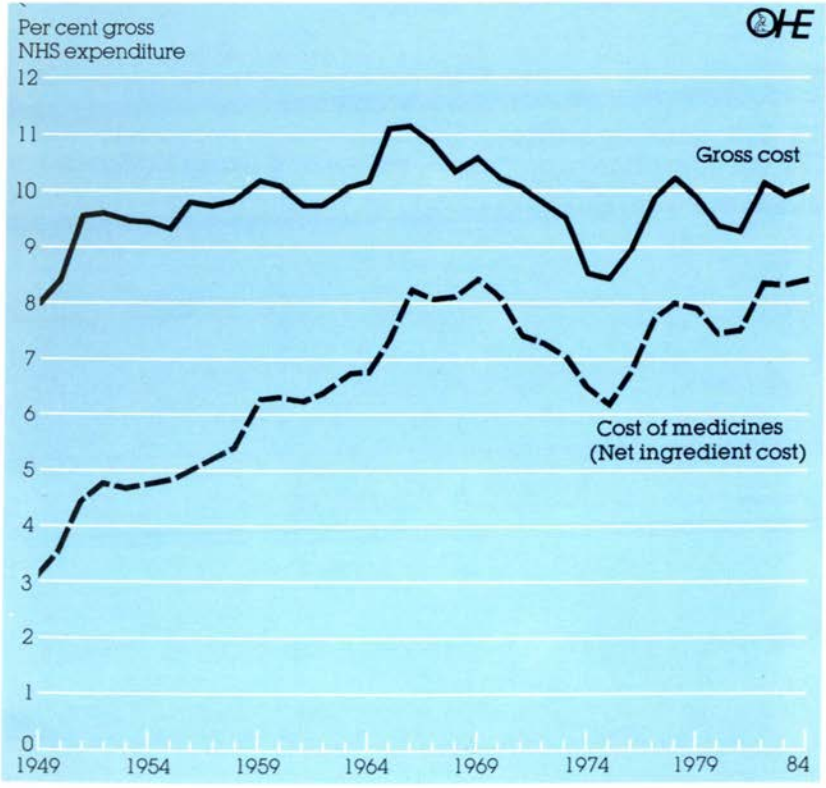
Ophthalmic services have similarly decreased their share of the NHS resources, although in 'real' terms the total cost has risen more than two-fold. They dropped from around 3 per cent in 1951 to 1 per cent in 1984. With the part-privatisation of this sector in operation during 1985, it is likely that this proportion will diminish further in years to come. About half of the £190 million spent in 1984 went to sight tests, the number of which rose to more than 11 millions in that year. In terms of glasses dispensed under the NHS, the ratio to population has remained fairly stable over the past three decades at around one pair for every ten persons.

In the pharmaceutical services the demand for medicines via prescriptions dispensed by chemist and appliance contractors expanded by 55 per cent from 256 to 398 million items between 1951 and 1984. After adjustment for population growth, this corresponds to a more than one-third rise from five items per person to seven items during the same period.

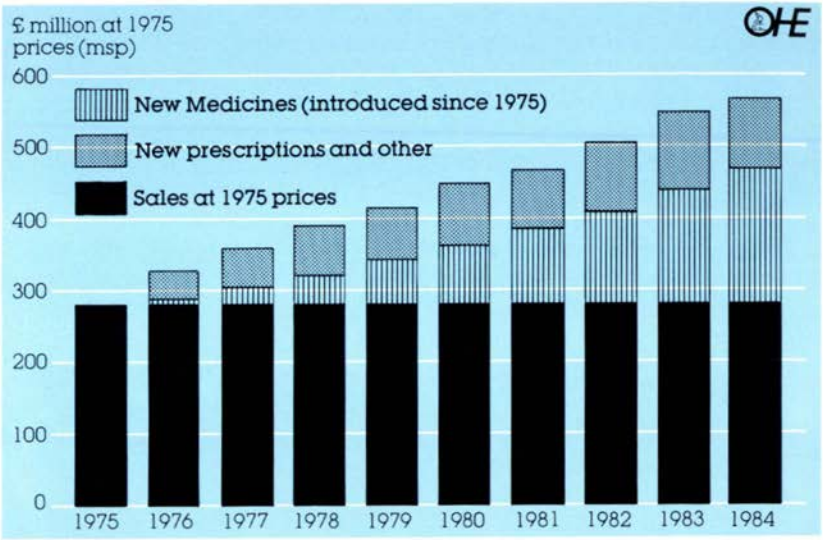
In part, the steady expansion of demand for prescription medicines was responsible for the rise of the gross cost of pharmaceutical services. In 1984 these amounted to £1,748 million (including the labour costs of pharmacists as well as medicine costs). This figure represents 10 per cent of UK NHS total expenditure, a proportion which has remained fairly constant over the past three years. In fact when comparing with that of 1966, as **Figure 11** shows, current pharmaceutical spending relative to the overall NHS costs fell by one-tenth in proportional terms.

Of the gross expenditure recorded in 1984, £1,456 million went to the ingredient cost of the medicines and the remainder of £292 million represented payments to pharmacists in the forms of dispensing fees, on-cost and other allowances. In total, FPS medicines dispensed via prescriptions, or net ingredient cost (NIC), cost on average £3.68 for every item in 1984. This represents a

11 Total cost of Pharmaceutical Services and medicine costs as per cent of NHS expenditure, UK

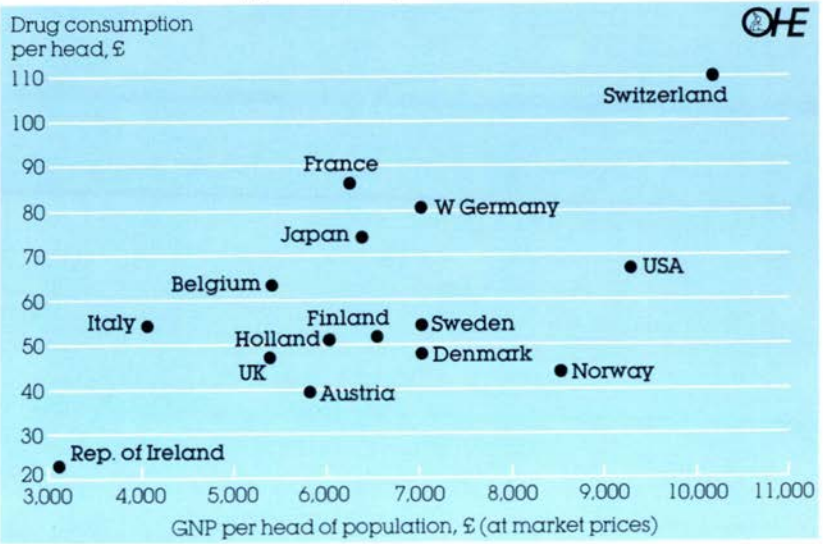


12 Component share of real growth of NHS medicines bill (Pharmaceutical Services), UK



Source: OHE

13 Relationship between pharmaceutical per capita consumption at consumer prices and Gross National Product (GNP) per capita, 1983.



Source: OHE

'real' rise of 3 per cent over 1983. **Figure 12** shows that apart from rises in prices and demand, new medicines (introduced since 1975) have also contributed substantially to the increase in the cost of pharmaceutical services in 1984, in terms of NIC.

For the NHS as a whole, overall expenditure on medicines (including payments to FPS pharmacists, dispensing doctors and hospital purchases) amounted to £37 for every person in the United Kingdom in 1983. When this is added to the costs of medicines purchased privately (or over-the-counter purchases), the aggregate represents an average outlay of £47 per person. **Figure 13** shows that in 1983, the latest year for which information is available for international comparisons, UK' per capita spending was one of the smallest among the industrial nations. Major countries like West Germany, Switzerland, and the USA apparently spent one half more on medicines on each person than did Great Britain, allowing for some distortions arising from exchange fluctuations.

PUBLIC EXPENDITURE PLAN

According to the latest White Paper (Cmnd 9702-II) on the government's expenditure plans, public spending (that is expenditure net of income received from certain charges) on the NHS in England is planned to grow by a steady declining annual rate beginning from the current financial year 1986/7 up to 1988/89. When discounting the effects of inflation (as measured by a GDP deflator), which is also assumed to fall steadily in the next three years, these figures indicate that the planned rise of resource input into the NHS will be 2.1 per cent in 'real' terms in 1986/87, dropping to 1.3 per cent in 1987/88 and to 1.2 per cent in 1988/89 **(Table 10).** In spite of the squeeze on NHS resources, however, health spending over the next three years appears rather well protected from the overall cuts in public expenditure as a whole, maintaining its constant share of the total at about 13 per cent.

Further analyses on the planned expenditure figures reveal that the hospital sector (including Community Health Services) will contribute fully to the steady reduction of the relative growth of NHS resources, although in absolute terms it will continue to absorb the largest share of the annual allocations. The current plan indicates that by the end of the eighties, the annual rate of growth resources available to the hospital sector will have to be

10 Government Expenditure Plan on NHS, England

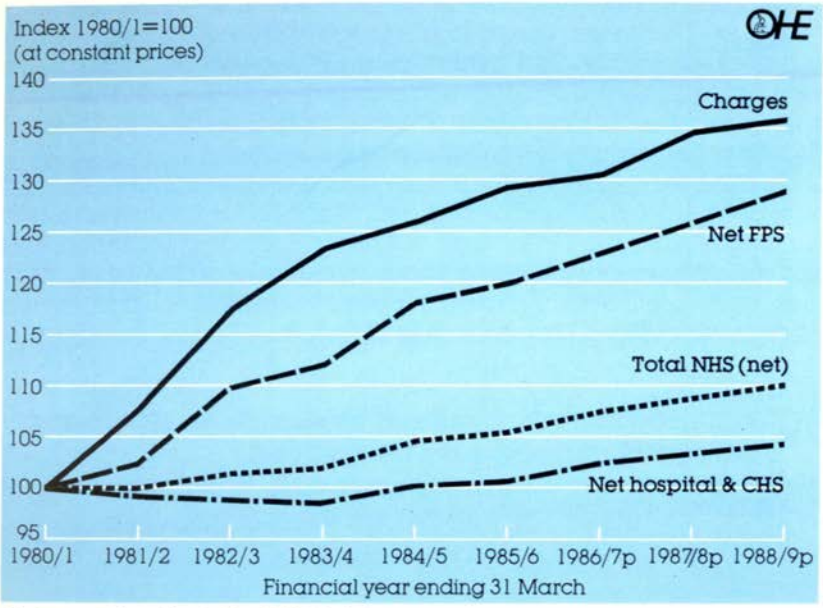
(Cash £ million)

	1980/81 outturn	1981/82 outturn	1982/83 outturn	1983/84 outturn	1984/85 outturn	1985/86 Estimated outturn	1986/87 Plans	1987/88 Plans	1988/89 Plans
Current–net expenditure									
Hospital & CHS	6,909	7,616	8,178	8,593	9,083	9,631	10,280	10,750	11,190
FPS	1,980	2,270	2,612	2,801	3,083	3,286	3,517	3,730	3,940
Central	260	297	330	381	423	453	491	510	510
Total current	9,149	10,183	11,120	11,775	12,589	13,370	14,288	14,990	15,640
Capital–net expenditure									
Hospital & CHS	540	650	672	681	753	743	765	790	810
FPS	5	5	6	7	7	10	11	10	10
Central	7	18	21	30	33	30	17	20	20
Total capital	552	673	699	718	793	783	793	820	840
Total NHS	**9,701**	**10,856**	**11,819**	**12,493**	**13,382**	**14,153**	**15,081**	**15,810**	**16,490**
Annual % growth	18.8%	11.9%	8.9%	5.7%	7.1%	5.8%	6.6%	4.8%	4.2%
Less inflation *	19.9%	11.9%	7.4%	5.1%	4.4%	5.0%	4.5%	3.5%	3.0%
% 'Real' growth	8.9%	0.0%	1.5%	0.6%	2.8%	0.8%	2.1%	1.3%	1.2%
Charges									
Hospital & CHS	54	64	66	74	74	82	86	90	90
FPS	192	234	282	309	336	362	382	410	430
Central	7	7	9	11	10	9	9	10	10
Total charges	253	305	357	394	420	453	477	510	530
Annual % growth	37.5%	20.6%	17.0%	10.4%	6.6%	7.9%	5.3%	6.9%	3.9%
Less inflation	19.9%	11.9%	7.4%	5.1%	4.4%	5.0%	4.5%	3.5%	3.0%
% 'Real' growth	17.6%	8.7%	9.6%	5.3%	2.2%	2.9%	0.8%	3.4%	0.9%

Notes: CHS = Community Health Services. FPS = Family Practitioner Services. * Based on UK GDP deflator.

Source: The Government's Expenditure Plans 1986/7 to 1988/89, Cmnd 9702-II.

14 Real* growth of net NHS expenditure, including planned spending in England



Notes: * As adjusted by GDP deflator
FPS = Family Practitioner Services
CHS = Community Health Service
p = planned expenditure

Sources: The Government's Expenditure plans 1986/87 to 1988/89, Cmnd 9702–I and II.

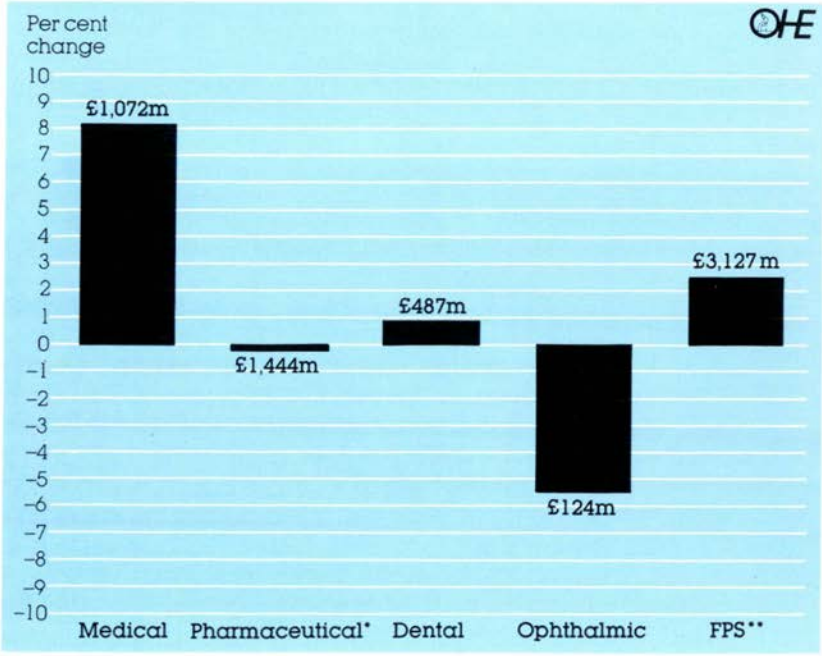
cut by almost a half from a 'real' increase of 2.1 per cent in 1986/87 to just under one per cent in 1988/89 **(Figure 14)**. This means that by the end of this decade, the relative growth of FPS budget, which is planned to grow at a constant rate of 2.4 per cent over the next three financial years, will have risen at twice the rate of that of the hospital resources. But when comparing its relative average rise of 3.6 per cent per year recorded during the first half of 1980s, the plan implies that up to 1988/89 the FPS budget is also subject to a cut leading to a freeze on its annual rate of expansion.

The planned reduction in 'real' spending on the FPS over the next three financial years is in the main associated with the assumption that there will be sizable savings on the national medicines' bill amounting to some £75 million annually following the introduciton on 1 April 1985 of selected list of medicines available for prescribing, and also savings arising from part-privatisation in the ophthalmic service. **Figure 15** shows that

within the overall FPS expenditure planned for 1985/6, the latest year for which information on FPS spending by sectors is available, both the General Medical and Dental services are provided with cash increases to allow for further expansion in the numbers of doctors and dentists during the year. These are to be offset by a planned reduction in absolute spending on the Pharmaceutical and Ophthalmic services, both dropping to a total of £1,444 million and £124 million, respectively.

Unlike the hospital sector, expenditure on the FPS is not subject to a cash limit and thus the budgets planned for future years are liable to uncertainties in relation to final spending (outturn). This in turn is due largely to the unpredictable level of demand which can vary considerably from one year to another and from one service to another. Indeed in financial terms the FPC budget has

15 Planned FPS cash spending† by services in 1985/6 and per cent change over 1984/5, England



Notes: † Nett of charges
* Including cost of drugs, dispensing fees, on-cost allowance etc. and expenditure as dispensing doctors.
** Including certain elements of appropriations in aid.

Source: Supply Estimates 1985/86, 239 X 1

11 Comparison of estimated FPS expenditure and outturn, England (£million cash)

		1976/7	1977/8	1978/9	1979/80	1980/1	1981/2	1982/3	1983/4	1984/5	1985/6	
Pharmaceutical Services*	Estimates	421	498	635	765	854	1,035	1,147	1,237	1,390	1,444
	Outturn	476	594	700	780	942	1,080	1,228	1,354	1,447†	
	Deficit	−55	−96	−65	−14	−89	−45	−81	−117	−57	
General Medical Services	Estimates	297	329	346	440	587	679	773	846	927	1,072
	Outturn	315	334	383	472	624	714	804	866	992†	
	Deficit	−18	−5	−37	−32	−37	−35	−30	−20	−65	
General Dental Services	Estimates	159	170	188	257	305	348	378	396	458	487
	Outturn	185	175	230	276	336	373	399	434	483†	
	Deficit	−26	−6	−42	−19	−31	−25	−21	−38	−25	
General Ophthalmic Services	Estimates	36	44	50	61	79	90	116	116	128	124
	Outturn	44	43	51	64	77	94	168	118	131†	
	Deficit/ surplus	−9	0	0	−2	2	−4	−52‡	−2	−3	
All FPS services	Estimates	912	1,040	1,219	1,524	1,825	2,152	2,414	2,594	2,904	3,128
	Outturn	1,020	1,146	1,363	1,592	1,979	2,261	2,598	2,772	3,054†	
	Deficit	−107	−106	−145	−68	−154	−109	−184	−178	−150	
Charges–All FPS services	Estimates	82	103	107	112	196	236	293	325	328	354
	Outturn	84	97	105	138	191	228	274	297	—	
	Deficit/ surplus	−1	6	2	−26	6	8	18	28	—	

Notes: All figures are rounded to the nearest and are nett of charges. * Figures relate to costs of chemists' and doctors' dispensing. They also include a certain amount of deductible revenue from the sales of pre-payment certificates for prescription medicines, charges retained by dispensing doctors and other. The figures are statistically comparable. † Estimated outturn. ‡ A substantial part of this deficit was due to arrear payments. — Indicates not available.

Sources: Estimates–Supply Estimates for various years. Outturn–NHS Summarised Accounts for various years.

regularly exceeded its planned total. In consequence, the validity of planning on FPS expenditure as a whole is subject to question. This has been strongly supported by the findings of the Social Services Committee (Session 1983/4) and accepted by the then Secretary of State, which criticised that 'FPS estimates in the White Paper have in the past been badly wrong'.

Table 11 traces the extent to which annual planned expenditure on FPS fell short of final spending since 1976/77. Based on the estimated expenditure first published in the Supply Estimates and the outturn totals shown in the NHS Summarised Accounts, it reveals that not only has the FPS bill been consistently underestimated but its size has also grown markedly in recent years. This historical experience is similarly shared by its component services, among which the pharmaceutical sector reported the greatest variations. In 1983/4, the latest year for which outturn information is available, its budget has been as in many years past substantially under-estimated by as much as £117 million, or a deficit planning of around 9 per cent . As for 1984/5, the estimated outturn published in the Supply Estimates indicates that marked deficit spending is again very likely to occur in pharmaceuticals as well as in other FPS services. Recent official concern about over-spendig in the FPS sector must therefore be balanced by the regularity and also the size of the underbudgeting set for these services over the past years. Taken against the falling overall proportion of FPC expenditure in terms of total NHS costs, it appears that unrealistic budgetting rather than profligate 'overspending' on the FPC services has been the cause of the difference between budgetted and actual expenditures in the FPC sector. In reality, the overall cost-effectiveness of the NHS could perhaps be increased by devoting more resources to the Family Practitioner Services, rather than by continuing to bring pressures to reduce their share of the total NHS budget.