

orienting

HEALTH CARE RESEARCH EXPENDITURE

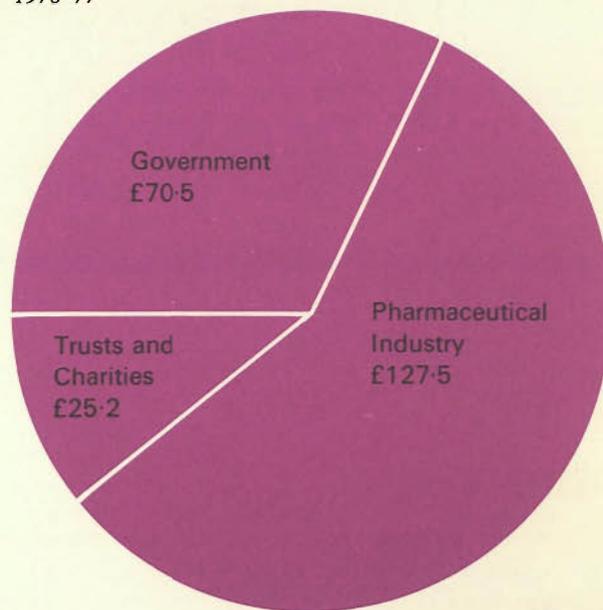
In the financial year 1976-77 over £220 million was spent on health care research in the United Kingdom (Figure 1). Taking account of recent expenditure growth and making an allowance for less readily identifiable contributions it may be estimated that total health care research spending is currently approaching the £300 million mark. In real terms this is an almost twofold increase on the £80 million (£172 million at 1976 prices) recorded at the beginning of the decade.

Health care research embraces a diverse range of activities including, for example, fundamental attempts to achieve a better understanding of disease processes, studies of the health care delivery system and the development of specific new medicines. Recently revised estimates suggest that the pharmaceutical industry alone spent £150 million on research and development in the UK in the calendar year 1977 compared to just over £4 million twenty years ago (£16 million at 1977 prices). Growth has been especially rapid during the present decade (in 1970 £29 million - £62 million at 1976 prices - was devoted to R & D) and it is estimated that the industry as a whole currently allocates approximately 10 per cent of the value of its total home and foreign sales to this activity (that is, 25 per cent of NHS sales value at manufacturers' prices).¹

These trends reflect the rapid escalation in the costs of developing new medicines which has stemmed, in part, from the growing technical difficulties of making genuine therapeutic progress. Costs have also risen because of the lengthening of the time interval between screening and marketing. This 'development stage' has doubled over the last decade or so, due largely to the extension of testing and other regulatory requirements, and is currently estimated at between 8 and 10 years. The outcome is that the cost of researching, developing and marketing a new medicine is now in excess of £20 million.

The most recent Department of Trade and Industry survey found that in 1975 in the UK, 97 per cent of all commercial research into new pharmaceutical products was undertaken in industry. The remaining 3 per cent

Figure 1 Health Care Research by sources of finance, 1976-77



Total: £223.2 Million

Source OHE Estimates

(£3.3 million at 1976 prices) was financed by private companies but carried out elsewhere, principally in hospitals and universities. Pharmaceutical research expenditure accounted for 6.4 per cent of all research in UK manufacturing industry and 32.8 per cent of the activity in the chemical and allied products classification.

¹ Worldwide, the industry spends about £1,200 million on R & D per annum.

Government funded health care research is undertaken principally by the Medical Research Council (MRC), the Department of Health and Social Security (DHSS) and the Universities (Table 1). In 1976-77 the MRC spent £52.2 million. This was spread over a broad range of topics although investigations relating to the environment, 'services and techniques' and cancer each claimed between four and five million pounds of the Council's resources. Other areas of major spending included work on infections and the central nervous system which accounted for £3.7 million and £2.5 million respectively. However, as the MRC emphasised in its annual report, segregated expenditure figures are not a particularly satisfactory method of representing research effort: in some areas work can advance at relatively low cost while other problems may require a large investment to achieve commensurate results. Furthermore, the true value of a large proportion of MRC and other research projects may be understated by expenditure figures because the projects may promote a better understanding in disease areas other than the one specified in a simple costing exercise.

Most of the MRC's activities are financed by parliamentary grants in aid but in recent years the health departments have provided a growing proportion of the Council's funds. Thus in 1976-77 of the £13.3 million obtained from a variety of indirect sources £10 million accrued from the collective contribution of the UK health departments, the Health and Safety Executive and the Department of Employment. This development has followed the implementation of the 1972 White Paper 'Framework for Government Research and Development' which established formal arrangements whereby 'customer' departments could ask appropriate 'contractor' organisations, and particularly the research councils, to undertake work of particular relevance to government objectives. The intention was to foster a clearer identification of practical research priorities and to avoid an excessive allocation of resources to 'theoretical' research. However, a recent report by the Nuffield Provincial Hospitals Trust² has criticised the present arrangements on a number of grounds including administrative instability, the fact that the anticipated increases in accountability for research spending have not been achieved and concern that experts have had to devote more time to advisory activities at the expense of research itself.³

Expenditure on research by the Department of Health and Social Security and the Scottish Home and Health Department totalled £28.3 million in 1976-77. (This figure includes the £10 million spent on research undertaken by the MRC.) An analysis of the allocation of DHSS funds (for England and Wales only) by the type of activity (Table 2) indicates that research work accounts for 81 per cent of total expenditure. Significant areas of spending include research into hospital services, NHS equipment and supplies and the locally organised research scheme. The latter, which received £2.1 million

Table 1 Government medical research expenditure by organisation, 1976-77. £ Millions

Organisation	£ millions	
A Medical Research Council		52.2
B DHSS:		
(i) England and Wales	25.8	
less amount to MRC	8.9	
	—	16.9
(ii) Scotland	2.5	
	1.1	
	—	1.4
Total A & B		70.5
C University medical research (1974-75):		
(i) General Teaching function		56.9
(ii) Research expenditure from grants and contracts		20.4
(iii) Other expenditure from specific income including services rendered		7.6
		84.5

Sources: MRC Annual Report 1976-77, DHSS Report and Handbook of R & D 1977, Supply Estimates and Statistics of Education, Volume 6, 1975.

in 1976-77, is a means of financing research workers (eg GPs, economists and social workers) who may be unable to obtain funds to undertake their studies from other sources. Approximately £5 million is devoted to development projects and of these computer activities attract the largest individual share (56 per cent) of expenditure.

2 *Five Years After: a review of health care research and management after Rothschild*. Edited by Gordon McLachlan. Oxford, Oxford University Press for the Nuffield Provincial Hospitals Trust, 1978.

3 Concomitant with the continuing debate on the desirability of present administrative arrangements the MRC has recently expressed more specific concern about proposed DHSS financing in the immediate future. In its report for 1976-77, the Council described as a 'major set-back' the unexpected cut of 10 per cent in expenditure by the DHSS on commissioned research. Effectively this will entail an overall reduction of about 2 per cent in the Council's budget and lead to disruptions in financial planning.

Table 2 DHSS (England and Wales) expenditure on Research and Development, 1976-77. £000's

Research	A Health and Personal Social Services Research	Development
	(1) Health Services	
844	(a) Public and environmental health	—
231	(b) Planning and organisation	73
1,679	(c) Hospital services	1,053
216	(d) Nursing services	—
546	(e) Primary health care	—
168	(f) Personnel	81
3,684	Total	1,207
	(2) Personal Social Services	
574	(a) Children	—
635	(b) Mental Health	457
854	(c) Social Handicap	504
403	(d) Local Authority social services	—
18	(e) Miscellaneous	—
2,484	Total	961
	B Other Research programmes supported by DHSS	
	(a) Research by DHSS Social Research Branch	—
240	(b) Social Security	—
150	(c) NHS Building and Engineering	—
922	(d) NHS Equipment, Appliances and Supplies	—
2,316	(e) NHS Computer R & D	2,800
—	(f) MRC	—
8,936	(g) Locally Organised Research Scheme	—
2,098		
14,662	Total	2,800
20,830	Grand Total	4,968

Source Research and Development Report and Handbook, 1977. HMSO.

Official health care research is also undertaken by the universities. Data compiled by the University Grants Committee identifies expenditure in terms of spending on the general teaching function and on specially commissioned research projects (Table 3). In 1974-75, the latest year for which published information is available, the relevant academic departments in the universities of the United Kingdom spent approximately £85 million⁴ of which £56 million (67 per cent) was accounted for by the general teaching function.⁵ Undoubtedly a certain proportion of the latter involves activities which could legitimately be classified as research into medicine and health, thereby increasing the overall figure for expenditure on medical research. But because it is impossible accurately to measure this contribution, no attempt has been made to include it in the estimate shown in Figure 1. Data for the academic year 1975-76, yet to be officially released, indicates that overall spending by the departments outlined in Table 3 now exceeds £100 million.

4 These figures exclude non-departmental costs such as general administration, libraries and maintenance.

5 These costs are primarily salaries of teaching and research staff, other departmental salaries and wages and departmental and laboratory expenditure. UK data for 1974-75 shows that expenditure on medical departments teaching function accounted for 20 per cent of the total cost of the teaching function of all academic departments.

6 In 1974-75 total UK university expenditure from research grants was about £67.4 million, 30 per cent of which was attributable to health care research.

Expenditure on clearly defined research projects totalled £20.4 million⁶ in 1974-75 and mainly involved work undertaken in clinical medical departments (75 per cent). Research activities currently account for approximately 24 per cent of total spending by 'medical' departments. This represents a slight increase over the 22 per cent recorded in 1969-70 when research spending was only £8.2 million (£12.9 million at 1974 prices). University medical research projects are commissioned by, among others, the DHSS and the pharmaceutical industry (about £3 million) but because these expenditures have already been included in the relevant sector figures elsewhere they are not shown as a separate item in total research spending.

The annual survey of the University Grants Committee for the academic year 1976-77 expressed concern about the ability of universities to discharge their responsibility for conducting research and training future researchers in all fields of knowledge. It pointed, for example, to the inadequacy of the grant for the renewal and modernisation of scientific equipment. Economic difficulties were also apparent where the Research Councils had identified research areas of major national importance to which universities wished to respond but had problems in doing so through a lack of financial flexibility and an inadequate planning horizon. The UGC therefore agreed as a special measure to retain approximately £500,000 from the 1976-77 distribution to provide grants to specific universities identified by the Research Councils as needing additional funds in order to play their part in high priority projects. As a result ten universities were helped to participate in a number of programmes which included veterinary research, dental research, toxicology and X-ray crystallography.

Table 3 Expenditure of university medical departments United Kingdom, 1974-75. £000's

	Pre-clinical medicine and dentistry	Clinical medicine	Clinical dentistry	Studies allied to health and medicine	Total
Total general education	15,933	29,904	6,122	4,530	56,489
Expenditure from research grants and contracts	3,962	15,399	473	596	20,430
Other Expenditure from specific income including services rendered	388	6,766	364	32	7,550
Total	20,283	52,069	6,959	5,158	84,469

Source Statistics of Education, Volume 6, 1975. HMSO

A large number of research projects are undertaken by professional bodies and individuals but it is often impossible to derive for these activities an appropriate cost estimate which could be added to the more clearly identifiable expenditures described above. Epidemiological knowledge, for example, has expanded as a result of detailed recording by certain general practitioners of events observed in their practices. One of the functions of Royal Colleges is to encourage and co-ordinate health care studies but again specific expenditures (which have not been included elsewhere in the research, efforts of organisations supplying the necessary funds) are difficult to identify.

Much of the continuous and ad hoc research work undertaken by the Office of Population Censuses and Surveys (OPCS) generates valuable data on medical and health topics. In 1976-77, £170,000 was spent on investigations of the latter type which, in recent years, have focused on areas such as smoking, the consumption of alcohol and the use made of the health services by specific client groups. The cost of the 'health component' of other OPCS investigations, such as the on-going General Household Survey, once again cannot easily be discerned. It is therefore clear that estimates such as those presented in Figure 1 provide only a crude (and probably understated) measure of the overall health care research effort.

A final non-government source of expenditure on health care research stems from the work of trusts and other charitable bodies. Twenty-six organisations belonging to the Association of Medical Research Charities (founded in 1972) collectively made available in 1976-77⁷ approximately £37 million for medical care and research – the latter accounting for £25.2 million of the total sum. If the contributions of charities not belonging to the Association are also taken into consideration it is likely that about £30 million is currently available for medical research from this source. Five of the Association's members – the Arthritis and Rheumatism Council, the Cancer Research Campaign, the British Heart Foundation, the Imperial Cancer Research Fund and the Wellcome Trust – each invested in excess of £1 million in medical research and had a collective total expenditure of £19.1 million. A further four organisations each contributed between £0.5 and £1 million. The work of the charitable bodies as a whole has contributed significantly to patient welfare as well as to the supply of funds for research and recent efforts are particularly impressive in view of the general recession being experienced by the British economy.

Office of Health Economics

The Office of Health Economics was founded in 1962 by the Association of the British Pharmaceutical Industry. Its terms of reference are:

To undertake research on the economic aspects of medical care.

To investigate other health and social problems.

To collect data from other countries.

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

The Office of Health Economics welcomes financial support and discussions on research problems with any persons or bodies interested in its work.

⁷ The organisations supplied data for either calendar or financial years for 1976 or 1977.