DEPARTMENT OF HEALTH AND SOCIAL SECURITY

On the State of THE PUBLIC HEALTH for the year 1987

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DEPARTMENT OF HEALTH AND SOCIAL SECURITY

On the State of THE PUBLIC HEALTH

THE ANNUAL REPORT OF
THE CHIEF MEDICAL OFFICER OF
THE DEPARTMENT OF HEALTH AND SOCIAL SECURITY

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HER MAJESTY'S STATIONERY OFFICE

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INTRODUCTION

To the Rt Hon Kenneth Clarke MP
Secretary of State for Health

Sir,

I am pleased to submit my report on the State of the Public Health for 1987, together with brief comments on some of the more important related events which occurred in the first seven months of 1988.

The report would not be complete without mentioning that on the 25 July 1988 the Office of Secretary of State for Social Services was divided. The new Secretaries of State for Health and for Social Security now head Departments formed of the relevant elements of the old Department of Health and Social Security.

Readers will find alterations in both the style and content of the text of this year's report. These reflect recommendations outlined in the 1986 Introduction. Each chapter examines key health issues and, where relevant, gives them a national and international perspective. Tables relating to demography, mortality and birth statistics, 'avoidable' deaths, cancer registrations, congenital malformations and vaccination uptake have been grouped together to form a special appendix. This appendix, which will be expanded in future years, is designed to provide easy access to statistical data not always readily available elsewhere.

In the introduction of my report for 1985 I noted the establishment by the then Secretary of State, the Rt Hon Norman Fowler, of a committee of inquiry, under my chairmanship, into "the future development of the Public Health function". The inquiry was to deal not only with "the control of infectious diseases but the assessment of the needs of populations for health care, the planning and evaluation of health services and responsibility for prevention and health promotion". In the event, the fact that the Committee had embarked on what turned out to be the first comprehensive review of public health since the Royal Sanitary Commission of 1871 elicited a great deal of interest and more than 200 organisations, many of them non-medical, submitted evidence.

The Committee, which included representatives not only of the medical specialties concerned with public health and infectious diseases, but also a Chief Environmental Health Officer, Health Authority members, NHS and Local Authority Managers and others with experience of nursing and general practice, reported in January 1988[1]. In July, following a constructive period of public discussion, the Government announced its agreement to the main recommendations of the report. Guidance is in preparation for Health Authorities which will set out their responsibilities for health; recommend the appointment of Directors of Public Health who will be required *inter alia* to prepare and publish an annual report on the state of health of the District; and invite Authorities to clarify their arrangements for the surveillance, prevention and control of communicable disease.

The Government has also accepted the recommendation that a small central unit should be set up in the Department of Health to facilitate monitoring of the

health of the population at the national level. In the longer-term, Public Health legislation is to be reviewed and brought up to date.

The overriding objective of the recommendations of the Committee is to ensure that the state of the nation's health is regularly monitored and that the services provided both for prevention and treatment are evaluated in terms of their likely impact on that state of health.

Prevention and health promotion

Alcohol abuse

The past year has seen a welcome increase in the attention given to alcohol misuse as a major and preventable cause of ill health. Government concern, and recognition of the widespread nature of the problems were expressed by the setting up, in September 1987, of the Ministerial Group on Alcohol Misuse, which involved Ministers from 11 Government Departments. The purpose of this group, and the influence of alcohol on major public health issues, such as hypertension and road traffic accidents involving young people, are discussed in Chapter 2.

The prevention of alcohol misuse requires an understanding of those factors which influence the drinking habits of the general population. The price of alcohol in relation to personal, disposable income is one such very important factor. People who misuse alcohol still often go unnoticed and unhelped because too few doctors, or other health professionals, yet have the requisite skills or experience in this field. Adequate treatment services are not always available. Some of the steps being taken to overcome these deficiences are also outlined in Chapter 2.

Smoking

Although the prevalence of smoking continues to decline slowly in both sexes and in all social groups, it remains the single most important preventable cause of premature death and sickness in Britain, being responsible for the shortening of the lives of about 100,000 Britons each year. In pregnancy, smoking is also harmful because it is an important cause of low birthweight and therefore of death in the early days of life. In these circumstances it gives me particular cause for concern that in young people of both sexes aged 16-24 years the decline in prevalence of smoking has ceased in recent years and that the uptake rate of the habit among schoolchildren remains high, particularly among girls.

March 1988 saw the publication of the Fourth Report of the Independent Scientific Committee on Smoking and Health.[2] The most important issue with which it dealt was passive smoking. The Committee added its authoritative weight to the view that the inhalation of other people's tobacco smoke can lead to a 10%–30% increase in the risk of non-smokers contracting lung cancer. The publication of this report received considerable publicity and led to increased pressure for further restrictions on smoking in public places.

Four draft directives on tobacco are currently being considered by the EC as part of the Europe Against Cancer campaign. Directives on health warnings

and limiting the tar content of cigarettes are in final draft form. Two new directives, on restricting smoking in public places and the protection of children against tobacco, appeared in June 1988.

Concern has been growing over oral tobacco products used for 'snuff dipping'. This habit is causally associated with oral cancer. In February 1988, the Government announced proposals to issue Safety Regulations under the Consumer Protection Act 1987 which would ban products used for 'snuff dipping'.

Look after your Heart!

Within the United Kingdom (UK), coronary heart disease (CHD) remains a very serious problem, and the prevalence of sickness and premature death due to this cause is higher in all four countries within the UK than in most other countries in the world.

It is therefore satisfactory to report that the DHSS/Health Education Authority (HEA) joint campaign, '*Look after your Heart!*' (LAYH) has completed a successful first year. The First Anniversary Exhibition, held in Birmingham in May 1988, demonstrated the wide variety of projects related to coronary heart disease prevention and the many different government and non-government organisations working throughout England under the LAYH umbrella.

The response by employers has been encouraging and much good will and intersectoral collaboration have been engendered by the granting of funds to LAYH — sponsored community projects and '*Heartbeat Awards*' to restaurants offering healthy menus and smoke-free zones.

Plans for the next five years are now being prepared. These will transform the LAYH campaign into a long-term programme, which it is hoped will be reinforced with other initiatives necessary to curtail the incidence of CHD.

Child sexual abuse (1987–1988)

In retrospect, 1987 will almost certainly be seen as the year when child sexual abuse first made a major impact on public consciousness. Many people had been made aware of the danger to children from strangers, but both public and professionals have had difficulty accepting the tragic fact that children can be and are abused not infrequently within the family circle.

The phenomenon has been known for centuries. Forty years ago, non-accidental injury of children was not regarded as a major problem, but following recognition by a few professionals, it became universally recognised as an important condition and there are now District procedures for coping with it. The same process of shock, denial, recognition and formulation of policies and effective procedures is now being worked through for child sexual abuse.

In the Spring of 1987, existing procedures broke down in Cleveland, and a large number of suspected cases became the subject of much public concern. The then Secretary of State decided to set up a judicial inquiry into the matter. He also asked the Standing Medical Advisory Committee (SMAC) to draw up guidance for the medical profession on the diagnosis of child sexual abuse. Both reports were published in July 1988,[3,4] with the DHSS circular and a guide to arrangements for inter-agency co-operation[5].

The report by Lord Justice Butler-Sloss disclosed a situation which in important respects reflected what earlier enquiries [6,7] on child abuse cases had found. It is hoped that the recommendations of the Butler-Sloss Report, and the guidance now given both in the DHSS documents and the SMAC report together with other planned professional advice will facilitate more reliable diagnosis and closer and more effective co-operation in dealing with this sensitive problem in future. The best interests of the children and their families must be safeguarded throughout.

Breast cancer screening

One of the major events in 1987 within the preventive services was the introduction of a national breast cancer screening service. Breast cancer kills more women in the UK than any other cancer — 15,000 each year, of whom 13,000 are aged 50 years or over. Every woman aged 50–64 years will be invited for mammography every three years. Women aged 65 years and over will be screened on request. Women under 50 years-of-age have not been included in the programme as it is at present uncertain whether they would benefit from mass screening.

The service is being modelled on recommendations in the Forrest Report (see chapter 2) which concluded that, provided most women avail themselves of the service, mammography should eventually reduce the mortality from breast cancer by about one third in the target population. At least one centre has already been set up in each of the 14 Health Service Regions and it is hoped that by 1990 there should be a nationwide network of up to 100 centres, including mobile units for rural areas, each serving a population of about half a million.

The success of the scheme will depend upon widespread support from women within the relevant age-groups and an efficient system of call and recall. The mammographic screening should be regarded as one essential element in a service which must also include diagnostic confirmation and appropriate treatment as well as skilled counselling and support for the women concerned throughout their contact with the service.

Outcome indicators and the health of the population

In last year's report I stressed the need for more and better measures of the outcome of the activity of the NHS, with particular respect to reduced premature mortality and improved quality of life. In Chapter 4, this issue is discussed in more detail and examples are presented of mortality trends in three diseases where deaths at specified ages may indicate deficiencies in health services. Monitoring of such 'avoidable deaths' requires caution as a relatively poor performance in a district or region can be explained by, for example, a higher incidence of the disease in that area than elsewhere. Nevertheless, if deaths from such diseases are often avoidable, then their occurrence is worthy of careful scrutiny wherever they occur.

Health services make an important contribution to the prevention, diagnosis, treatment and care of many illnesses and in time, outcome indicators will doubtless be developed for all these categories of intervention. However, the activity of health services alone can be expected to have only a limited impact on much of the sickness and premature mortality which occurs in the population. Many illnesses have their origins in social behaviour and environmental factors which also need to be measured.

The problem of monitoring the overall health of the nation is compounded by the variable quality and quantity of data available. This is particularly the case for health problems which, though causing illness or impairment, are not usually a cause of death. In Chapter 3, several topics are briefly reviewed ranging from visual handicap to long-term mental illness. A selection of results is also presented from a survey of disability carried out by the Office of Population, Censuses and Surveys for DHSS. In subsequent reports it is intended to cover a wide spectrum of health problems, identifying, where appropriate, opportunities for prevention.

Infant mortality in England

Infant mortality (deaths at ages under one year) in England fell each year from 1970 to 1985. The small increase that occurred from 1985 to 1986 from 9.2 to 9.5 per 1,000 live births, was probably due to the very severe weather in February, 1986. There was a rise in postneonatal mortality (deaths at ages over 28 days and under one year) from 3.9 to 4.2 per 1,000 live births and a smaller fall in neonatal mortality (deaths in the first 28 days of life) from 5.3 to 5.2 per 1,000 live births.

Neonatal mortality fell during the decade but at a diminishing rate and appears to be levelling out. Postneonatal mortality on the other hand changed little during this period, lying between 4.5 and 4.2 deaths per 1,000 live births from 1976 to 1982, falling in 1984 and 1985 to 3.9, and rising in 1986 to 4.2 deaths per 1000 live births.

Until 1986, therefore, a decline in infant mortality in the face of an almost unchanging postneonatal mortality was maintained by a continuing although diminishing fall in neonatal mortality. In that year a rise in postneonatal mortality resulted in an increase in infant mortality.

These trends and the pattern of mortality are examined in Chapter 3, and related briefly to experience in other European countries.

The environment

COMARE Report on Dounreay (1988)

The Committee on Medical Aspects of Radiation in the Environment (COMARE) was established to implement the final recommendation of the Black Report on the possible increased incidence of cancer in West Cumbria published in July 1984.[8] The Committee's Terms of Reference are 'to assess and advise Government on the health effects of natural and man-made radiation in the environment and to assess the adequacy of the available data and the need for further research'. The Scottish Minister for Health asked the Committee to advise whether the epidemiological data relating to the Dounreay Nuclear Establishment suggested that childhood leukaemia incidence around Dounreay was higher than expected; to advise what, if any, connection there could be between the observed leukaemia incidence and the radioactive discharges from the Dounreay site; and to suggest any further studies to assist in assessing the situation.

The Committee's report on Dounreay was published on 8 June 1988[9] and found that six cases of leukaemia were registered among young people aged 0–24

years during the years 1968–1984, and within a 25km circle around Dounreay. Only three were expected. All of the six cases occurred after 1979. The Committee also found that the reported discharges from Dounreay contributed only a small proportion of the total estimated dose from all forms of radioactivity in the environment. It stated if conventional dose and risk estimates were used the doses were far too low to account for the observed leukaemia excess.

The Committee concluded that there was probably evidence of a raised incidence of leukaemia among young people living in the vicinity of Dounreay and that this evidence, taken in conjunction with that relating to the area around Sellafield, tended to support the hypothesis that some feature of these nuclear plants led to an increased risk of leukaemia in young people living in the vicinity. However, conventional dose and risk estimates suggested that neither authorised nor accidental discharges were likely to be responsible, although there remained "uncertainties about dose and risk calculations especially with respect to exposure of the foetus and small child". The Committee considered a number of alternative explanations including other mechanisms by which the authorised discharges could be implicated, the possibility that parental occupational exposure could be relevant and the possibility that factors other than radiation could be important. All these possibilities needed further investigation. The Committee made a number of recommendations for further work which the Government has accepted in principle.

Communicable diseases

Legionnaires disease — Portland Place
Two cases of Legionnaires Disease were reported on 29 April 1988 to the Communicable Disease Surveillance Centre (CDSC). It was noted that both were associated geographically within the vicinity of Portland Place in London and it was suspected that other unrecognised cases might have occurred.

Active case-searching and investigation was undertaken by the Medical Officer of Environmental Health of the City of Westminster in co-operation with CDSC and the Public Health Laboratory Service (PHLS).

All the cooling towers in the locality were examined, cleaned and disinfected and *Legionella pneumophila* serogroup 1 Pontiac sub-type was identified in water samples from one tower, that situated in the BBC building in Portland Place.

To aid in the case finding I sent an urgent letter to all doctors to alert them to the possibility of Legionnaires disease in any patient with respiratory tract infection who, in the ten days prior to the onset of symptoms, had visited or worked in the Portland Place area from mid-April to 2 May 1988 when the cooling towers were disinfected.

At the time of writing a total of 67 confirmed cases of Legionnaires disease fitting the case description have been identified (59 male and 8 female) including two fatalities. A further 28 cases with a clinical diagnosis of Legionnaires disease are still being investigated. The main epidemic wave started on 21 April and most cases contracted the infection during the three days from 19 to 21 April. Several of the affected patients had only briefly visited the area and

probably contracted the infection while walking in the street. Twelve individuals infected in this locality were admitted to hospitals outside the Greater London area including Newcastle, Southampton and Nice.

In nine patients, a serogroup (serogroup 1) of *Legionella pneumophila* was isolated which was indistinguishable from that found in the cooling tower mentioned above. Investigations into this outbreak, the second largest ever in the UK, are continuing.

Measles
Epidemics of measles occur regularly at two-to-three-year intervals and in 1986, 82,072 cases were notified. In contrast, in 1987, the number of notifications (42,125) was the lowest on record. Unfortunately, low uptake of measles vaccine in the past has allowed the persistence of large numbers of unvaccinated children and a further major outbreak was inevitable. In 1988, by the end of the 24th week, no fewer than 56,734 cases of measles had been notified and six children had died of measles-related conditions. Figure I. 1 shows the five-week moving average of measles notifications for the above years.

Regional and District Health Authorities have been reminded of the need to achieve a high uptake of vaccine as quickly as possible; and a circular letter has drawn each region's attention to those districts with the lowest uptake. The epidemic of Spring 1988 and the likely further increase later in the year, were brought to the attention of all doctors, health visitors and nurses involved in immunisation who were encouraged to achieve improvements in the uptake of vaccines. It is essential that this preventable disease with its unnecessary burden of sickness and expense should be eliminated.

Meningococcal meningitis
This condition continued to be unusually prevalent in 1987 and the notifications of meningococcal meningitis for the first two weeks of 1988 were the highest number for this period at any time in the last ten years. Although the weekly notifications subsequently fell, they remained equal to or higher than those for comparable weeks of 1986 and 1987 for 16 of the first 23 weeks of 1988. The sudden and unexpected onset of the condition, its predeliction for young people and children, and its relatively high fatality rate have understandably attracted a great deal of public attention and concern. However, the previously reported clustering of meningococcal infections due to the type B15 P1.16 strain in some localities such as Stonehouse in Gloucestershire diminished as this strain became less prevalent and B4 P1.15 and B untypable strains became more common. It remains to be seen whether 1988 proves to be the peak year in the current upsurge.

Within England, Group A strains of meningococcal menigitis accounted for only 2% to 4% of infections during 1987 although these are the prevalent strains in Africa, the Middle East and the Indian sub-continent. Vaccination against Group A meningococcal infection will be an entry requirement into Saudi Arabia for all pilgrims attending the Hajj at Mecca in 1988, following the outbreak associated with the pilgrimage in 1987.

HIV and AIDS

The work which has gone on within the UK to contain the epidemic of HIV infection and its principal clinical consequence, AIDS, is discussed in Chapter

6. The international aspects are more appropriately considered here. During 1987, the Government continued to place great emphasis on the need for international co-operation in the fight against the spread of AIDS. The World Health Organization (WHO) rightly takes the lead in co-ordinating this action but the UK has also played a key role. Through the Overseas Development Administration (ODA) the UK contributed £3 million to WHO's Global Programme on AIDS in 1987–88. In the coming year we shall be contributing £4.5 million to the programme. The International Planned Parenthood Federation received £1.6 million to help develop its public education materials. Over and above this, British research workers are closely involved in international research programmes such as those developed by the EC and by WHO's Global Programme.

Greater co-operation and involvement with our colleagues in Europe occurred throughout 1987. A UK initiative put AIDS on the agenda of the meeting of European Community Heads of Government in December 1986. This was followed by a Health Ministers' agreement in May 1987 on further measures, including the establishment of an ad hoc working group on AIDS to develop a common strategy within the Community for preventive action and exchange of information.

In the summer of 1987, the response to AIDS was on the agenda of the Economic Summit in Venice and of the meeting of Commonwealth Heads of Governments in Vancouver. The United Nations General Assembly in October made AIDS the subject of its first ever debate on a health topic. The then Secretary of State in his address to the General Assembly stressed the need for global awareness of the treatment of AIDS and for a global response.

Major conferences

Several major international conferences were held in London during 1987. In March, a seminar, '*Future Trends in AIDS*' organised by the DHSS, was held at the Queen Elizabeth II Conference Centre.[10] The meeting opened by Mr Norman Fowler, the then Secretary of State for Social Services, focussed on virus transmission and incubation. The discussion revealed the complexity of the AIDS epidemic.

Mr Fowler also convened a conference in London in March 1987, which involved people working in statutory and voluntary bodies.[11] It considered the provision of community care for people with AIDS and HIV-related illnesses and as a result of the conference, a Departmental Working Party was set up to consider the issues further.

In January 1988 the UK Government and WHO jointly presided in London over the World Summit Meeting of Ministers of Health on Programmes for AIDS Prevention. Delegates from 148 countries, three-quarters of whom were ministers, attended the Summit and contributed to the London Declaration on AIDS Prevention. This emphasised education, free exchange of information and experience, and the need to protect human rights and dignity. The Declaration designated 1988 as a year of communication and co-operation about AIDS.

Developments in UK HIV and AIDS surveillance

Two major developments occurred in the field of surveillance during 1987. First, I set up a group of experts under the Chairmanship of Dr J W G Smith,

Director of the PHLS, to advise me on improvements which might be made in the monitoring and surveillance of AIDS and HIV infection in the UK. Their report[12] is now receiving consideration.

The second major development was the passing of the AIDS (Control) Act 1987. Under the terms of this Act, District Health Authorities (DHAs) are required to make public reports to Regional Health Authorities (RHAs) (DHAs in Wales), and RHAs are required to make public reports to the Secretary of State, on the action taken over the previous year on HIV and AIDS infection. These reports will include broad descriptions of services to be provided, as well as numerical data on cases of AIDS and of HIV infection.

Acknowledgements

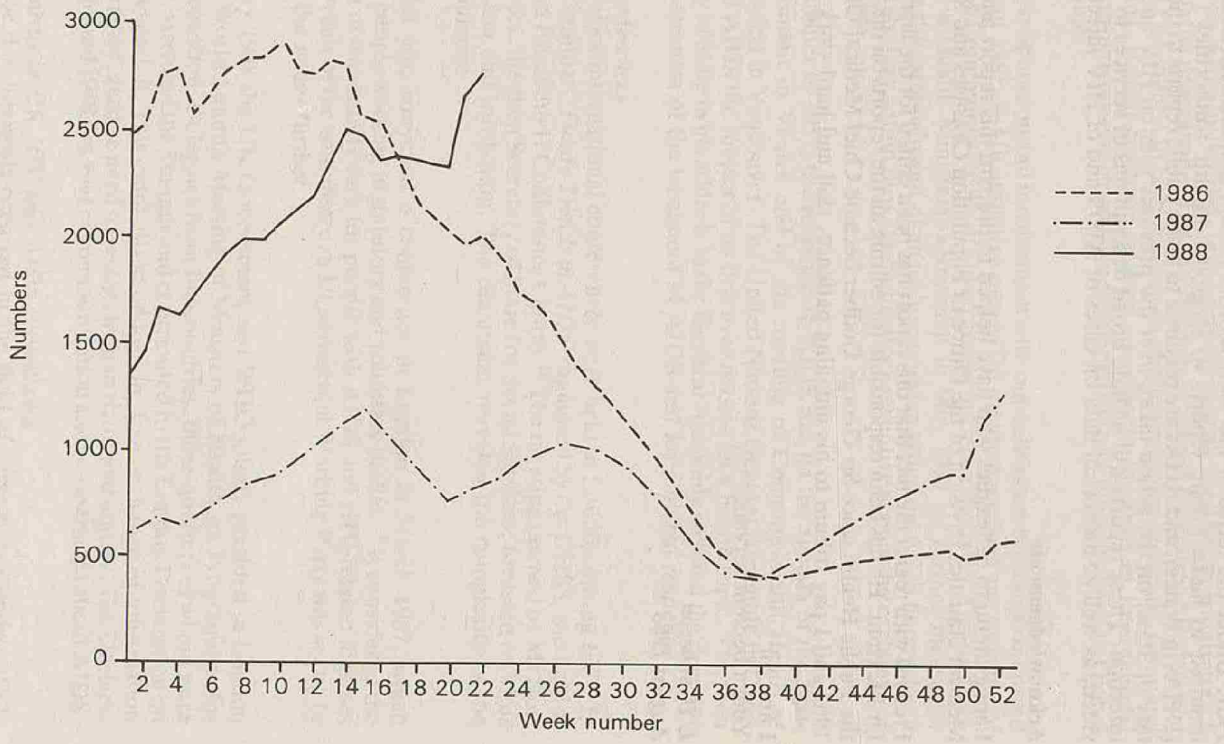
I am grateful to colleagues who have helped to prepare this report and to the Medical Statistics Division of the Office of Population Censuses and Surveys.

I record with regret the fact that this report has been edited for the last time by Dr J L Hunt. He has been responsible for editing all the reports on the State of the Public Health since Sir George Godber became Chief Medical Officer in 1962 and I pay tribute to his unfailing patience, skill and hard work.

I am, Sir
Your obedient servant

E D Acheson
August 1988

Figure I.1: *Measles — 5-week moving average. England and Wales 1986–88*



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1. VITAL STATISTICS

(a) Population size

The estimated resident population of England at 30 June 1987 was 47,407,000 persons. The increase of 152,000 over that of 1986 (0.3%) continued the recent trend in annual changes. About two thirds of the latest increase arose from natural change (births minus deaths), and the remainder from net inward migration.

(b) Age and sex structure of the resident population

Table A.1 in the appendix (Page 134) shows how the size of the population in various age/sex groups has changed over recent years. Between mid 1986 and mid 1987 there was a small rise in the number of children aged under one year, associated with a slight increase in live births, and the number of children aged 1–4 years also increased slightly for a second consecutive year. The population of school age (5–15 years) continued to fall, reflecting the passage of the cohort born in the late 1970s (when births reached a low point) through the age-group. The overall number of adults of working age (16–64 years for men, and 16–59 years for women) continued to rise, with the increases among younger adults partly offset by a further decrease in the working population aged over 45 years. There was little change in the pensionable population aged under 75, but the population aged 75–84 years, and particularly that aged 85 years and over, increased between 1986 and 1987. These increases were linked to the downturn in deaths in the 12 months to mid 1987 (associated with mild weather in the 1986/87 winter). Since 1981, the number of people aged 75–84 years and 85 years and over have increased by 13% and 27% respectively. Women continue to account for about two thirds of all people over retirement age.

(c) Fertility statistics — aspects of relevance for health care

(i) Total births

Table 1.1 shows that there were approximately 682,000 live births in England and Wales during 1987, an increase of over 20,000 (13%) compared with 1986. The annual number of births has increased each year since 1982 and the 1987 figure was the highest annual total since 1972. After allowing for changes in the size and structure of the female population of childbearing age, the total period fertility rate (the average number of children which would be born per woman if the age-specific fertility rates of the year in question persisted) for 1987 was 1.81. This compares with a total period fertility rate (TPFR) of 1.88 at the most recent peak, in 1980. The TPFR for England and Wales has been below the level of 2.1 required for the long-term replacement of the population since 1972.

Table 1.1: *Numbers of live births, crude, general and total period fertility rates for England and Wales 1977, 1986 and 1987.*

Year of birth	Livebirths	Crude birth rate: all births per 1,000 population of all ages	General fertility rate: all births per 1,000 women aged 15–44	Total period fertility rate (TPFR)
1977	569,259	11.5	58.1	1.66
1986	661,018	13.2	60.6	1.77
1987	681,511	13.6	62.0	1.81

(ii) Teenage conceptions

Data on conceptions to women resident in England and Wales cover pregnancies which lead to a maternity or to a legal termination under the 1967 Abortion Act, but do not include those leading to spontaneous abortion. In Table 1.2 the numbers and rates of girls becoming pregnant at ages under 16 years and under 20 years are compared for the years 1976, 1985 and 1986. For under-16s, the conception rate in 1986 was 8.7 per 1,000 female population aged 13–15 years, a slight increase in comparison with 1985. The proportion of conceptions terminated by abortion in this age-group fell from 56% in 1985 to 54% in 1986, the smallest percentage recorded since 1978. The continued prevalence of conception and abortion in very young girls underlines both the importance of sex education and the ethical problems which face those who may be in a position to offer contraceptive advice to this group.

The overall teenage conception rate rose from 61.7 per 1,000 female population aged 15–19 years in 1985 to 62.3 per 1,000 in 1986 but the proportion of all conceptions to under-20s terminated by abortion fell slightly from 34% in 1985 to 33% in 1986. The proportion of teenage pregnancies leading to a birth within marriage fell to 14% in 1986 compared with 15% in 1985 and 31% in 1976. However, the proportion leading to jointly registered illegitimate births continued to rise (27% in 1986, compared to 24% in 1985 and only 9% in 1976).

(iii) First legitimate births to women aged 30 years and over

First births to women aged 30 years and over are of medical interest in view of the greater likelihood of obstetric problems with a first pregnancy at this age. Table 1.3 shows that first births to married women of this age-group increased by 8% between 1986 and 1987. Such births accounted for 20% of all first legitimate births in 1987 compared to 19% in 1986 and only 13% in 1977.

(iv) Average age of mother at first legitimate birth

Increases in the average age at which women marry and the interval between marriage and first birth serve to raise the average age at which women have children. Table 1.4 shows that between 1977 and 1987 the average age at first legitimate birth increased from 25.0 years to 26.5 years, this pattern being evident in all the social classes.

(v) Sex ratio of births

Male live births exceeded female live births by about 5% in 1987, which was fractionally less than the excess in 1977 (about 6% more males than females). The ratio of male to female live births varied little for mothers of different ages.

(d) Mortality and morbidity

In 1987 the level of mortality was once again lower than in previous years. The number of deaths recorded in England was 531,150 compared with 538,628 in 1986 and 533,150 in 1985. This represents a fall of about 2.5% between 1986 and 1987 and gives a crude mortality rate for the year of 11.2 per 1,000 population as against 11.5 per 1,000 in 1986.

Recent improvements in mortality should, however, be placed in the longer term context of an ageing population. Standardised mortality ratios (SMRs) are designed to take account of a changing population structure. These indicate that mortality is now slightly less than three quarters of that recorded in the

Table 1.2: *Teenage conceptions: Numbers and rates, 1976, 1985 and 1986, England and Wales*

Age at conception / Year of conception	All conceptions	Conceptions outside marriage					Conceptions inside marriage		
		Total	Illegitimate maternities*		Legitimate maternities+	Abortions under the 1967 Act	Total	Maternities	Abortions under the 1967 Act
			Sole registrations	Joint registrations					
(a) Numbers (thousands)									
Under 16									
1976	9.2	9.2	2.3	1.0	0.9	4.9	0.0	0.0	0.0
1985	9.4	9.4	2.2	1.7	0.2	5.2	0.0	0.0	0.0
1986	9.2	9.2	2.2	1.8	0.2	5.0	0.0	0.0	0.0
Under 20									
1976	105.7	73.1	14.1	9.2	21.2	28.6	32.6	31.5	1.1
1985	119.3	101.0	19.8	28.8	12.7	39.6	18.3	17.6	0.7
1986	118.8	102.5	20.6	31.6	11.3	38.9	16.3	15.6	0.7
(b) rates per 1,000 girls									
Under 16	7.9	7.9	2.0	0.9	0.8	4.2	0.0	0.0	0.0
1976	8.6	8.6	2.0	1.6	0.2	4.8	0.0	0.0	0.0
1985	8.7	8.7	2.1	1.7	0.2	4.7	0.0	0.0	0.0
1986									
Under 20									
1976	58.7	40.6	7.9	5.1	11.8	15.9	18.1	17.5	0.6
1985	61.7	52.3	10.3	14.9	6.6	20.5	9.5	9.1	0.4
1986	62.3	53.8	10.8	16.6	5.9	20.4	8.5	8.2	0.4

Notes:

Rates for the under 16 and under 20 age-group are based upon the populations of girls aged 13–15 and 15–19 respectively.
* Illegitimate births may be registered by the mother alone (sole) or by both mother and father (joint).
+ Conceptions outside marriage leading to legitimate births occurring less than 8 months after marriage.

Table 1.3: *First legitimate births to women aged 30 years and over: 1977, 1986 and 1987, England and Wales*

Age of mother	Number of births (000s)		
	1977	1986	1987
All ages 30 and over	27.7	39.2	42.2
30–34	23.1	30.8	33.3
35–39	3.9	7.5	7.8
40–44	0.7	0.9	1.1
45 and over	0.0	0.0	0.0

Table 1.4: *Mean age of women at first legitimate live birth, according to social class of husband: 1977, 1986 and 1987, England and Wales*

Social class of husband	Mean age of women at first legitimate birth		
	1977	1986	1987
All Social Classes (including 'other')	25.0	26.2	26.5
I and II	27.2	28.1	28.4
III Non-manual	25.9	26.8	27.0
III Manual	24.2	25.4	25.8
IV and V	23.2	24.2	24.5

early 1950s. Throughout this period, the fall in the male ratios has been somewhat less than that for females, so that, taking 1950–52 as a base of 100, the SMR for 1987 for males was 72, whereas that for females was 68.

Previous reports have drawn attention to the influence of weather, both on the total number of deaths recorded in the year, and on their seasonal distribution. Figure 1.1 illustrates the week-by-week registrations of deaths from all causes at ages one year and over, for 1986 and 1987. Also included is an expectation for 1987 based on observations over the previous 10 years. In 1987 there were fewer deaths than expected for most of the period January – April 1987, whereas there was a marked excess in early 1986, particularly during February and March. It is of interest to note that February 1986, with a mean daily air temperature at sea level of −0.4 C, was the coldest month since 1963 and the coldest February since 1947. As a further indication of the importance of cold weather in relation to mortality, the number of deaths associated with hypothermia (Table 1.5) also returned to the normal level in 1987 after a rise in the previous two years. Deaths associated with influenza, a further component of the usual excess winter mortality, were also less in 1987 than in recent years.

Table 1.5: *Numbers of deaths from specified causes 1983–1987, England and Wales*

Year	Number of deaths with mention of hypothermia	Number of deaths from influenza
1983	538	796
1984	555	346
1985	827	662
1986	848	587
1987	581*	190

* Provisional figure

Figure 1.1: *Weekly deaths, 1986, 87 — and the expected deaths.*

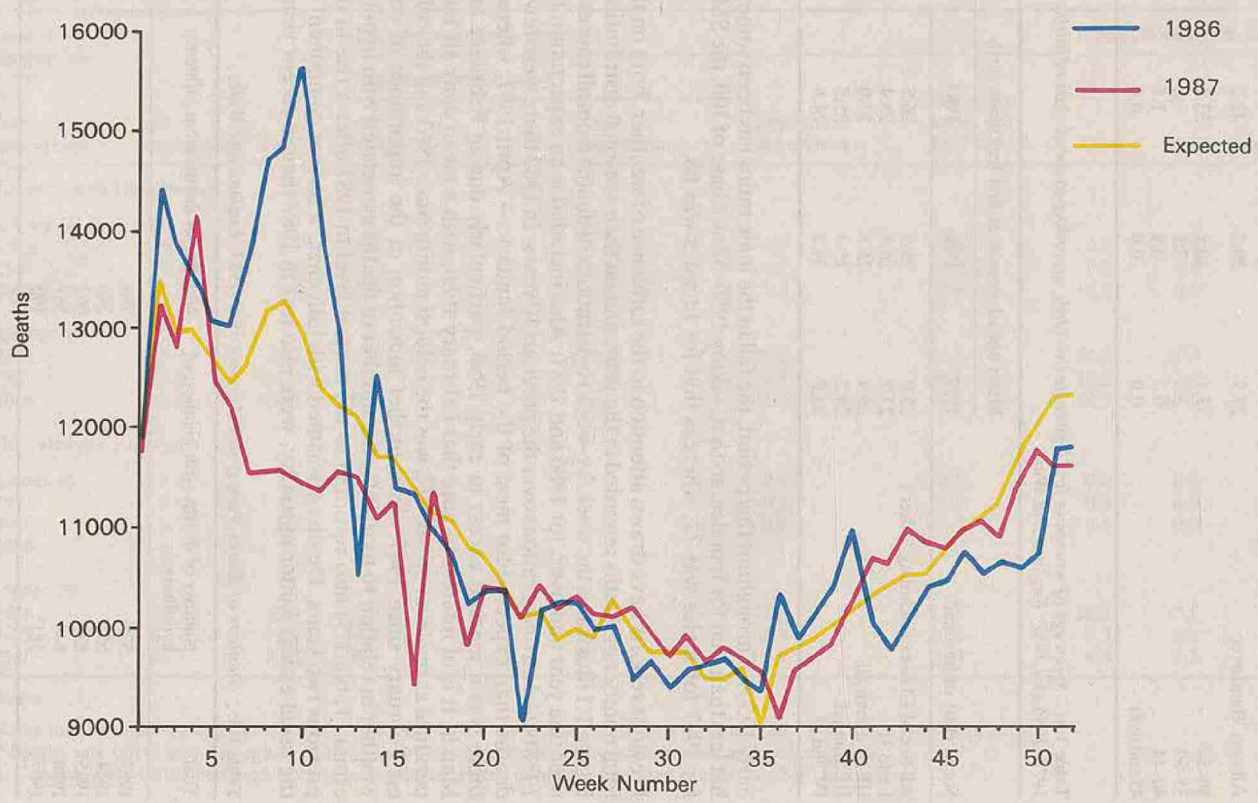


Figure 1.2: *Age specific mortality – England, 1979-87 (Males)*

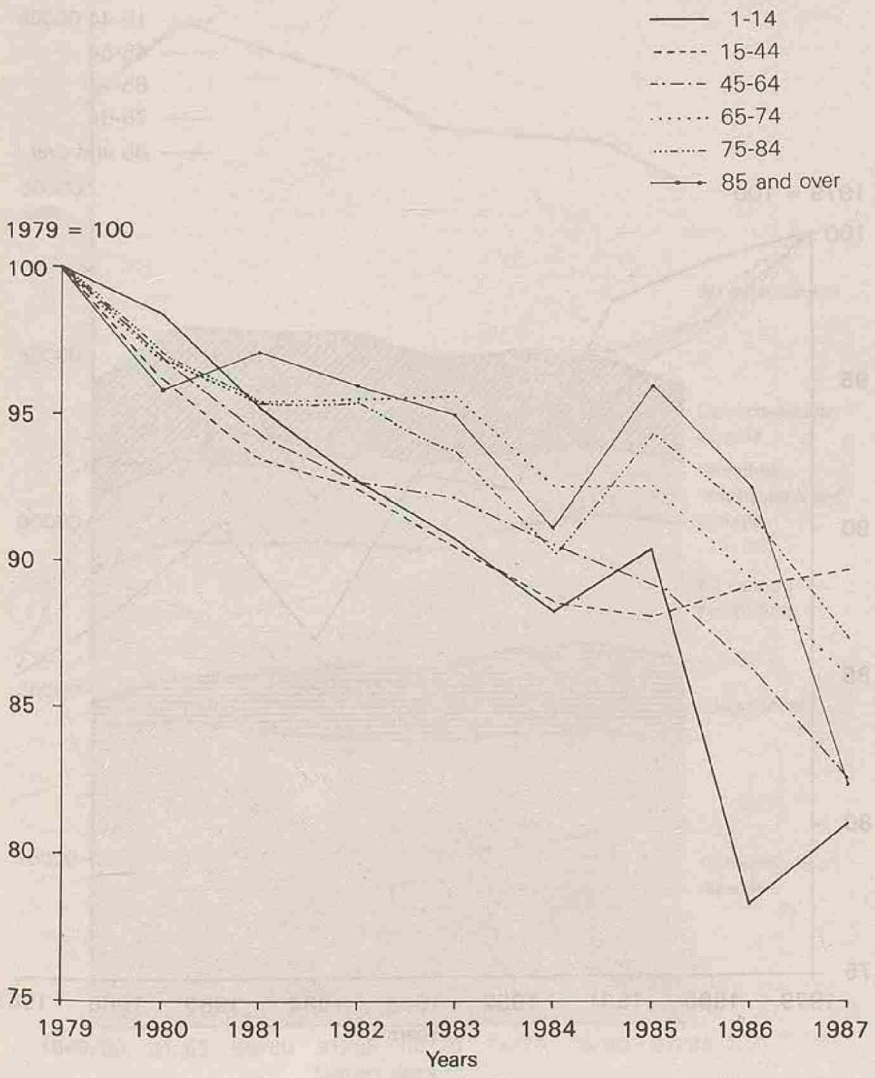


Figure 1.3: *Age specific mortality – England, 1979-87 (Females)*

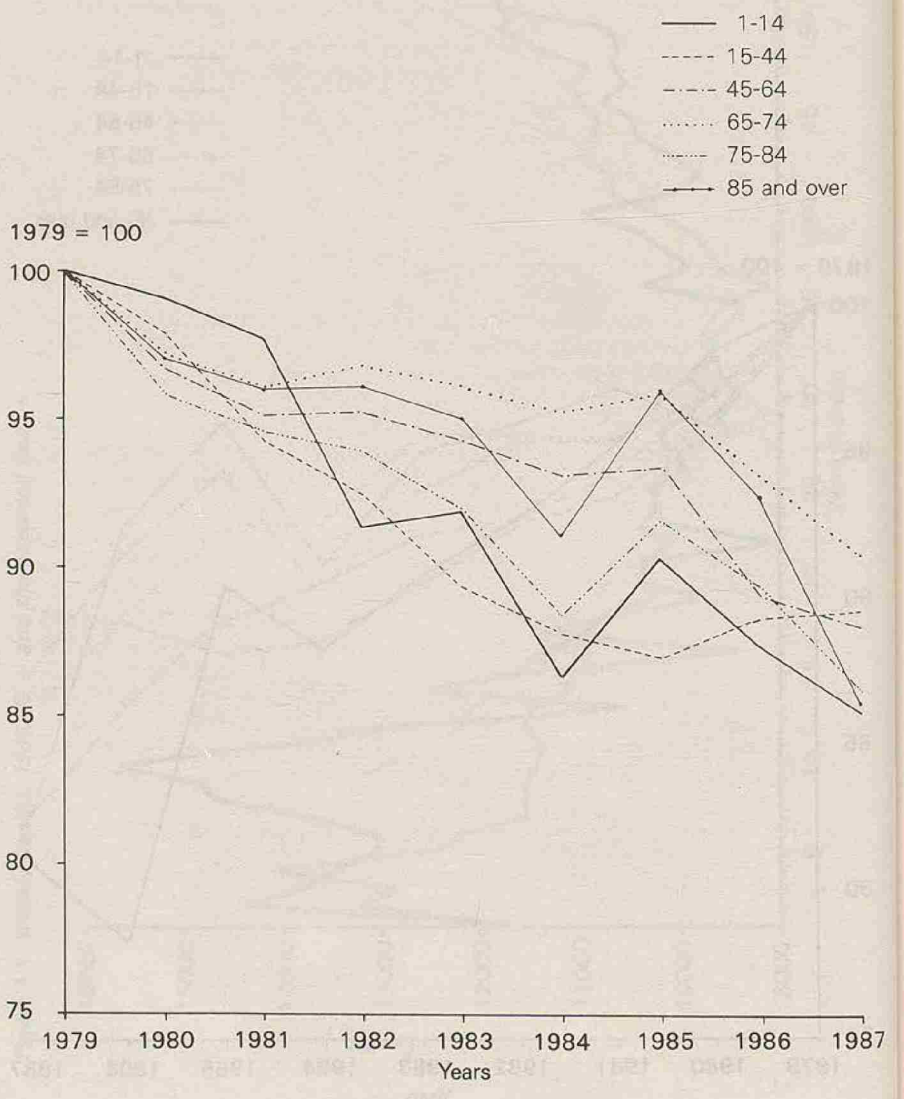


Figure 1.4: *Death rates by various causes for quinary years 1946-85 for males aged 60-84 years, England and Wales*

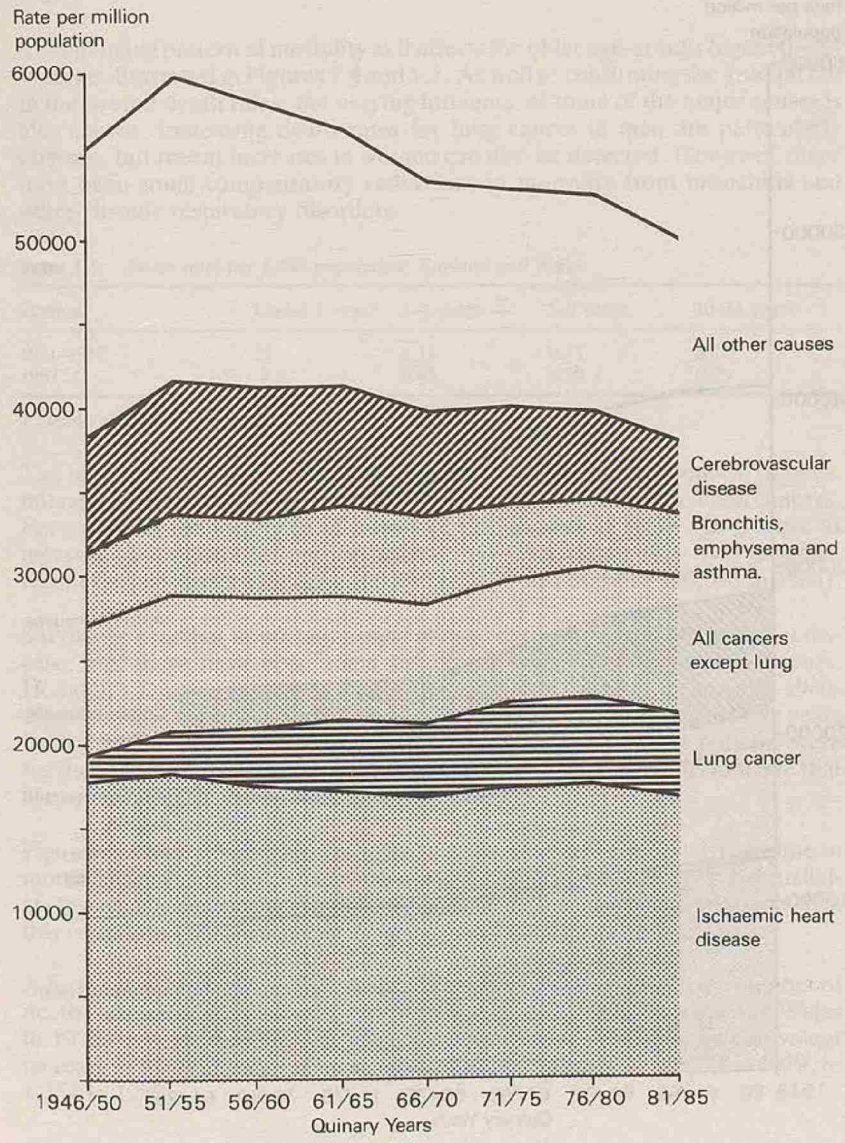
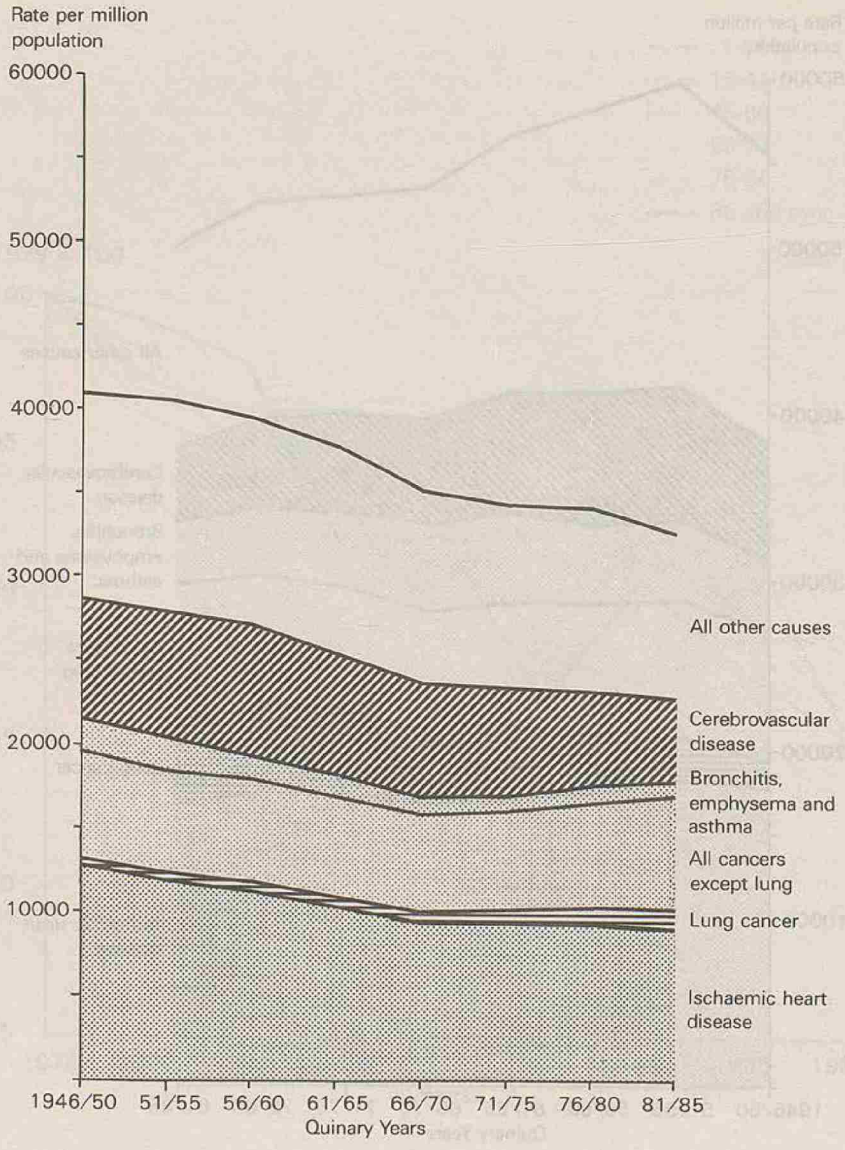


Figure 1.5: *Death rates by various causes for quinary years 1946-85 for females aged 60-84 years in England and Wales*



The reduction in mortality which has been a feature in most age-groups for many years appears to have been arrested since 1986 for persons aged 15–44 years of both sexes. (Figures 1.2 and 1.3). This will be the subject of further analysis next year. In the longer-term, the greatest improvements have been in child, and particularly infant, mortality. Death rates under the age of 14 years in 1987 were generally about half those recorded for the early 1950s (Table 1.6). Although there was a rise in the infant mortality rate (deaths under one year) in England and Wales in 1986 (which is discussed in Chapter 3), the rate for 1987 of 9.2 per 1,000 live births, was the lowest ever recorded and, was one third of the rate of 27 per 1,000 which was the average between 1951 and 1955. Similar falls in the death rates between ages one and 14 years have also been recorded (Table 1.6).

The changing pattern of mortality as it affects the older age-groups (ages 60—84 years) is illustrated in Figures 1.4 and 1.5. As well as confirming the gradual fall in the overall death rates, the varying influence of some of the major causes is also shown. Increasing death rates for lung cancer in men are particularly obvious, but recent increases in women can also be detected. However, there have been some compensatory reductions in mortality from bronchitis and other chronic respiratory disorders.

Table 1.6: *Death rates per 1,000 population, England and Wales*

Persons	Under 1 year†	1–4 years	5–9 years	10–14 years
1951–1955	27	1.14	0.47	0.41
1987	9.2	0.45	0.20	0.25

† Deaths per 1,000 live births

The relatively stable combined death rates for 'other' cancers conceal smaller, but nevertheless important, trends in the incidence of some individual cancers. For example, the incidence of cancer of the stomach in these age-groups, as measured by registrations of the disease, has fallen about 10% over the most recent decade (from 143.7 per 100,000 in 1974 to 128.3 per 100,000 in 1984).

Survival is a further important aspect related to the mortality of malignant disease; and there have been some significant improvements in recent years. Hodgkin's Disease is an example of this. Reliable figures for the early 1960s suggested that about one third of patients with this condition survived five years from the time of diagnosis. By the early 1970s, about half the patients were surviving for this length of time, and figures for 1981 registrations indicate that almost two thirds (63%) were still alive in 1986.

Figures 1.4 and 1.5 also illustrate the continuance of the long-term decline in mortality from cerebrovascular disease in both sexes at older ages. Nevertheless there has been, as yet, little effect on the use of hospital beds by patients with this condition (Figure 1.6 and 1.7).

A further interesting change in mortality has been the decrease in the number of deaths attributed to fractured neck of femur; from 1,748 in England and Wales in 1979, to 1,152 in 1987. During this period there has been an equivalent increase in the number of deaths assigned to osteoporosis; from 729 in 1979, to 1,357 in 1987.

Figure 1.6: *Number of hospital beds used by patients with cerebrovascular disease, 1966 to 1985*

Figure 1.7: *Percentage of hospital beds used by patients with cerebrovascular disease, 1966 to 1985*

Finally, there has been a recent improvement in the mortality from congenital malformations of the nervous system, with markedly fewer deaths from anencephaly and spina bifida.

(e) Termination of pregnancy

The number of abortions in 1987 was 174,276. This was a rise of 1.2% over 1986. Nearly 90% of the abortions were performed on women resident in England and Wales. The rise in the number of abortions to resident women was slightly below 6%, while the number of abortions to non-resident women fell by over a quarter. There was a smaller rise for those below 20 years and the number of abortions to girls under 16 years fell slightly.

(f) Appendix Tables and their content

Several tables have this year been transferred to an appendix. It is intended that these tables will form a consistent set of data to be published annually. This method of presentation will enable the annual report to be used as an initial reference source for selected data. For some of the tables, more detailed data are available from other OPCS or DHSS publications.

It is hoped in future years to expand the appendix by inclusion of tables covering sexually transmitted diseases, hospital discharges and international mortality data.

Appendix Table 1: Population age and sex structure, 1987; and changes by age 1981–7.
This table is described on the first page of this chapter.

Appendix Table 2: Five main causes of death at different ages.
This table contrasts the major causes of mortality in different age-groups. It should be noted that the rankings are dependent on the particular groupings of disease chosen. Above age 35 years the major burden of mortality derives from circulatory disease and malignant neoplasms. At ages 15–34 road vehicle accidents, other causes of injury and poisoning and suicide are major contributors to death particularly in males. These causes of death — other than suicide — are also important in childhood although congenital anomalies also rank highly.

Appendix Table 3: Relative mortality from various conditions when ranked by numbers of deaths and future years of 'working life' lost.
Data presented include the total numbers of deaths at all ages attributed to selected causes. The percentage distribution of numbers of deaths demonstrates the major impact of circulatory disease and cancer in both sexes. About three-quarters of deaths occur over the age of 65 years.
Data are also presented for years of 'working life' lost between 15 and 64 years in order to indicate the impact of various causes of death occurring at younger ages. For this tabulation a death occurring under the age of 15 years accounts for the loss of the full 50 year period between 15 and 64 years whereas death at age 60 years contributes a loss of only 5 years of 'working life'. Thus weight is given to the age at death as well as the number of deaths, and emphasis is given to the burden of deaths occurring at younger ages.
Comparison of the percentage distributions demonstrates how the relative ranking of the selected causes differ when years of 'working life' lost are considered rather than the total numbers of deaths.

In males, although circulatory disease and cancer still contribute substantially to loss of 'working life', other causes become more prominent. These include accidents — mainly motor vehicle — and suicide, and also those deaths occurring early in life — perinatal and infant deaths.
In females, the total years of future 'working life' lost from all causes combined is much less than in males, reflecting the considerably lower death rates in females. Cancer is a major contributor to loss of life under 65 years in females, particularly breast, cervix, uterus and ovary. (Cancer of the ovary is discussed in more detail in Chapter 3). Although accounting for almost 50% of the total number of deaths, circulatory deaths account for only 15% of the years of future 'working life' lost. In other respects the pattern is broadly similar to the males although accidents account for a smaller proportion of deaths amongst females.

Appendix Table 4: Trends in 'avoidable deaths', 1979 to 1986.
This table is discussed in detail in Chapter 4.

Appendix Table 5: Live births, stillbirths, infant mortality and abortions, 1960–87.
The rise in infant mortality is discussed in detail in Chapter 3.

Appendix Table 6: Congenital malformations-secular trends in selected malformations.
This table emphasises the marked decline in malformations of the central nervous system which has occurred in recent years. It is evident in both stillbirths and live births and probably reflects a decreasing incidence in these malformations. As discussed in my report for 1985 (page 22) elective abortion following screening is not the major explanation for the decline.

Appendix Table 7: Cancer registrations in 1984 (males).
This table indicates the distribution of cancer registrations in men at different ages. At all ages combined, cancers of the lung, large intestine (including rectum) and skin account for about half of the registrations.
In childhood, a high proportion of cancers are attributable to leukaemias, lymphomas, tumours of the central nervous system and embryonic tumours such as neuroblastomas and retinoblastomas. At older ages, cancer of the lung is the major cause registered. In the oldest age-group presented (85 years and over), prostate cancer accounts for almost as many registrations as lung cancer.

Appendix Table 8: Cancer registrations in 1984 (females).
In childhood, the pattern of female cancers is broadly similar to that in males. However, at ages 25–44 years cancers of breast (34%), and cervix (19%) predominate. At older ages, breast cancer continues to account for many registrations, although cancers of the lung, skin and large intestine also occur in substantial numbers.

Appendix Table 9: Vaccination 1975 to 1986.
This table is discussed in Chapter 5.

2. PREVENTION AND HEALTH PROMOTION

(a) Public Health in England

The establishment of a committee of inquiry into the 'future development of public health function' was announced by the then Secretary of State, the Rt Hon Norman Fowler, on 21 January 1985 when he reported to the House the outcome of the inquiry into the outbreak of food poisoning at Stanley Royd Psychiatric Hospital[1] which had led to 27 deaths. He concluded his statement by saying: "There can be no doubt at all about the continuing need for proper provision of public health and community medicine advice within the management structure of the Health Service. The functions of the specialty of community medicine include not only the control of infectious diseases but the assessment of the needs of populations for health care, the planning and evaluation of health services and responsibility for prevention and health promotion. I have therefore decided that it would be right to establish an inquiry into the future development of the public health function, including the control of communicable diseases and the specialty of community medicine in England. The inquiry will be a broad and fundamental examination of the role of public health doctors including how such a role could be best fulfilled."

The terms of reference of the inquiry were: "To consider the future development of the public health function, including the control of communicable diseases and the specialty of community medicine, following the introduction of general management into the Hospital and Community Health Services, and recognising a continued need for improvements in effectiveness and efficiency; and to make recommendations as soon as possible, and no later than December 1986". The membership of the committee of inquiry was a multi-disciplinary one including representatives not only of the medical specialties concerned with public health and infectious disease but also a chief environmental health officer, health authority members, NHS and local authority managers and others with experience of nursing and general practice.

The Committee defined public health as: "the art and science of preventing disease, prolonging life and promoting health through the organised efforts of society". The guidelines which the inquiry adopted in approaching what might have proved the almost unmanageable scale of its remit were noted in the introduction to this Report for 1985. While confronting fairly and squarely the specific problems which it had been asked to deal with, it recognised that the root of many of the problems lay in the performance of the public health function as a whole, following successive reorganisations and the introduction of general management into both the NHS and local government.

The fact that the Committee had embarked upon what turned out to be the first comprehensive review of the public health function since the Royal Sanitary Commission of 1871 elicited a great deal of interest. More than 200 organisations, many of them non-medical, submitted written evidence, and some 65 individuals representing more than 20 major groups or organisations gave oral evidence. As a result, the inquiry continued beyond its allotted timespan and did not complete its work until the end of 1987.

A number of fundamental problems came to light during the course of the inquiry and influenced the general pattern of the Committee's report. These included:—

- a lack of co-ordinated information about the health status of the population both nationally and locally
- a lack of emphasis on promotion of health and prevention of disease
- weakness in the capacity of health authorities to evaluate their activities
- widespread confusion about the role and responsibilities of public health doctors
- confusion about. responsibility for the control of communicable disease.

The Committee published its report in January 1988 under the title '*Public Health in England*'[2] and in announcing its publication to the House, Mr John Moore, the then Secretary of State, said: "as required by its terms of reference, the report concentrates on the control of communicable disease and the role of public health doctors within the framework of general management in the NHS and examines the wider issues of the public health function. It also suggests ways in which surveillance of the health of the population might be improved, a greater emphasis on the prevention of illness and premature death achieved, and the effectiveness of health services better evaluated."

The recommendations of the report may be summarised under three headings:

Recommendations on the public health function

(i) Guidance should be issued to all health authorities updating them on their responsibilities for health.

(ii) a public health doctor (normally the existing District Medical Officer) should be appointed as Director of Public Health); he/she should be a part of the decision-making machinery of the authority.

(iii) the Director of Public Health should be required to produce an annual report on the state of health of the District or Region.

(iv) a small central unit should be set up at the Department of Health to facilitate monitoring of the health of the population at the national level.

As the Committee pointed out (para 3.4): "objective setting with clearly defined targets is a useful tool in the public health field. . .". The overriding objective of their recommendations is to ensure that the state of the nation's health is regularly monitored and that services provided, both for prevention and treatment, are evaluated in terms of their likely impact on that state of health.

Role of public health doctors

The Report devotes close attention to the future of the specialty of community medicine — which, in view of widespread misunderstanding, it suggests should be known in future as the specialty of public health medicine. "The role of the community physician is considered both in respect of prevention of illness and

promotion of health, and in relation to the planning and evaluation of health services and the need to improve their balance, effectiveness and efficiency. At a time of growing and seemingly limitless demand for health services, techniques for evaluating outcomes are assuming increasing importance". (Para 1.7).

The Report finds that "epidemiological skills are relevant to monitoring the health of the population, analysing the pattern of illness in relation to its causes and evaluating services — all of which are helpful in seeking to make best use of finite resources". (Para 3.12).

Infectious disease control

In addition to the outbreak of Salmonella food poisoning at Stanley Royd Hospital which has already been referred to, the outbreak of Legionnaires Disease at Stafford in 1985[3], which also resulted in a public inquiry, played a part in leading to the establishment of the inquiry. The reports on both those outbreaks had pointed to a decline in available medical expertise in environmental health and in the investigation and control of communicable diseases, and had recommended a review of the responsibilities and authority of medical officers of environmental health. The Stafford inquiry, for instance, had stated (paragraph 139): "Evidence we heard and submissions made to us lead us to believe that the responsibilities and authority of the MOEH need to be reviewed. He also believe that there is legitimate concern that the present training and experience of MOsEH is less effective than that formerly provided to fit them to undertake responsibilities for the investigation and control of outbreaks of infection".

Recommendation 29 of '*Public Health in England*' recommends that in the longer-term the public health legislation should be revised in order to bring it more up-to-date. Such an enterprise is a long-term one requiring Parliamentary time. A detailed set of practical shorter-term recommendations aims to improve the surveillance, prevention and control of infectious disease here and now. Public concern over the spread of AIDS and the recent outbreaks of meningitis illustrate how important this issue is.

The report recommends that DHA's responsibilities in this field should be clarified and that a named doctor, to be entitled the District Control of Infection Officer, should be appointed and made accountable to the DGM. Developments in education and training are recommended in order to ensure that a cadre of experts is available to undertake this work. Strengthened support services for the control of infectious disease are also recommended both regionally and centrally.

At the time of going to press it was announced that the Government had accepted the main recommendations of the inquiry.

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(b) Alcohol misuse

Alcohol misuse has received much more attention this year — and rightly so. It is one of the major preventable causes of ill-health. Although *per capita* consumption declined slightly in 1986/87, we are, as a nation, drinking almost twice as much as 30 years ago and this is reflected in the current burden of alcohol-related illness and other harm, including cirrhosis of the liver and mental illness. Three additional examples which highlight the consequences to health of alcohol misuse are:

i. *Hypertension*: It is clear that excessive consumption of alcohol is an important cause of high blood pressure and could account for 10% to 15% of cases[1]. This proportion would represent as many as between 250,000 and 375,000 people. High blood pressure is a major factor in the causation of most forms of cardiovascular disease. These in turn are associated with more premature deaths than all other causes of death combined. Alcohol is often an important factor in young stroke patients who can suffer severe permanent disability at great cost to themselves, their families and the Health Service.

ii. *Injuries due to assault in A & E Departments*: A major source of work in casualty departments is the young male patient with injuries due to assault. Research suggests that most of these are habitual 'binge' drinkers[2,3] who were drinking at the time they were attacked. These patients, together with others who are intoxicated, are both difficult to assess and often uncooperative and violent. They add greatly to the workload, stress and strain of staff in Accident and Emergency Departments — particularly at weekends.

iii. *Road traffic accidents involving young people*: Accidents are the commonest cause of death in adolescents. About 25% of teenage drivers killed in road accidents in 1985 had blood samples exceeding the legal limit for alcohol[4]. The lost potential of these young people, killed or permanently disabled, represents a tragic waste of human resources which also imposes a heavy burden on the Health Service. Alcohol excess is also a major factor in deaths and injuries among pedestrians.

Ministerial Group on Alcohol Misuse

On 18 September 1987, the Home Secretary announced the establishment of an inter-departmental Ministerial Group on Alcohol Misuse under the chairmanship of the Lord President of the Council and Leader of the House, John Wakeham, MP. This new Group provides, for the first time at Ministerial level, a mechanism for reviewing, co-ordinating and developing the Government's strategy to combat alcohol misuse. The Group has identified alcohol misuse by young people as one of its first priorities and has already announced a programme of measures which includes:

- tightening the law on the sale of alcohol to under-age drinkers;
- requesting the Independent Broadcasting Authority and the Advertising Standards Association, in co-operation with the drinks industry, to review the advertising codes of practice on alcohol;
- new regulations to ensure that all alcoholic drinks are labelled with percentage strength;

— promotion of low and non-alcoholic drinks by the drinks industry;

— information and educational material about alcohol for young people and those who work with them.

The Group has drawn up a forward plan of work involving meeting at two-monthly intervals to consider a wide range of issues.

Publications

The Department published two reports on medical education about alcohol[5,6]. Doctors who qualified some time ago often feel that they did not receive adequate education about the impact of alcohol misuse in clinical practice. There are now encouraging examples of innovative teaching about alcohol in medical schools using an integrated approach. The Royal College of Psychiatrists organised a consensus meeting on alcohol misuse attended by representatives of a wide range of Medical Royal Colleges and other interested organisations. The resulting Consensus Statement[7] called for a vigorous approach to our national alcohol problem and detailed areas where action might be taken. The Home Office Standing Conference on Crime Prevention produced a report from the Working Group on Alcohol and Young People, chaired by Baroness Masham[4]. The issue of the report coincided with the establishment of the Ministerial Group on Alcohol misuse and the Group was able to draw on the recommendations of the report, particularly those relating to the problem of under-age drinking. The Medical Council on Alcoholism produced a brief handbook aimed principally at GPs[8]. It provides a practical guide for doctors on the detection and management of problem drinking in general practice.

Treatment services

Alcohol Concern, the Government-sponsored voluntary agency, produced a consultative document[9] on future preventive strategy and a review of alcohol treatment services[10] detailing the uneven distribution of facilities across the country and recommendations for developing a more effective, community-oriented network of services. The Department supported a conference organised by Alcohol Concern for personnel working in Alcohol Treatment Services to consider their future development. The results of DHSS-funded research on Community Alcohol Teams, now becoming available, will influence future service development.

Current issues

The many demands for more and better education about alcohol raises one of the central issues of health education: how to ensure that it is appropriately targeted and how to evaluate its effect on behaviour. An effective campaign of public education about alcohol must be backed up with adequate services to offer help to those who come forward with drinking problems. Evidence is accumulating on the benefits of intervention at an early stage of problem drinking. General practitioners have a key role to play in early detection and treatment, but it has been difficult so far to produce the level of commitment necessary to make a major impact. Research in the USA suggests that treatment for problem drinking is highly cost-effective[11]. The cost of such treatment for problem drinking is more than outweighed by subsequent savings in the use of general health services by problem drinkers and their families. This merits attention in the United Kingdom.

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(c) **Drug misuse**

New developments in 1987

The decrease in the number of heroin addicts notified to the Home Office Index in 1986 which gave rise to cautious optimism, has not continued in 1987. The introduction of a new notification form in September 1987, was followed by a 40% increase in the number of notifications received in the last quarter of the year. Nevertheless, the reported reduced purity of street heroin and anecdotal evidence from street drug agencies suggest that because of the decreased availability of illicit heroin, misuse might be levelling out.

The paucity of heroin availability in some parts of the country has, however, led to an increase in the misuse of pharmaceutical products, particularly dihydrocodeine tartrate ('*DF118*'), buprenorphine ('*Temgesic*') and temazepam ('*Normison*'). These drugs are usually obtained on prescription. Doctors therefore need to be increasingly alert to this possibility, and avoid prescribing to unknown or temporary patients. The widespread misuse of illicit amphetamine sulphate, often by injection, continues.

The association between the sharing of injecting equipment by drug misusers and transmission of HIV infection reinforces the need for health education and treatment for drug misusers. In September, the third stage of the drug prevention campaign was launched in tandem with the Government's AIDS public education campaign. Evaluation of the campaign indicates that it has been well received, there is increased awareness among injectors of the risks of sharing injecting equipment, and attitudes against drug misuse have been re-inforced. Other research projects funded by the Department suggest that drug injectors are reducing their risk-taking injecting behaviour. During 1987 additional financial support was provided for the National AIDS Helpline, and specialist drug counsellors have been recruited to it. A further £1 million have been provided to Regional Health Authorities to help drug misuse services reach more drug misusers and provide enhanced counselling on AIDS. This sum was in addition to the £5 million provided annually from 1986/87 to improve and expand drug misuse services from which 174 schemes had been funded. Twelve special schemes have been established in England, part funded by the DHSS, providing both counselling for drug misusers and facilities for the exchange of used injecting equipment for sterile equipment. Preliminary evaluation of the schemes shows that they are attracting drug misusers who have not previously been in touch with helping agencies, that continued contract with the schemes leads to modification of risk-taking injecting practice, and that some clients have moved on to treatment for their drug misuse.

The Advisory Council on the Misuse of Drugs established a working party on Drug Misuse and AIDS to consider and make recommendations on the implications for drug misuse services of AIDS and HIV infection. Within this remit, its first priority was to consider further measures which could be taken to combat the spread of infection. Ministers endorsed the need for an early report, which was completed in December, published in March 1988, and widely distributed to health and local authorities[1,2]. The Council is continuing work on a further report addressing the management of drug misusers who develop AIDS. A report is anticipated towards the end of 1988.

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(d) Smoking and Health

Prevalence

Although the prevalence of cigarette smoking among adults in the UK has fallen from 46% in 1972 to 33% in 1986 this habit continues to be the most important preventable cause of illness and premature death in this country. Among men, prevalence has fallen from 52% in 1972 to 35% in 1986. The proportion of women smoking fell from 41% to 31% over the same period[1].

Young people's smoking

Smoking among young people continues to give cause for concern. The most recent survey[2] among school children shows an overall rate of 'regular' smoking of 7% among boys and 12% among girls. At aged 15 years, 18% of boys and up to 27% of girls are smoking regularly. It is also to be noted that the decline in prevalence of smoking, seen in older people in recent years, has ceased in young people of both sexes aged 16–24 years.

The Independent Scientific Committee on Smoking and Health (ISCSH)

The ISCSH published its Fourth Report on 23 March 1984[4]. The Report among other matters, dealt with the dangers to health of environmental tobacco smoke, birthweight and perinatal mortality, and product modification. The Committee made a number of recommendations which are being carefully studied:

(i) Passive smoking

The Committee reviewed the evidence on the possible health implications of breathing other people's tobacco smoke. They concluded that the scientific evidence is consistent with an increase of 10%–30% in the risk of lung cancer among non-smokers due to passive smoking. The inhalation of other people's smoke accounts for several hundred of the current annual total of about 40,000 lung cancer deaths in the UK. The Committee's findings received considerable publicity and have greatly increased pressure from the general public for further restrictions on smoking.

(ii) Low birthweight and perinatal mortality

The Committee reported that smoking during pregnancy is associated with an increase in perinatal mortality of about 28% and of a reduction in birthweight of between 150g and 250g. This implies that smoking in pregnancy is one of the most important known unfavourable factors affecting the health of the infant in the perinatal period.

(iii) Product modification

The Report reviews the progress and achievements of the policy of tobacco product modification, introduced in the 1970s to encourage the development of less harmful products, and recommends action to reduce further the amount of the main carcinogenic and other health-threatening components in cigarettes. The Committee concluded that, together with the welcome reduction in the

proportion of people who smoke, the policy has contributed to the more favourable trends now developing in certain smoking related diseases, most notably, lung cancer in men.

Advertising

Under the terms of the 1986 Voluntary Agreement between the Government and the tobacco industry a joint committee was set up to monitor the operation of that Agreement and another dealing with sports sponsorship. The Committee's Chairman, Sir Peter Lazarus, presented its first report on 23 March[5]. While highlighting certain areas where the agreements are inadequate the Report shows that, in general, the system of voluntary agreements which govern tobacco advertising, health warnings and sports sponsorship are working.

Oral tobacco products

The growing evidence of a rapid spread of the habit of 'snuff dipping' amongst young people in the USA is causing us considerable concern. The US Surgeon General's report published in 1986[3] emphasised the increasing use and the causal correlation between the habit and the incidence of oral cancer. Recent surveys show the rate of teenage snuff dipping in some areas within the USA now exceeds that of smoking.

A major tobacco product manufactured specifically for 'snuff dipping' was introduced into the UK in 1984. I subsequently wrote a letter to all doctors warning of the potential carcinogenicity of this product.

In June 1987, a WHO study group on smokeless tobacco recommended that, in countries where it is not an established habit, manufacture, importation and sale of such products should be banned. Some countries, including New Zealand, Ireland, Hong Kong, Israel, Singapore, Saudi Arabia and various Australian states have taken steps to ban snuff dipping products.

On 23 February 1988, the Secretary of State announced proposals to issue Safety Regulations under the Consumer Protection Act, 1987. These regulations would effectively ban the supply of tobacco sold or advertised for oral use other than for chewing or smoking.

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(e) Look after your Heart!

The '*Look after your Heart!*' (LAYH) campaign was launched in April 1987 jointly by the DHSS and the Health Education Authority (HEA). The purpose of the campaign was to reduce the high incidence of coronary heart disease in England by drawing attention to preventable risk factors. It was planned as the first phase of a continuing drive, complementary to the work already going on in this area. During the first year the campaign had three main objectives:

- to establish the national profile of '*Look after your Heart!*' and, in so doing, to raise public awareness and support for healthy lifestyles;
- to encourage the development of local action and the involvement of community groups;
- to encourage the active participation of industry and commerce.

All three objectives have been achieved.

The publicity was designed to create national awareness of the campaign, awareness about heart disease and steps which can be taken to combat it. The '*Broken Hearts*' survey, published at the launch of the campaign, showed that coronary heart disease causes almost 28% of all deaths in England (some 150,000 a year). The launch was well publicised and the importance of a healthy lifestyle received extensive editorial coverage. More than eight million leaflets were distributed in the first weeks.

Preliminary results from evaluation of the campaign show an increased awareness among different socio-economic groups that personal action can reduce the risk of coronary heart disease. Levels of awareness in the lower socio-economic groups have risen by up to 22%. This success was helped by a national television and billboard poster advertising campaign in August/September 1987.

The campaign recognises the key roles played by local groups,including Health Education Units (HEUs), Health Authorities(HAs), Local Authorities (LAs), Family Practitioner Committees(FPCs), Community Health Councils (CHCs) and Environmental Health Departments (EHDs). In the first year it paid £225,000 in community grants to 125 projects. These include school competitions, exhibitions, health fairs, bus advertising, projects for people of Asian origin and primary care check-up systems. A special inner-city strategy also exists and key cities are being targeted. Many regions have formed co-ordinating groups which play an active part in LAYH. In the Mersey region, for example, the RHA and each of the 10 DHAs have signed the '*Look after your Heart!*' charter to encourage local employers to support the campaign.

Another section, the '*Heartbeat Award*', encourages all catering establishments to provide healthy menu choices, set standards of hygiene, and offer smoke-free areas. The scheme is being organised jointly with the Institute of Environmental Health Officers and, after six months, 56 LAs are taking part in an experimental project which will be used to plan a national extension.

Industry and commerce have joined the campaign by signing the '*Look after your Heart!*' contract. This strategy uses commerce and industry as a channel to the public through the workplace. When a company joins, it must undertake at least three of the measures outlined in the document '*Working for a Healthier Future*'. Employers are encouraged to introduce workplace health policies on smoking, alcohol, exercise, nutrition and stress. By the end of January 1988, 75 companies, covering almost two million employees, had signed contracts and over 500 had expressed interest in joining. Employers in both the public and private sectors have adopted these measures, and the DHSS was the first government department to join. All employees received LAYH leaflets and a LAYH exhibition at London Headquarters proved very popular.

Many organisations have worked with the LAYH campaign in promotional and sponsorship activities. The Meat and Livestock Commission is promoting a Lean Choice scheme to its members, two of the first recruits being Dewhurst and Marks and Spencers. In collaboration with LAYH St Ivel distributed a booklet, '*Get Your Fats Right*', with some of their low-fat spreads. The National Dairy Council published one on skimmed and semi-skimmed milk in support of the campaign. Other companies which have promoted the '*Look after your Heart!*' message and logo include '*Lo Salt*', British Telecom and Tesco. Such activities have contributed to the success of the campaign and its message that the adoption of healthy lifestyles can help prevent heart disease.

The DHSS and the Health Education Authority (HEA) each provided £1.5 million in the first year; and various companies sponsored national promotions. Local groups, especially health authorities, were encouraged to help finance local initiatives which supported coronary heart disease prevention.

Overall the campaign has made a promising start and has involved a wide range of different groups. The future strategy will take account of what has already been achieved and will build and expand on the interest raised, especially in the community, industry and primary care.

(f) Child abuse

The DHSS continues to give high priority to child abuse and 1987 has provided a number of important developments which assist the professions, both with training needs and in the prevention and management of child abuse, including child sexual abuse.

Work in hand

A White Paper, '*The Law on Child Care and Family Services*'[1], proposes changes which place the interests of the child within a clearer, simpler and more effective legal framework. Legislation will be introduced as soon as the parliamentary timetable allows.

Work has continued on the *Guidance on Interagency handling of child abuse cases*, and on the conduct of *Inquiries into child abuse* at a local level. The final documents will consider any lessons to be learnt from current Inquiries (see below).

The DHSS Training Initiative on Child Abuse developed from last year to encompass:

Phase I:

i. *In-depth treatment training at the Department of Psychological Medicine, the Hospital for Sick Children, Great Ormond Street*

This project began in January 1988 after the senior training lecturer had been appointed, and the trainees selected.

ii. *Training Advisory Resource*

The Training Advisory Group on the Sexual Abuse of Children (TAGOSAC) is well established at the National Children's Bureau. A project/development officer and a part-time consultant have been appointed. In September 1987, a national conference was held to identify the training needs of agencies and disciplines concerned with child sexual abuse. TAGOSAC is also collecting a broad database on material on child sexual abuse training suitable for all professions concerned with the problem.

b. *Phase II* — Announced by the Minister for Health on 8 April 1987[2]:

i. *Training for child abuse consultants*

This project, based at the National Society for the Prevention of Cruelty to Children (NSPCC), will develop specific training packages for senior Social Services Departments and District Health Authorities (DHAs) who have responsibility for the management of child abuse and/or custody of registers.

ii. *Training for doctors in child sexual abuse*

The Department has supported the Royal Society of Medicine in this venture, in association with the NSPCC and the King's Fund. A training video was completed during 1987 and work has begun on written materials to accompany it.

iii. *Training to improve awareness of child abuse*

The Department has commissioned the Open University to produce a short basic course for people, including health professionals, police, teachers and voluntary workers with little or no training in child abuse and neglect.

iv. *Training to improve inter-professional co-ordination*

Preliminary work has started at the Department of Social Administration and Social Work, Nottingham University. The project, expanded from earlier work done on multidisciplinary care conferences, will highlight and strengthen inter-professional co-ordination in child abuse, and is for use by relevant agencies, including DHAs.

Research

There is an active research programme into child care, which includes child abuse. Drs FA Boddy and D Gough are reviewing the literature in Glasgow; a major project has begun at Great Ormond Street Hospital to study the efficacy of treatment of child sexual abuse and to follow up children and their families for an 18-month period.

Statistics

Considerable preliminary work was carried out in 1987 on the feasibility of collating statistical returns on child abuse to give a clearer national picture. Results of a pilot study are expected to be published in the autumn of 1988.

An article written within the Department, which analysed existing surveys of the frequency of child sexual abuse in the UK, was published in *Health Trends* in February 1983[3]. The same journal published a review of how a multidisciplinary approach to the assessment and management of child sexual abuse in Tower Hamlets was set up[4].

Child abuse inquiries

a. Cleveland

The then Minister for Health, Mr Tony Newton, on 9 July 1987, announced an inquiry by Lord Justice Butler-Sloss to look at the arrangements for dealing with suspected cases of child abuse in Cleveland during the early part of 1987. The findings were published in July 1988[5]. Following that, the DHSS issued a circular and guidance on child abuse procedures, '*Working Together*', which includes sections on child sexual abuse, and the handling of inquiries locally[6,7].

The *Standing Medical Advisory Committee* (SMAC) was asked to prepare guidance for doctors on the clinical diagnosis of child sexual abuse. This was issued in July 1988 at the same time as the DHSS guidelines[8]. Practice guidelines were also prepared for social workers, and for nurses, including health visitors. The professional groups concerned will want to take account of any lessons to be learnt from current inquiries.

b. *Kimberley Carlile inquiry*

The report of this independent inquiry, chaired by Mr Louis Blom Cooper QC, was published on 11 December[9]. The Greenwich DHA and the Local Authority jointly sponsored the proceedings. The Department's current work programme addresses several of the report's recommendations, such as those concerning multi-agency procedures, exchange of information, supervision and training.

c. *Tyra Henry inquiry*

The report of the panel appointed to inquire into the death of Tyra Henry was published by the London Borough of Lambeth on 18 December 1987. The Department is engaged in a consultation exercise on regulations and guidance which will apply to those children in care who are placed at home with a parent, relative, guardian or friend (as was Tyra Henry).

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(g) Breast cancer screening

In February 1987, a national breast cancer screening service was announced and a Health Circular was issued (DA(87)9)[1]. Every woman aged 50 to 64 years will be invited for mammography (breast X-ray) every three years. At least one centre has already been set up in each of the 14 English Regional Health Authorities.

The first 17 centres for breast cancer screening in England are in Aylesbury, Barnet, Bolton, Camberwell, Cornwall, Epping, Gateshead, Guildford, Huddersfield, King's Lynn, Liverpool, Manchester, Nottingham, Southampton, Stoke, Suffolk and Wigan.

Statistics

Breast cancer kills more women in the UK than any other cancer — 15,000 each year (13,000 of them are aged 50 years and over). This should be compared with 11,000 deaths from lung cancer in women and 2,000 from cervical cancer. There are 24,000 new cases each year.

Forrest report[2]

A UK working group (Chairman, Sir Patrick Forrest) was set up in July 1985 on behalf of Health Ministers to consider UK policy on breast cancer screening. It reported to Ministers and the then Secretary of State announced the Government's acceptance of the group's proposals on the 25 February 1987.

(i) 'Forrest' model screening service

The NHS breast cancer screening service is being based on the model recommended in the Forrest Report which concluded that, provided a substantial proportion of women avail themselves of the service, screening those aged 50–64 years by mammography should eventually reduce deaths from breast cancer by about one third in the target population. The service will provide a computerised call and recall system to screen women in that age-group. Women aged 65 years and over will be screened on request.

There is insufficient evidence so far to show that mass screening for younger women significantly reduces mortality and more research is required. Women under 50-years-of-age are not, therefore, included in the screening population. Younger women at special risk may be offered mammography if referred by their general practitioner.

(ii) Implementation

The service is being implemented over three years. Sir Roy Griffiths, Deputy Chairman of the NHS Management Board, is leading a small team monitoring this exercise. The programme has to be developed relatively slowly because of the need to train staff and to provide back-up facilities for diagnosis, treatment, counselling and aftercare. By 1990 there should be a nationwide network of up to 100 centres, including mobile units for rural areas in England, each serving a population of about half a million.

Funding

Between 1987–88 and 1989–90, on current plans, nearly £55 million will be provided to set up and run the screening centres, including central initiatives to support the service, eg staff training, development of standard computer software, and health education.

Supervision of service

An Advisory Committee (Chairman, Professor Martin Vessey) will indicate how the service might develop, monitor its effectiveness and efficiency, and advise on research concerned with its provision.

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(h) Nutrition

1987 saw the completion of fieldwork for a Dietary Survey of Adults, commissioned jointly by DHSS and the Ministry of Agriculture, Fisheries and Food (MAFF), with the Office of Population Censuses and Survey (OPCS). This survey has collected dietary, nutritional, anthropometric, haematological and biochemical data from a representative sample of about 2,000 adults in Great Britain. The data are being processed by OPCS, who conducted the survey, and analysis should be completed by 1989. The unique information from the survey should provide a keystone for the future health monitoring of the nation.

One of the important aspects addressed by the Adult Dietary Survey is obesity. Many people are concerned about their weight, and this is reflected in the increasing interest in the use of Very Low Calories Diets. In December 1987, the Committee on Medical Aspects of Food Policy (COMA) published its report on the *Use of Very Low Calorie Diets in Obesity*[1]. This made recommendations on the formulation, use and marketing of these products which should provide a voluntary code of practice for their manufacture and sale.

In the same vein, interest has been mounting in the role of sugars in the UK diet. The Panel of experts, set up by COMA to examine this, hopes to report in 1988.

Another COMA panel held its first meeting in 1987 to review the recommended daily amounts of food energy and nutrients. This major exercise should produce a full report in 1990/91, but interim reports on individual nutrients might be proposed during the review.

As well as making the usual recommendations on energy, protein, vitamins and minerals, the panel will examine the possibility of making recommendations for fibre, fat and carbohydrate — three items identified by the 1984 COMA panel[2] as potentially relevant to cardiovascular disease. The Ongoing Review Panel on Diet and Cardiovascular Disease, which first met in 1987, plans to keep a watching brief on changes in knowledge in this subject.

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3. HEALTH OF THE POPULATION

This chapter comprises several short reviews of health-related topics. In this and subsequent annual reports, it is intended to cover a wide range of subjects including ones that have tended to receive less attention than they merit. Aspects of morbidity and disability often fall into this category due to the availability of insufficient or selective data. Nevertheless, if interpreted with caution, such data can often provide a useful insight into the magnitude of the problem, and enable disease trends to be assessed.

This year, topics are included which cross the complete age-range from infancy (infant mortality) through childhood (childhood accidents), to adulthood and the elderly where disability is a major contributor to ill-health (visual handicap; the OPCS disability survey). An important cause of mortality specific to females is presented (ovarian cancer). Finally, a section is devoted to mental rather than physical ill-health (long-term mental illness).

(a) Infant mortality in England

Introduction

Infant mortality (deaths at ages under one year) in England fell each year from 1970 to 1985. The small increase that occurred between 1985 and 1986 — from 9.2 to 9.5 per 1,000 live births — naturally drew comment (Table 3.1). The increase was the result of a rise in postneonatal mortality (deaths at ages over 28 days and under one year) from 3.9 to 4.2 per 1,000 live births, and a smaller fall in neonatal mortality (deaths in the first 28 days of life) from 5.3 to 5.2 per 1,000 live births (Figure 3.1 shows the trend in England and Wales). Further investigation has shown that the rise in postneonatal mortality in 1986 was due to an increase in deaths from respiratory diseases and the sudden infant death syndrome (SIDS) associated with the severe cold snap in February (see also p15). This increase was seen in all social groups.

Table 3.1: *Infant mortality by main cause, England 1985, 1986*

Rates per 1000 live births

	Neonatal		Postneonatal		Infant	
	1985	1986	1985	1986	1985	1986
All causes	5.32	5.24	3.91	4.24	9.23	9.49
Congenital anomalies ICD Chapter XIV	1.71	—	0.68	—	2.39	—
Perinatal conditions ICD Chapter XV	3.17	—	0.23	—	3.41	—
Respiratory diseases ICD Chapter VIII	0.07	—	0.58	—	0.65	—
Symptoms and signs (mostly SIDS) ICD Chapter XVI	0.09	—	1.69	—	1.77	—
Other causes	0.28	—	0.73	—	1.01	—

Data from which derived
1985: OPCS. Mortality statistics DH3 18 (1987)
1986: OPCS. Monitor DH3 87/4 (1987)

Neonatal mortality has been falling at a diminishing rate and appears to be levelling out. By 1985, early neonatal mortality was no longer falling as rapidly as in the late 1970s and early 1980s, and the same pattern occurred in the still-birth rate. As a result perinatal mortality, which fell by an average of 5.8% annually between 1975 and 1983, fell by only 2.8% in 1984, 2.6% in 1985, and 2.7% in 1986. Late neonatal mortality (mortality after six days but within 28 days) now makes up 19% of neonatal mortality and 11% of infant mortality. The rate fell on average by 3.8% annually between 1975 and 1986.

In contrast, the postneonatal mortality rate changed little between 1976 and 1982, lying between 4.5 and 4.3 deaths per 1,000 live births. It fell in 1983 to 4.2 and in 1984 and 1985 to 3.9, but rose in 1986 to 4.2 deaths per 1,000 live births.

Until 1986, therefore, a decline in infant mortality in the face of an almost unchanging postneonatal mortality was maintained by a continuing although diminishing fall in neonatal mortality. In that year, a rise in postneonatal mortality resulted in an increase in infant mortality. However, provisional figures for 1987 show that infant mortality rate has fallen again, to 9.1 deaths per 1,000 live births, accompanied by a fall in postneonatal mortality.

Trend and changing pattern of infant mortality: 1979–1985

Between 1979 and 1985 infant mortality fell by 28%, from 12.8 to 9.2 deaths per 1,000 live births. Eighty-two per cent of the improvement was in neonatal mortality (which fell by 35%) and 18% in postneonatal mortality (which fell by 14%). The percentage improvement in infant mortality was about the same for babies of low birthweight (less than 2,500 grams) as for others although survival in babies of very low birthweight (less than 1,500 grams) improved rather less. But although in England only 7% of babies were of low birthweight, because their mortality in infancy (in 1985) was 12 times that of others, they constituted 48% of infant deaths. Their neonatal mortality rate was 25 times greater, accounting for 64% of neonatal deaths, and their postneonatal mortality was 5.5 times greater, accounting for 26% of such deaths.

Pattern of perinatal and infant deaths

Figure 3.2 shows for England and Wales in 1985 (the latest year for which data are available) the major causes of death and their magnitude. Table 3.1 shows data on infant mortality for England in 1985. Most deaths in infancy are the result of congenital anomalies, conditions arising in the perinatal period, respiratory diseases and SIDS.

Congenital anomalies

Infant mortality due to congenital anomalies fell by 34% between 1979 and 1985, only a little less than mortality overall, and so its contribution to mortality remained little changed at 26% (Figure 3.3). The improvement was largely the result of a fall in deaths due to neural tube defects, partly through prenatal detection and partly due to a decline in incidence of these defects. It should be stated that mortality due to congenital anomalies is higher among the offspring of migrants from the Indian sub-continent than among other English babies, the relative risk being about two.

Figure 3.1: *Deaths in the first year of life, England and Wales, 1965-1986*

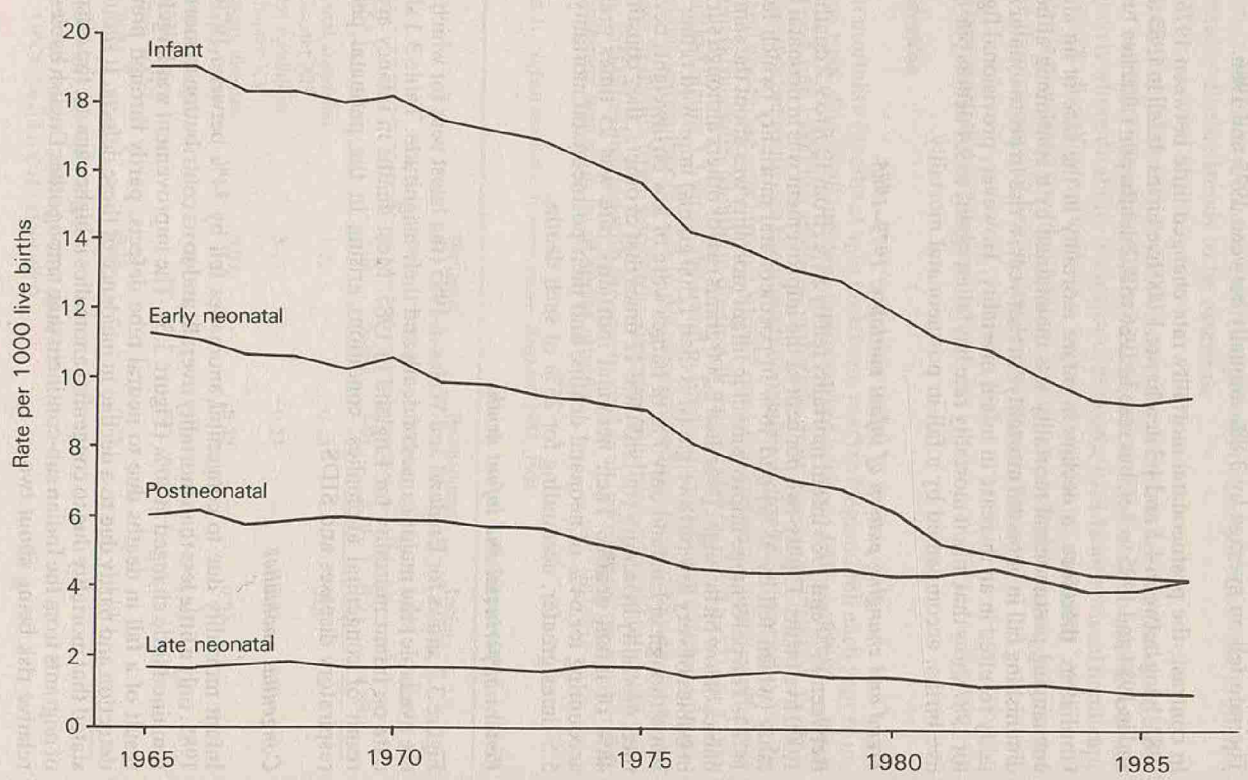
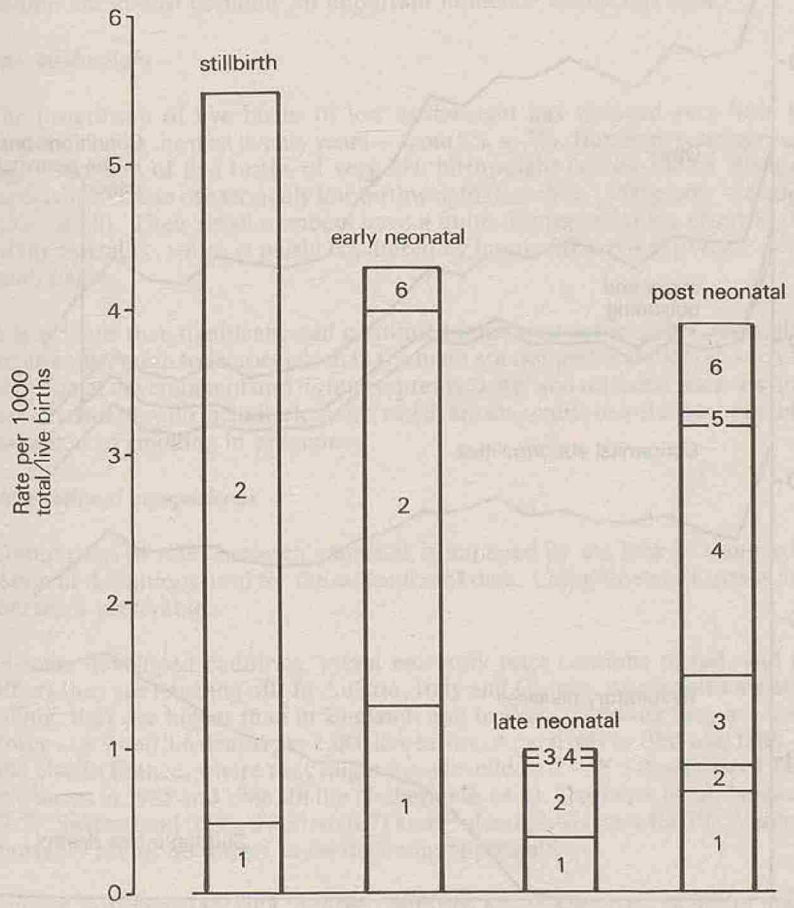


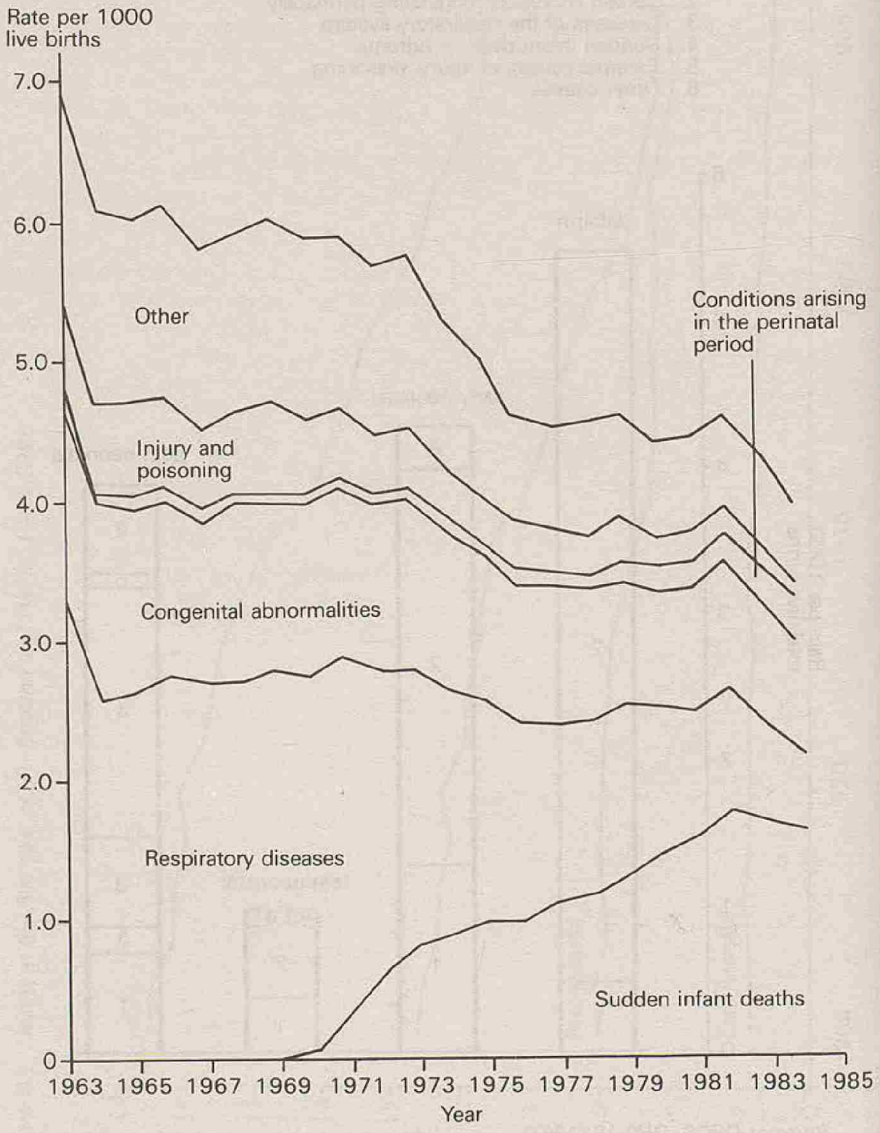
Figure 3.2: *Stillbirths and infant mortality rates against main cause of death, England and Wales 1985.*

1. Congenital anomalies
2. Certain conditions originating perinatally
3. Diseases of the respiratory system
4. Sudden infant death syndrome
5. External causes of injury, poisoning
6. Other causes



Source: OPCS, DH3 18 (1987)

Figure 3.3: *Cumulative postneonatal deaths by selected causes, England and Wales. 1963-1984.*



OPCS. Monitor DH3 85/4 (1985)

Conditions arising in the perinatal period

In 1979 and 1985, 42% and 37% respectively of infant deaths were due to these causes. Most were in babies of low birthweight and were attributed to slow fetal growth, malnutrition and immaturity, asphyxia, hypoxia and other respiratory conditions that developed perinatally.

Respiratory diseases and SIDS

Together, these have been the cause of 56% to 58%, postneonatal deaths during the period 1979–85. Although respiratory disease has diminished as a reported cause of infant death, there has been a corresponding rise in SIDS, their combined postneonatal mortality rate remaining largely unchanged since 1979 at 2.3–2.4 deaths per 1,000 live births (Figure 3.3). Changes in diagnostic fashion are almost certainly an important influence within this area.

Low birthweight

The proportion of live births of low birthweight has changed very little in England during the past twenty years — from 8% to 7%. But there is an increasing proportion of live births of very low birthweight (about 1% of all) and especially of those of extremely low birthweight (less than 1,000 grams — about 0.3% of all). Their small numbers have a quite disproportionate effect upon infant mortality, which is partly countered by improved survival of these very small babies.

It is evident that significant and continued improvement in infant mortality requires attention to factors which in the main are not well understood, such as early foetal development and its faults, prematurity, and retarded intra-uterine growth. But they do include elements which are amenable to influence, notably reduction of smoking in pregnancy.

International comparisons

Comparison of rates between countries is impeded by the lack of standardisation of definitions used for the collection of data. Comparisons of trends are therefore preferable.

In some developed countries, infant mortality rates continue to fall, and in others they are levelling off. In Austria, Italy and Greece, where rates are still falling, they are higher than in England; and in West Germany they are now lower — 8.9 and 8.6 deaths per 1,000 live births respectively in 1985 and 1986 — and also in France, where they might have levelled off — 8.3 deaths per 1,000 live births in 1985 and 1986. In the Netherlands (8.1), Denmark (8.0), Norway (7.5), Switzerland (6.9), Sweden (6.7) and Finland (6.4) (rates for 1985) infant mortality seems no longer to be declining appreciably.

Interest is drawn especially to those countries where low levels of infant mortality have been achieved which might no longer be declining. It is not possible to say whether the limits imposed by biological and social factors, and health services, impede further improvement. But is possible to offer partial explanations for the differences between England and these countries.

Congenital anomalies become a more significant cause of infant death as mortality due to other causes declines. Their contribution to infant mortality no longer varies appreciably between European countries. In particular, infant mortality due to neural tube defects which was greater in countries of the UK, has fallen. The effect has been to reduce, but not remove, one source of differences in mortality between England and other European countries.

The considerable problems that are presented by the need to assess levels of perinatal and infant mortality and their trends in health regions and districts, and to make comparisons, have been considered elsewhere[1,2].

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(b) Childhood accidents

Childhood accidents are a major cause of morbidity and mortality. Indeed such fatal accidents account for about one third of all deaths in children. (See Appendix Table A2). It has been estimated that each year about 1.3 million children seek hospital medical treatment following accidents[1]. Although most such children are not admitted (92% of 0 to 4-year-olds and 95% of 5 to 14-year-olds attending accident and emergency departments following home accidents were not admitted) and in those admitted, mean hospital in-patient stay was only about 2.5 days, the large number of children involved, the preventable nature of many of the accidents and the resultant pain, morbidity, disability or death, underline the urgent need for action in this area.

Home accidents

Home accidents account for 34% of all accidents treated in hospital (for all ages) and children, particularly those aged under five years, have very high rates for such accidents (Figure 3.4).

In 1976, the Home Accident Surveillance System (HASS) was set up. Data for HASS are collected by the Consumer Safety Unit of the Department of Trade and Industry. HASS monitors home accident cases receiving attention at the accident and emergency departments of a rolling sample of 20 hospitals in England and Wales. Details of all accidental injuries are recorded, including the type and location of accident and the type of injury. Results are reported annually[2]. The scheme is now being widened in selected hospitals to include leisure accidents under an EC initiative (the European Home and Leisure Accident Surveillance System). Data from 1986 concerning the distribution of accident types are presented in Table 3.2.

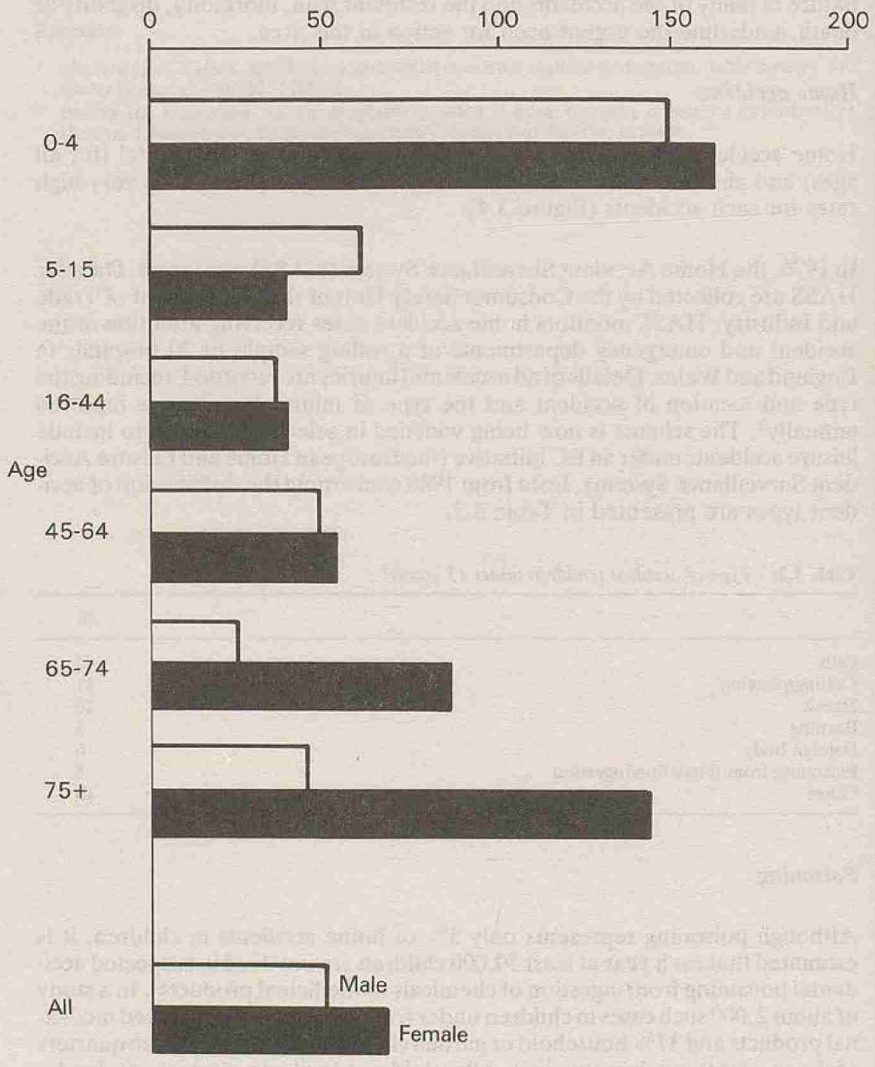
Table 3.2: *Type of accident (children under 15 years)*[2]

	%
Falls	43
Cutting/piercing	11
Struck	20
Burning	5
Foreign body	6
Poisoning from inhalation/ingestion	5
Other	10

Poisoning

Although poisoning represents only 5% of home accidents in children, it is estimated that each year at least 30,000 children are involved in suspected accidental poisoning from ingestion of chemicals or medicinal products[3]. In a study of about 2,000 such cases in children under five years old, 59% involved medicinal products and 37% household or garden chemicals[4]. In nearly three quarters of the accidents involving medicines the child was aged one or two years. Inadequate supervision of children and unsafe storage of medicines were highlighted as major avoidable factors.

Figure 3.4: *Rate of home accidents receiving medical treatment per thousand population per year, by age and sex, 1984, Great Britain*



Source: General Household Survey

Fatal home accidents

Detailed data on fatal accidents have been collected in the Home Accident Death Database (HADD) since 1982. In 1984 (the most recent year available from HADD) 235 children under 15 years died in home accidents[2]. The distribution of deaths is shown in Table 3.3 and can be contrasted with the distribution of non-fatal accidents.

Table 3.3: *Type of fatal accident (children under 15 years)*[2]

	Number	(%)
Drowning	24	(10)
Suffocation/choking	40	(17)
Foreign body	31	(13)
Burning	72	(31)
Other	68	(29)
	235	(100)

Prevention

Many accidents involving children are preventable and a recent King's Fund Centre publication has indicated how the NHS can develop its role in child accident prevention[5]. The starting point must be accurate information, and the guide shows how data held by the NHS can be used to develop policies and target resources, evaluate programmes, and provide a focal point for multisectotal co-operation. Doctors working in public health and health visitors have important roles[6].

Outside the home, traffic-related accidents are the major cause of death and disability. In 1985, 864 children died in accidents and just over half of these occurred on the roads. In comparison with a number of other countries the number of pedestrian accidents in children in Britain is high. In 1987, 405 children were killed in road traffic accidents and 41,000 children were injured. Two thirds of these accidents happened to pedestrians, one sixth to cyclists and the remainder to children travelling in cars.

Prevention of child accidents requires a collaborative approach involving the NHS, local and education authorities, parents, designers, manufacturers and others active in this area. The Childhood Accident Prevention Trust (CAPT) plays a leading role in fostering such collaboration, both between Government Departments and among non-governmental organisations. The policy development workshop at Harrogate held by CAPT and others in June 1987 focussed on policy, and the development of an action plan for Local and Health Authorities[7].

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(c) Visual handicap

Registration procedures

For a person to be registered as blind or partially sighted he or she must first be examined and assessed by a consultant ophthalmologist. The clinician's findings are then recorded on a standard form (BD8) and sent to the local authority where the patient's name is entered on a register for the blind or partially sighted, as appropriate. People who are registered as blind are considered to be 'so blind as to be unable to perform any work for which eyesight is essential'[1]; those certified as partially sighted are 'substantially and permanently handicapped by defective vision caused by congenital defect, illness or injury'. It should also be emphasised that not all persons who are blind or partially sighted choose to be registered as such, and that the true prevalence of visual handicap is higher than is shown by the registration figures. The blind registers are likely to be more complete than those for the partially sighted because registration is necessary for blind people who wish to obtain certain financial benefits.

Anonymised copies of Form BD8 are sent to DHSS. Forms for persons under 16 years-of-age are sent annually[1], for persons under 65 years-of-age every five years, and for persons of all ages, every ten years. In addition, the total numbers of blind and partially sighted persons on registers at the end of the year and the total number of new registrations during the year are submitted to DHSS every third year on Form SSDA 902. New registrations of persons under 16 years-of-age are, however, submitted annually.

Statistics relating to the blind

It is from Form BD8 that DHSS statistics about the causes of blindness and partial sight are derived. Varying responses from local authorities mean that the number of BD8s available for analysis of cause does not equal the number of registrations on Form SSDA 902 in that year. No weight can therefore be given to fluctuations over time in the numbers of new registrations based on BD8s returned.

Causes of blindness are now coded to agree with the International Classification of Diseases (Ninth Revision). This method gives more detail of the various causes of visual handicap. Before 1976 a different method of classification devised by Sorsby[2–7] was used. This change of method complicates attempts to compare statistics before 1976 with those of a later date.

Registrations

New registrations for blind and partially sighted persons and total numbers on the registers by age and sex for the years 1976/77 and 1980/81[8] have been derived from Forms SSDA 902 (Table 3.4). Numbers of BD8 forms analysed are also presented in Table 3.4. Over this period about 12,000 adults annually were newly registered as blind in England. This represents about one in 3,000 of the adult population. The total number of adults on the register rose between 1976 and 1982 from 98,871 to 109,745 - an increase of 11% in six years. Persons aged 16 to 64 years account for over 24,000 (23%) of the total registered blind.

Table 3.4: *New registrations of persons certified as blind and partially sighted by age and sex and in parentheses the number of BD8s analysed*

England — Number

Years ended 31 March	All Ages			All Adults			16–64			65–74			75 and over		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Blind															
1976/77	†12,279	4,521	7,758	12,020	4,401	7,619	1,978	1,025	953	2,428	1,018	1,410	7,614	2,358	5,256
	—	—	—	—	—	—	(1,092)	(566)	(526)	—	—	—	—	—	—
1980/81	11,641	—	—	11,450	—	—	1,655	—	—	2,270	—	—	7,525	—	—
	*(9,174)	(3,424)	(5,750)	(8,949)	(3,305)	(5,644)	(1,428)	(720)	(708)	(1,755)	(742)	(1,013)	(5,766)	(1,843)	(3,923)
Partially sighted															
1976/77	†8,185	2,836	5,349	7,712	2,611	5,101	1,446	745	701	1,804	632	1,172	4,462	1,234	3,228
	—	—	—	—	—	—	(849)	(420)	(429)	—	—	—	—	—	—
1980/81	8,234	—	—	7,952	—	—	1,358	—	—	1,672	—	—	4,922	—	—
	*(7,140)	(2,482)	(4,658)	(6,872)	(2,340)	(4,532)	(1,281)	(603)	(678)	(1,544)	(580)	(964)	(4,047)	(1,157)	(2,890)

— not available
† data include 'age unknown': 36 blind, 146 partially sighted
* data include 'age unknown': 9 blind, 18 partially sighted

Sources: Figures not in parentheses — forms SSDA902
Figures in parentheses — Registration Certificates (forms BD8)

Notes

(i) Forms SSDA902: some authorities were unable to provide data for 1980/81; latest available figures have been used instead.

(ii) The number of BD8 forms received is usually fewer than the estimated numbers of new registrations. In 1980/81 however the number available for analysis of causes of blindness exceeded the number of new registrations in the 0–15 age-group. This discrepancy could have been caused either by misallocation of BD8s to the wrong year, because of their illegibility, or by inappropriate estimating of numbers of new registrations.

Table 3.5: *Selection of causes of blindness among new registrations, year ended 31 March 1981: percentage distribution*

England — Percentages

ICD Code and Condition		1980/81												
		All Ages			0–15		16–64		65–74		75–84		85 & over	
		T	M	F	M	F	M	F	M	F	M	F	M	F
Total: all conditions (=100%)		(9,174)	(3,424)	(5,750)	(111)	(105)	(720)	(708)	(742)	(1,013)	(1,303)	(2,368)	(540)	(1,555)
362	Total: other retinal disorders	51.6	48.0	53.8	14.4	31.4	41.5	46.8	47.7	52.7	52.1	55.1	54.8	57.3
362.0	Diabetic retinopathy	7.9	7.8	7.9	0.9	1.9	17.1	22.3	13.1	16.5	3.1	4.7	1.3	0.9
362.3	Retinal vascular occlusion	2.3	2.6	2.1	–	1.0	1.8	1.0	3.8	2.3	2.8	2.4	1.9	2.1
362.5	Degeneration of macula and posterior pole	37.0	32.4	39.7	1.8	13.3	9.3	8.8	26.4	29.9	43.8	45.9	50.7	52.5
362.7	Hereditary retinal dystrophies	2.5	3.2	2.0	5.4	8.6	10.6	11.0	2.0	1.6	0.7	0.4	0.7	0.3
365	Total: Glaucoma	12.5	13.4	12.0	1.8	1.9	6.5	4.5	17.0	11.4	17.3	15.6	10.7	10.9
365.1	Open-angle glaucoma	8.0	8.7	7.6	1.8	1.0	3.8	2.8	11.9	6.6	11.2	10.2	6.3	6.9
366	Total: Cataract (excluding congenital)	8.8	6.2	10.3	0.9	4.8	1.8	5.4	5.0	8.4	8.2	10.1	9.8	14.5
367	Total: Disorders of refraction and accommodation	4.5	4.9	4.2	4.5	1.0	6.7	7.9	7.1	6.3	3.6	3.2	2.8	2.9
367.1	Myopia	4.0	4.5	3.7	4.5	1.0	6.5	7.8	7.0	6.1	3.1	2.7	1.9	1.9
377	Total: Disorders of optic nerve and visual pathways	4.6	5.8	3.8	23.4	14.3	13.9	11.6	4.9	3.8	2.0	2.3	2.2	2.0
377.1	Optic atrophy	3.4	4.3	2.8	20.7	10.5	11.0	9.7	2.2	2.2	1.6	1.6	1.7	1.5
743	Total: Congenital anomalies of eye	1.3	1.6	1.1	25.2	24.8	3.1	3.1	0.1	0.6	0.2	0.2	0.2	0.1
	Total: Multiple causes	5.3	6.7	4.4	1.8	1.9	3.9	2.1	4.7	3.5	8.0	4.6	11.1	5.9

Source: Registration Certificates (Forms BD8)

Over the same period, an average 8,268 people were newly registered as partially sighted annually (one in 4,500 of the adult population). Between 1976 and 1982 the total number of adults on the partially sighted register rose from 40,151 to 55,776 — an increase of nearly 39% in six years.

Causes of blindness and partial sight

Table 3.5 shows the percentage distribution of a selection of causes of blindness for the year ended 31 March 1981. The importance of degeneration of the macula and posterior pole as a cause of blindness is well demonstrated, accounting for 37% of all new registrations and 47.7% of new registrations aged 75 years and over. Between the ages of 16 and 64 years, diabetic retinopathy was the single most common cause of blindness, accounting for 19.7%, while optic atrophy, hereditary retinal dystrophies and degenerations of macula and posterior pole each accounted for about 10% of blindness between these ages.

Congenital anomalies of the eye and disorders of the optic nerve and visual pathways were the two most common causes in children aged 0–15 years.

An attempt has been made to compare the prevalence of certain causes of blindness and partial sight in 1970 and 1980/81 by numbers and percentages (Table 3.6). Changes in coding procedures complicate any analysis and comparisons of numbers of cases due to particular conditions are in themselves meaningless because numbers of certificates vary, both between years and in relation to total new registrations.

Table 3.6: *Causes of blindness and partial sight, 1970 and 1980/81: certain conditions*

England — Numbers and percentage

	All Ages	0–15	16–64	65 and over
Blindness – 1970				
Total new registrations	*11,202	240	1,833	9,110
Total certificates analysed	10,762	221	1,745	8,796
Glaucoma	1,622(15.1)	—	152(8.7)	1,470(16.7)
Cataract (excl. congenital)	1,708(15.9)	34(15.4)	116(6.6)	1,558(17.7)
Optic atrophy	531(4.9)	75(33.9)	261(15.0)	195(2.2)
– 1980/81				
Total new registrations	11,641	191	1,655	9,795
Total certificates analysed	*9,174	†216	1,428	7,521
Glaucoma	*1,149(12.5)	4(1.9)	79(5.5)	1,064(14.1)
Cataract (excl. congenital)	*803(8.8)	6(2.8)	51(3.6)	745(9.9)
Optic atrophy	310(3.4)	34(15.7)	148(10.4)	128(1.7)
Partial sight – 1970				
Total new registrations	*6,167	343	1,204	4,612
Total certificates analysed	†6,302	†351	1,189	†4,762
Glaucoma	789(12.5)	—	90(7.6)	699(14.7)
Cataract (excl. congenital)	1,349(21.4)	82(23.4)	27(10.7)	1,140(23.9)
Optic atrophy	231(3.7)	48(13.7)	112(9.4)	71(1.5)
– 1980/81				
Total new registrations	8,234	282	1,358	6,594
Total certificates analysed	*7,140	250	1,281	5,591
Glaucoma	*818(11.5)	3(1.2)	89(6.9)	725(13.0)
Cataract (excl. congenital)	*861(12.1)	6(2.7)	67(5.2)	785(14.0)
Optic atrophy	*187(2.6)	27(10.8)	93(7.3)	64(1.1)

* includes age unknown.

† excess over new registrations possibly due to allocation of certificates to wrong year.

However, percentage falls for both blindness and partial sight are noted for cataract, glaucoma and optic atrophy. Cataract and glaucoma are both amenable to screening procedures and to treatment. It is unwise to base conclusions on the interpretation of proportions rather than absolute rates, but one can be confident that, in spite of the complications introduced by changes in codings, the evidence supports a decrease in visual handicap caused by cataract. This is due to the increased availability of cataract surgery, and better techniques and anaesthetics making it possible to operate successfully on more elderly people.

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(d) The prevalence of disability among adults

The first results from a series of surveys of disability carried out by OPCS for DHSS have been published[1]. The main objective of the research was to provide estimates of the number of disabled people in Great Britain with different levels of severity. This entailed a series of surveys in order to cover adults and children in communal establishments as well as private households. The surveys focus on disability, a restriction or lack of ability to perform normal activities, which has resulted from the impairment of a structure or function of the body or mind. The surveys asked questions about all types of disability, whatever their origin. The data collected have been organised in two main ways. First, a single scale of severity has been developed. All people above the relatively low threshold of disability can be placed on it regardless of the type or number of different disabilities they have. Second, the survey distinguishes 13 different types of disability based on those identified in the International Classification of Impairments, Disabilities and Handicaps. The majority of disabled adults, particularly the more severely disabled and almost all of those living in communal establishments, had more than one type of disability.

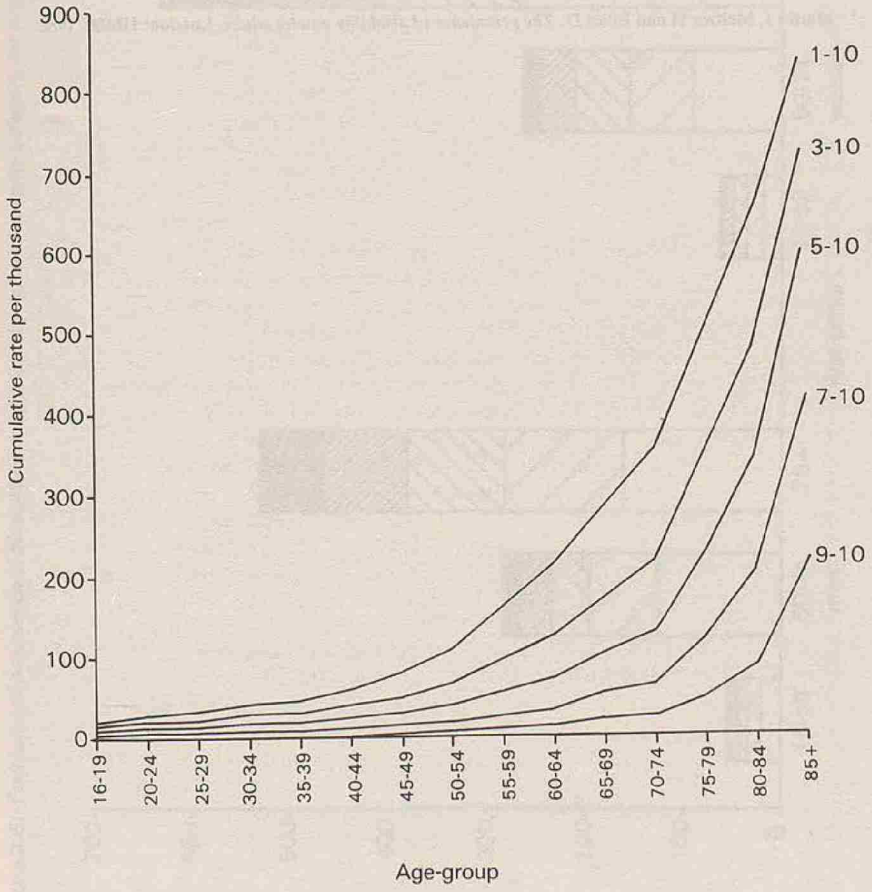
The survey estimates that there are just over six million adults with one or more disabilities in Great Britain, of whom around 400,000 (or 7%) live in some kind of communal establishment. Over one million of the adults were in the lowest severity category 1, almost all of whom were living in private households. Successively smaller numbers were found in each higher category. Thus 200,000 were in the most severe category 10, of whom one half lived in communal establishments.

An example of someone in the lowest severity group (category 1) is a man of 50 years who is deaf in one ear and has difficulty hearing someone talking in a normal voice in a quiet room. Mid-way up the scale, in category 5, is a woman of 75 years who has phlebitis and a number of other disabilities. She cannot walk 50 yards without stopping or experiencing severe discomfort, can walk up and down a flight of 12 stairs only if she holds on, and, in addition, suffers from incontinence, in that she loses control of her bladder at least once every 24 hours. At the most severely disabled end of the scale, in category 10, are people with many disabilities, some of which are very severe. For example, a 55-year-old man who has suffered a stroke and cannot walk at all or feed himself. He cannot get in and out of bed or a chair, wash, dress or get to and use the toilet without help. He cannot do anything involving holding, gripping and turning or raising his arms. He is also very difficult for strangers to understand and loses control of his bladder at least once a month.

Overall, 14% of adults (aged 16 years or more) have at least one disability. This rate is, however, related to age. Figure 3.5 shows that the overall rate of disability (all categories 1–10) rises with age, slowly at first, then accelerating after 50 years and rising very steeply after about 70-years-of-age. Only 2% of adults 16–19 years had a disability, this rose to 13% of people in their fifties and to 71% of those aged 80 years or more. The rates of the most severe categories (9–10) did not rise steeply until 70 years-of-age and rose very steeply after 80 years. Almost two thirds of adults with this degree of severity were aged 70 years or more.

The survey showed that there are more disabled women than men, partly because women live longer than men and there are therefore greater numbers

Figure 3.5: *Estimates of prevalence of disability among adults in Great Britain by age and severity category*



of elderly women. It is estimated that in Great Britain there are about 1.5 million women with disabilities aged 75 years or more compared with just over 600,000 men. But prevalence is higher for women in older age-groups too. Figure 3.6 compares prevalence rates at different ages for men and women showing the higher rates for the higher severity bands for older women. Even among those aged 85 years or more, women have a higher rate than men; 85% had a disability compared with 75% of men.

Figure 3.7 shows the prevalence of disability by type. As can be seen, the most common were locomotion disabilities, found among 10% of the adult population. This was followed by hearing and personal care disabilities.

This brief summary is from the first report in a series[1]. Subsequent reports will cover the financial circumstances of people with disabilities and their need for and use of services. Comparable reports will look at children with disabilities.

Reference

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Figure 3.6: *Estimates of prevalence of disability among adults by age and severity category for men and women*

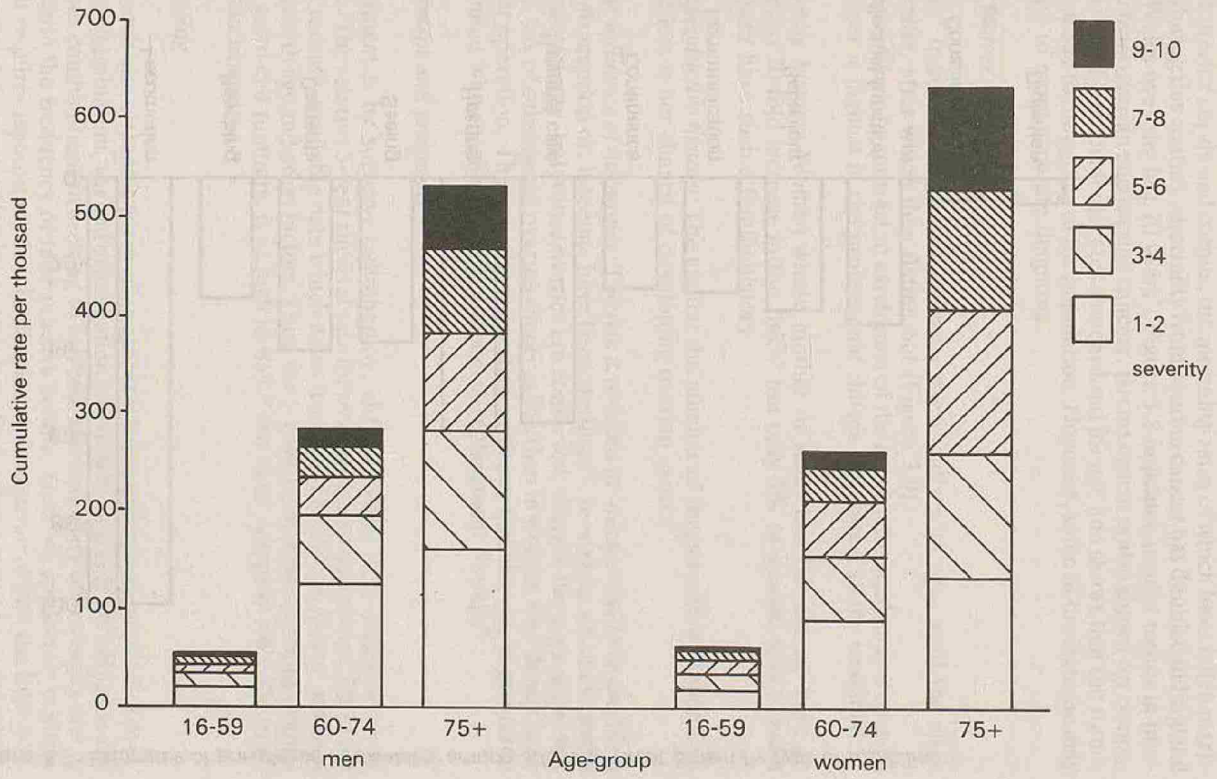


Figure 3.7: *Estimates of prevalence of disability among adults in Great Britain by type of disability*

(e) Ovarian cancer

Epidemiology

Ovarian cancer is now the commonest gynaecological malignancy in most western countries. In England and Wales, about 4,500 women develop ovarian cancer each year and there are approximately 3,700 deaths annually. Unlike cancer of the uterine cervix and corpus, the mortality rates of which have fallen markedly during this century, mortality from ovarian cancer has doubled in England and Wales over the last 70 years[1]. Figure 3.8 indicates secular trends in mortality from ovarian and uterine cancers. Breast cancer is also shown for comparison. The figure presents rates standardised for age and shows that the trends are not due to the ageing of the population. However, some of the increase may be due to more accurate diagnosis.

Risk factors

Age: Incidence and mortality rates rise rapidly with age, until the sixth decade, after which they flatten out (Figure 3.9).
Social Class: In contrast to carcinoma of the cervix, the incidence of ovarian cancer is highest in the professional classes and lowest in the unskilled.

Family history: Women whose mother or sister had the disease have an almost 20-fold increase in the risk[2,3] but only 5% of women with ovarian cancer have such a family history.

Reproductive history: The greater the number of pregnancies a woman has, the less is her chance of developing ovarian cancer[4].

The influence of hormones: The risk is reduced in women who have used oral contraception or, it seems, have been sterilised[5]. In women who have had a hysterectomy, but whose ovaries are conserved, there is the suggestion that the risk of subsequent ovarian cancer is less than in women who do not have that operation. There is also suggestive evidence that the risk is greater in women who receive oestrogen alone as replacement therapy[6].

Treatment and prognosis

Treatment is by surgery, radiotherapy, chemotherapy or a combination of these. The relative 5-year survival rate for ovarian cancer was about 25% in the most recently available data which dates from the 1970s[7,8]. However, survival varies with age and other factors. Thus, the 5-year survival rate of young women with germ-cell tumours, is as high as 85%[9] but these comprise only 3% of all ovarian tumours.

Screening

Research into screening for ovarian cancer is being actively pursued[10,11]. Ultrasound examination, vaginal examination and tumour markers are being used in various combinations in seeking to increase the sensitivity of screening and to minimise the frequency of false positive results. Since an apparently positive result requires laparotomy for clarification, it is imperative that the false positive rate of a screening programme is low. So far this has not been achieved.

Figure 3.8: *Trends in mortality from ovarian, uterine and breast cancer, England and Wales, 1911–80.*

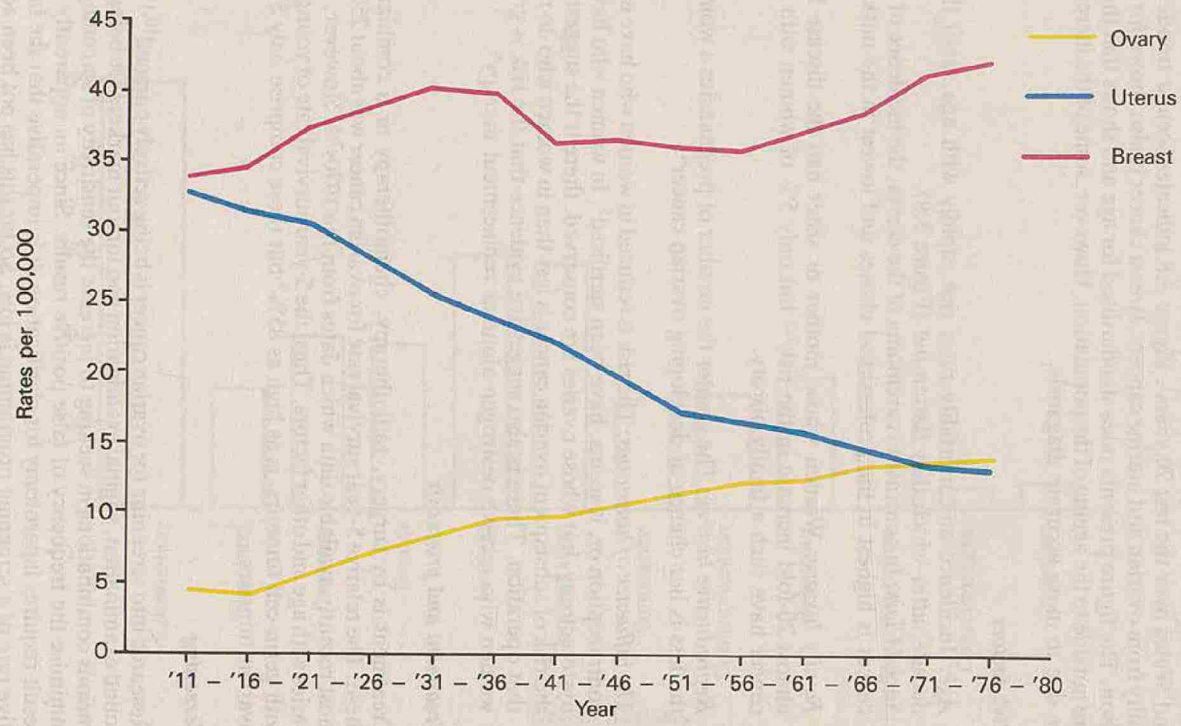
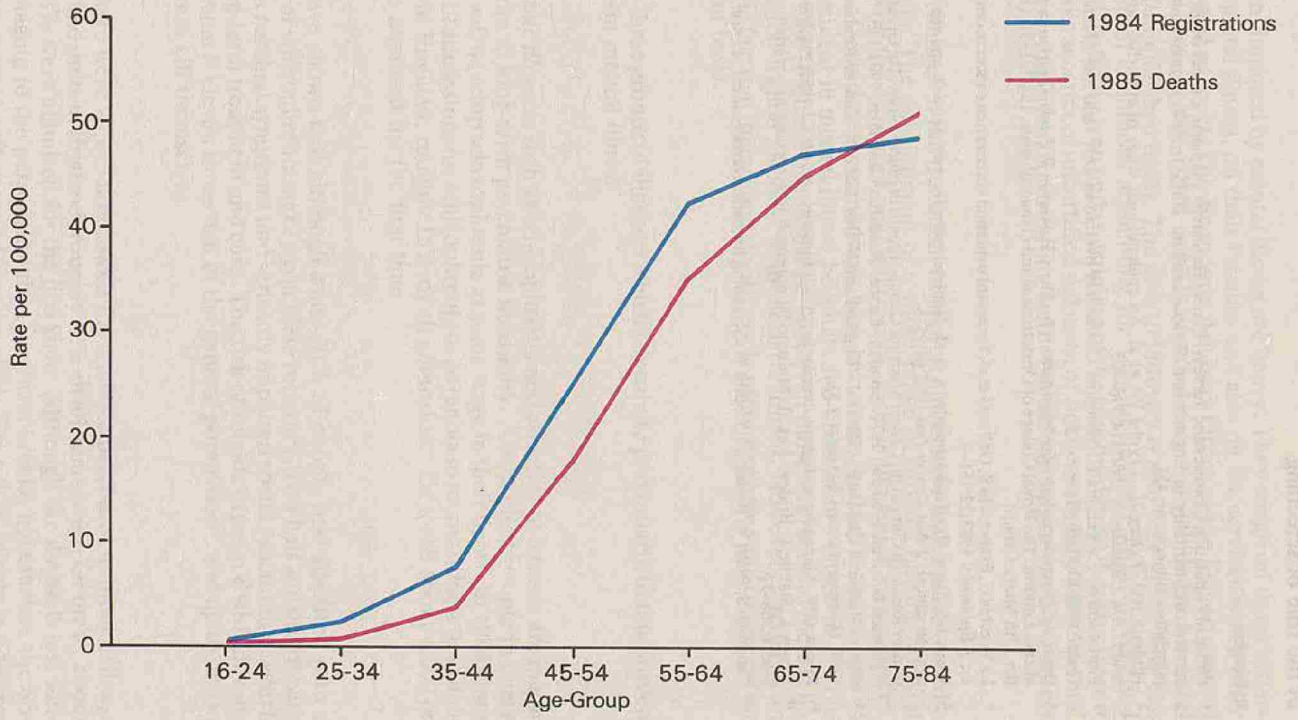


Figure 3.9: *Registrations for (1984) and deaths from (1985) ovarian cancer in different age-groups.*



The fact that this common condition tends to present late in the course of the disease, when treatment is ineffective, is a stimulus to the further investigation of the role of screening.

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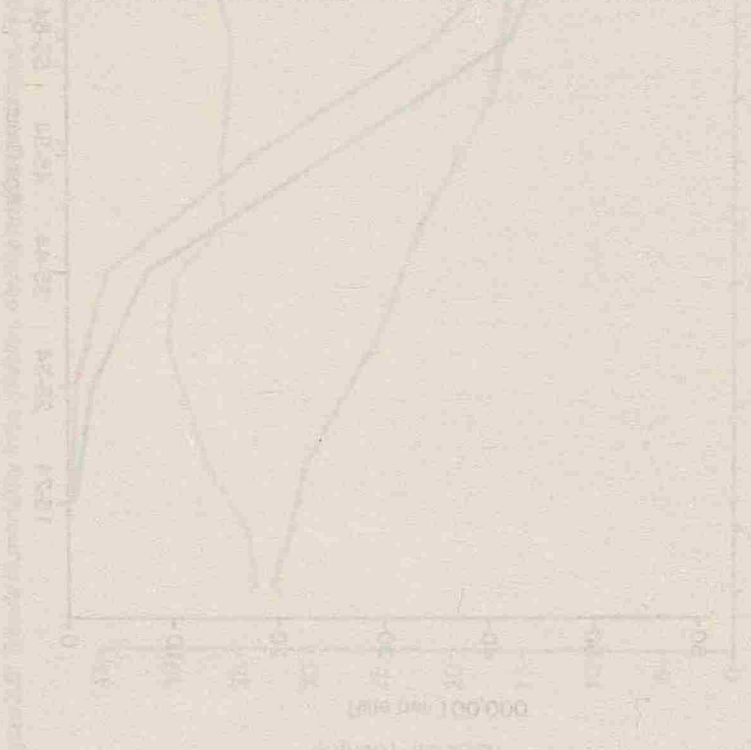


(f) Long-term mental illness

The burdens imposed by mental illness are heavy. They weigh on those suffering from mental illness, on their families and also on the services which offer treatment and support. The Economic Advisers Office at the Department of Health has estimated that 20% of NHS costs relate to mental illness or mental handicap (unpublished data). The cost to industry is also very great, with the same group of conditions accounting for 14% of days off work on certified sickness[1]. This figure is an under-estimate of the true burden on industry since it does not take account of uncertified sickness, or sickness absence where mental illness was an important contributing factor but did not appear on the sickness certificate.

Dramatic changes in the treatment of mental illness have taken place over the last 40 years. The development of a wider range of services outside hospital together with the advent of new treatments, such as the major tranquillisers, lithium and the anti-depressant drugs, have led to a marked fall in the number of patients resident in mental illness hospitals and units from 149,480 in 1956 to 60,280 in 1986 (Figure 3.10). Most people, even those with serious mental illness, will show a good response to modern treatment. However, it remains an unpalatable fact that many mentally ill people require support and treatment on a long-term basis.

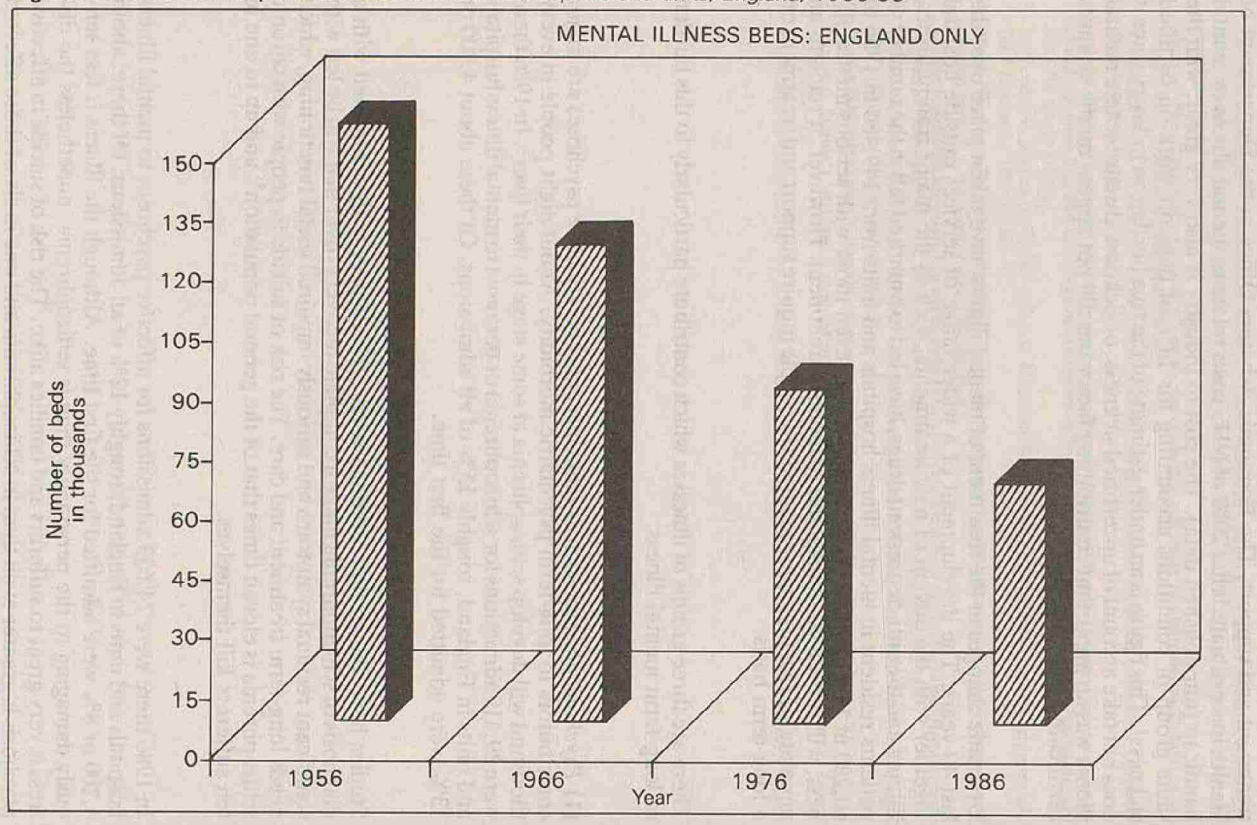
There are three groups of illnesses which contribute particularly to this burden of long-term mental illness.

(1) *Psychotic illnesses* such as schizophrenia and affective psychoses are major contributors to long-term psychiatric morbidity. About eight people in every thousand will develop schizophrenia at some stage in their lives[2]. In 1986 there were 29,419 admissions for schizophrenia or paranoia to mental illness hospitals and units in England, roughly 15% of all admissions. Of these about 4,000 or 13% were admitted for the first time.

Studies have shown that although some 20% of people first admitted with a diagnosis of schizophrenia make a complete recovery, over half will be left with significant residual symptoms and seriously impaired social functioning, which needs long-term treatment and care. The risk of suicide in people with chronic schizophrenia is eleven times that of the general population[3], and up to one in ten sufferers kill themselves.

In 1986 there were 24,633 admissions for affective psychoses to mental illness hospitals and units in England, roughly 12% of all admissions. Of these, about 4,200 or 8% were admitted for the first time. Although the illness is less seriously damaging to the personality than is schizophrenia, nonetheless the distress is very great to sufferers and families alike. The risk of suicide in affective psychosis is greater even than in schizophrenia and one in six of those affected kill themselves[4].

Figure 3.10: *Number of patients resident in mental hospitals and units, England, 1956-86*



(2) *Dementia.* The demographic trend towards an increasing proportion of very elderly people in the population will be reflected in an increasing number of older people presenting with dementia. It is estimated that there will be 4.0 million people in the UK aged 75 years and over in 1991 and 4.2 million by 1996[5]. Research suggests that some 20% of people over the age of 80 years are likely to suffer from a significant degree of dementia[6]. In England the age specific admission rate for dementia in the 75 years and over age-group has risen from 284 per 100,000 in 1976, to 488 per 100,000 in 1986 (source: Mental Health Enquiry, DHSS).

With the anticipated shift in population structure, and with an increasing percentage of women in full-time work, the proportion of carers is falling, and the management of the elderly in the community will become an increasingly important area for the integration of voluntary and statutory services.

(3) *Depression and anxiety.* Very considerable numbers of people suffer long-term distress as a result of depression and anxiety. They are looked after mainly by the general practitioner (GP) and the primary care team. GPs identify some 14% of patients attending their surgeries as having a significant psychological disorder. The use of validated screening tests shows that a further 9% of general practice attenders have a similar degree of disorder but are not identified as such[7]. These groups are therefore termed 'conspicuous' and 'hidden' morbidity. There is evidence that if hidden morbidity can be detected by the GP, then its prognosis improves[8]. Research has shown that depression is associated with an increased risk of physical illness (and hence increased mortality), increased risk of suicide and parasuicide, marital breakdown, and with considerable occupational problems such as sickness absence, labour turnover, problems with colleagues, poor performance and accidents. It also results in emotional and cognitive impairment in the children of depressed parents, which in turn can predispose to adult mental illness when the children grow up, as well as having an adverse effect on the children's ultimate intellectual attainment. Children may come into care as a result of neglect and abuse from a depressed parent.

It is clear that there are likely to be major benefits from improved detection and treatment of affective disorder in primary care patients.

The Future

When considering the needs of these three groups of patients and how best to respond to them, it is important to bear in mind the appropriate division of labour between primary and secondary care teams. Studies in other countries of the closure of large hospitals have shown that, with the move of services to the community, there can be a progressive drift away from providing for people most severely disabled towards providing for those less disabled. There are important lessons to be learnt from this since there are already disturbing reports of a similar trend in this country[9]. It will be important for psychiatrists and their professional colleagues to ensure that there is not an undue diversion of their resources away from the most serious and disabling forms of mental illness such as the psychoses and dementia with the attendant risks that these most vulnerable patients will fall out of care, possibly into dereliction and crime. Reports that up to 50% of destitute and homeless people in London have serious mental health problems are a cause for great concern and indicates a

considerable public health problem. Similarly, a joint DHSS/Home Office working party on mentally abnormal offenders in the prison system reported an estimate of some 1,500 mentally disordered people in the prison population at a census in October 1986.

Since the major disabling disorders should be the main focus of attention for the secondary care services, it is crucial that primary care teams should be well able to detect and manage the minor forms of psychiatric morbidity, depression and anxiety.

The main objective of present mental illness policy is the development of a comprehensive service within each health district with a consequent reduction in size of the old multi-district hospitals. Services for people with serious, long-term disabilities tended to be centred on these large hospitals with the inevitable problems of institutionalisation and isolation from family and friends. The biggest challenge facing mental health service practitioners and planners is to organise new-style services in such a way that they offer people with long-term illness treatment and care that is at least as good and at least as consistent as the care offered by the previous pattern of service. Fortunately there is now a developing body of knowledge about how high quality care can be delivered consistently to people with chronic disabilities when they are dispersed across a district instead of all within one hospital.

Research

Recognising the special needs of these groups of chronically disabled patients, the Department has, over the years, funded research to examine how services can be delivered in a way that helps ensure continuity of care in a setting appropriate to patients' needs. Research reports on 'hospital hostels' which provide longer-term inpatient care in more domestic settings for those chronically disabled by mental illness have been published[10,11,12] and, during the last year, a series of five seminars presented both the clinical and economic evaluations of hospital/hostels.

The treatment and care for patients with long-term illness must be continuous and efficiently monitored. The Department has funded studies of 'care registers' which use microcomputers to compile lists of patients with special mental health needs in a district. These help to ensure continuity of care by reminding clinicians when, for instance, a vulnerable patient misses an outpatient appointment. They also provide patients and relatives with information about services available to them.

The Department has also funded research in the primary care of mental health, leading to advances in our understanding of the nature, prevalence, management and outcome of depression and anxiety.

Case management and review

Good community care involves a range of agencies which can provide different elements of the total care package. Case management, the co-ordination of care at the individual level, is essential if services are to meet the needs of patients. Needs change; in hospital they are assessed at a multi-disciplinary ward round. Clinical teams should develop similar multi-disciplinary reviews for patients living outside hospital.

Both case management and community reviews were recommended by a recent committee of enquiry[13]. The Department intends to issue further guidance in this area before the end of 1988.

Conclusion

Both the incidence and the natural history of the psychoses, of dementia and of persistent depression and anxiety make it clear that very many people suffer serious long-term disability from mental illness. Most of them are, appropriately, living outside hospital. Research has shown that, even when faced with serious disability, few patients or families prefer inpatient hospital care to good quality care in the community.

To deal with this major burden of long-term illness, both primary and secondary care services (as well as other statutory and voluntary agencies) will need to ensure that available resources are most effectively applied. In particular, greater attention needs to be paid to ensuring continuity of care. At best falling out of care is likely to result in a deterioration in a patient's mental health; at worst to dereliction, crime and admission of the mentally ill to the prison system.

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4. OUTCOME INDICATORS–'AVOIDABLE' DEATHS

(a) The development of outcome indicators

Demographic changes, medical advances and increased public expectations have resulted in rapidly increasing demands for health care. These demands potentially exceed the capacity of any nation's economy to meet them so that priorities have to be set in deciding on the use of limited resources. Such decisions need to be made on the best information available. Most data that are routinely collected by health authorities concern the access to and process of health care delivery. Increasing attention is now being focussed on how to collect and assess data that measure the *outcome* of health service interventions — whether these are preventive or therapeutic.

Measuring outcome involves quantifying not only mortality, but also the different dimensions of morbidity, including pain, disability and distress. Ideally, a measurement should be developed which combines an estimate both of the amount life has been lengthened by a given intervention and also of the quality of life.

Comprehensive measures of health, such as quality adjusted life years (QUALYS), have been developed recently. Amongst other issues, they deal with the problem that, sometimes, reduction in mortality is associated with an unacceptable price paid in terms of pain and suffering. They also enable the benefits of different procedures to be ranked in relation to cost. However, formidable methodological problems will have to be overcome before these measures can be used on a wide scale.

(b) The effect of intervention on health

Randomised controlled trials are usually needed to determine whether a new intervention is more beneficial than current treatment. If positive benefits are shown then these need to be confirmed in more routine clinical practice. Having shown that an intervention is capable of producing such benefit, the next stage is to assess whether those benefits are actually being achieved everywhere. For example, are the acknowledged benefits of modern treatment for Hodgkin's disease, or of cervical screening, available to all suitable patients throughout the country?

(c) Methods of examining outcome

There are several methods of examining outcome at a local level. If an intervention is known to produce health benefit and the intervention is also known to be delivered locally to both a high standard and to the appropriate population, then the benefit may be reasonably assumed. In these circumstances output, which can be measured easily, becomes a proxy for outcome which may be difficult to assess directly. Immunisation procedures are an example of where output is used as a proxy for outcome.

Alternatively local experience can be compared with estimates of what should be possible given the known potential benefits of preventive or remedial regimens. This approach is the underlying basis of much medical audit, and also underpins the 'potentially avoidable death' indicators. These assume that with a

well run health service, deaths from certain conditions (eg tuberculosis, cervical cancer) should be sufficiently uncommon to trigger local investigation when they do occur.

(d) 'Avoidable' death indicators

These indicators, which have been developed in this country at St Thomas' Hospital, have been chosen to identify selected causes of mortality which are amenable to health service intervention, either preventive or curative. They might best be called 'potentially avoidable deaths' as while it may not be possible to prevent every death deemed 'avoidable' it is expected that a substantial proportion could be. The indicators have been made available to Health Authorities through the Inter-Authority Comparisons and Consultancy (IACC), 40 Edgbaston Park Road, Birmingham B15 2RT.

Appendix Table A.4 presents recent secular trends of nine categories of avoidable deaths. The data are presented as age standardised mortality ratios (SMRs) which adjust for differences in the age structure in the years to be compared.

Over the period 1979 to 1986 declines are evident in eight of the categories presented, although cervical cancer shows only a small and inconsistent decline. Only asthma shows a higher mortality ratio in 1986 than in 1979. Trends in asthma morbidity and mortality were discussed in detail in my report for 1986 (page 24).

(i) Examples of 'avoidable' death indicators

The SMRs for hypertension and cerebrovascular disease, cervical cancer and tuberculosis are presented graphically (Figure 4.1). This shows that the 1986 SMRs for hypertension and cerebrovascular disease and tuberculosis have decreased considerably from their 1979 values. However, it does not necessarily follow that any or all of this decline is due to improvements in treatment. The mortality from stroke has been declining for several decades for reasons that are not clear. The relatively large year to year variations in the SMR for tuberculosis could be due to the small numbers of deaths involved. The SMRs for cervical cancer show an initial fall from their 1979 level, followed by a plateau then an increase from 1985 to 1986. Although this is unsatisfactory and reflects the failure so far to bring those women most at risk into the cervical screening scheme, too much should not be read into the increase between 1985 and 1986.

(ii) Regional and district differences

Indicators can also be compared geographically in order to pinpoint areas with high death rates that might need investigation. Local studies can then identify avoidable factors and problems of health care delivery. Regional variations in mortality from hypertension and cerebrovascular disease (Table 4.1), cervical cancer (Table 4.2) and tuberculosis (Table 4.3) are tabulated. For each region the actual number of deaths in extreme years is presented. Owing to the method of calculation, SMRs should only be compared within any one year and not between years. Regions with SMRs above 100 have higher death rates than the England and Wales average, those with values less than 100 have lower than average rates.

Figure 4.1: *Age standardised mortality ratios 1979 to 1986 England and Wales (1979 = 100)*

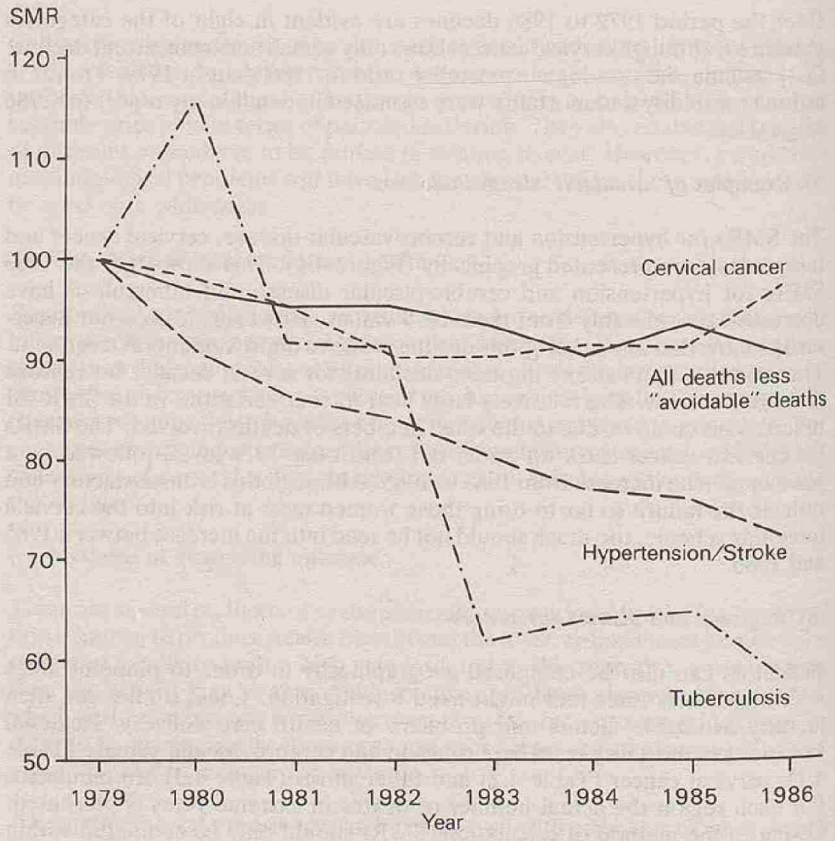


Table 4.1: *Regional variations in 'avoidable' deaths, 1979 to 1986, England and Wales*
Age Standardised Mortality Ratios (England and Wales=100)
Condition: *Hypertension/stroke* Age: 35–64 years

	SMRs [1]								Actual No. of Deaths	
Region	1979	1980	1981	1982	1983	1984	1985	1986	1979	1986
Northern	124	134	120	121	121	122	116	132	767	591
Yorkshire	102	105	107	109	114	116	112	108	698	539
Trent	100	104	105	104	107	107	104	97	886	634
East Anglia	78	81	74	70	74	83	75	80	270	216
North West Thames	83	86	93	80	77	83	83	88	540	416
North East Thames	89	82	88	84	89	88	92	91	646	470
South East Thames	93	88	92	97	86	87	97	94	645	473
South West Thames	80	76	73	83	78	79	78	74	458	307
Wessex	76	77	77	80	74	77	85	85	390	339
Oxford	73	80	90	75	81	79	76	79	292	250
South Western	92	86	90	94	81	91	83	83	547	385
West Midlands	111	114	110	110	118	110	111	111	1108	813
Mersey	118	122	115	123	108	112	114	115	553	392
North Western	132	122	123	121	130	122	123	127	1027	700
Wales	117	118	115	120	121	116	122	109	655	442
England and Wales	100	100	100	100	100	100	100	100	9482	6967

[1] The Standardised Mortality Ratio is calculated by dividing the observed number of deaths in each Region by the expected number of deaths based on the England and Wales death rate in each year.

Table 4.2: *Regional variations in 'avoidable' deaths, 1979 to 1986, England and Wales*
Age Standardised Mortality Ratios (England and Wales=100)
Condition: *Cervical Cancer* Age: 15–64 years

	SMRs [1]								Actual No. of Deaths	
Region	1979	1980	1981	1982	1983	1984	1985	1986	1979	1986
Northern	125	119	95	134	131	113	115	114	92	79
Yorkshire	116	128	116	116	121	126	117	105	95	83
Trent	97	116	121	110	82	99	113	122	102	126
East Anglia	69	87	79	78	89	74	67	74	29	32
North West Thames	69	80	58	80	70	91	71	94	55	73
North East Thames	84	84	76	101	94	86	85	87	73	72
South East Thames	83	88	93	83	79	88	79	91	70	72
South West Thames	89	63	79	85	71	66	64	56	62	37
Wessex	75	97	93	63	91	75	89	72	47	45
Oxford	110	61	46	67	59	55	75	81	54	43
South Western	103	77	82	91	106	93	112	81	74	57
West Midlands	97	100	107	103	111	108	85	80	115	93
Mersey	126	152	169	149	135	161	183	159	72	85
North Western	127	130	137	117	129	128	116	141	119	123
Wales	125	98	124	103	121	115	135	138	83	86
England and Wales	100	100	100	100	100	100	100	100	1142	1106

[1] The Standardised Mortality Ratio is calculated by dividing the observed number of deaths in each Region by the expected number of deaths based on the England and Wales death rate in each year.

Table 4.3: *Regional variations in 'avoidable' deaths, 1979 to 1986, England and Wales*
Age Standardised Mortality Ratios (England and Wales=100)
Condition: *Tuberculosis* Age: 5–64 years

	SMRs [1]								Actual No. of Deaths	
Region	1979	1980	1981	1982	1983	1984	1985	1986	1979	1986
Northern	111	150	92	91	143	108	86	121	16	10
Yorkshire	81	135	82	103	109	135	105	86	13	8
Trent	82	75	79	100	38	97	66	41	17	5
East Anglia	61	63	79	39	94	36	53	0	5	0
North West Thames	110	100	106	114	144	190	70	157	17	14
North East Thames	94	178	143	177	123	139	202	155	16	15
South East Thames	118	80	137	137	118	87	105	161	19	15
South West Thames	52	71	41	66	35	105	103	90	7	7
Wessex	33	64	63	81	90	50	85	27	4	2
Oxford	83	88	66	44	16	61	89	99	8	6
South Western	80	69	79	39	22	33	107	96	11	8
West Midlands	137	114	103	112	141	132	98	95	32	13
Mersey	82	55	130	100	115	71	126	63	9	4
North Western	204	129	147	104	186	131	130	185	37	19
Wales	85	67	119	119	62	36	48	54	11	4
England and Wales	100	100	100	100	100	100	100	100	222	130

[1] The Standardised Mortality Ratio is calculated by dividing the observed number of deaths in each Region by the expected number of deaths based on the England and Wales death rate in each year.

Variation between districts is illustrated by the three maps of the country (Figures 4.2, 4.3 and 4.4). To reduce the effect of small numbers, data are pooled for the years 1982 to 1986. Even so, cautious interpretation of the maps is needed. Low SMRs are not an excuse for complacency as they merely indicate a better than average death rate in the time period considered and take no account of underlying differences in disease incidence. High SMRs of these conditions indicate possible problems and the need for careful consideration of the local situation.

(iii) Benefits and constraints of 'avoidable' death indicators

Indicators which are considered to show an excessive number of deaths after consideration of the SMR, the number of observed deaths and the trends over time, will indicate the need for a local investigation. This should examine the adequacy of the preventive and remedial activities required to reduce the number of deaths. Intervention may be targeted at the patient, primary health care or hospital care and follow up, depending on the indicator and the remedial action being considered. Remedial factors will not be identified in every case, but this does not negate the value of the principle that excess should be investigated.

The number of deaths that are thought to be 'avoidable' will vary according to the type of indicator and the local conditions. In the case of tuberculosis a high SMR in a district may point to the presence of a large ethnic minority group with high susceptibility. In respect of cervical cancer research shows that, in theory, (ie with 100% uptake of the service), up to 84% of deaths can be prevented by the recommended five-yearly screening programme. With some indicators

Figure 4.2: *Deaths from hypertension/stroke 1982 to 1986*
SMRs (England and Wales = 100)

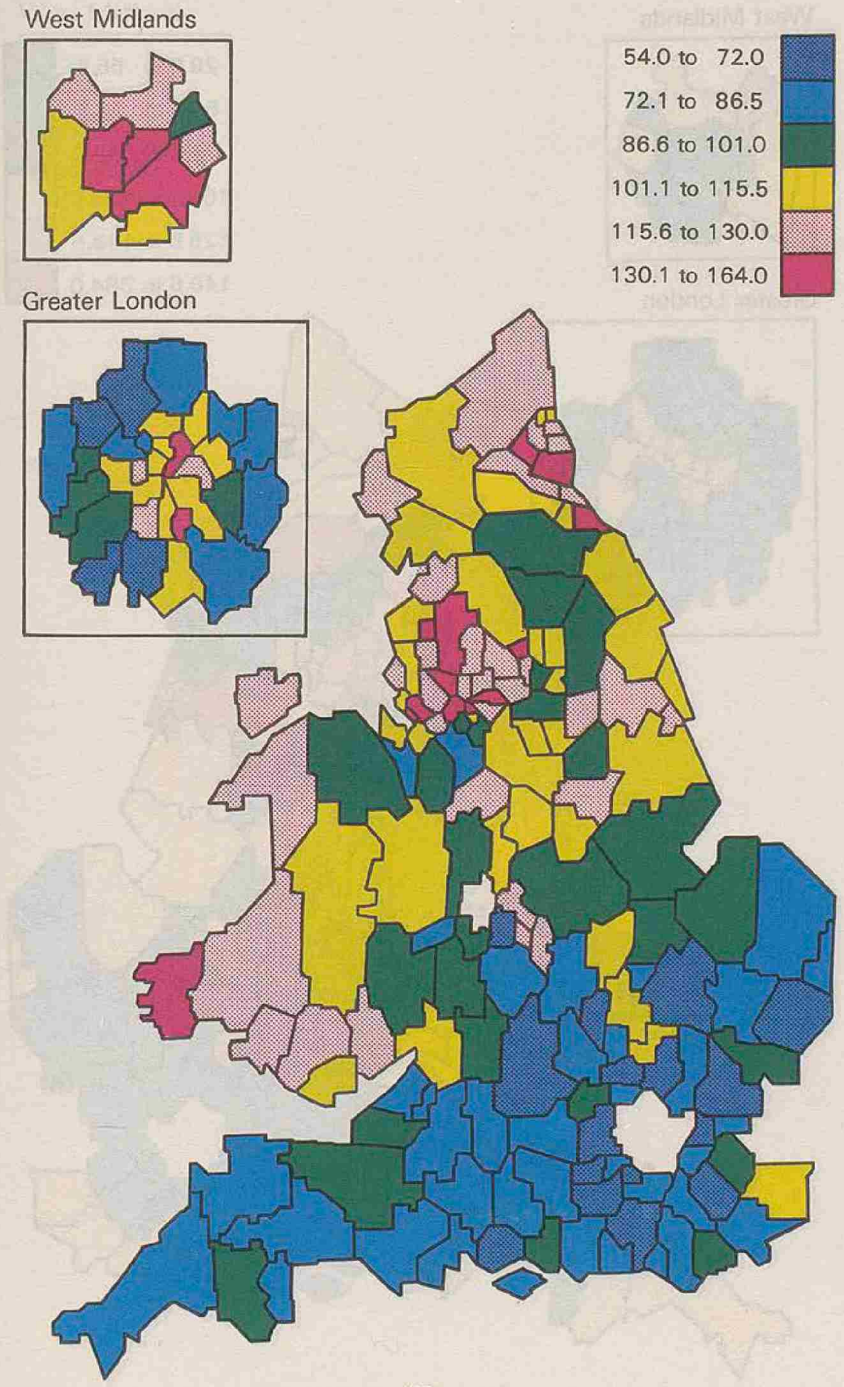


Figure 4.3: *Deaths from cervical cancer 1982 to 1986*
SMRs (England and Wales = 100)

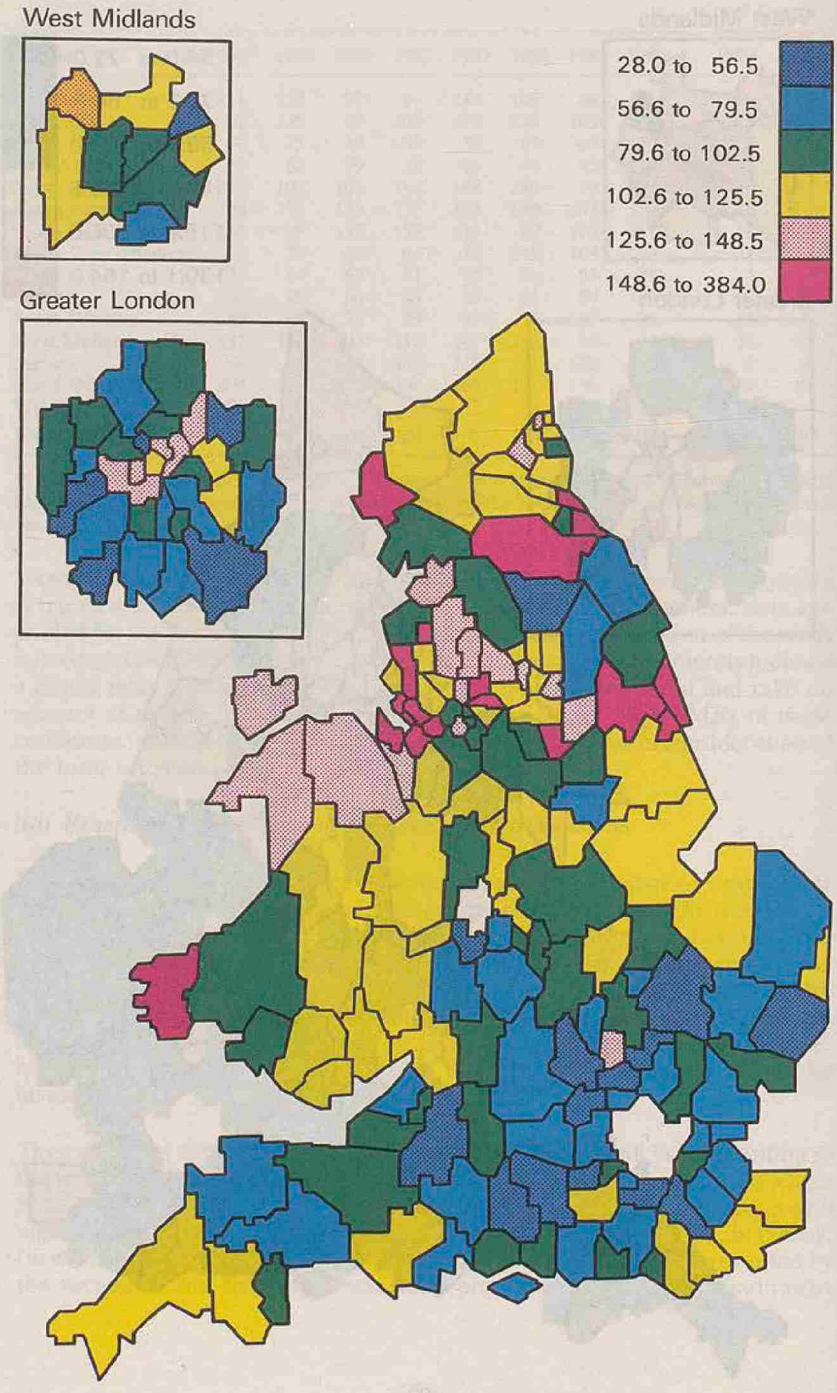
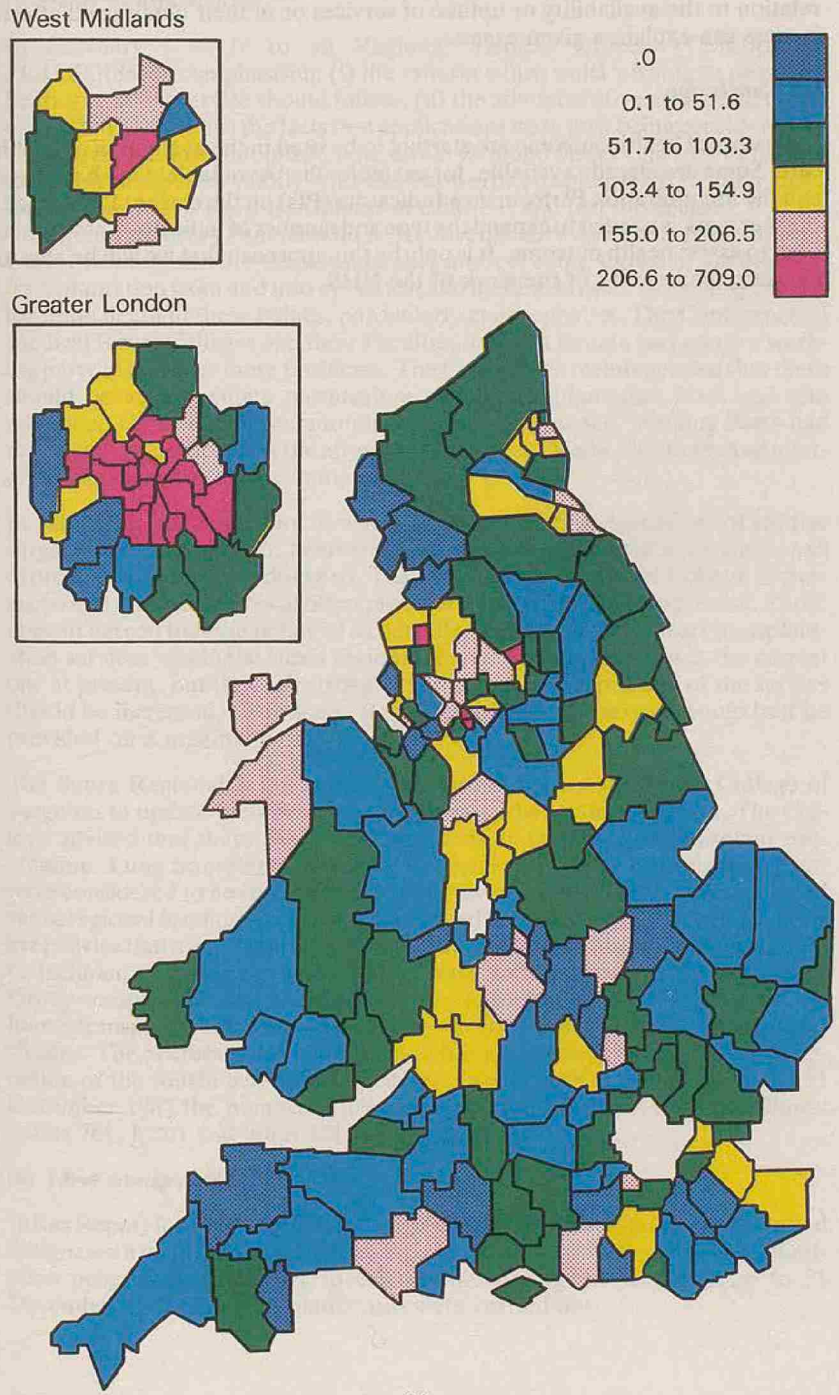


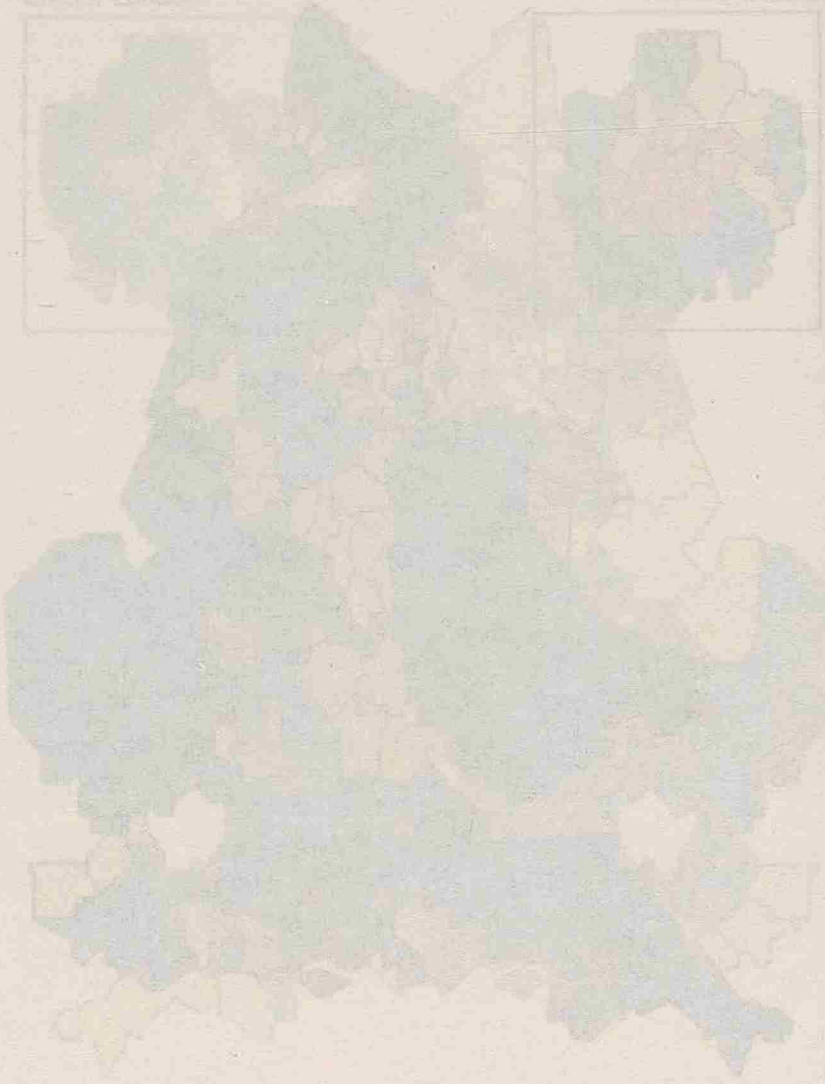
Figure 4.4: *Deaths from tuberculosis 1982 to 1986*
SMRs (England and Wales = 100)



there might be differences between Districts in the reliability and comparability of the data. Observed variations in mortality can turn out to be artefacts due to variations in the collection of data, for example, in the recording of diagnosis, death certification and coding. Alternatively, a high incidence, or problems in relation to the availability or uptake of services or of their quality and effectiveness can explain a given excess.

(e) Conclusion

Indicators of health outcome are starting to be used in the evaluation of health care. Some are already available, for example, the 'Avoidable' Death package and the immunisation Performance Indicators (PIs) on the current PI package. Further work is needed to expand the type and number of indicators that may be used to assess health outcome. It is only by this approach that we will be able to measure the benefits of the work of the NHS.



5. MAIN EVENTS RELATING TO DHSS

(a) Hospital services

(i) Heart transplantation

In February I wrote to all Regional Medical Officers (CMO)(87)4), PL/CMO(88)3[1,2] emphasising (i) the criteria which units wishing to provide a heart transplant service should follow; (ii) the administrative arrangements set out in HN(83)36[3]; (iii) the facts that applications were now being considered for a fourth centre and that, in addition, Great Ormond Street Children's Hospital had been designated jointly with the Papworth Hospital team to carry out a limited number of heart transplants in children; and (iv) the decision that the Transplant Advisory Panel should be reconvened to review the existing criteria. I also drew attention to the considerable interest being shown in the ethics of transplantation from and into neonates, and in the relevance of existing criteria for brain death in these babies, particularly anencephalics. The Conference of Medical Royal Colleges and their Faculties in Great Britain had set up a working party to consider these problems. The Conference recommended that there should be an immediate moratorium on all transplantation from and into infants up to the age of one month until such time as the Working Party had reported. I therefore drew the attention of Regional Medical Officers and interested clinicians to this recommendation.

In July, I chaired a meeting to which I had invited representatives of cardiac surgical units carrying out heart transplantation and of those units which had expressed an interest in doing so. The President of the Royal College of Surgeons and representatives of other professional bodies were also present. Those present agreed that the policy of a controlled development of heart transplantation services within the supra regional services arrangements was the correct one at present, but they felt strongly that the pace of expansion of the service should be increased. Eventually, it was considered, the service would best be provided on a regional basis.

The Supra Regional Services Advisory Group invited the Royal College of Surgeons to update their previous advice on cardiac transplantation. The College advised that there should be an expansion of the heart transplant programme. Lung transplants, normally undertaken in heart transplant centres, were considered to be still in the experimental phase in clinical application and supra regional funding was not recommended at present. The College did however advise that a limited programme of combined heart/lung operations should be included in the supra regional heart transplant programme. The Advisory Group accepted the advice and recommended to the Secretary of State that the fourth transplant centre should be established at Wythenshawe Hospital, Manchester. The Secretary of State accepted this advice and announced the designation of the fourth centre in December. In the six-year period up to the 31 December 1987 the number of transplantations carried out were as follows: hearts 761, heart and lungs 171, and lungs 7.

(ii) Liver transplantation

In this Report for 1986 I drew attention to the fact that the Secretary of State had designated a further unit for liver transplantation at Leeds. The liver transplantation programme continues to expand and during the six years up to 31 December 1987, 479 transplantations were carried out.

References

1 Department of Health and Social Security. *Cardiac transplantation*. Heywood (Lancashire): Department of Health and Social Security, 1987. (Health Circular: CMO(87)4).

2 Department of Health and Social Security. *Cardiac transplantation*. Heywood (Lancashire): Department of Health and Social Security, 1988. (Health Circular: PL/CMO(88)3).

3 Department of Health and Social Security. *Health services development: supra regional services*. Heywood (Lancashire): Department of Health and Social Security, 1983. (Health Circular: HN(83)36).

(iii) Clinical audit

One of the most important events on the NHS calendar in 1987 was the publication, on 8 December, of the findings of the Confidential Enquiry into Perioperative Deaths (CEPOD)[1].

A joint working party of the Associations of Anaesthetists and of Surgeons of Great Britain and Ireland studied all deaths which occurred within 30 days of a surgical operation performed during 1986 in three regions — South Western, North East Thames and Northern Regions. The Enquiry, probably the most vigorous self appraisal ever undertaken by a professional group, was supported by the King's Fund and the Nuffield Provincial Hospitals Trust and its design closely followed that of the Enquiry into Maternal Deaths.

At a time when public interest in and concern about the quality of health care are rapidly growing, the Enquiry provided a major step towards the fulfilment of the Department's policy to encourage the medical profession to audit the quality of its work — in this case, the key area of operative surgery.

The study received the co-operation of over 90% of the 1,396 clinicians involved, and examined the 4,034 deaths which occurred in relation to 555,258 operations conducted in the three regions. These fatalities, which represented a death rate of 0.7%, most often occurred in people over 75 years-of-age and were unavoidable due to progression of the presenting condition, such as cancer, or co-existing disease such as heart or respiratory failure. However, in approximately 20% of these deaths (ie in 0.14% of patients operated on) an avoidable factor was found, one, "which, if corrected, would have altered the outcome or might at least have reduced the chance of death at that time".

Death was attributed to "avoidable surgical and anaesthetic factors" in only 20 cases. The report explicitly stated that no preventable deaths could be blamed on a shortage of nurses or to overlong hours worked by junior medical staff. However, professional error related to insufficient training or inexperience, including delegation of responsibility, was frequently implied.

In addition to problems related to professional error, the report identified significant differences in clinical practice between the three regions and deficiencies in the Hospital Activity Analysis data. There were also problems with the storage, movement and retrieval of patients' notes particularly those of the deceased — and in transferring patients for specialised treatment to other hospitals. Few surgeons and anaesthetists held regular audits of operation results, and joint meetings between the disciplines were very rare.

The main recommendations arising from these findings address quality assurance, accountability, clinical decision making and organisation issues.

The Department welcomed this self audit and made available £200,000 for 1988/89 to enable a wider study to cover the 14 health regions in England. Further discussions with the professions, colleges and health authorities are in progress.

Reference

[1] Buck N, Devlin HB, Lunn JN. *The report of a confidential enquiry into perioperative deaths*. London: Nuffield Provincial Hospitals Trust, 1987.

(iv) Planning, manpower and medical education

This report for 1986 (page 129) referred to the consultative document '*Hospital Medical Staffing: Achieving a Balance*'[1], issued in July 1986 following discussions between the medical profession, the Health Departments and RHA Chairmen. Further discussions between the three parties in the light of the response to consultation culminated in the publication in October 1987 of '*Achieving a Balance: plan for Action*'[2]. This sets out a far-reaching programme of reform to the hospital staffing structure in order to correct imbalances which go back to the 1950s. The reforms will lead to better patient care, with more patients treated by fully trained doctors; will improve the morale of junior hospital doctors, by giving them a more certain career progression within the hospital service; and will give Health Authorities more scope and flexibility in their manpower planning.

Specific elements of the package include various measures to increase the rate of consultant expansion, including a centrally-funded 'pump-priming' scheme; improved methods of relating the number of UK doctors in training to future career opportunities; introduction of a new intermediate level career grade, the Staff Grade; and measures to help doctors unlikely to make further career progress. Implementation is expected to take ten years to complete, but a good start has already been made.

The work of the Joint Planning Advisory Committee (JPAC), also reported last year, can now be seen as an integral part of the '*Plan for Action*'. JPAC's original remit was to advise the Health Departments on the number of senior registrar posts required to fill expected consultant vacancies, and has now been extended to include registrar posts. Scrutinies of senior registrar numbers are now almost completed and JPAC will be turning its attention to registrar numbers later in 1988. Regions have already been given indicative figures for registrars to enable them to do preparatory work.

Some anxieties have been expressed that the problem of the hospital staffing structure will not be resolved until the intake to UK medical schools is reduced. This was not the view of the majority opinion of the Advisory Committee for Medical Manpower Planning whose report was published in 1985[3], but in the light of the persistent anxieties a Second Advisory Committee (ACMMP II) was set up in April 1986. It has now completed its work and a report is with Ministers.

These developments, in particular the '*Plan for Action*', have important implications for the qualitative aspects of the training of doctors. The '*Plan for Action*' creates the opportunity for a more systematic and professional approach to planning training programmes at all levels; at the same time, the expected reduction in the number of junior doctors could put additional pressures on the educational system. In order to focus the implementation of postgraduate policies within the NHS, the Department has recently announced[4] the establishment of a Standing Committee on Postgraduate Medical Education (SCOPME) whose members combine educational, service and professional interests. This Committee will to some extent replace the much larger Council for Postgraduate Medical Education (CPME). It is envisaged that SCOPME will work largely by setting up ad hoc working groups to tackle highly specific issues, such as those recently identified in the report of a CPME

working group on the SHO grade[5], and to make firm recommendations which can be implemented through Postgraduate Deans and their training committees and the parallel structure which is being developed at district level[6].

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(b) Primary care

The Government review of primary health care remained the centre point of debate during 1987. Consultation on the Primary Health Care Discussion Document (Cmnd 9771)[1] and the Cumberlege Report on Community Nursing Services in 1986[2] was followed by consideration of the comments received, and culminated in the publication in November 1987 of '*Promoting Better Health*' (Cmnd 249)[3], the Government's decisions on the steps necessary to improve primary health care. Simultaneously the Department's guidance on the recommendations in the Cumberlege Report appeared as a Health Circular (HN(87)29)[4].

The Government's objectives, for which there was wide support, are:

- to make services more responsive to the consumer
- to raise standards of care
- to promote health and prevent illness
- to give patients the widest range of choice in obtaining high quality primary care services
- to improve value for money
- to enable clearer priorities to be set for family practitioner services in relation to the rest of the health service.

(i) Health promotion and disease prevention

Much has been accomplished in developing health promotion in the primary care field where the primary health care team has a key role. Immunisation and screening programmes have greatly reduced the incidence of many diseases. Nevertheless, the number of deaths of unscreened women from cervical cancer and the incidence of measles demonstrate that more could be done. In the spring of 1988, screening programmes for cervical cytology were improved by the Family Practitioner Committee (FPC) computerised call and recall systems which will cover all women aged 20–64 years in England and Wales. The Government has also announced the introduction of a breast screening programme for women aged 50–64 years based on a similar call and recall system (see p 41). Invitations will be issued, preferably through family doctors, to attend for mammographic screening at units being established in England and Wales over the next two to three years.

There have been a number of health promotion campaigns at national level, reflecting the government responsibility for raising individuals' awareness of the link between life-style and health. Much of the ill-health caused by obesity, smoking, stress, alcohol misuse and drug misuse could be avoided if people took greater responsibility for their own health. To do this effectively, they must first be well-informed and have access to appropriate support and resource services. Members of the primary health care team play an important part in such services and are well placed, because of their regular contacts with patients, to promote good health and identify such conditions as hypertension.

In '*Promoting Better Health*', the Government stated its intention to encourage family doctors and primary health care teams to increase their contribution to these activities. It plans to amend doctors' terms of service to clarify their role in the provision of health promotion services and in the prevention of ill-health, and consider what financial incentives might be provided to achieve target levels of provision for vaccination and immunisation.

Advice on life-style, coupled with regular and frequent assessment, is particularly important for elderly people. They form a steadily increasing proportion of the general population and represent a substantial part of a family doctor's workload. Those living alone in the community may have special needs and the Government will encourage doctors to provide comprehensive regular care for elderly people.

Children under the age of five years are another group which needs special attention. District Health Authorities (DHAs) are responsible for child health surveillance, taking into account all aspects of the health of the child, advising on treatment and care and instituting appropriate preventive measures. Family doctors and health visitors already contribute to the health surveillance of under-fives. The Government intends that family doctors should play an increasing role and FPCs, acting in agreement with DHAs, will be asked to develop the contribution of suitably trained family doctors. Inevitably, the change will be gradual and the community health services will continue to play an important role.

During 1987 the Department issued a consultation document on district health authority usage of the patient registration data maintained by all FPCs[5]. The data consist of the name, address, date of birth and sex of every patient registered with a GP and they would provide health authorities with a valuable information base for identifying and contacting target populations for illness prevention and surveillance programmes, and for use in health service planning. It is argued on the one hand that readier access would lead to increased benefits for patients and on the other hand that wider access should be subject to safeguards to ensure that the patients' rights to confidentiality are preserved.

(ii) Referral patterns

Child health surveillance is only one example of the interface between health authority services and family practitioner services. The referral of patients by family doctors to a hospital, either for specialist help or to make use of diagnostic and treatment facilities, determines much of a health authority's expenditure. The wide variation in referral rates suggests that expensive hospital facilities are not always being used in the most cost-effective way. Family doctors currently have no reason to examine their criteria for referral. Whilst a high referral rate might be justified, it could indicate that some patients are inappropriately referred. Conversely a low referral rate might mean that some are not receiving the care appropriate to their condition. Indeed there is no reason to believe that doctors whose rates are on the 'norm' are invariably making correct decisions. The Department is partially funding a three-year project by East Anglian Regional Health Authority, to develop an information system to provide individual general practitioners with regular information on their referral rates by specialty, in comparison with their colleagues. It will then be possible for the profession to examine the criteria used to determine referral. The system,

which could be implemented by other health authorities, should improve the logic of decision-making and result in more appropriate care, cost effective decisions, better informed general practitioners and greater benefit from the specialist services available.

(iii) Prescribing

General practitioners' decisions are also reflected in medicines prescribed by them. This remains the single largest element in the Family Practitioner Services expenditure. This report for 1986[6] described the results of studies indicating the benefits of providing general practitioners with information about their prescribing habits. The Government has provided the Prescription Pricing Authorities in England and Wales with new computer systems and, in co-operation with the medical profession, has developed a new prescribing information system. This will enable family doctors to be provided with well presented information about their prescribing at quarterly intervals. The first returns will be available in the autumn of 1988 and will aid the increasing number of practices undertaking self-audit of their prescribing. The level of generic prescribing continues to increase — a welcome trend.

The Regional Medical Service makes itself available to doctors undertaking self-audit to discuss effective prescribing and two specially trained medical officers have been appointed to promote better prescribing practice in Yorkshire and North East Thames Regional Health Authority areas. Family Practitioner Committees will also have an increasing role in encouraging better prescribing practice by exercising a leadership role and by monitoring individual doctors' prescribing. As the White Paper '*Promoting Better Health*'[3] makes clear, they will need access to independent medical advice to do this.

(iv) The future role of Family Practitioner Committees

FPCs will have an enhanced management role in future. Since 1985 they have been free-standing authorities responsible for the planning, development and monitoring of Family Practitioner Services. '*Promoting Better Health*'[3], announced that their responsibilities will be extended and their management role strengthened. It is proposed that FPCs develop policies for improving the standards of practice premises so that the money spent goes where it is most needed, will have greater responsibilities for practice team development, develop targets for disease prevention programmes in collaboration with DHAs, consider succession planning for vacancies (encouraging the development of group practices), and undertake consumer surveys to ensure that the views of the public are known and taken into account. FPCs will require independent medical advice on many issues and they may wish to obtain this from a variety of sources, including community physicians and the Regional Medical Service.

There has been substantial progress since 1985 in developing collaborative arrangements among FPCs, DHAs, Community Health Councils, Local Authorities and voluntary bodies. The Government continues to encourage this.

(v) Primary health care teams

It is widely accepted that primary health care can be of high quality when professionals from a number of disciplines work closely together under one roof.

The Government has confirmed its policy of supporting the development of primary health care teams in '*Promoting Better Health*'. Such teams might include physiotherapists, counsellors and chiropodists as well as nurses, and can provide a wide range of services for patients. Currently, while a family doctor may employ any number of staff, only certain categories are directly reimbursed, at 70% of their salaries, up to a limit of two whole-time equivalents per doctor. It is proposed that these restrictions — including the fixed 70% rate — on the direct reimbursement of salaries should be removed, along with the present restriction on the employment of related staff. FPCs will be allocated a specific fund for practice team development, and will have the responsibility for allocating money for practice team development to improve care, locality by locality, and to develop the teams and the services family doctors provide.

Collaboration between FPCs and DHAs is also essential in the organisation of community nursing services. The Cumberlege Report[2] said that nurses were at their most effective when they and general practitioners worked together as an active primary health care team and that this was the best means of delivering comprehensive care to the consumer. Its main proposals were that:

- community nursing services should be planned, organised and delivered on a neighbourhood basis
- there was scope for making better use of nursing skills
- the effectiveness of the primary health care team needs to be improved
- there should be a more integrated approach to the training of all nurses working outside hospitals
- Consumer groups should have a stronger voice.

The Government wishes to see better use made of nursing skills. It accepts that primary health care teams should be strengthened, and that the organisation and management of community nursing services should be at a level closer to the consumers. However, the Government also recognises that there is no single right way of organising services and that such decisions are for health authorities to make. The Government sees merit in the Cumberlege Report proposals relating to the possible role of nurse practitioners' in primary care and the idea that nurses should have more freedom to prescribe a limited range of items such as dressings, ointments and medical sprays. These proposals are being examined.

The Government's response to the Report is set out in Health Circular HC(87)29/HC(FP)(87)10[4], which invites health authorities to review the organisation of their Community Nursing Services in consultation with FPCs and, if it is decided to introduce neighbourhood nursing services, with local professional bodies and community health councils. It sets out the principles to be applied in considering any organisational changes. These include the need to take full account of local factors and to recognise that community nursing staff will continue to be linked to general practices.

(vi) Consumerism

The Cumberlege proposal that consumer groups should have a stronger voice mirrors the Government's objectives. It is proposed in '*Promoting Better Health*' that FPCs should publish more comprehensive information about the family doctor practices in their areas and should make this more widely available. The Government will encourage the provision by family doctors of booklets about the services they provide and their practice organisation. Patients and prospective patients need better information to make it easier to choose a doctor. Like the Social Services Committee, the Government believes that freedom of choice, linked with more competition and simpler systems of changing doctor, will improve the quality of services[7].

(vii) Quality, education and training

Other proposals to improve the quality of services include discussions with the Medical Practices Committee on the need, when determining the distribution of doctors, to take more account of local factors, such as morbidity, which affect doctors' workloads; and financial incentives for doctors working in areas of deprivation where workloads are high in relation to list size. Quality of care lends itself to peer review and the Government welcomes voluntary experiments in this field, which it might be prepared to support financially. Continuing medical education to help doctors to keep abreast of developments and the training of undergraduate medical students in primary care, will also be encouraged by new payments for doctors who maintain regular education and training or who are involved in medical education, in association with academic departments of general practice, as will the training of practice nurses.

(viii) Conclusion

Despite the improvements in recent years in the organisation, delivery, quality and range of primary health care services, there remains room for further improvements, raising the standards of all practices to those of the best. The Government believes that the reforms set out in '*Promoting Better Health*' will achieve these aims.

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(c) Environmental Health and Toxicology

(i) Consequences of the Chernobyl nuclear accident

A considerable amount of work has continued in connection both with the effects of the nuclear accident which occurred at Chernobyl in the Soviet Union on 26 April 1986, and with the consequences for nuclear accident planning both in the United Kingdom (UK) and internationally.

1. Management of the effects of the accident

Controls on imports of food from the Soviet Union, Poland, Bulgaria, Czechoslovakia, Hungary, Rumania, Yugoslavia, Austria, East Germany, Sweden and Turkey continued under the European Community (EC) Regulation which was renewed for a further two years. The check monitoring of imports into the UK from these countries carried out by the Port Health Authorities revealed levels of contamination with radiocaesium well below the control levels (370 Becquerels/kilogram for baby foods and 600 Becquerels/kilogram for all other foods) in the vast majority of cases.

Meanwhile the negotiations on a Regulation to enable the levels of radionuclides in food to be controlled within the EC following any future nuclear accident were finally agreed in December 1987.

Within Great Britain controls under the Food and Environment Protection Act, 1985, on the movement and slaughter of sheep in certain parts of Cumbria, North Wales and Scotland continues. Although the number of affected animals fell in 1987, there was a need for further controls on spring lambs to be reintroduced in some areas in 1988, and at the present time about 180,000 animals remain under restriction orders in England. The problem is clearly going to persist for a considerable time, but all the evidence suggests that the Government's measures have prevented lamb contaminated above the action level from entering the food chain.

2. Monitoring of human exposures

Surveys of levels of radiocaesium in members of the public have been carried out by various groups during the last year. These have given reassuring results and confirmed the prediction that exposures from radiocaesium consequent to the Chernobyl accident need not give rise to concern even in those areas experiencing the highest deposition levels following Chernobyl. In fact, the radiocaesium body content in those areas of high deposition was only a factor of 2 higher than the average for the UK, due probably to the complexity of food production and distribution.

3. Review of accident plans

Immediately following Chernobyl a thorough review of the UK's contingency plans for dealing with nuclear accidents was instituted. The first stage of the review recommended that a national response plan for dealing with the effects in the UK of nuclear accidents occurring in other countries should be prepared, and that although existing plans continued to provide a valid basis for the response to any nuclear accident within the UK, the Department of Energy and the Nuclear Installations Inspectorate should carry out an extensive review of UK site plans in collaboration with relevant departments and agencies, including DHSS.

The Department of the Environment published a statement on 21 January 1988 of the proposals for establishing a network of monitoring stations throughout the United Kingdom, as part of the National Response Plan for dealing with nuclear accidents overseas[1].

Meanwhile each government department has been reviewing its own plans, and the DHSS, as part of that review, has been revising its advice to the NHS on nuclear accident planning to include guidance on what they might be required to do following accidents occurring both within and outside the UK.

4. International activities

The Department of Health contributed to a substantial programme of meetings held by WHO, aimed at developing consistent advice for member states following a nuclear accident. In collaboration with the International Agency for Research on Cancer (IARC) and the International Atomic Energy Agency (IAEA), two meetings were held in May to discuss the need for and design of epidemiological studies of populations exposed to radiation after Chernobyl. The widespread contamination following that accident generated considerable public concern about possible adverse health effects. However, in much of the USSR and in most other countries, current dose estimates and knowledge of radiation biology suggest that any adverse effects are likely to be at too low a level to be detected beside the normal variations in disease incidences. The WHO group concluded that all that was indicated, in most cases, for those outside the USSR, was a surveillance exercise via existing health registries, in conjunction with the exercises to estimate general population exposures that were already known to be under way via a variety of international agencies (eg United Nations Scientific Committee on the Effects of Atomic Radiation, the Organisation for Economic Co-operation and Development, European Community). The IARC will co-ordinate this exercise for childhood leukaemia using national registers.

The meetings were told that within the USSR an organisational structure to follow-up the more highly exposed population was already operating. These people include 45,000 who received exposures between 0.2–0.5 Sievert, a dose range for which interpretable human data have not previously been available.

Study of this group was felt at the WHO/IAEA meetings to be particularly important in assessing the accuracy of our present risk estimates.

The European Community Registry (EUROCAT) reviewed data from 23 regional registries on the congenital effects of radiation exposures. A study of Down's syndrome between January 1986 and March 1987 does not demonstrate any excess of cases following the Chernobyl accident. Further studies on other possible effects are under way although detectable effects are not expected at the levels of exposure experienced in Europe.

(ii) Stable Iodine — indications for use

Following a nuclear accident, radioactive isotopes of iodine can be released from the fuel rods in the core of the reactor as a gas or in radioactive particles. Populations exposed to the cloud or depositions from it can receive radiation doses from the radioiodine. Most radioisotopes of iodine have half-lives of days rather than years so exposures from radioiodine are usually a problem only in the first few weeks after an accident.

Inhaled or ingested iodine is generally taken up rapidly from the lungs and intestines and preferentially concentrated in the thyroid gland. It can also concentrate to a lesser extent in the salivary or mammary glands and gastrointestinal tract.

Because of the selective and rapid concentration of iodine in the thyroid gland, the amount of iodine in an unplanned release will frequently be a critical factor in determining the need for action to reduce doses following a nuclear accident. The concentration of radioiodine in the thyroid can be reduced by pre-loading the body with table iodine before the radioiodine is concentrated in the gland. For this reason, nuclear site emergency plans generally include plans to distribute stable iodine, in the form of iodate or iodide, to members of the public near the site.

The Chernobyl accident released considerable radioiodine, and stable iodine prophylaxis was recommended for some, or all, of the populations of Poland, Rumania and Czechoslovakia, as well as the USSR.

In the USSR, 5.4 million people, of whom 1.7 million were children, were given stable iodine. Although the Soviet authorities felt that many of these did not strictly need the tablets, many were apparently reassured by taking them. In Poland, eight million adults and 12 million children received stable iodine. In both countries the prophylaxis appears to have been well tolerated and side-effects minimal.

The Polish Government is now planning a series of epidemiological studies to evaluate the effects of this mass medication. In particular, the effects of such prophylaxis on the foetus and on those with thyroid disorders (such as goitre or controlled thyrotoxicosis) will be assessed. The results of these studies will be most useful in further refining the guidelines for the use of stable iodine following a nuclear accident.

WHO has commissioned a review of the indications for the use of stable iodine and held a joint meeting with the European Community in July 1988. Following this meeting WHO intends to issue guidelines on the indications for the use of stable iodine prophylaxis. These will obviously be relevant to any revision of guidance given within the UK.

Summary

It might seem surprising that, two years after the Chernobyl accident, so much remains incomplete or uncertain. However, determining the health effects of any exposure is a time-consuming process. There is a need to liaise with many other countries while collecting and considering data. WHO is to be commended for the effort it has put into collating data on these health issues.

(iii) Validity of toxicological data and good laboratory practice

The DHSS Good Laboratory Practice (GLP) Compliance Monitoring Programme covers 56 laboratories in the UK which are engaged in the health effects and environmental safety testing of pharmaceuticals, cosmetics, food additives, pesticides and industrial chemicals. Inspection of the laboratories is organised on a two-year cycle and the major part of the cost of monitoring is recovered from the laboratories within the programme.

There has been again considerable international activity in the field of GLP and the DHSS Toxicology Unit as been involved with foreign GLP authorities in joint inspections and study audits. These activities are designed to harmonise the international approach to GLP monitoring and, in particular, to generate mutual confidence in the standards of surveillance of industrial testing laboratories. In March 1988, the DHSS was host in London to the first GLP workshop arranged by the Organisation for Economic Co-operation and Development (OECD), Paris. This workshop was attended by delegates from 14 member countries of OECD.

At the end of 1986, the Commission of the European Communities published its first Directive on GLP (87/18/EEC)[2]. This required that regulatory authorities responsible for registering chemicals in member states accept only data generated in laboratories which operate in compliance with GLP principles and that member states monitor the laboratories to assure that compliance. The measures necessary to comply with the Directive are now more or less completed. A second GLP directive, which will come into force in January 1989, describes the procedures whereby monitoring units in member states are to verify GLP compliance. As these procedures parallel those recommended by the OECD and already adopted by the DHSS, the UK will not need to take further action.

During 1987 the DHSS concluded bilateral GLP agreements with the United States Federal Drugs Administration and with the Environmental Protection Agency. This agreement formalises the arrangements under which GLP monitoring by any one of the parties to the agreement is recognised and accepted by the other parties to the agreement. Similar arrangements have been completed with the Japanese Ministries of Health and Welfare, and Agriculture, Food and Forestry. Under the provisions of the Treaty of Rome, these bilateral agreements will remain in force until overtaken by Community provisions.

(iv) Contaminants in food

Prevention of contamination of food by unnecessary and potentially harmful chemicals contributes to the safety and wholesomeness of the food supply. However, in many cases it is not possible to eliminate completely known chemical contaminants from the diet without discarding nutritionally important foods. An added difficulty in this area is that the possible consequences for human health of low level chemical contamination of food are much more difficult to define and recognise than, say, the consequences of microbiological contamination of food. Surveillance and control of chemical contaminants to reduce as much as possible their entry into the food chain is therefore central to any preventive strategy.

Responsibility for surveillance and control of contaminants in food lies with the Ministry of Agriculture, Fisheries and Food (MAFF), which seeks advice from the Department, via the Committee of Toxicity of Chemicals in Food, Consumer Products and the Environment on the possible health effects of the contaminants found. Residues such as heavy metals, mycotoxins, nitrate, pesticides, veterinary drugs, food packaging materials and environmentally persistent organic chemicals in foods are kept under regular review by the Steering Group on Food Surveillance. This is an interdepartmental expert committee which organises investigations of residues in foods and advises ministers

on any actions that might be necessary to reduce their levels[3]. Analytical surveys determine the average daily intakes of particular chemical contaminants from foods, and identify special problem areas. For example, are there local geographical areas of higher contamination? Are some foods more contaminated than others? Are there atypical consumers who, because of their unusual patterns of food consumption, have higher-than-average intakes of particular contaminants? Are different groups, such as young infants, pregnant women or the elderly, more at risk from certain contaminants?

Of the various contaminants on which the Steering Group on Food Surveillance reported in 1987, average daily intakes generally posed no foreseeable health risks. However, in one or two areas, the surveillance data indicated that particular foods or consumer groups warranted special attention. Strategies for dealing with such situations vary. Sometimes it is possible to reduce quickly or alter the conditions of use of the chemical causing the contamination. In other cases, particularly with environmentally persistent chemicals, only long-term strategies can eventually reduce levels of contamination. With naturally occurring contaminants, whose levels can fluctuate markedly over time, it might be necessary to reject batches of food contaminated above acceptable levels. Examples from the recent reports of the Steering Group on Food Surveillance illustrate some of the special problems on which action has been recommended.

Food packaging materials occasionally give rise to unexpectedly high residues of chemicals in foods. In the recent survey of plasticisers, the maximum estimated intake of di-2-ethylhexyl adipate (DEHA) in foods was 16 mg/person/day, a potential intake greater than that of all the other plasticisers surveyed put together[4]. DEHA is the plasticiser used in 'cling-film' and it readily migrates from the film into fatty foods. Toxicity studies in animals have shown that the liver is the target organ, and at very high doses, several orders of magnitude above maximum human intakes, liver tumours are induced in mice. In view of the very large margin between human intakes and the occurrence of adverse effects in animals, the Committee on Toxicity considered that the possibility of any risk to public health was remote. However, because of uncertainties in the toxicological data, the Committee recommended it would be prudent to avoid high intakes of this and other plasticisers. Consumers will be given firm guidance on how to use 'cling-film' type materials in the home via instructions on the packaging. Advice has already been issued by MAFF on its use during cooking and reheating meals. In this case, once the problem was identified, it was possible to take fairly quick action with the co-operation of manufacturers. Films with lower levels of, or without, DEHA are already on the market.

A similar example of immediate remedial action involved the use of lead-containing caps to seal wine bottles. Wine can penetrate the cork and attack the seal, forming corrosion products of lead which contaminate the wine as it is poured. Drinking contaminated wine could increase the average daily lead intake several-fold, a highly undesirable situation, particularly for pregnant women. MAFF therefore advised the public that contamination is reduced by wiping the neck of the bottle after removal of the seal and before uncorking. Discussions are also under way with wine producers about switching to non-lead materials for seals, but it will be some time before the nation's cellars are emptied of lead-capped bottles as these seals are often used on fine wines.

Enforcement of necessary action in relation to certain veterinary residues in foods has proved more difficult. A survey[5] showed that whilst residues of most veterinary drugs were extremely low or non-detectable, residues of sulphadimidine in kidney, especially pig kidney, were found frequently, in a large number of carcasses. This raised the possibility of intolerance reactions in individuals already sensitised by exposure to the much higher human therapeutic doses. The high residues were thought to be caused by ignorance of, or failure to observe, withdrawal periods between the administration of the drugs to pigs and their slaughter, or alternatively, to accidental contamination of unmedicated feed. Unfortunately, there are no statutory requirements to observe withdrawal periods. MAFF is presenting the problem to the farming and veterinary communities and ensuring they understand the necessity of 'using the drugs correctly. So far these measures have proved ineffective. New regulations are also being introduced which will require all those incorporating medicinal products into feed to observe a code of practice which will include such matters as the prevention of cross-contamination.

Mycotoxins are naturally occurring contaminants in foods, though contamination of the UK food supply by mycotoxins other than aflatoxins is unquantifiably low[6]. Aflatoxins are carcinogenic in several species of animals. Aflatoxin M_1 contamination of milk has been dramatically reduced in recent years by controls on the imports of aflatoxin-contaminated animal feed. However, aflatoxin contamination of certain nuts and nut products, and, in particular, some 'health food' brands of peanut butter, has been highly variable. MAFF is drafting regulations to introduce an upper limit of 10μg/kg for aflatoxins in nuts and nut products for human consumption.

Finally, some contamination problems have only long-term solutions. Mercury, for example, which is discharged into the sea, accumulates in fish in the form of methylmercury. Evidence suggests that the foetus may be more sensitive to the effects of methylmercury than adults or children. The UK data indicate there is still a substantial safety margin between the current intakes of methylmercury and the upper limit considered acceptable on health grounds for the most vulnerable group, pregnant women, but continued surveillance of very high consumers of fish in this group is needed to ensure safety[7]. During the last two decades, there has been a significant reduction in the amount of mercury discharged into estuaries and coastal waters in the UK and, overall, a downward trend in mercury levels in fish caught in these areas. But in some localities in recent years the reductions in mercury levels in fish have not been sustained. Further efforts are needed to ascertain why this is so and to ensure that the situation does not deteriorate.

(v) Nitrate, nitrite and N-nitroso compounds

The Twentieth Report of the Steering Group on Food Surveillance drew together surveillance data on nitrate, nitrite and volatile N-nitrosamine levels in foods on retail sale in the United Kingdom, and information on the concentrations of nitrate and nitrite in drinking-water supplies[8].

The average daily intake of nitrate from food was about 53mg per person, mostly from the consumption of vegetables. Drinking-water contributed on average a daily additional 10mg–20mg per person. In bottle-fed babies, and in areas with nitrate concentrations greater than 50mg per litre in the water

supply, water could be the major source of nitrate. It was not possible to estimate the extent to which inhaled nitrogen oxides might contribute by conversion in the body to nitrate and nitrite.

The average daily intake of nitrite from food was less than 1mg per person. Higher intakes would result from unusual consumption of bacon, ham, some sausages and pork pies, which contain added nitrite as a preservative; however, cured meats made only a minor contribution to the average diet. Nitrite was usually not detectable in water supplies unless bacterial contamination had rendered the water unsuitable for human consumption. In uncontaminated water, nitrite was sometimes formed from ammonia present naturally or added as part of the disinfection process; it could then contribute up to 0.2mg to the daily intake of nitrite.

There were (and remain) considerable problems in measuring and even identifying the N-nitroso compounds present in the diet. The detailed data in the report were confined to a small number of relatively well-characterised compounds. The greatest exposures to volatile N-nitrosamines appeared to be associated with the usage of tobacco by smoking, snuff taking, or tobacco chewing. In non-users of tobacco, the diet was the major source of pre-formed N-nitroso compounds, which have been detected particularly in beer and whisky and other malt-derived foods, in cured and smoked meat, in fish (especially smoked fish) and in cheese. N-nitroso compounds were not detected in UK water supplies.

The comments of the DHSS Committee on the Medical Aspects of the Contamination of Air, Soil and Water (CASW), and the DHSS Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT), formed appendices to the report. CASW recalled the role of nitrate in water in causing infantile methaemoglobinaemia, but noted that there bas a long-established UK public health policy in this area and that no instances of the condition had been attributed to nitrate in UK public water supplies for many years. Nitrite concentrations in UK public water supplies were not hazardous to health, and N-nitroso compounds had not been detected. Ambient air was likely to make only a very small contribution to daily exposure to nitrate, nitrite and N-nitroso compounds.

Both committees commented on the relationship between ingestion of nitrate and the formation of N-nitroso compounds in the body, and the role of N-nitroso compounds in causing cancer. Epidemiological studies had provided no evidence that current exposures to nitrate, nitrite and N-nitroso compounds were hazardous to human health, but they did not exclude a small risk. There were many areas of uncertainty requiring further research: for example, it was still not known whether the major exposure to N-nitroso compounds was from their formation in the body, or from their intake from food, water and the environment. COT recommended that the levels of use of nitrate and nitrite as food additives should be kept as low as is consistent with their essential antimicrobial function, and that research should continue on the use of effective alternatives to these preservatives in cured meats. COT welcomed the action already undertaken to reduce N-nitrosamine levels in beer and whisky, and recommended further research on the origins and methods of reduction of N-nitroso compounds in other foods, in addition to the development of appropriate analytical methods and toxicological evaluations. Research into the incorporation of inhibitors of nitrosation into curing mixtures was also recommended.

Dietary modification to effect a substantial reduction in the intake of nitrate would require a lower consumption of vegetables, but this could have undesirable effects on health. In view of the uncertainties and the evidence which suggests that any possible risk is small, COT did not consider it justifiable to advise dietary modification to reduce the intake of nitrate, nitrite and N-nitroso compounds from food.

(vi) Man-made mineral fibre

Early in 1987 questions were raised about the safety of the use of glass wool and similar materials for loft insulation in the home. This concern arose from the publication of evidence indicating an increase in deaths from lung cancer amongst workers employed in the early technological phase of the Man-Made Mineral Fibre (MMMF) manufacturing industry, that is, amongst those who were at work at a time when exposure to fibre dust was high. Studies of exposure to fibres in insulated homes were carried out and the evidence was reviewed by the Department's Committee on Carcinogenicity towards the end of the year.

MMMF has been produced and used for thermal insulation almost as long as asbestos. In recent years the economic importance of energy conservation, higher expectations of comfort, and an increasing concern with the dangers of hypothermia in the elderly, have lead to the widespread installation of thermal insulation in domestic lofts, encouraged by a system of grants known as the Home Insulation Scheme. Installation is often done by householders themselves on a Do-It-Yourself (DIY) basis. The most widely used products are based on MMMF made from rock, slag or glass.

Although the irritant properties of MMMF had long been recognised, there was no suspicion, until quite recently, that they might share some of the hazards of asbestos. Inhalation studies with laboratory animals consistently showed that MMMF did not lead to significant lung fibrosis, an excess of lung cancer or malignant mesothelioma (a characteristic type of cancer produced by asbestos). Experiments which introduced fibres through the chest wall of laboratory animals did produce malignant pleural tumours, but the relevance of this methodology was questioned. The Advisory Committee on Asbestos, set up by the Health and Safety Commission in 1976, had a sub-committee explore the potential carcinogenic hazard to man from MMMF, but it was unable to find convincing evidence. Major morbidity and mortality studies of exposed workers in MMMF industries were also begun in the United States and Europe.

By 1986 these studies of MMMF[9] confirmed earlier reports, which suggested an increase in death from lung cancer more than 20–30 years after first exposure in workers employed in the early technological phase of the production of rock/slag wool. The evidence is more persuasive for rock/slag wool than for glass wool. Levels of dust containing fragments of the fibres are believed to have been high in that early phase but, more recently, modern manufacturing processes and dust suppression techniques have reduced the exposure substantially.

The Committee on Carcinogenicity was originally asked to assess this occupational health evidence on behalf of the Health and Safety Executive (HSE), the

official agency responsible for safety in the workplace. In June 1987, the Committee confirmed that, despite limitations which it found in the evidence, there was a strong indication that there had been increased mortality amongst workers who had been heavily exposed during MMMF manufacture. Although the evidence came from the manufacturing sector, the Committee advised that "it would be prudent to act on the basis that sufficient exposure to any form of MMMF in the production (or in the user) industries may increase the risk of lung cancer among the work force". The Committee found no evidence of excess mortality in the workers from other cancers including mesothelioma, or of the occurrence of lung cancer in the animal studies. Moreover it found no excess of lung cancer amongst workers employed under modern conditions.

The evidence has also been reviewed by a working group of IARC which has classified glasswool, rockwool and slagwool according to IARC criteria as being 'possibly carcinogenic to humans'.

As soon as the results of the occupational studies became known, the Department of the Environment (DOE) requested an opinion on whether any health hazard was presented to the DIY installer and to residents in the home by the installation or subsequent disturbance of MMMF loft insulation. The evidence available in early 1987 suggested that the exposure of these groups of people to airborne fibres was very low, but the data were too few to be relied on. Both DOE and the industry therefore commissioned fibre counts in appropriate homes. The results of these surveys confirmed that exposure to fibres associated with loft insulation was low, counts falling to background levels very soon after installation. Results from the DOE study are in press. Other findings can be obtained from the Library of the Institute of Occupational Medicine (Edinburgh). In November 1987, the Committee on Carcinogenicity reviewed these results and advised that the levels of MMMF which had been found in the living areas of homes as a result of domestic loft insulation did not pose a carcinogenic risk of any practical consequence to the health of residents; further, the Committee advised that the infrequent and short-term exposures to higher levels of MMMF which could occur with DIY installation or with disturbance of insulation did not pose a significant additional risk. Nonetheless, the Committee did consider that it would be prudent for installers of MMMF insulation to wear appropriate masks during installation.

The evaluation of very low level exposures to possibly carcinogenic material is always subject to some uncertainties. Direct evidence of the very small effects which are the most that might be anticipated as a result of such low exposures cannot be obtained in the face of the variations in morbidity and mortality which occur naturally. Extrapolation from the effects of exposures to high doses, often in laboratory animals, is commonly relied on as a way of estimating risk from low doses in humans, but is inherently imprecise. Given the undoubted benefits, direct and indirect, of effective insulation and valuable properties of MMMF, as well as the very low order of exposure associated with loft insulation, there seems no doubt of the wisdom of the continued widespread use of these materials. But it is right, as well as natural, to wish to reduce the likelihood of even uncertain or trivial risks, when this is easily done. In the face of the residual uncertainties which are inevitable with any body of evidence, care in the use of any irritant or sensitive material is a sensible general principle even where risk is very low.

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(d) Communicable diseases

(i) Legionellosis

The 'Second Report of the Committee of Inquiry into the Outbreak of Legionnaires Disease in Stafford in April 1985' was published in December 1987[1]. This, the final report of the Committee of Inquiry, emphasised the view that Legionnaires Disease should be largely preventable and that this prevention depended upon marked improvements in the standards of operation and maintenance of water systems in buildings. The Inquiry noted the lack of basic scientific knowledge about the factors influencing the behaviour of the Legionella bacterium and recommended topics for further research.

The Report also made recommendations with regard to cases of Legionnaires Disease associated with travel, new and existing buildings and their engineering systems; the training of engineers; and water treatment and testing.

Legionnaires Disease is not a notifiable disease in the United Kingdom. Nevertheless, a surveillance programme introduced by the Communicable Disease Surveillance Centre (CDSC) in 1977, in which medical microbiologists report confirmed infections to the Centre, provides a reliable estimate of the incidence in England. A similar reporting system is available in Scotland to the Communicable Diseases (Scotland) Unit.

In England and Wales, 205 cases (146 in males, 58 in females, and one with sex not stated) were reported to CDSC in 1987 (189 in 1986 and 211 in 1985). There were 34 deaths and 108 cases were associated with travel abroad. There were 11 clusters of two or more cases, comprising a total of 33 cases, associated with travel abroad. There were four clusters, comprising 10 patients, of indigenous infections in England and Wales.

The large proportion of Legionnaires disease apparently acquired abroad presents particular problems. The majority of these cases were associated with holiday areas such as Spain, Portugal and Italy.

That a person stayed in a specific hotel and was infected with legionella during that stay does not prove that the source of the infection lay in the hotel itself. To trace the source of an infection, skilled investigators must find persons who might have been infected, analyse samples from water systems in the area and see if Legionellae present match the strain found in the patients.

Nevertheless, if several cases are associated with a hotel or other buildings at the same time, or if persisting sporadic outbreaks occur, this is 'prima facie' evidence for investigation and possible remedial engineering measures.

All cases of Legionnaires Disease thought by CDSC to be acquired abroad are reported to the UK Embassy in the country concerned so that the appropriate national health authorities can be informed. Further preventive action is the responsibility of the country. However, following the recommendations in the Second Report of the Committee of Inquiry, the Department is revising its procedures for notifying travel-associated Legionnaires Disease to national authorities responsible for preventive action and considering how the adoption of preventive measures in overseas hotels might be encouraged.

(ii) Hepatitis B

There has been a sharp decline in the annual total of acute hepatitis B cases reported to the Public Health Laboratory Service (PHLS) since 1,995 cases (the largest annual number ever) were reported in 1984.

The total of approximately 800 cases for 1987 is the smallest since 1974. Reasons for the decrease are unclear but are strongly related to a fall in the number of cases associated with a history of drug misuse, and a lower incidence of hepatitis B in homosexual men. These two groups are particularly at risk through their life-styles. It could be that warnings about routes of transmission of HIV infection, which have similarities to those of hepatitis B, have had a beneficial effect on rates of hepatitis B infection. The availability of hepatitis B vaccine might also have played a part.

Two vaccines are available in the UK. One, available since 1982, is purified from human plasma; the second, used since the second half of 1987, contains hepatitis B surface antigen made by yeast cells using a recombinant DNA technique. The Health Departments, advised by the Joint Committee on Vaccination and Immunisation (JCVI), have issued new guidance on the use of hepatitis B vaccine[2]. This recommends an extension to the categories of individuals for whom immunisation with hepatitis B vaccine should be considered because their life-style or their occupation puts them at risk. These categories are:

1. *Health care personnel*: doctors, dentists, nurses, midwives and others, including students and trainees, who have direct contact with patients or their body fluids, or are likely to experience frequent parenteral exposure to blood or blood-contaminated secretions or excretions.

   Groups at highest risk in this category include:

   i. Those health care personnel and others who are at risk because they are or may be directly involved in patient care in institutions or units for the mentally handicapped over a period of six months or more;

   ii. Those working in units treating known carriers of hepatitis B who are at risk because they are or may be directly involved in patient care over a period of six months or more; and

   iii. Laboratory workers and mortuary technicians.

2. *Patients and family contacts*:

   i. Patients on entry into institutions or units dealing with the mentally handicapped, especially where there is a known high prevalence of hepatitis B;

   ii. Immunocompromised patients likely to require haemodialysis or renal transplant;

   iii. Spouses or other consorts of hepatitis B carriers; and

   iv. Infants born to mothers who are carriers of hepatitis B.

3. *Police and emergency services*: the statistics of the incidence of hepatitis B do not show that, in general, members of the police, ambulance, rescue services and staff of custodial institutions are at greater risk than the general population. Nevertheless, there may be individuals within these occupations who are at higher risk and who should be considered for immunisation.

4. *Other indications for immunisation*: consideration should also be given to individuals who frequently change sexual partners, particularly those who are prostitutes or male homosexuals; to parenteral drug misusers; and to inmates of long-term custodial institutions.

Such advice has to be somewhat general in nature and any selection has to be decided by the occupational health services or following other medical advice as appropriate. The Memorandum must be consulted for the details of these recommendations.

*(iii) **Meningococcal meningitis***

In 1987 there were 1,090 notifications of meningococcal meningitis and 158 deaths. Figure 5.1 shows the five-week moving average number of cases notified weekly to OPCS between 1985 and May 1988. The increase of notifications since 1986 is similar to the last upsurge in the mid-1970s. The expected rise in cases during the winter of 1987/1988 occurred earlier than previous years and reached higher levels. Notifications peaked in the first two weeks of 1988 at 67 and 66 cases respectively.

The change in prevalence of meningococcal groups has continued; Group C organisms accounted for 37% of total organisms; Group B Type 15 sulphonamide-resistant organisms fell to 28% of the Group B organisms. The development of new monoclonal antibodies has allowed typing of previously ungrouped organisms.

In February 1988 I wrote to all doctors advising them of the increased incidence of meningococcal infection, the epidemiology, early management, antibiotic prophylaxis of contacts and need for notification of cases[3]. At the same time, a check-list for management was sent to Health Authorities.

Meningococcal vaccine was used to control two outbreaks of Group C meningococcal infection in 1987, one in a school with 1,000 children, the other in a naval camp with 3,000 recruits. No cases occurred in either group after mass vaccination.

In August and September 1987, 23 cases of Group A meningococcal infection were reported to the CDSC. All of them were travellers or contacts of travellers who had taken part in the Hajj pilgrimage to Saudi Arabia. Doctors were advised to consider giving meningococcal vaccine for travellers to Saudi Arabia and other countries with substantial Muslim populations, especially those at risk from overcrowding, involved in health care, or attending school.

*(iv) **Diphtheria***

Two cases of diphtheria were notified during the year. The first was a medical microbiologist who developed a sore throat after handling toxigenic strains of *Corynebacterium diphtheriae*. A throat swab revealed a positive culture of *C.diphtheriae var mitis* which was toxigenic and identical to the strains handled in the patient's laboratory. The patient had a history of a full primary course of immunisation although it is not certain if he had received a pre-school booster dose of diphtheria/tetanus vaccine. In 1978 he had a positive Schick test before

entering microbiology training. However, no booster dose was given as it was felt that the Schick test would have provided a sufficient boost to immunity.

The other case was a six-month-old child recently returned from Pakistan. She was admitted to hospital with an acute bout of diarrhoea. A routine nose and throat swab isolated a toxigenic strain of *C. diphtheriae*. This child had received only one dose of triple vaccine and oral poliomyelitis vaccine.

(v) Influenza

In the winter of 1986/87 influenza activity was at a low level apart from outbreaks of A(H1N1) infection in schools. This was the ninth successive winter of low incidence. After a Press Release from the Influenza Monitoring and Information Bureau stimulated speculation about an influenza epidemic during the winter of 1987/88, sales of influenza vaccine increased by 25%. Circular PL/CMO(87)9 was subsequently issued on 5 October 1987 to advise on the vaccines which would protect against prevailing strains of influenza virus.

(vi) Paralytic poliomyelitis

Two cases of paralytic poliomyelitis were reported. The first was a two-year-old boy who was admitted to hospital with paralysis of his right leg and a history of a febrile illness six months earlier while in Bangladesh. The patient had not been vaccinated against poliomyelitis and the antibody studies were compatible with a diagnosis of poliomyelitis.

The other patient was a 26-year-old, unimmunised man who developed paralytic poliomyelitis 34 days after his five-month- old child received a dose of oral poliovaccine.

(vii) Whooping cough

During the year, 15,200 cases of whooping cough were notified in England and Wales together with five deaths. The previous comparable year was 1983 when there were 19,340 cases and seven deaths. The uptake of whooping cough vaccination in England rose two percentage points to 67% (See Appendix Table A.2).

(viii) Rabies

On 15 March 1987 an eight-year-old Sikh boy was admitted to East Birmingham Hospital Intensive Care Unit with a clinical diagnosis of rabies. The patient had been bitten on the ankle by a dog on 13 January while visiting relatives in India. He had returned to the UK on 3 February and remained well until 11 March when symptoms began to develop. He died on 4 April and the diagnosis was later confirmed at the Virus Reference Laboratory, Colindale. Staff treating the patient, ambulance officers and other close contacts were offered vaccination.

The present case is the 19th of human rabies reported since the disease was eradicated from domestic dogs in 1902. Thirteen of these cases were infected in

the Indian sub-continent where rabies is common in the semi-domesticated dog population.

In the latter part of 1987 there was publicity about the existence of rabies type virus in bats in Continental Europe and concern over the possibility that bat rabies might be introduced into the United Kingdom. A press release was issued by Mr Donald Thompson, Parliamentary Secretary at the MAFF, on 1 September 1987, urging continued public vigilance to keep rabies out of Britain.

(ix) Tuberculosis

The number of new cases of tuberculosis notified in England and Wales in 1987 was 5,157 and the number of registered deaths (including late effects of the disease) was 625. This represents a reduction from 1986 when the corresponding figures were 5,993 and 733.

(x) Vaccination and immunisation

Appendix Table A.2 shows the number and the percentage of children completing primary courses of vaccination and school children receiving BCG over the last 11 years. The target level for primary immunisation in childhood is 90% and uptake has some way to go to achieve this. The uptake of rubella vaccine for schoolgirls vaccinated by their 14th birthday was 86%.

(xi) Microbiology of food/food poisoning

Formal notifications and cases ascertained by other means reported to the OPCS by Medical Officers for Environmental Health (MOsEH) in England and Wales are included in weekly, quarterly and annual OPCS publications. Table 5.1 gives extracts relating to England only from the OPCS collations for the five years from 1983–1987. Notifications have increased steadily throughout the period and in 1987 outbreaks were the highest on record. Salmonellosis and *Campylobacter enteritis* continue to be the most important foodborne infections in England. Provisional data from the CDSC for 1987 show laboratory identifications of Salmonella to be about 17,000 (as compared with 5,000 in the 1960s) and laboratory reports of *Campylobacter enteritis* (mostly foodborne) to be around 25,900 as compared with about 23,600 in 1986.

(xii) Viral gastroenteritis from cockles

Following problems in 1985 and 1986 caused by cockles, 20 outbreaks of cockle-associated viral gastroenteritis occurred in the period May-September 1987. Cockles (in 500g polythene bags) had been distributed by a national frozen food producer as cooked frozen products. Investigation revealed the likely source to be the estuary of the River Dee. The series of outbreaks produced about 2,000 cases. In October, 200 more were reported after a dinner at which cockles from Leigh-on-Sea were eaten.

After an urgent meeting with local authority and trade representatives, the Department, in November 1987, wrote to all Chief Environmental Health Officers and MOsEH about virus contamination of molluscan bi-valve shellfish, particularly cockles.

Table 5.1: *Food poisoning cases in England 1983–7 corrected notifications to OPCS*

	Year	Formally notified	Ascertained by other means
Presumed contracted abroad	1983	1,006	559
	1984	1,062	685
	1985	1,022	653
	1986	1,352	837
	1987		
Presumed contracted in GB	1983	8,651	3,503
	1984	9,607	5,403
	1985	8,862	4,168
	1986	11,239	4,858
	1987		
Not known where contracted	1983	1,954	1,008
	1984	1,776	1,211
	1985	2,078	1,101
	1986	2,673	1,565
	1987		
Totals	1983	11,611	5,410
	1984	12,445	7,299
	1985	11,962	5,922
	1986	15,264	7,260
	*1987	19,738	9,217

Footnote: There were 52 reporting weeks in 1987
* Provisional

Reference was made to research carried out by the Virus Research Laboratory of the PHLS and the MAFF Torry Research Station which led to an improved design for a cockle-cooking plant able to destroy viruses. The new design ensures that the temperature at the centre of the cockle reaches 90°C and is maintained for at least 1½ minutes. Local authorities were asked to apply the closest possible supervision to all aspects of cockle harvesting, processing, distribution and sale and to ensure that cooking methods were properly evaluated. From information supplied by trade and other sources, a list of cockle-processing plants was included with the letter to local authorities.

The City of London has subsequently taken action to ensure that all cockle processing at Leigh-on-Sea complies with the Torry-recommended process from the beginning of 1988 and local authorities are following up other cockle processors. The Department initiated meetings, with the Chester Port Health Authority and local authorities adjacent to the River Dee Estuary, in September 1987 with a view to the introduction of an effective order under the Public Health (Shellfish) Regulations 1934, controlling harvesting and cooking of River Dee cockles prior to consumption.

A plan to monitor cockle harvesting on the Fylde coast and in Morecombe Bay was contemplated at the end of the year. There is a need to ensure that all cockle processing in England and Wales is effectively controlled by local authorities and, where waters are polluted, orders should be applied under the Public Health (Shellfish) Regulations 1934 to ensure the effective removal of the risk of viral gastroenteritis before sale.

(xiii) Listeria monocytogenes in soft cheese

On 30 November 1987, I sent a Food Hazard Warning to Chief Environmental Health Officers and MOsEH following the action taken in Switzerland on Vacherin Mont D'or Swiss cheese[8]. Consumption of this cheese reportedly caused 40 cases of human Listeriosis and three deaths in Switzerland during 1987. *Listeria monocytogenes* serotype 4b was the organism responsible.

Listeriosis had been recognised for many years. It is not necessarily foodborne. The incidence is low but appears to be increasing worldwide. Foodborne outbreaks of human Listeriosis with high case fatality rates have occurred in North America caused by contaminated coleslaw (Nova Scotia 1981), pasteurised milk (Massachusetts 1983) and soft cheese (Los Angeles 1985).

Listeria is widely distributed in the environment and Listeriosis infects humans and animals. *Listeria monocytogenes* is resistant to nitrites and salt and grows at 4°C. It is found in several foods, including chicken and salads. The organism is normally destroyed at pasteurising temperatures.

The epidemiology of human Listerial infection is not well understood. Large gaps exist in the knowledge of movement of Listeria from natural reservoirs to humans, modes and vehicles of transmission, routes of entry to the body, links between exposure, infection and disease, pathogenesis and host and organism factors affecting these. Listerial infection manifests itself in its most severe forms (meningitis and/or septicaemia) most often in two groups: those who are immunocompromised and pregnant women, where the foetus or the neonate bears the brunt of the infection. Morbidity and mortality can be high; case fatality rates in pregnant women, the elderly and the immunocompromised are between 30% and 60%. Reported cases for England and Wales were — 1973 (25), 1983 (107), 1986 (107), and 1987 (187).

In the UK, although laboratory reports of Listeria isolations from patients have increased in the last five years, by the end of 1987 there had been only one reported case of Listeria meningitis associated with the consumption of an imported soft cheese — Touree from France[9]. However, detailed food histories are rarely taken from these patients and future epidemiological studies will investigate the possibility of food association with all cases of human Listeriosis.

A recent UK survey of various soft cheeses revealed that *Listeria monocytogenes* could be detected in 14% of French cheese sampled, 4% English and Welsh cheese, 16% Italian, and 10% Cyprus soft cheese.

The European Community and World Health Organization (Geneva) hosted several meetings between December 1987 and February 1988 following the Swiss outbreak. Agreement at these meetings produced initiatives to reduce the risk of contamination by Listeria by improving dairy hygiene in cheese manufacturing plants. Small farm-house-type producers of cheese remain a problem, but in the UK, guidance being produced by the industry for the benefit of major cheese producers, will be adapted and extended for small farm producers. Guidance will be produced to help cheese retailers reduce the risks of Listeria cross-contamination and ensure effective refrigerated storage, date marking of end products, and effective advice to consumers. In addition, the CDSC is mounting a large scale epidemiological study.

The growing evidence of worldwide foodborne transmission of infection has not yet been confirmed by reports in the UK.

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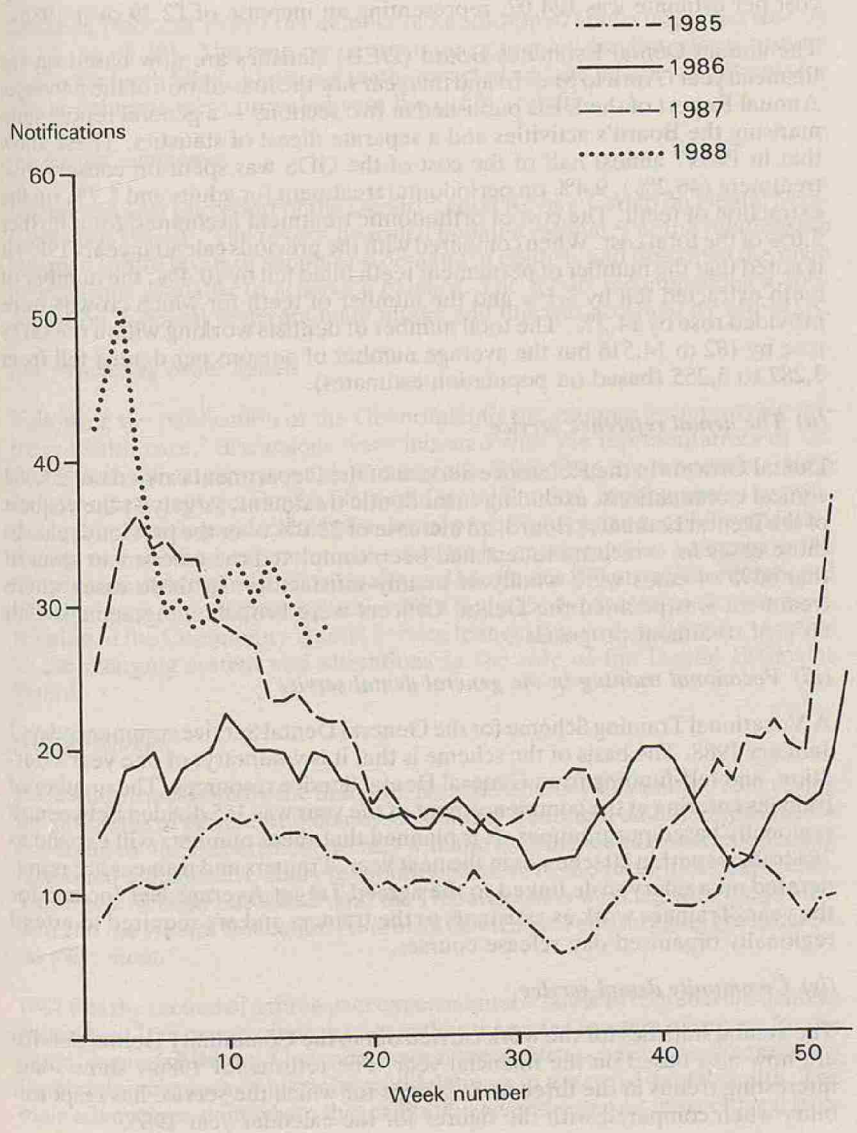
Figure 5.1: *Five-week moving average of weekly notifications to OPCS of meningococcal meningitis, England and Wales, January 1985 to May 1988*



(e) Dental services

(i) General dental services

Up to 1986 the number of estimates authorised for payment by the Dental Estimates Board had shown a gradual yearly increase of about 2%. However, in the calendar year 1987, this trend was reversed, with the number of estimates falling by 0.5% to 32,108,493.

The gross fees authorised for all practitioners in the General Dental Services (GDS) amounted to £771,320,810, an increase of 9.5% over the previous year. Patients' contributions accounted for 30.7% of these gross fees and the average cost per estimate was £24.02, representing an increase of £2.39 over 1986.

The annual Dental Estimates Board (DEB) statistics are now based on the financial year (April to March) and this year saw the first edition of the new style Annual Report of the DEB published in two sections — a general report summarising the Board's activities and a separate digest of statistics. These show that in 1986/7 almost half of the cost of the GDS was spent on conservative treatment (46.2%), 9.4% on periodontal treatment for adults and 1.7% on the extraction of teeth. The cost of orthodontic treatment accounted for a further 3.0% of the total cost. When compared with the previous calendar year (1985) it is noted that the number of permanent teeth filled fell by 10.4%; the number of teeth extracted fell by 3.1% and the number of teeth for which crowns were provided rose by 14.3%. The total number of dentists working within the GDS rose by 182 to 14,516 but the average number of persons per dentist fell from 3,287 to 3,255 (based on population estimates).

(ii) The dental reference service

Dental Officers in the Reference Service of the Department carried out 27,302 clinical examinations, excluding orthodontic treatment, largely at the request of the Dental Estimates Board, an increase of 22.0% over the previous year. In those cases for which treatment had been completed the assessment showed that 95% of cases were wholly or mainly satisfactory. In those cases where treatment was planned the Dental Officers were broadly in agreement with 66% of treatment proposals.

(iii) Vocational training in the general dental service

A Vocational Training Scheme for the General Dental Service commenced on 1 January 1988. The basis of the scheme is that it is voluntary, of one year's duration, and self-funding from General Dental Service resources, The number of trainees entering at the commencement of the year was 155 divided between 18 regionally based programmes, It is planned that these numbers will expand to 264 trainees within 20 schemes in the next year. Trainers and trainees are remunerated on a salary scale linked to the agreed Target Average Net Income for the year. Trainees work as assistants to the trainers and are required to attend regionally organised day release courses.

(iv) Community dental service

The annual statistics for the work carried out in the Community Dental Service are now also based on the financial year. The returns for 1986/7 show some interesting trends in the three main groups for which the service has responsibility when compared with the figures for the calendar year 1985.

The number of inspections carried out on children under five years of age rose by 27.9% to 195,730. The proportion of those examined who required treatment fell by 2.8% while the average number of primary teeth filled or extracted per patient inspected fell by 24.3%.

The maintained school population on 1 January 1986 was 7.48 million. This represents a small increase of 0.6% from the previous year. Inspections on schoolchildren rose by 1.1% to 5,333,425. In spite of this slight increase, the number of primary and permanent teeth filled fell by 11.7% and the total number of teeth extracted by 7.8%. The number of schoolchildren for whom dentures were provided fell by 15.4% to 1,816.

Between 1985 and 1986/7 the number of handicapped adults inspected rose by 20.1% to 60,701, The amount of treatment provided for this group rose by 24.9% for teeth filled, 30.4% for teeth extracted and the number of patients for whom dentures were provided rose by 31.5% to 5,637.

(v) Dental manpower

During the year the report of the Departmental Review Group on Dental Manpower was issued[1]. The review provided updated estimates of the relationship between future levels of supply and demand of dentists and described the main mechanisms available to achieve a balance. The report recommended a 10% reduction in dental undergraduate intake and this was accepted by Ministers.

(vi) Promoting better health

Following the publication of the Government's programme for improving primary health care,[2] discussions were initiated with the representatives of the profession with a view to implementing the White Paper's proposals. These include a new contract for the General Dental Service, improvements in postgraduate education and training for dental practitioners, the possibility of introducing new methods of monitoring standards, and incentives to improve the distribution of manpower. The Health and Medicines Bill proposes a number of changes such as compulsory retirement for elderly dental practitioners, a revision of the Community Dental Service to meet future dental needs, changes to the charging system and alterations to the role of the Dental Estimates Board.

(vii) Research

Following discussions by the Standing Dental Advisory Committee concerning the problems of people who do not seek dental treatment and their reasons for not doing so, the Department, jointly with the British Dental Association, commissioned a qualitative study to identify barriers to the receipt of dental care. This has now been published[3] and the Department is working with the profession and the Health Education Authority on means of encouraging greater dental awareness.

1987 was the second of a three year experimental scheme to remunerate dentists within the GDS on a capitation basis rather than a fee for item of service for the dental care of children. Under capitation the dentist is paid a fixed annual fee for maintaining each of his or her child patients in a state of dental health. The main advantages claimed are that capitation gives the dentist more clinical free-

dom, promotes prevention and innovation in practice, and discourages over-treatment. It also provides continuity of care, encouraging a long-term view of the patient's dental health, whereas under the present fee for item of service system the dentist's obligation is discharged once the patient has been rendered dentally fit on completion of a discrete course of treatment. Capitation is also likely to increase both consumer and professional satisfaction while its relative administrative simplicity may produce cost savings. Following successful completion of a pilot study covering some 19,000 children and involving 50 dentists to test the feasibility of such a system, the three-year controlled experiment was started in the autumn of 1986 in three matched pairs of contrasting areas of the country. With the agreement of a majority of local dentists, each matched pair of areas was randomised to form a capitation group of practices and a control group continuing on fee for item of service. Capitation will be tested against the existing system and evaluated in cost-benefit terms. If the experiment is successful, the intention in the longer-term is for the introduction of a national capitation scheme to cover all children.

Early in 1987 a report on the 'Provision of Dental Care by Women Dentists in England and Wales' was published[4]. This report showed that the proportion of women in the dental profession had increased dramatically over the last ten years. Approximately 50% of new entrants to dental schools and 25% of registered dentists are women. The report includes a number of proposals such as job sharing and better retraining opportunities for those who take a break to have a family.

During the year experiments started with direct electronic transmission of data from practitioners to the Dental Estimates Board. Some 20 practitioners were involved initially and it is hoped to extend this number to 200–300 within the next few years.

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3 Anonymous. Barriers to the receipt of dental care [Editorial]. *Br Dent J* 1988;**164**:195–6.

4 Seward MH, McEwan EM. The provision of dental care by women dentists in England and Wales in 1985: a ten year review. *Br Dent J* 1987; **162**:50–1.

6. AIDS HIV INFECTION AND SEXUALLY TRANSMITTED DISEASES

(a) AIDS and HIV infection

During 1987 the Government devoted much time and effort to problems caused by the HIV epidemic. The intense public awareness which developed earlier has been maintained. The four main areas of governmental activity were: prevention of the spread of infection and surveillance of the epidemic; public education; research; and the development of health and other services for the care and treatment of people with AIDS and HIV infection.

International co-operation flourished and a brief account of some of the most important international conferences held in England, of the organisations involved, and of the present international position in the fight against the HIV epidemic appear in the introduction of this report.

The introduction also includes a short description of two major developments in surveillance, the work of a group chaired by Dr J W Smith, the Director of the Public Health Laboratory Service (PHLS) which reviewed the monitoring and surveillance of AIDS and HIV in the UK, and the AIDS (Control) Act 1987.

(i) Surveillance of HIV infection and of AIDS cases

The voluntary reporting system for AIDS cases and HIV infection, set up by the Communicable Disease Surveillance Centre (CDSC) in 1982, continues to operate. In England, Wales and Northern Ireland, clinicians in charge of AIDS patients report cases, and deaths, if these occur, in strict confidence to CDSC. (In Scotland, reports are made to the Communicable Diseases (Scotland) Unit (CDSU). Co-operation between the Office of Population Censuses and Surveys (OPCS) and CDSC ensures that deaths ascribed to AIDS on the death certificate or to certain associated conditions, are also notified to CDSC.

Laboratories in the PHLS, the National Blood Transfusion Service (NBTS), the NHS, and private laboratories which carry out HIV testing, report positive results to CDSC. A small sample of PHLS laboratories also reports negative results. These results give some information about the prevalence of HIV infection in the various risk groups, but because the number of infected people not yet tested and the size of the various risk groups from which those tested have come are not known, the information is incomplete and probably biased.

Neither AIDS nor HIV infection is notifiable in the UK, because there is no evidence that statutory notification would help limit the spread of infection or increase the accuracy of case detection. If the condition were made statutorily notifiable anxiety about confidentiality might discourage people from presenting for testing.

(ii) The present state of the epidemic

1. HIV – seropositive people in England (Tables 6.1 and 6.2)
During 1987, 4,368 positive tests for HIV antibodies were reported in England (including the Channel Islands) bringing the cumulative total to 6,526. (An additional 67 reports were received from Wales, 43 from Northern Ireland, and 1,381 from Scotland giving an overall UK total of 8,017.) The largest group

comprised homosexual or bisexual males (3,382 or 52%), a percentage similar to that found in 1986.

Reports for heterosexual people can be assessed more clearly if the following three figures are subtracted from the cumulative total of 6,526: (i) homosexual/bisexual men, (3,433 including those who were also injecting-drug abusers); (ii) 23 children of parents who were themselves infected or at high risk; and (iii) the 1,247 people whose risk group is as yet undetermined (of whom the great majority are men and probably homosexual or bisexual). This leaves 1,823 people of whom almost all are probably heterosexual. 99% of these are in three main groups: haemophiliacs and others infected by the receipt of blood or blood products (1,041 or 57%); heterosexual injecting-drug misusers infected by the use of contaminated equipment (480 or 26%); and people who claimed they acquired their infection by heterosexual intercourse (293 or 16%). Of the 293 infected by heterosexual contact, 142 (49%) were men. The source of infection was established in 110 of the 142. Five of the 110 (4%) were infected by contact with an injecting-drug misuser or a recipient of infected blood or blood products. In the remaining 105 (96%) the source of infection was probably someone living abroad and outside the high risk groups shown in Table 6.1.

The picture was different in the 129 women for whom the source of infection was known, presumably because of the possibility of heterosexually-acquired spread from bisexual or haemophiliac men. People from one of the risk groups shown in Table 6.1 had infected 43% of these women. Those not infected by a risk group member, like their male counterparts, were thought to have been infected abroad.

The marked difference between England and Scotland persists. Although the population of Scotland represents less than 10% of the population of the UK it provides 17% of the HIV-positive cases reported in the UK; injecting-drug misusers account for 57% of their total of 1,381 known seropositives, and one third of these are women, most of reproductive age, and able to pass the virus to their unborn children.

The percentage contribution of heterosexual injecting-drug misusers to the total number of people with AIDS or HIV infection is increasing within the UK (Communicable Disease Report — January 1988) and in the European region of WHO. By March 1987, 15% of reported AIDS cases in Europe were in this group. In some countries in Southern Europe, for instance Italy and Spain, drug misusers accounted for more than half of all reported AIDS cases. Heterosexual drug misusers can be infected by sharing contaminated injection equipment or by sexual contact, so it is probable that some cases listed as having become infected by injecting drugs or by heterosexual contacts have been incorrectly classified.

Table 6.2 shows the regional distribution of HIV-positive people reported in England to 31 December 1987. The reports are concentrated in the Thames regions, which account for 67% of the total (similar to 1986).

Not all infected individuals have presented for testing, and some already tested presented outside their place of residence. Therefore, the data in Table 6.2 cannot be used to derive regional prevalence rates.

Undoubtedly, some people with HIV infection present more than once, but as there is no requirement for people attending a genito-urinary medicine (GUM) clinic to give their names or correct addresses it is not possible to measure the extent to which the figures are inflated by duplicate reporting.

Similarly, some people listed as HIV-sero-positive will also feature in the AIDS tables discussed below. Because it is not obligatory for a person requesting HIV antibody testing to identify himself correctly, it is not possible to measure the extent of this overlap and the number of people listed as HIV-sero-positive who have died of AIDS cannot be calculated. At most, this number could be 10% of the total number of known seropositive people.

Table 6.1: *Cumulative totals of HIV-positive cases in England by transmission category to 31 December 1987 (reports during 1987 in parentheses)*

Transmission category	Number of cases									
	Male		Female		NK		Total		%*	
Homosexual/bisexual	3,382	(2,117)	0	(0)	0	(0)	3,382	(2,117)	52	(48)
(Injecting-drug misuser)	307	(190)	168	(110)	5	(1)	480	(301)	7	(7)
Homo/bisexual and injecting-drug misuser	51	(37)	0	(0)	0	(0)	51	(37)	1	(1)
Haemophiliac	974	(570)	3	(2)	1	(1)	978	(573)	15	(13)
Recipient of blood/blood products	34	(18)	29	(19)	0	(0)	63	(37)	1	(1)
Heterosexual contact										
of above groups	5	(0)	55	(28)	1	(1)	61	(29)	1	(1)
of other groups	105	(75)	74	(60)	1**	(0)	179	(135)	3	(3)
undetermined	32	(32)	18	(18)	3	(3)	53	(53)	1	(1)
Child of parent infected or at high risk	12	(7)	9	(6)	2	(1)	23	(14)	<1	(<1)
Multiple risks	8	(5)	0	(0)	0	(0)	8	(5)	<1	(<1)
Other/undetermined	1,114	(955)	48	(36)	85	(76)	1,247	(1,067)	19	(24)
Total	6,024	(4,006)	404	(279)	98	(83)	6,526	(4,368)	100	(99)

* Totals do not always add up to 100 because of rounding.
** Subsequently reclassified.

Table 6.2: *Cumulative totals of HIV-positive cases reported in England by region of reporter to 31 December 1987*

Region	Cases	
	No.	%*
Northern	247	4
Yorkshire	244	4
Trent	213	3
East Anglia	141	2
N W Thames	2,152	33
N E Thames	1,252	19
S E Thames	751	12
S W Thames	191	3
Wessex	197	3
Oxford	277	4
South Western	183	3
West Midlands	307	5
Mersey	119	2
North Western	245	4
Channel Isles	7	<1
Total	6,526	101

* Total does not add up to 100 because of rounding.

2. *People with AIDS in England (Tables 6.3 and 6.4)*
In 1987, 656 cases of AIDS were reported in the UK. The cumulative total of 1,227 included 1,166 (95%) cases from England. Of these, 1,015 (87%) were homosexual/bisexual men (some of whom were also injecting-drug misusers). The male: female sex ratio for England was 32:1, approximating that for 1986. In respect of AIDS cases there is no important difference between the risk group distribution when England is compared with Scotland: presumably infection is still at an early stage in the great majority of the Scottish seropositive injecting-drug misusers referred to above, so they do not yet appear in the AIDS tables. The cases reported from England are shown by transmission category in Table 6.3.

Table 6.3: *Cumulative totals of reports of AIDS cases in England by transmission category to 31 December 1987*

	Male		Female		Total	
Transmission category	N	%	N	%*	N	%
Homosexual/bisexual male	996	88	—	—	996	85
Injecting-drug misuser	11	1	2	6	13	1
Homo/bisexual and injecting-drug misuser	19	2	—	—	19	2
Haemophiliac	60	5	1	3	61	5
Blood/components recipient:						
abroad	9	1	7	20	16	1
UK	3	<1	2	6	5	<1
Heterosexual:						
presumed infected abroad	21	2	10	29	31	3
presumed infected UK	2	<1	5	14	7	1
Child of at risk/infected parent	5	<1	7	20	12	1
Other/undetermined	5	<1	1	3	6	1
Total	1,131	100	35	101	1,166	100

* Total does not add up to 100 because of rounding.

Interesting differences exist between the percentage distributions shown in Tables 6.1 and 6.3 which represent different stages of the epidemic. Because of the long latent period, the AIDS cases are largely made up of people infected several years ago when the infection first spread to the UK via homosexual and bisexual communities. Data for HIV seropositive people shown in Table 6.1 however, represent people infected both during the early stages of the epidemic, and later on, and the evidence of gradual spread of infection into the other transmission categories is clear. This comparison also indicated that, if treatment to retard the development of AIDS in HIV-positive people is not found soon, the percentage distribution by risk group of AIDS cases will change. The predominance of the homo/bisexual men will diminish, that of injecting-drug misusers will increase, and this change will be most pronounced in Scotland.

Table 6.4 shows the regional distribution of AIDS cases reported in England to 31 December 1987. The four Thames regions provide 80% of the total (similar to 1986). As discussed above for the HIV-seropositive people, the region from which a report is received is not necessarily the region of residence.

Table 6.4: *Cumulative totals of AIDS cases reporter in England by region of reporter to 31 December 1987*

Region	Cases	
	No.	%*
Northern	31	3
Yorkshire	19	2
Trent	19	2
East Anglia	17	2
N W Thames	547	47
N E Thames	233	20
S E Thames	111	10
S W Thames	44	4
Wessex	28	2
Oxford	22	2
South Western	20	2
West Midlands	20	2
Mersey	15	1
North Western	40	3
Total	1,166	102

* Total does not add up to 100 because of rounding.

Table 6.5 shows the distribution by risk group of AIDS patients reported from England and known to have died. Because the number of cases in women is so small the data for both sexes have been combined. Overall, 57% of AIDS patients reported from sources in England to CDSC are known to be dead. The figure at the end of 1986 was 48% (278 of the then cumulative total of 585 reported cases).

Table 6.5: *AIDS cases reported from England to 31 December 1987 and known to have died; both sexes together*

Transmission category	Cases	Deaths	
		No.	%
Homo/bisexual male	996	558	56
Injecting-drug misuser	13	9	69
Homo/bisexual male and injecting-drug misuser	19	8	42
Haemophiliac	61	45	74
Blood/components recipient:			
abroad	16	10	63
UK	5	4	80
Heterosexual:			
presumed infected abroad	31	10	32
presumed infected UK	7	6	86
Child of at risk/infected parent	12	6	50
Other/undetermined	6	3	50
Total	1,166	659	57

The only two transmission categories with numbers of people with AIDS large enough for useful comparison of the proportions known to have died are homosexual/bisexual men, and haemophiliacs. Of the latter, 74% are dead, compared with 56% of homosexual/bisexual men. New infections among haemophiliacs are decreasing rapidly (Communicable Disease Report for January 1988). The difference in proportions known to be dead could reflect the

difference in proportions infected year by year, with a greater proportion of haemophiliacs infected early in the epidemic.

The cumulative incidence of AIDS in England increases with age up to 35–44 years, and then declines (Table 6.6). Comparison with Table 6.7 shows that the peak reported incidence of HIV-sero-positivity is, as would be expected, in a younger age-group (25–34 years).

Table 6.6: *AIDS cases reported from England*
Cumulative totals and approximate rates per million population, by age-group, to 31 December 1987 (figures to 31 December 1986 in parentheses)

Age-group years	Number of cases	Estimated population mid-1986 (million)	Rate/million estimated
0–14	16 (5)	8.9	1.8 (0.6)
15–24	64 (24)	7.7	8.3 (3.1)
25–34	368 (61)	6.8	54.1 (93.7)
35–44	433 (309)	6.5	66.6 (32.2)
45–54	183 (92)	5.1	35.9 (18.0)
55–64	49 (23)	5.1	9.6 (14.5)
>65	29 (6)	7.3	4.0 (1.2)
NK	24 (31)	–	– (–)
Total	1,166 (551)	47.4	24.6 (11.6)

Table 6.7: *HIV-positive reports from England*
Cumulative totals and approximate rates per million population, by age-group, to 31 December 1987

Age-group years	Number of reports	Estimated population mid-1986 (million)	Rates/million estimated population
0–14	167	8.9	18.8
15–24	1,075	7.7	139.6
25–34	2,018	6.8	296.8
35–44	1,152	6.5	177.2
45–54	386	5.1	75.7
55–64	119	5.1	23.3
>65	34	7.3	4.7
NK	1,575	–	–
Total	6,526	47.4	137.5

The international situation continues to be dominated by the USA, which by the end of 1987 had reported 48,139 cases to WHO. These and totals from European countries are shown in Table 6.8, together with approximate cumulative incidence rates per million population. The order of incidence has shown almost no change since the end of 1986. The cumulative total of AIDS cases reported from Europe to WHO to the end of 1987 was 8,839, an increase of 4,262 cases (93%) in one year. Comparisons of incidence rates, even within Europe, and particularly outside Europe and the USA, can be misleading because the completeness of notification varies greatly from country to country. For instance, although it is widely believed that the AIDS epidemic has reached major proportions in parts of Africa, at the end of 1987 the cumulative total of cases reported to WHO from the whole of Africa was only 8,628.

Table 6.8: *AIDS cases reported to WHO by various European countries: cumulative totals at 31 December 1987 (USA figures shown for comparison)*

Country	Number of cases	Population (millions)	Cumulative cases/million population
Spain	624	39	16
Italy	1,104	57	19
UK	1,227	56	22
Netherlands	370	15	25
W Germany	1,588	61	26
Belgium	280	10	28
Denmark	202	5	40
France	2,523	55	46
USA	48,139	230	209

(iii) HIV and blood donations

The NBTS has continued to screen all blood donations, and the standard of HIV antibody testing at the regional centres continues to be regularly monitored by external quality assessment schemes. All would-be donors are, as before, asked to read a leaflet[2] listing the risk groups and not to give blood if they belong to any of these groups. By the end of 1987, 5,840,520 donations for the UK as a whole had been screened for antibodies to HIV, of which 90 (0.0015%) were confirmed to be positive; 75 of the 90 were male, and 15 female. The proportion of positives confirmed in 1987 is significantly less than it was in 1986 ($p<0.001$): this result is not unexpected because many donors who were negative on their first test have donated more than once since, and all these donations are included in the total number tested. The percentage of first-time donors found to be positive in 1987 was 0.004% — a little less than the percentage for 1986, but the difference is not statistically significant.

Of the 90 confirmed positives identified so far, 77 (86%) are in a risk group; 8 have denied risk group membership; 5 are not yet classified.

(iv) HIV-2 infection

Prospective blood donors who come from or have visited West Africa since 1977 are screened for antibodies to HIV-2. Sera taken for diagnostic purposes from patients presenting at certain GUM clinics in London are also tested and PHLS will examine, on request, samples taken elsewhere in the UK. Several approaches to the technical problems of testing have been developed which together provide an adequate diagnostic facility. There is as yet no definite evidence of indigenous infection with HIV-2 in England[3] although studies in Western Europe indicate its presence there.

(v) Public education

Public education to prevent the spread of HIV infection is still the principal strategy for limiting the epidemic. There is no effective vaccine and major clinical trials of therapy in the UK and abroad have yet to report their results.

In the Autumn of 1986 it was decided to expand the campaign described in my report for 1986[4] and a further £20 million was allocated for the 12 months from November 1986. Between November 1986 and March 1987 £7.5 million were

spent on advertising in all the main media and on the distribution to all households of the leaflet *AIDS: DON'T DIE OF IGNORANCE*. Advertisements were also placed in youth magazines, in the cinema and on the radio, and street posters were displayed in urban centres. A free national AIDS Telephone Helpline was established in January 1987 to complement this campaign. The Helpline had two main components, providing free advice and a free leaflet ordering service. Ministers have agreed to continue support for this Helpline into 1988. Early in 1987 the first phase of the public education campaign was assessed by an independent market research company. This assessment, published in September 1987, concluded that the campaign effectively increased public awareness of AIDS and HIV infection and had increased knowledge about the ways in which infection is spread.

Additional initiatives were taken to educate groups not specifically addressed by the first phase of the campaign, principally the blind (using audiocassettes and Braille leaflets), the deaf (using a sign-language video), and people speaking Asian languages (using a telephone service, and leaflets). The National AIDS Helpline has also recruited advisers from ethnic groups.

The then Secretary of State for Social Services launched the second phase of the national campaign in September 1987. This concentrated on the risks of infection in people who misuse drugs by injection, for spread amongst these people represents an important hazard. Most injecting-drug misusers are heterosexual, so infection initially acquired by sharing contaminated injecting equipment can be spread subsequently by heterosexual intercourse. Further, women of childbearing age form a substantial proportion of injecting-drug misusers and can transmit the virus to their babies.

This phase of the public education campaign runs concurrently with, and complements, the third stage of the Government's drug prevention campaign, which has three main objectives: to deter existing drug injectors from sharing equipment; to deter those using drugs in other ways from injecting; and to deter young people from starting to use drugs.

The National AIDS Helpline has been involved in this aspect of the campaign. It has recruited drug-specialist advisers to speak to callers and train other advisers about drug-related risks of infection. Drug misuse services in the statutory and voluntary sectors are becoming increasingly involved in all aspects of counselling and support, and extra resources have been provided for health authorities to support these services.

In 1986/87 the Government provided one million pounds to RHAs to help drug misuse services respond to the additional demands arising from AIDS. Fifteen needle exchange schemes were established and are being monitored and assessed; an interim report is expected. These schemes, in addition to the basic needle exchange facility, offer health education, advice and counselling, and, where appropriate, referral to other relevant agencies.

A Working Party of the Advisory Council on the Misuse of Drugs, set up during 1987 to consider the effect of AIDS on drug misuse services, has now published its report[6]. This has been submitted to Ministers and includes recommendations on immediate interventions to contain the spread of infection. Further work on

the care of seropositive people and of people with AIDS who are drug misusers will be carried out in 1988, and a final report will be submitted.

The HEA now has responsibility for the future development of the public education campaign. Consultation with interested groups throughout the UK will ensure that the needs of all areas are considered and will encourage the development of community based approaches to prevention.

Information for specific groups

Health care workers: During the latter part of 1987 and early 1988 the Expert Advisory Group on AIDS (EAGA) compiled a report on the issue of HIV-infected health care workers. This report was published.[7]

Children and young people: A booklet for teachers[8], and a video resource package[9] accompanied by a comprehensive users' guide, have been distributed.

Ethnic minority groups: People from ethnic communities need access to information which is sensitive to the needs of each community. Following consultation with representatives of the communities and of the ethnic minority press, a dial-and-listen service has been set up in the main languages of the Indian sub-continent and Cantonese. Other languages can be added as needs are identified. Back-up literature is also available on demand. This is in addition to the work of ethnic advisers to the National AIDS Helpline mentioned above.

People with reading and learning difficulties: Work is in hand on the preparation of a dial-and-listen tape in simple English for these people.

Health professionals (and interested parties): A series of guidance documents[10, 12] has been issued dealing with decontamination, organ and tissue donation, and skin piercing. The BMA produced three videos, one largely funded by the DHSS, which provide information useful to GPs.

Travellers: The provision of information for travellers is currently under review.

Prisoners: Leaflets were circulated to prisoners and a video is being produced; a training package is available for prison service staff.

(vi) Research

During 1987 there was a major expansion of AIDS research funded by the Research Councils and the Health Departments and, by the end of the year, over 100 projects were in progress.

The MRC is responsible for co-ordinating UK research into epidemiological, clinical, and basic scientific aspects of AIDS at home and abroad. The MRC support is provided in two ways: through the programme of directed research on vaccines and antiviral drugs, and for studies in other areas, through special project grants awarded by the Physiological Systems Board (PSB). To assist the development of the non-directed programme, the PSB has set up two committees.

Directed research
In February 1987, the Government accepted the proposals put forward by the MRC for a programme of directed research to develop a vaccine to prevent infection, and anti-viral drug to treat those already infected with the AIDS virus. An additional £14.5 million was awarded for the three years, 1987–1989. The two major elements of the directed programme have been co-ordinated by two steering committees, each advised by working groups; the committees report directly to a MRC Committee. About 50 projects and programmes had been funded by the end of 1987.

Non-directed research
During 1987 the MRC awarded 37 special project grants at a cost of £3.9 million through the PSB. The Health Departments have agreed to contribute up to £300,000 per annum to the MRC towards epidemiological research and the UK Centre for Co-ordinating Epidemiological Research on AIDS. DHSS has agreed to contribute a further £700,000 in 1988/89 for epidemiological research and clinical trials.

Zidovudine ('Retrovir')
An anti-viral agent used for the treatment of AIDS was issued with a product licence, on the advice of the Committee on Safety of Medicines, on 4 March 1987, for the management of serious manifestations of HIV infections in patients with AIDS syndrome or AIDS-related complex (ARC). Supplies were initially limited by manufacturing problems and a special distribution system was set up by the manufacturers to ensure the fair allocation of the drug in the UK. During the year, supplies increased and from October it was possible to use the normal marketing and distribution system. The effects of treatment with 'Retrovir' are being monitored and trials of its use in the treatment of symptomatic and asymptomatic HIV infection are taking place within the UK and Europe.

Social and behavioural research
The Economic and Social Research Council (ESRC) takes the lead here and has set aside £1.5m for this, to be spent over the three years 1987–89. Contracts were issued for five projects in 1987.

The Health Departments are responsible for funding research related to health care services and provision, including the personal social services. By the end of 1987 DHSS had directly funded 19 projects at a cost of over £1.2 million; £400,000 had been allocated for projects in 1987/8. The programme has focused on such areas as costs and provision of services for people with AIDS; drug misuse and AIDS, its prevention and service requirements; sterilisation of NHS equipment; and screening of blood for transfusion services.

The importance of obtaining information on sexual behaviour patterns of the general public and the groups at high risk of HIV infection is recognised for the purpose of:

a. making the AIDS health education campaign more effective;

b. providing data which will allow more accurate predictions of the extent of the spread of HIV infection.

The ways in which this information can be obtained are being explored by the Health Departments, the HEA and the Research Councils.

Other departments and government-funded organisations supporting or undertaking a considerable programme of research into AIDS include the Scottish Home and Health Department (SHHD), the PHLS, the National Institute for Biological Standards and Control (NIBSC), and the HEA.

The Chief Scientist's AIDS research committee has continued to take an overview of the government-funded research within the UK with a view to identifying gaps in the programme.

AIDS research in Europe was given a high priority within the 4th Framework Programme for Medical and Health research within the EC agreed during the year.

Abbott Laboratories funded several travel fellowships to the USA in 1987 for researching the care of people with AIDS or HIV infection in hospital or the community. These fellowships provide an opportunity to meet colleagues working in the same field.

*(vii) **Health and other services for care and treatment***

As the need for care and treatment services has developed, additional resources have been made available centrally to the NHS: £3 million in 1986–87; £25.1 million in 1987–88; and £58.6 million for 1988–89.

The Government asked Health Authorities to continue to pursue three main aims: the provision of facilities for diagnosis, treatment, counselling and support for people with HIV infection; the prevention of spread of HIV infection; and the promotion of better understanding of HIV infection. Additional money was allocated for the care, treatment and counselling of haemophiliacs and their families, and an ex-gratia grant was made to set up a trust fund for them.

In each health district, a standing action group, accountable to the health authority through a nominated community physician, is now responsible for co-ordinating relevant local services. In the regions, the first priority has been given to the development of facilities, usually in GUM clinics, which offer people advice, expert counselling and, if requested, tests for HIV antibody. DHSS has funded training courses for counsellors in London, at St Mary's Hospital, and in the Bolton and East Birmingham Health Authorities; £240,000 was allocated centrally for the development and provision of such courses in 1987–88. They also financed a course in the clinical management of AIDS patients at St Stephen's Hospital in London. Part-time appointments in three London hospitals have been established which enable GPs to care for patients under the supervision of hospital specialists. Ministers earlier recognised the importance of nurses in the delivery of care for people with AIDS and HIV infection. The Department is helping the English National Board provide training for nurses, has awarded 13 fellowships to nurses, midwives, and health vistors to study a range of aspects of HIV infection and produce comprehensive reports, and has organised workshops for senior community nursing staff in every RHA. The objective of the last is to promote a cascade effect of information and education and the workshops will be evaluated in 1988.

The important part played by the voluntary sector in AIDS work was recognised by substantial government grants, including those to London Lighthouse, Mildmay Mission Hospital, and the Terrence Higgins Trust. The Government supported the establishment of the National AIDS Trust which was set up to co-ordinate and help boost funds raised by activities in the voluntary sector. It gave grants to the Trust for administrative costs and for distribution to voluntary organisations.

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(b) Sexually transmitted diseases

In 1986, clinics in England reported 647,359 (349,190 in men and 298,169 in women) new cases, an increase of 7% over the total for 1985. As in 1985 the increase was greater in females (9%) than in males (5%). Females accounted for 46% of the total cases in 1986. The major conditions with an upward trend were non-specific genital infection and genital warts.

HIV infection and AIDS also continued to rise and had a marked influence on the work in clinics. London again had the most cases but increased numbers were reported from other centres with a large male homosexual population.

Another reason for the greater case load was the number of persons worried about HIV infection which had received widespread coverage in the media during the latter part of 1986. Patients often required prolonged counselling; women with genital warts needed time-consuming colposcopic examination so the rising workload in clinics is not merely a reflection of numerical increases.

In contrast, the incidence of syphilis and gonorrhoea declined in both sexes, though to a greater extent in males. Genital herpes incidence fell slightly in males and females compared to 1985 but the figures remained above those for 1984.

(i) Gonorrhoea

The reported number of new cases of gonorrhoea continued to fall in 1986 to 40,705, the decline in incidence being more marked for males (15%) than females (8%). Most were post-pubertal infections, only 20 other infections being reported. Age-specific data are presented in Figures 5.2 and 5.3. Amongst males there was a decline in incidence rate between 1985 and 1986 in each age-group except the under-16s where relatively few cases occur. Of note is the decline in 16–19-year-olds which reverses the recent trend, and the steepening of the decline in 20–24-year-olds. Amongst females, a decline occurred in each age-group during 1986, again including the 16–19-year-olds. Gonorrhoea infection rates are one indication of current patterns of sexual behaviour and the trends reported suggest a continuation of recent changes.

Reported isolations of B-lactamase-producing totally penicillin-resistant *Neisseria gonorrhoea* again fell. This continues to contrast with many other countries where these isolates either continue to increase or maintain a high incidence.

(ii) Syphilis

In 1986 there was a fall in the total number of new cases of syphilis to 1,932. This reflected a decline in the incidence rate during 1986 in both males (24%) and females (10%). Amongst males there were substantial falls in both 'primary and secondary' and 'latent in first two years of infection' categories, and a small fall in 'late' disease. Amongst females 'late' and 'latent' infection fell but 'primary and secondary' syphilis rose. Examination of trends in 'primary and secondary' syphilis in males demonstrates a continuation of the decline reported last year, at all ages except for 45 years and over where numbers of cases are very small.

Table 6.9: *Cases of syphilis and gonorrhoea reported by NHS GUM clinics in England for the year ended 31 December 1986 with the figures for the year ended 31 December 1985 in parentheses*

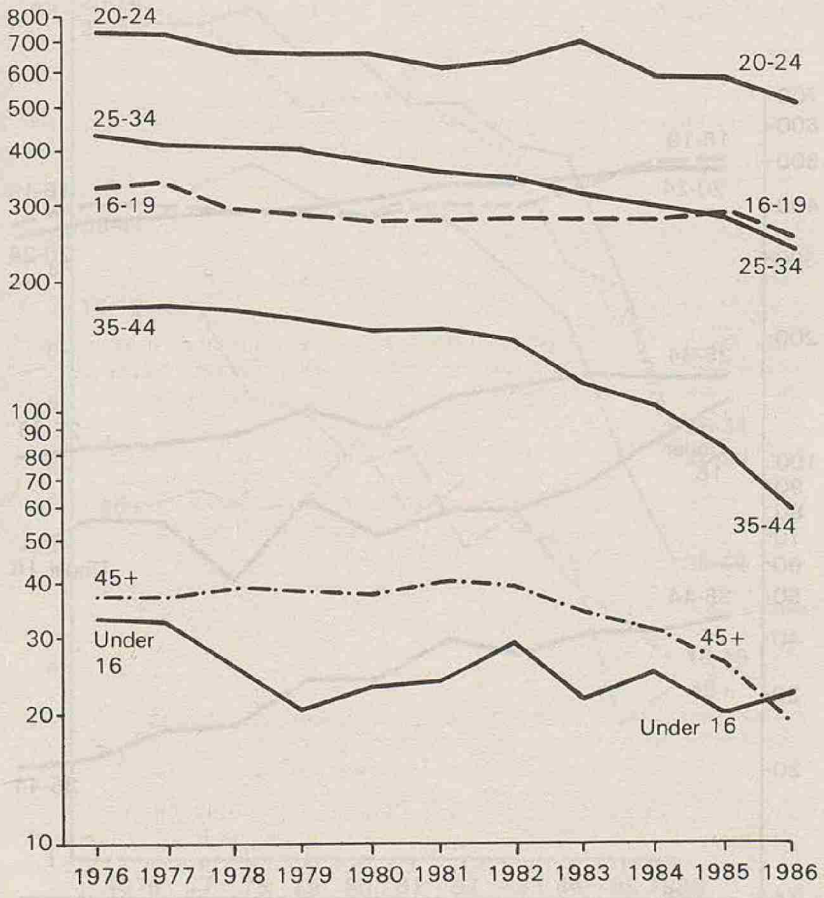
	Total		Male		Female	
Syphilis						
Early	887	(1,229)	696	(1,032)	191	(197)
Primary and secondary only	519	(691)	428	(625)	91	(66)
Late	981	(1,107)	665	(759)	316	(348)
Congenital	64	(68)	26	(28)	38	(40)
Gonorrhoea						
All forms	40,705	(46,314)	24,450	(28,759)	16,255	(17,555)
Post-pubertal gonorrhoea						
All ages	40,685	(46,294)	24,441	(28,751)	16,244	(17,543)
Under 16 years	310	(317)	83	(73)	227	(244)
16–19 years	8,963	(10,286)	3,714	(4,438)	5,249	(5,848)
20–24 years	16,581	(18,370)	10,065	(11,363)	6,516	(7,007)
25–34 years	11,351	(12,830)	7,919	(9,231)	3,432	(3,599)
35–44 years	2,596	(3,299)	1,931	(2,615)	665	(684)
45 years and over	884	(1,192)	729	(1,031)	155	(161)

Table 6.10: *Other sexually transmitted diseases reported by NHS GUM clinics in England in the year ended 31 December 1986 with the figures for the year ended 31 December 1985 in parentheses*

	Total		Male		Female	
Chancroid	47	(61)	38	(48)	9	(13)
Lymphogranuloma venereum	42	(30)	35	(23)	7	(7)
Granuloma inguinale	20	(17)	14	(15)	6	(2)
Non-specific genital infection (NSGI)	157,792	(149,524)	106,291	(103,198)	51,501	(46,326)
NSGI with arthritis	504	(487)	460	(459)	44	(28)
Trichomoniasis	14,041	(15,381)	923	(1,077)	13,118	(14,304)
Candidiasis	63,108	(60,517)	11,535	(11,853)	51,573	(48,664)
Scabies	1,742	(2,015)	1,452	(1,664)	290	(351)
Pediculosis pubis	9,333	(9,859)	6,508	(6,817)	2,825	(3,042)
Genital herpes	18,800	(18,935)	9,983	(10,025)	8,817	(8,910)
Genital warts	67,068	(52,177)	40,253	(31,250)	26,815	(20,927)
Genital molluscum	2,820	(2,195)	1,798	(1,374)	1,022	(821)
Other treponemal diseases	526	(592)	353	(384)	173	(208)
Other conditions requiring treatment in a centre	119,460	(109,318)	53,354	(49,079)	66,106	(60,239)
Other conditions not requiring treatment in a centre	143,092	(130,162)	87,281	(82,242)	55,811	(47,920)
Other conditions referred elsewhere	6,327	(5,318)	3,075	(2,754)	3,252	(2,564)
Overall Total	647,359	(605,306)	349,190	(332,840)	298,169	(272,466)

(Figure 5.4). In females, only 91 cases of this category of syphilis were reported in 1986 and changes in each age-group were inconsistent. Rises in the 16–19 and 20–24-year age-groups demonstrate the need to maintain control measures as was mentioned in the 1986 report. The fall in syphilis — and gonorrhoea — was again more marked in the Thames region than elsewhere. The incidence of congenital syphilis was the same as in 1985.

Figure 6.1: *New cases of post-pubertal gonorrhoea in males, rates per 100,000 population, England 1976-86*



Note: Population aged 45 to 59 years is used to calculate rates at ages of 45 years and over

Figure 6.2: *New cases of post-pubertal gonorrhoea in females, rates per 100,000 population, England 1976-1986*

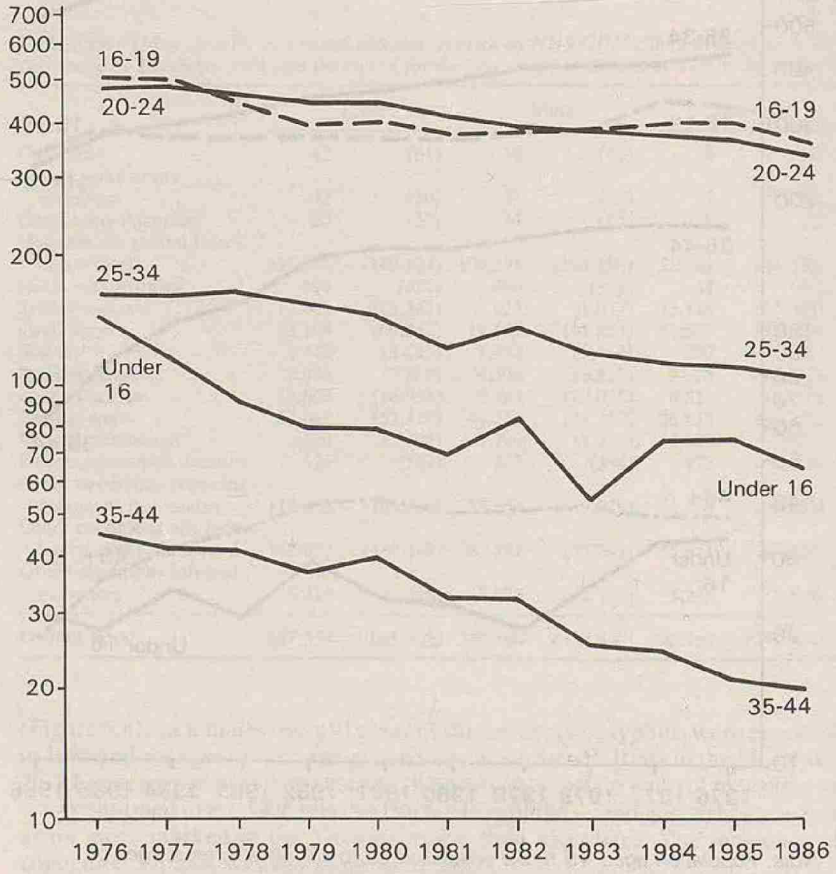
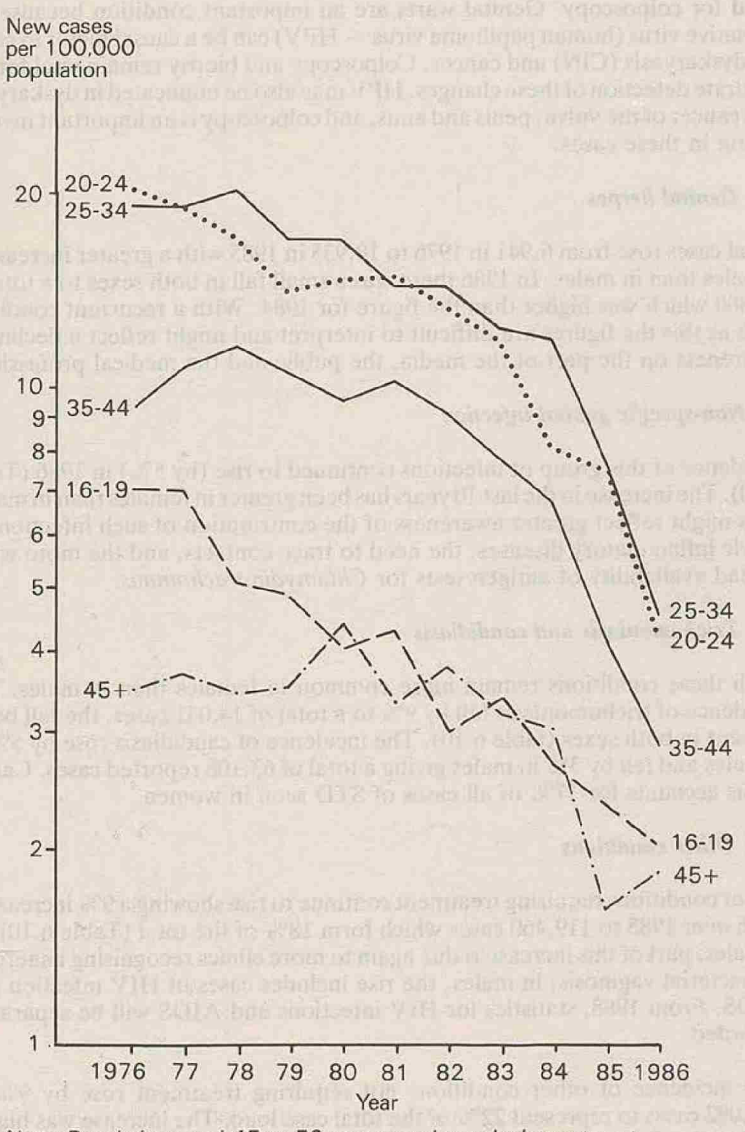


Figure 6.3: *New cases of primary and secondary syphilis, males, 1976-1986, age-specific rates per 100,000 population, England*



Note: Population aged 45 to 59 years used to calculate rates at ages of 45 years and over

(iii) Genital warts

In 1986 reported cases of genital warts rose to 67,068, a 29% increase over 1985, the rise being similar in males and females. This is a more marked increase than in the previous year. Genital warts now account for over 10% of new cases seen in clinics. Over the past 10 years the numbers have more than trebled with a greater increase in females than in males. Because the figures are diagnoses rather than individual patients, it is impossible to determine the number of new patients attending clinics. The figures do indicate the workload on clinics both in terms of treatment, which tends to be repetitive and unsatisfactory, and the need for colposcopy. Genital warts are an important condition because the causative virus (human papilloma virus — HPV) can be a causal factor in cervical dyskaryosis (CIN) and cancer. Colposcopy and biopsy remain vital for the accurate detection of these changes. HPV may also be implicated in dyskaryosis and cancer of the vulva, penis and anus, and colposcopy is an important investigation in these cases.

(iv) Genital herpes

Total cases rose from 6,941 in 1976 to 18,935 in 1985 with a greater increase in females than in males. In 1986 there was a small fall in both sexes to a total of 18,800 which was higher than the figure for 1984. With a recurrent condition such as this the figures are difficult to interpret and might reflect a decline in awareness on the part of the media, the public and the medical profession.

(v) Non-specific genital infection

Incidence of this group of infections continued to rise (by 5%) in 1986 (Table 6.10). The increase in the last 10 years has been greater in females than in males. This might reflect greater awareness of the contribution of such infections to pelvic inflammatory diseases, the need to trace contacts, and the more widespread availability of antigen tests for *Chlamydia trachomatis*.

(vi) Trichomoniasis and candidiasis

Both these conditions remain more common in females than in males. The incidence of trichomoniasis fell by 9% to a total of 14,041 cases, the fall being present in both sexes (table 6.10). The incidence of candidiasis rose by 5% in females and fell by 3% in males giving a total of 63,108 reported cases. Candidiasis accounts for 17% of all cases of STD seen in women.

(vii) Other conditions

Other conditions requiring treatment continue to rise showing a 9% increase in 1986 over 1985 to 119,460 cases which form 18% of the total (Table 6.10). In females, part of this increase is due again to more clinics recognising anaerobic or bacterial vaginosis; in males, the rise includes cases of HIV infection and AIDS. From 1988, statistics for HIV infections and AIDS will be separately recorded.

The incidence of other conditions not requiring treatment rose by 9% to 143,092 cases to represent 22% of the total case load. The increase was higher for females at 16% than males at 6%. The latter includes patients worried about

HIV infection, the former includes patients worried about HIV infection, genital warts and cervical disease. Many of these required prolonged counselling.

(viii) Statistical Bulletin on STD

Further information on rates of new cases seen at NHS genito-urinary clinics can be obtained from the Statistical Bulletin on Sexually Transmitted Diseases. This is obtainable from Information Division (DHSS), Canons Park, Government Buildings, Honeypot Lane, Stanmore HAY 1AY — Price £2.00.

Table A.1: *Population age and sex structure 1987; and changes by age 1981–87* England

Age (in years)	Resident population at mid 1987 (thousands)			Percentage change (Persons)			
	Persons	Males	Females	1981–87	1984–85	1985–86	1986–87
Under 1	627	321	306	4.8	4.2	0.9	1.4
1–4	2,418	1,239	1,178	8.2	–0.3	1.1	1.3
5 –15	6,484	3,330	3,153	–13.0	–1.7	–1.4	–1.8
16 –29	10,541	5,353	5,188	6.9	1.4	0.9	0.7
30 –44	9,773	4,907	4,866	6.5	1.0	1.5	1.2
45 –64/59*	8,865	5,016	3,849	–2.6	–0.8	–1.0	–0.5
65/60 –74**	5,511	1,871	3,640	–2.3	0.4	0.2	–0.2
75 –84	2,541	921	1,620	13.0	1.8	1.2	1.6
85 and over	648	157	491	26.7	4.1	3.8	7.4
All ages	47,407	23,116	24,291	1.3	0.3	0.3	0.3

* 45–64 for males and 45–59 for females.
** 65–74 for males and 60–74 for females.
Component figures may not add precisely to totals due to rounding.
Source of data: OPCS.

Table A.2: *Five main causes of death at different ages (and percentages of all causes of deaths) England, 1987*

Rank	All ages 1 and over		1–14		15–34		35–54		55–74		75 and over	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1	Ischaemic heart disease	Ischaemic heart disease	Road vehicle accidents	Congential anomalies	Road vehicle accidents	Road vehicle accidents	Ischaemic heart disease	MN* of bone, connective tissue, skin and breast	Ischaemic heart disease	Ischaemic heart disease	Ischaemic heart disease	Ischaemic heart disease
	31%	24%	18%	15%	27%	14%	34%	21%	36%	26%	28%	25%
2	MN* of respiratory and intratho-racic organs	Cerebro-vascular disease	Other causes of injury and poisoning	Road vehicle accidents	Other causes of injury and poisoning	Other causes of injury and poisoning	MN* of digestive organs and peritoneum	MN* of genito-urinary organs	MN* of respiratory and intratho-racic organs	Cerebro-vascular disease	Cerebro-vascular disease	Cerebro-vascular disease
	9%	15%	17%	13%	19%	13%	9%	11%	13%	10%	12%	18%
3	Cerebro-vascular disease	Other diseases of the circu-latory system	Congenital anomalies	Other causes of injury and poisoning	Suicide and self-inflicted injury	MN* of bone, connective tissue, skin and breast	MN* of respiratory and intratho-racic organs	Ischaemic heart disease	MN* of digestive organs and peritoneum	MN* of digestive organs and peritoneum	Other diseases of the circu-latory system	Other diseases of the circu-latory system
	9%	9%	13%	13%	14%	8%	8%	9%	9%	9%	9%	11%
4	MN* of digestive organs and peritoneum	MN* of digestive organs and peritoneum	Diseases of the nervous system and sense organs	Diseases of the nervous system and sense organs	Diseases of the nervous system and sense organs	Suicide and self-inflicted injury	Other causes of injury and poisoning	MN* of digestive organs and peritoneum	Cerebro-vascular disease	MN* of bone, connective tissue, skin and breast	Chronic obstructive pulmonary disease and allied con-ditions	Pneumonia
	8%	7%	11%	12%	5%	8%	6%	9%	8%	8%	8%	8%
5	Other diseases of the circu-latory system	Pneumonia	MN* of lym-phatic and haematopoie-tic tissue	MN* of lym-phatic and haematopoie-tic tissue	MN* of lym-phatic and haematopoie-tic tissue	Diseases of the nervous system and sense organs	Cerebro-vascular disease	Cerebro-vascular disease	Chronic obstructive pulmonary disease and allied con-ditions	MN* of respiratory and intratho-racic organs	MN* of respiratory and intratho-racic organs	MN* of digestive organs and peritoneum
	7%	6%	6%	6%	4%	6%	5%	7%	6%	8%	7%	6%
Remainder	35%	39%	35%	41%	30%	51%	39%	44%	28%	39%	36%	33%
All causes of death	258,712	266,593	1,190	880	5,949	2,685	18,039	11,787	115,059	76,384	118,475	174,857

*MN=malignant neoplasm.
Source of data: OPCS.

Table A.3: *Relative mortality from various conditions when ranked by numbers of deaths and future years of 'working life lost', England and Wales, 1985*

Cause	Males				Females			
	Number of deaths (thousands)		Years of life lost (thousands)		Number of deaths (thousands)		Years of life lost (thousands)	
	All Ages	(%)	Age 15–64	(%)	All ages	(%)	Age 15–64	(%)
ALL CAUSES	292	(100)	1,029	(100)	298	(100)	627	(100)
All neoplasm*	73	(25)	191	(19)	66	(22)	206	(33)
Lung cancer	26	(9)	49	(5)	10	(3)	21	(3)
Breast cancer+					14	(5)	60	(10)
Genito-urinary cancer	11	(4)	15	(1)	10	(3)	40	(6)
Leukaemia	2	(0.7)	16	(2)	2	(0.7)	11	(2)
Circulatory disease*	140	(48)	265	(26)	147	(49)	94	(15)
Ischaemic heart disease	92	(32)	195	(19)	71	(24)	43	(7)
Cerebrovascular disease	28	(10)	33	(3)	46	(15)	29	(5)
Respiratory disease*	34	(12)	50	(5)	31	(10)	36	(6)
Pneumonia	10	(3)	14	(1)	18	(6)	11	(2)
Bronchitis	11	(4)	16	(2)	6	(2)	12	(2)
Congenital malformation	1	(0.3)	59	(6)	1	(0.3)	55	(9)
Perinatal deaths	1	(0.3)	67	(7)	0.9	(0.3)	47	(7)
Sudden infant deaths	0.7	(0.2)	36	(3)	0.5	(0.2)	24	(4)
Accidents*	8	(3)	157	(15)	5	(2)	47	(7)
Motor vehicle accidents	3	(1)	97	(9)	1	(0.3)	28	(4)
Suicide	3	(1)	57	(6)	1	(0.3)	18	(3)

*These conditions are presented as well as selected causes within these broader headings.
+Not calculated for male breast cancer.
A more extensive table, including details of the method of calculation, is presented annually in OPCS mortality statistics, series DHI.

Table A.4: *Trends in 'avoidable' deaths, 1979 to 1986, England and Wales. Age Standardised Mortality Ratios (1979=100).*

Condition	SMR's[1]								Actual no of deaths	
	1979	1980	1981	1982	1983	1984	1985	1986	1979	1986
Hypertension/stroke (35–64)	100	91	86	84	80	77	76	72	9,482	6,967
Perinatal mortality	100	91	81	77	71	69	67	65	9,400	6,361
Cervical cancer (15–64)	100	98	95	90	90	91	91	97	1,142	1,106
Hodgkin's disease (5–64)	100	99	99	86	86	79	75	74	365	281
Respiratory diseases (0–14)	100	101	95	87	62	51	50	40	329	126
Surgical diseases (5–64)	100	87	81	77	71	78	66	72	262	190
Asthma (5–44)	100	88	115	105	105	102	113	111	250	294
Tuberculosis (5–64)	100	116	91	91	62	64	65	58	222	130
Chronic rheumatic heart disease (5–44)	100	80	70	52	42	41	35	34	133	51
									21,585	15,506
All causes: age 0–14	100	96	87	82	77	73	74	73	11,132	8,470
All causes: age 15–64	100	96	93	92	90	88	88	86	127,194	110,366
All causes: all ages	100	96	95	94	93	89	92	89	591,039	579,257
All deaths less 'avoidable'	100	97	95	95	93	90	93	90	569,454	563,751

[1] The Standard Mortality Ratio for a condition is calculated by dividing the observed number of deaths by the expected number of deaths based on 1979 death rates.
Derived from data supplied by OPCS

Table A.5: *Live births, stillbirths, infant mortality and abortions, England, 1960–87*

Year	Live births	Stillbirths		Early neonatal mortality (deaths under 1 week)		Perinatal mortality (stillbirths plus deaths under 1 week)	Post-neonatal mortality (deaths 4 weeks to under 1 year)	Infant mortality (deaths under 1 year)	Abortions@
	No.	No.	Rate*	No.	Rate+	Rate*	Rate+	Rate+	Rate#
1960	740,859	14,753	19.5	9,772	13.2	32.5	6.3	21.6	–
1970	741,999	9,708	12.9	7,864	10.6	23.4	5.9	18.2	87.6
1975	563,900	5,918	10.4	5,154	9.1	19.4	5.0	15.7	149.9
1976	550,393	5,339	9.6	4,468	8.1	17.6	4.6	14.2	148.7
1977	536,953	5,087	9.4	4,070	7.6	16.9	4.5	13.7	152.7
1978	562,589	4,791	8.4	3,975	7.1	15.4	4.4	13.1	157.7
1979	601,316	4,811	7.9	4,028	6.7	14.6	4.5	12.8	158.8
1980	618,371	4,523	7.3	3,793	6.1	13.4	4.4	12.0	164.5
1981	598,163	3,939	6.5	3,105	5.2	11.7	4.3	10.9	168.8
1982	589,711	3,731	6.3	2,939	5.0	11.2	4.6	10.8	171.1
1983	593,255	3,412	5.7	2,746	4.6	10.3	4.2	10.0	169.2
1984	600,573	3,425	5.7	2,640	4.4	10.0	3.9	9.4	177.3
1985	619,301	3,426	5.5	2,674	4.3	9.8	3.9	9.2	177.6
1986	623,609	3,337	5.3	2,640	4.2	9.5	4.2	9.5	183.5
1987	643,330	3,224	5.0	2,518	3.9	8.9	4.0	9.1	187.7

* Per 1,000 live and stillbirths.
\+ Per 1,000 live births.
\# Per 1,000 conceptions (live births, stillbirths and abortions)
@ Relates to England residents.
Source of data: OPCS.

Table A.6: *Congenital malformation — Selected malformations, England, 1977, 1982 and 1987*

ICD Code(s)	Malformation	Stillbirth*			Live birth**		
		1977	1982	1987	1977	1982	1987
	Malformed babies						
	Number	928	470	486	10,892	12,040	12,164
	Rate	17.1	7.9	7.5	202.8	204.2	189.1
320–359, 740, 741,	Central nervous system						
742.0–742.5, 742.8, 742.9, 767.6	Number	730	273	85	1,014	662	335
	Rate	13.5	4.6	1.3	18.9	11.2	5.2
360–389, 743.0–743.6	Ear and Eye						
743.8–744.3	Number	21	19	56	425	654	672
	Rate	.4	.3	.9	7.9	11.1	10.4
749.0–749.2	Cleft Lip/Cleft Palate						
	Number	41	34	36	752	782	743
	Rate	.8	.6	.6	14.0	13.3	11.5
390–459, 745–747, 425.3, 745.4	Cardiovascular						
746.9, 747.0, 747.5, 747.9, 785.2	Number	11	10	65	597	807	793
	Rate	.2	.2	1.0	11.1	13.7	12.3
752.6	Hypospadias/Epispadias						
	Number	2	2	4	885	987	1,069
	Rate	.0	.0	.1	16.5	16.7	16.6
755.0, 755.1	Polydactyly/Syndactyly						
	Number	8	15	18	839	1,024	1,027
	Rate	.1	.3	.3	15.6	17.4	16.0
754.5–754.7	Talipes						
	Number	63	39	27	2,097	1,995	2,037
	Rate	1.2	.7	.4	39.1	33.8	31.7
758.0–758.9	Chromosomal						
	Number	13	17	55	447	576	488
	Rate	.2	.3	.9	8.3	9.8	7.6

* Rates per 10,000 total births.
** Rates per 10,000 live births.

Table A.7: *Cancer registrations (1984) by sex, age and site: England and Wales (Males)*

	Numbers and percentages															
	Age-group (in years)															
	All ages		0–4		5–14		15–24		25–44		45–64		65–84		85 and over	
		%		%		%		%		%		%		%		%
Eye, brain and other nervous system	1,833	2	56	21	70	21	64	10	280	7	809	3	541	1	13	0
Mouth and pharynx	1,815	2	3	1	5	2	8	1	129	3	816	3	796	1	58	1
Oesophagus	2,437	2	–	–	–	–	2	0	55	1	828	3	1,450	2	102	2
Lung	26,203	26	–	–	–	–	7	1	294	8	8,286	27	16,730	27	886	19
Stomach	6,788	7	–	–	–	–	4	1	120	3	1,852	6	4,475	7	337	7
Pancreas	2,926	3	3	1	–	–	3	0	72	2	908	3	1,802	3	138	3
Large intestine and rectum	11,917	12	–	–	–	–	13	2	313	8	3,569	12	7,412	12	610	13
Prostate	9,524	9	1	0	–	–	–	–	10	0	1,290	4	7,401	12	822	18
Bladder	6,886	7	–	–	–	–	3	0	137	3	1,975	6	4,450	7	321	7
Skin	12,431	12	4	1	9	3	55	8	611	16	297	1	7,125	11	657	14
Leukaemias and lymphomas	6,283	6	105	39	182	55	262	39	729	19	1,774	6	2,992	5	239	5
All other cancer	13,281	13	96	36	64	19	249	37	1,167	30	7,985	26	6,930	11	463	10
Total cancer	102,324	100	268	100	330	100	670	100	3,917	100	30,389	100	62,104	100	4,646	100

Source of data: OPCS.

Table A.8: *Cancer registrations (1984) by sex, age and site: England and Wales (Females)*

	Numbers and percentages															
	Age-group (in years)															
	All ages		0–4		5–14		15–24		25–44		45–64		65–84		85 and over	
		%		%		%		%		%		%		%		%
Eye, brain and other nervous system	1,471	1	53	23	58	22	63	10	223	3	576	2	478	1	20	0
Mouth and pharynx	1,105	1	1	0	7	3	13	2	80	1	361	1	547	1	96	1
Oesophagus	1,897	2	–	–	–	–	1	0	26	0	401	1	1,221	2	248	3
Breast	21,363	22	–	–	1	0	26	4	2,488	34	8,748	29	8,736	17	1,364	16
Lung	9,840	10	1	0	–	–	3	0	177	2	3,340	11	5,838	11	481	6
Stomach	4,465	5	–	–	–	–	3	0	59	1	791	3	2,933	6	679	8
Pancreas	2,772	3	–	–	–	–	1	0	27	0	554	2	1,839	4	351	4
Large intestine and rectum	12,500	13	1	0	1	0	12	2	240	3	2,849	9	7,783	15	1,614	19
Ovary	4,539	5	2	1	4	2	47	8	360	5	1,956	6	1,973	4	197	2
Cervix	4,043	4	–	–	–	–	41	7	1,411	19	1,433	5	1,066	2	92	1
Other uterus	3,759	4	–	–	1	0	2	0	160	2	1,689	6	1,726	3	181	2
Bladder	2,619	3	–	–	–	–	4	1	42	1	654	2	1,648	3	271	3
Skin	12,054	12	1	0	18	7	71	12	876	12	3,116	10	6,742	13	1,230	14
Leukaemias and lymphomas	5,520	6	100	44	106	41	194	32	462	6	1,261	4	2,883	6	514	6
All other cancer	11,232	11	68	30	64	25	127	21	613	8	2,774	9	6,416	12	1,170	14
Total cancer	99,179	100	227	100	260	100	608	100	7,244	100	30,503	100	51,829	100	8,508	100

Source of data: OPCS.

Table A.9: *Numbers (in thousands) of children aged 16 and under completing primary course of vaccination with the percentage of eligible children vaccinated before three-years-of-age shown in parenthesis, but for BCG this percentage is the estimated school population age 13 years. England 1975–1986*

Year	Diphtheria		Tetanus		Polio		Whooping cough		Measles		BCG	
1975	479.0	(74)	499.2	(74)	481.5	(74)	247.9	(60)	310.2	(47)	522.5	(70)
1976	487.5	(75)	510.2	(75)	495.6	(75)	240.6	(38)	323.7	(47)	564.5	(74)
1977	490.9	(78)	513.1	(78)	515.6	(78)	191.9	(40)	304.9	(50)	590.1	(76)
1978	506.0	(78)	524.4	(79)	518.8	(78)	199.4	(31)	302.1	(48)	576.6	(74)
1979	528.6	(80)	543.7	(80)	533.6	(80)	250.3	(35)	331.7	(51)	563.9	(74)
1980	545.9	(81)	560.2	(81)	549.7	(81)	285.6	(41)	351.6	(53)	617.9	(82)
1981	552.2	(83)	564.4	(83)	554.5	(82)	320.5	(46)	368.5	(55)	575.1	(78)
1982	558.1	(84)	572.7	(84)	562.8	(84)	384.8	(53)	390.7	(58)	547.1	(75)
1983	528.5	(84)	538.3	(84)	531.5	(84)	406.8	(59)	392.9	(60)	538.1	(76)
1984	532.1	(84)	540.2	(84)	534.0	(84)	391.7	(65)	435.6	(63)	507.9	(71)
1985	544.4	(85)	551.6	(85)	548.9	(85)	414.2	(65)	473.8	(68)	518.7	(77)
1986	563.6	(85)	573.1	(85)	569.1	(85)	475.9	(67)	502.9	(71)	486.7	(76)

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