DEPARTMENT OF HEALTH AND SOCIAL SECURITY

On the State of THE PUBLIC HEALTH for the year 1986

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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
FOR THE YEAR 1986

LONDON
HER MAJESTY'S STATIONERY OFFICE

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INTRODUCTION

To the Rt. Hon. John Moore, MP
Secretary of State for Social Services

Sir,

I have pleasure in submitting my report on the State of the Public Health during 1986.

Recently I reviewed the series of Reports produced by Chief Medical Officers since 1856 at a seminar attended by colleagues with a professional interest in the public health. The seminar concluded that the Reports have been useful as an unbiased record of topical events relating to health and as a commentary on progress and on important unsolved problems. It was suggested that in future they should contain relevant statistics not available in other publications and articles on key health issues with a national and international perspective. It is hoped to incorporate a number of these changes in the Report for 1987.

In 1986 the health scene in the UK as in many other countries was dominated by the evolution of the epidemic of infection with the virus (HIV) which underlies AIDS and the increasing public awareness of its significance. But the unique character of two other events which occurred in 1986 — different, yet each in its way of historic significance to public health — earns them mention in the opening paragraphs of this Introduction.

On the night of 26 April 1986 a massive explosion took place in a nuclear reactor at Chernobyl in the Soviet Union. Although within the UK the health effects due to the radioactive cloud proved to be minimal the explosion naturally aroused widespread public concern and tested the capacity of Governments in many countries to react to a potential nuclear emergency.

The second event was the setting up in January 1986 by the then Secretary of State of an Enquiry into 'the future of the public health function'. The terms of reference give particular emphasis to the control of communicable disease and the role of the specialty of community medicine. So far as can be determined this is the first review for at least a century. It is hoped that the Committee will report at the end of this year.

Acquired immune deficiency syndrome (AIDS) and HIV infection

During the first six months of 1987 281 cases of AIDS were reported from England to CDSC. This contrasts with 107 in the comparable period of 1986, and with the 1986 total of 298 cases. The nature of the definition of AIDS introduces an arbitrary element to the dating of a diagnosis, and there may also be delays of varying length between the diagnosis and reporting of cases. If the date of diagnosis is taken as the point of reference the epidemic curves of cases in the UK is at present exponential with a doubling time of about 10 months. A similar curve is found if deaths attributed to AIDS are plotted by date of death.

The future trend of the epidemic will depend on the number of people currently infected with the underlying virus (HIV) and the rate of incidence of new infections. Although, unfortunately there are no reliable estimates of either of these figures a total of 5,009 positive tests had been reported from England, up

to 30 June 1987. Almost all of these people are believed to be within the high risk groups or to have been sexual partners of persons in these groups. The high risk groups are young homosexual or bisexual males, haemophiliacs, people who have had sexual intercourse in Sub-Saharan Africa and intravenous drug abusers.

In early 1987 pilot schemes for testing ante-natal patients for HIV infection in Edinburgh and Dundee were announced. It is envisaged that this will be extended to centres in England by the end of this year. Such schemes give HIV positive women the opportunity to consider whether they wish to continue with the pregnancy, since there is an approximately even chance of their offspring being infected.

In the absence of an effective vaccine or treatment the principal means of reducing the spread of HIV is to educate the public how the virus is transmitted and how to protect themselves and others. The public information campaign which began in 1986 has continued to gather momentum and has attracted much international interest. In the first two weeks of January 1987 an AIDS leaflet was delivered to every household in the country. This was accompanied by television and cinema advertising. The broadcasting authorities gave additional 'air time' to AIDS advertising on all channels and by broadcasting 19 hours of television programmes in an 'AIDS Television Week'. In the same month a two-tier free telephone information and advice service was established to complement the campaign.

This consists of an 'AIDS telephone service' which functions 24 hours a day for 7 days a week and in which general enquiries can be answered and literature offered. Callers requiring more sensitive personal advice are referred to 'The National Advisory Service on AIDS' which operates between 10 am and 10 pm, 7 days a week. Outside these hours a back-up service is provided by 'Network, Scotland'; all calls are free. All aspects of the public education campaign, including the telephone information services, are monitored and evaluated. Results of market research reveal that the vast majority of the public now know how the virus is transmitted.

In the early part of the year I accompanied the then Secretary of State for Social Services to the USA. This trip provided considerable insight into possible strategies for caring for patients. Subsequently two conferences were held — one on the prediction of the future number of AIDS cases; the other on caring for people with AIDS. Following the latter it was announced that 14 nursing fellowships would be established to formulate ideas for nursing AIDS patients, that special training facilities for other health care professionals including community nurses, general practitioners (GPs) and hospital specialists would be provided and that a pilot scheme for an AIDS regional advice and support centre, to be jointly run by the health authority and the local authority, would be established. This centre will be in Newcastle-upon-Tyne.

AIDS research

At the end of 1986, the Medical Research Council (MRC) put forward a suggestion for a programme of directed research to develop a vaccine to prevent infection and anti-viral drugs to treat those already infected with the AIDS virus. These proposals were accepted by the Government in February 1987 and an additional £14m was allocated over the next 3 years. The programme

will be closely monitored by the MRC, the Department of Health (DHSS) and the Department of Education and Science (DES).

In early 1987 the Economic and Social Research Council (ESRC) outlined its plans for a programme of research to start later in the year.

The DHSS has given research into AIDS a top priority. Many health services research projects are under consideration for a 1987 start.

Zidovudine (*'Retrovir'*) was issued with a project licence by the Committee on Safety of Medicines (CSM) on 4 March 1987. Supplies are limited and its use at present is confined to the management of serious manifestations of HIV infection in patients with the AIDS syndrome or AIDS related complex (ARC).

Whooping cough

Although 1986 was an epidemic year, notified cases were considerably less than those for the equivalent epidemic years of 1978 and 1982. This fall was the result of improved immunisation but a much greater increase in uptake of pertussis vaccine is needed if future epidemics are to be avoided.

Vaccination and immunisation

The uptake of measles and whooping cough vaccine has shown some increase in recent years, but these levels together with those for diphtheria, tetanus, poliomyelitis and rubella vaccination are below the target levels of 90%.

In August 1985, and again in July 1986, the District Health Authorities were asked to designate a particular person to co-ordinate immunisation activity in each district. As the theme for World Health Day 1987 was immunisation, it was considered appropriate to hold the first meeting of these designated officers on that day, 7 April, at the London School of Hygiene and Tropical Medicine.

On 7 April 1987, it was announced that Ministers had approved a change in childhood immunisation policy to replace single antigen measles immunisation with combined measles, mumps and rubella (MMR) immunisation. This new vaccine will be introduced in the autumn of 1988 and in the meanwhile trials on the acceptance and reactivity of the vaccine are being carried out in Somerset, North Hertfordshire and Fife.

Meningitis

Britain is currently experiencing the first resurgence of meningococcal meningitis since 1976. In 1986 the notifications rose for the third succesive year to some 850 cases and a further increase is expected in 1987. As the dominant strain has been Group B for which no vaccine is at present available, it has not been possible to control the outbreak by immunisation. Although penicillin is usually effective if given in adequate doses as soon as the diagnosis is suspected there remains a significant fatality rate of about 10%. This together with the facts that it attacks principally young children and adolescents, and, as it is transmitted by undisclosed carriers, seems to strike at random account for the high degree of public concern associated with this condition.

The Health Education Authority

In November 1986 the then Secretary of State announced the proposed reconstitution of the Health Education Council as a special health authority. While the immediate purpose was to create a statutory body suitable to assume responsibility for the £20 million public education campaign on AIDS, this reconstitution will also enhance the importance of health promotion within the NHS. It will ensure that it is given appropriate priority in the accountability review process. The Health Education Authority (HEA) came into being on 1 April 1987, and further details of its functions and composition are given in Chapter 2.

Look after your heart!

1986 witnessed the planning of this campaign which was launched officially by the then Secretary of State in April 1987. The campaign is jointly sponsored by DHSS and the HEA, and its aim is to reduce what in international terms is in England a very high level of coronary heart disease (CHD). The first phase is largely intended to raise public awareness about the main risk factors in CHD which include smoking, dietary fat and lack of exercise and to suggest what people can do to reduce them. A fuller description of the campaign is given in the section on CHD (see page 31).

Smoking

References to the well established connections between smoking and ill health appear in various parts of the main report. However, because of its importance to the state of the public health, a special section on the subject has been included in Chapter 2 of the Report.

Although mortality from all-causes has fallen in all social classes, the decline has been least in those engaged in semi-skilled and unskilled manual work. Smoking is a major contributor to such differences, particularly with respect to coronary heart disease and lung cancer. While it would be quite wrong to express any satisfaction about the nation's smoking habits, it is encouraging that the most recent prevalence data demonstrate that the proportions of both adult men and women who smoke now show a decline in unskilled manual workers, as well as in all other socio-economic groups. There remain however large differences in smoking prevalence across society and it is important that further substantial improvements are made.

In contrast to adults, recent evidence about smoking among young people continues to give me considerable cause for concern. Although the 1986 survey on smoking among secondary school children showed that the prevalence rate for smoking in first to fifth form boys was 7% — in 1984 it had been 13% — smoking in the same group of girls remained virtually unchanged. It is particularly unsatisfactory that among fifth formers 35% of girls and 24% of boys smoked regularly or occasionally.

The effects of passive smoking — that is, the effect on the health of non-smokers of inhaling other people's tobacco smoke is now provoking increasing concern. The Independent Scientific Committee on Smoking and Health (ISCSH) issued a public statement in March 1987. The Committee confirms the

association between passive smoking and the exacerbation of respiratory and cardiovascular symptoms. It also pointed out that the findings on the association between passive smoking and lung cancer were consistent with an increase in the small absolute risk of lung cancer among non-smokers — possibly of the order of 10–30%. It is likely that many non-smokers will soon expect to be able to work and to undertake leisure activities in a smoke-free environment.

Drug misuse

Drug misuse remains a major problem. Though there is some evidence from indicators of drug misuse that the availability and use of heroin may have slowed down in 1986, the widespread use of illicit amphetamine sulphate is worrying, and there is the continued threat of a rise in cocaine misuse.

HIV infection is a new major associated risk for people who inject any of these substances. Sharing of syringes, needles and other paraphernalia provides an important route for transmission of HIV and the mortality associated with HIV far exceeds that associated with drug misuse *per se*. Moreover, infected drug users may transmit the virus by sexual contact to their partners and in the case of women to the unborn child.

It is therefore even more urgent than previously to give priority to the development and expansion of local drug misuse services, so that a greater number of drug users, whether casual or dependent, may be contacted and offered advice and treatment.

Alcohol misuse

Recently additional powerful arguments have emerged in support of the need for action on alcohol as a cause of disease. It has been known many years that alcohol misuse can give rise to cirrhosis, mental illness and other disorders of the central nervous system as well as being an important factor in the causation of cancers of the upper respiratory and digestive tracts. More recently there has been growing evidence to implicate alcohol in the development of hypertension and breast cancer, both major causes of death and illness. It seems that the effects of alcohol on the development of these two conditions may be important even at relatively moderate levels of consumption in predisposed individuals. The total range of health problems in which alcohol may be a significant factor makes the drinking habits of the nation the legitimate concern of every doctor. The recent publication of special reports on alcohol by three Medical Royal Colleges and the British Psychological Society highlight the scale of the problem. A particularly welcome feature of these publications was that all four reports included a single co-ordinated series of recommendations on safe levels of alcohol consumption. The maximum levels of consumption which are thought to be safe are 21 units per week for men and 14 units per week for women. [One unit = ½ pint of ordinary beer or a standard measure of wine or spirits.]

Environmental radiation

The Department's response to the Chernobyl accident in the USSR included provision of advice to the public on the immediate implications within the United Kingdom (UK), and subsequently international collaboration to

improve the guidelines on which any actions necessary in the future would be taken. The Department has also been involved in the Government's review of the UK plans for dealing with nuclear emergencies.

The Committee on Medical Aspects of Radiation in the Environment (COMARE) which was set up at the end of 1985 in response to a recommendation in the Black Advisory Group Report on the *'Investigation of the Possible Increased Incidence of Cancer in West Cumbria'* published its first report in 1986. This reassessed the findings of the Black Advisory Group in the light of additional discharge data made available by British Nuclear Fuels plc, and judged that the substance and essential conclusions of the Black Advisory Group were unchanged. COMARE also advised Government on the significance to health of exposures to radon in dwellings, and recommended that the feasibility of a study of the effects of radon exposure on inhabitants of dwellings in the UK be considered.

Cervical screening

The importance of this subject remains undiminished and the main developments in 1986 are referred to in Chapter 6. The aim of policy is to achieve a substantially greater uptake of screening — particularly among women who have never previously had a cervical smear test thereby reducing the mortality from the disease.

In February 1987 the then Secretary of State announced that call and recall for cervical cancer screening will extend to women from the age of 20 years. In April he announced the establishment of a small team, headed by Sir Roy Griffiths, which is to oversee the implementation of this Government's policies on cancer screening, in particular by ensuring that Health Authorities have viable plans to implement computer-based call and recall systems by Spring 1988.

Breast screening

Following the publication of the report of the Working Group set up to consider breast screening policy the Secretary of State also made it known that a national breast screening service was to be set up. By early 1988 each region would have one screening centre with the intention of increasing this number to 100 for the whole country by 1990.

Trials in Sweden and elsewhere have demonstrated that screening by mammograph can prolong the lives of women with breast cancer aged 50 years and over. The programme envisaged by the UK Health Ministers will require skilled and motivated multidisciplinary teams. For success to be assured it will also be necessary to persuade the majority of women of the appropriate age to avail themselves of this service.

Syringes for diabetics

About a million people suffer from diabetes in the United Kingdom and a fifth of them need regular injections of insulin to maintain their health. Prior to 1987 some were supplied with disposable syringes through the hospital service but the majority relied on re-usable syringes and needles prescribed by their GPs.

This situation was widely perceived as unsatisfactory because of possible infection through re-use of equipment, and the greater ease and comfort that would come from use of disposables. This was argued particularly strongly in respect of children. In Scotland disposables have been available on GP prescription for some time for patients up to age of 16 years.

In March 1987, the Minister for Health told the House that disposable syringes and needles would be available on GP prescription. Since diabetics are among the groups who are exempt from all prescription charges, this supply will be free, and is expected to cost up to £10 million in a full year.

Organisation and management of health services

Outcome indicators
While a great deal of information is collected about health service activity we know surprisingly little about the extent to which health services actually improve people's health. Much more needs to be done to develop indicators which enable professional staff and managers to assess the results of treatment in terms of actual benefit to patients. Decisions on priorities would be easier if we had clearer indicators of such benefits.

At present only a few measures of clinical outcome are available. A small number of the current performance indicators relate to outcome, mainly in the fields of maternity services and immunisation. Increasing interest is being shown in avoidable deaths as indicators of outcome. These measure mortality for selected diseases or conditions which can be effectively prevented or treated by district. While differences between districts must be interpreted with care, they often point to the need for local investigation of a particular problem.

A growing number of District Medical Officers are producing reports on the health of the populations of their Districts and a number of Health Authorities are adopting specific targets for health improvement as part of their longer term planning. While health services are clearly only one of many factors which influence the health of a community, the measurement of indicators of outcome of services will play an increasingly important part in determining what real benefits people derive from the NHS.

Medical equipment
A report by a working group of the Advisory Council for Applied Research and Development (ACARD) on the medical equipment industry in the UK was published in July 1986. A central theme was the importance of the NHS as an influence on the industry's shape, and the implications this has for both the home and overseas markets.

In announcing the publication of the Government's response in February 1987 the Secretary of State made clear the Government's commitment to the industry. He drew attention both to the wide-ranging programme of actions designed to develop a strong, internationally competitive health-care industry, which was announced on 15 December 1986, and to the future measures set out in the response. He emphasised the scope for British industry to assist the NHS in achieving increased efficiency, value for money and the provision of improved care, and the opportunity for building a firmer base for exports which

would result if the industry could meet a higher proportion of the Service's needs.

Croham report

I welcome the attention given to developments in the field of undergraduate medical education by the Croham Report on the review of the University Grants Committee (UGC). The report contains a clear statement of the complex funding and management arrangements which apply to medical education and recommends that better co-ordination of planning and funding is needed between DHSS and DES and between Health Authorities and the Universities. The recommendations of the Report have been followed up at national level by DHSS in conjunction with DES and the UGC. Working links between the Departments have been strengthened. In March 1987 a joint note of guidance was issued by DHSS and DES to health authorities and universities with medical schools. It called for health authorities to review their resource allocation policies in the light of the needs of medical education and emphasised the need for joint planning and consultation.

The Artificial Limb Service

Brief reference was made in this Report for 1985 (p. 88) to the review of the Artificial Limb and Appliance Service (ALAC) undertaken by Professor McColl's Working Party which was published in January 1986.

The McColl Report made a series of important recommendations, which dealt with the organisation and management of the services, the nature of the limb contracts and the standard of prosthetic care. The broad thrust of the report was accepted by Ministers and already many of the recommendations have been acted upon. A recommendation of the McColl Working Party was that it would be inappropriate for these services to remain under the direct control of the DHSS. This also was accepted by the Government who therefore decided to establish an interim management board in the form of a Special Health Authority, with effect from 1 July 1987; it is known as the Disablement Services Authority and will be responsible for the whole of the artificial limb service, for wheelchair services and for the provision of appliances to war pensioners.

The Working Party also identified a need to forge stronger links with the other services for disabled people. To this end Ministers have decided that one of the major tasks of the Special Health Authority will be to prepare the way for full integration of the ALAC services into the NHS in April 1991. As part of its consideration of the longer term arrangements, the Authority will also be asked to devise any safeguards which are needed to ensure that continuity of the services is maintained, and that there is no disruption or diminution of them. The Authority itself will cease to exist after 1991 and its responsibilities will pass to regional and district health authorities.

Trends in asthma

It is my intention to select each year an aspect of the problem of disease in England which is of concern or topical interest and to subject it to detailed analysis.

The first subject in this series, bronchial asthma, which appears to have become more prevalent in recent years, is dealt with in Chapter 1 on page 24.

The Committee on Safety of Medicine (CSM)

The work of the CSM and its sub-committees during 1986 is described on page 91. A list of members during 1986 appears as Appendix A on page 141. The period of appointment for all members expired on 31 December 1986, and I would like to record my appreciation of their valuable work. In particular, Professor Sir Abraham Goldberg retired after being Chairman of the Committee since July 1980. During his 6½ years in office Professor Goldberg chaired the Committee with unfailing tact and courtesy. He will be very much missed by members and Secretariat.

Acknowledgement
I am also 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 am, Sir
Your obedient Servant

E D Acheson
September, 1987.

1. VITAL STATISTICS

(a) Population size

The estimated resident population of England on 30 June 1986 was 47,254,000 persons, an increase of 143 thousand over that for 1985. Almost one half of the increase was due to natural change (births minus deaths) and the other half to migration. There was an increase of over 10% in the estimated number of immigrants from beyond the United Kingdom coupled with a decrease of 2% in the number of emigrants leaving England for destinations beyond the UK.

(b) Age and sex structure of the resident population

Table 1.1 shows how the size of the population in various age/sex groups has changed over recent years. There was a small increase in the number of 1–4 year olds between mid-1985 and mid-1986 which reflected aging of the 'under 1' cohort at mid-1985, this being 4% higher than the mid-1984 cohort. The number of children of school age (5–15 years) had fallen by 11% since 1981. The fall between 1985 and 1986 was the smallest for the past 5 years. The overall number of adults of working age (16–64 years for men and 16–59 years for women) continued to increase. This disguises, however, a further decrease in the working population over age 45 years. The number of people of pensionable age at mid-1986 was slightly higher than a year earlier. There were increases in all three of the pensionable age groups shown in Table 1.1; once again the largest, just under 4%, was for those aged 85 years and over. Since 1981 the number of people in the age groups of 75–84 years and 85 years and over has increased by 11% and 18% respectively. Men account for one-third of all people over retirement age, a proportion which has changed little since 1981.

Table 1.1: *Population age and sex structure 1986, and changes by age 1981–86: England*

Age	Resident population Mid-1986 Thousands			Percentage change (Persons)			
	Persons	Males	Females	1981–86	1983–84	1984–85	1985–86
Under 1	618	317	301	**3.3**	0.0	4.2	0.9
1–4	2,386	1,223	1,163	**6.8**	0.5	–0.3	1.1
5–15	6,602	3,391	3,211	**–11.4**	–2.2	–1.7	–1.4
16–29	10,464	5,312	5,153	**6.2**	1.3	1.4	0.9
30–44	9,653	4,850	4,803	**5.2**	0.1	0.1	1.5
45–64/59*	8,907	5,050	3,857	**–2.1**	0.1	–0.8	–0.1
65/60–74**	5,520	1,851	3,669	**–2.2**	–1.1	0.4	0.2
75–84	2,501	898	1,603	**11.2**	2.5	1.8	1.2
85 & over	603	142	462	**18.0**	3.2	4.1	3.8
All ages	47,254	23,034	24,220	**0.9**	0.2	0.3	0.3

* 45–64 for males, 45–59 for females
** 65–74 for males, 60–74 for females
Figures may not add due to rounding.

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

(i) 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

Table 1.2: *Teenage conceptions: Numbers and rates, 1974 and 1984, England and Wales*

Age at conception/ Year of conception	All Conceptions	Conceptions outside marriage					Conceptions inside marriage		
		Total	*Illegitimate maternities** Sole registrations	Joint registrations	Legitimate maternities†	Abortions under the 1976 Act	Total	Maternities	Abortions under the 1976 Act
(a) *Numbers (thousands)*									
Under 16									
1974	9.4	9.3	2.7	1.0	1.1	4.5	0.0	0.0	0.0
1984	9.6	9.6	2.3	1.7	0.3	5.4	0.0	0.0	0.0
Under 20									
1974	118.2	80.1	15.7	8.4	27.5	28.5	38.1	37.0	1.1
1984	118.2	97.9	19.1	26.0	14.1	38.7	20.4	19.6	0.8
(b) *Rates per 1,000 girls*									
Under 16									
1974	8.5	8.5	2.4	0.9	1.0	4.1	0.0	0.0	0.0
1984	8.6	8.6	2.1	1.5	0.2	4.8	0.0	0.0	0.0
Under 20									
1974	69.6	47.2	9.2	4.9	16.2	16.8	22.4	21.8	0.6
1984	59.9	49.6	9.7	13.2	7.1	19.6	10.3	9.9	0.4

Notes:
Rates for the under 16 and under 20 age-groups 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.

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 1974 and 1984. For under-16s the conception rate per 1,000 female population aged 13–15 years was about the same in each year, although there were changes in the outcome of these pregnancies; for example, the proportion of conceptions terminated by abortion increased over the period (from 48% to 56%).

The overall teenage conception rate per 1,000 female population aged 15–19 years fell between 1974 and 1984, but legal terminations increased (rising from 25% to 33% of all conceptions to under-20s). The proportion of teenage pregnancies resulting in a birth within marriage virtually halved over the decade, whilst jointly registered illegitimate births rose steeply (from 7% to 22%).

(ii) 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 there were more first births to married women of this age-group during 1986 than in 1966, when total numbers of births were near a post-war peak. Increases have mainly occurred among women aged 30–34 years, who accounted for an estimated 15% of all legitimate first births in 1986 (compared with 7% in 1966).

Table 1.3: *First legitimate births to women aged 30 years and over: 1966, 1976 and 1986, England and Wales*

Age of mother	Number of births (000s)		
	1966	1976	1986 (est.)
All ages 30 and over	29.3	24.3	39.3
30–34	20.7	19.7	30.8
35–39	7.1	3.9	7.6
40–44	1.4	0.7	0.8
45 and over	0.1	0.0	0.0

(iii) 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 1976 and 1986 the average age at first legitimate birth increased from 24.9 years to 26.2 years, this pattern being evident in all the social classes.

(iv) Sex ratio of births

Male live births exceeded female live births by about 5% in 1986, which was fractionally fewer than in 1976 and 1966 (about 6% more males than females born live in these two years). The ratio of male to female live births varied little for mothers of different ages.

(d) Mortality and morbidity statistics

The overall level of mortality was slightly lower in 1986 than in the previous year — with a total of 538,628 deaths (533,150 in 1985) and a crude mortality

Table 1.4: *Mean age of women at first legitimate live birth, according to social class* of husband: 1976 and 1986, England and Wales*

Social class* of husband	Mean age of woman at first legitimate birth	
	1976	1986 (est.)
All Social Classes (including 'other')	24.9	26.2
I and II	26.9	28.1
III Non-manual	25.7	26.9
III Manual	24.1	25.5
IV and V	23.1	24.2

* Definition of Registrar General's Social Classes:

Non-manual:	I	Professional occupations
	II	Intermediate occupations (including most managerial and senior administrative occupations
	IIIN	Skilled occupations (non-manual)
Manual:	IIIM	Skilled occupations (manual)
	IV	Partly-skilled occupations
	V	Unskilled occupations
Other:		Residual groups (including for example Armed Forces, students and those whose occupations were inadequately described).

rate of 11.5 per thousand population (11.7 in 1985). The weather throughout the year is an important factor influencing oscillations in numbers of deaths per week, per month, or for the total year — and there had been a more severe period of cold in 1985 than 1986. Figures 1.1 and 1.2 show the 3 main causes of deaths in males and females at different ages. The figure shows the three commonest causes of death in each of three age-groups. Infant deaths, for which the pattern of mortality is very different, are dealt with in the following sub-section. When examining figures like these, it must be remembered that the cause list utilised has a major influence on the ranking of the individual causes. Thus the contribution of cancer, which accounts for 24% of the total deaths, is minimised. The figure has been based on aggregations of causes of death to the level recommended by the World Health Organization in their Basic Tabulation List.

By the age of 35–54 years ischaemic heart disease is the commonest cause of death in males, and remains so in older age-groups. In females aged 35–54 years of age malignant neoplasm of the breast is the commonest cause of death. Other forms of malignant disease are important causes of death at this age — alimentary tract cancer in both sexes, genitourinary cancers in females and respiratory cancer in males. Although less predominant in females than in males, respiratory cancer is still the fifth commonest cause of death in women aged 55–74 years, the trends in this cancer reflecting the different smoking patterns in the sexes.

Cardiovascular disease other than ischaemic heart disease becomes an important cause of death for both males and females above the age of 55 years as do other vascular diseases. Respiratory disease is the fifth cause in males aged 55–74 years and pneumonia in females 75 years and over (and this is predominantly certificates solely mentioning bronchopneumonia and no other condition present).

Figure 1.1: *Three main causes of death at different ages (as percentage of all causes of death) males, England, 1986*

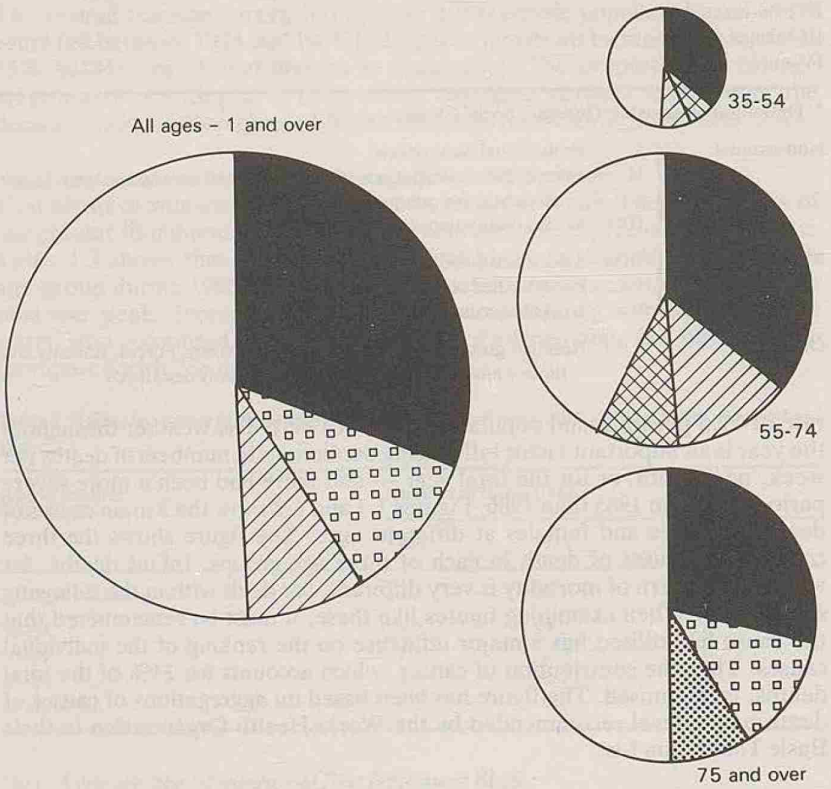
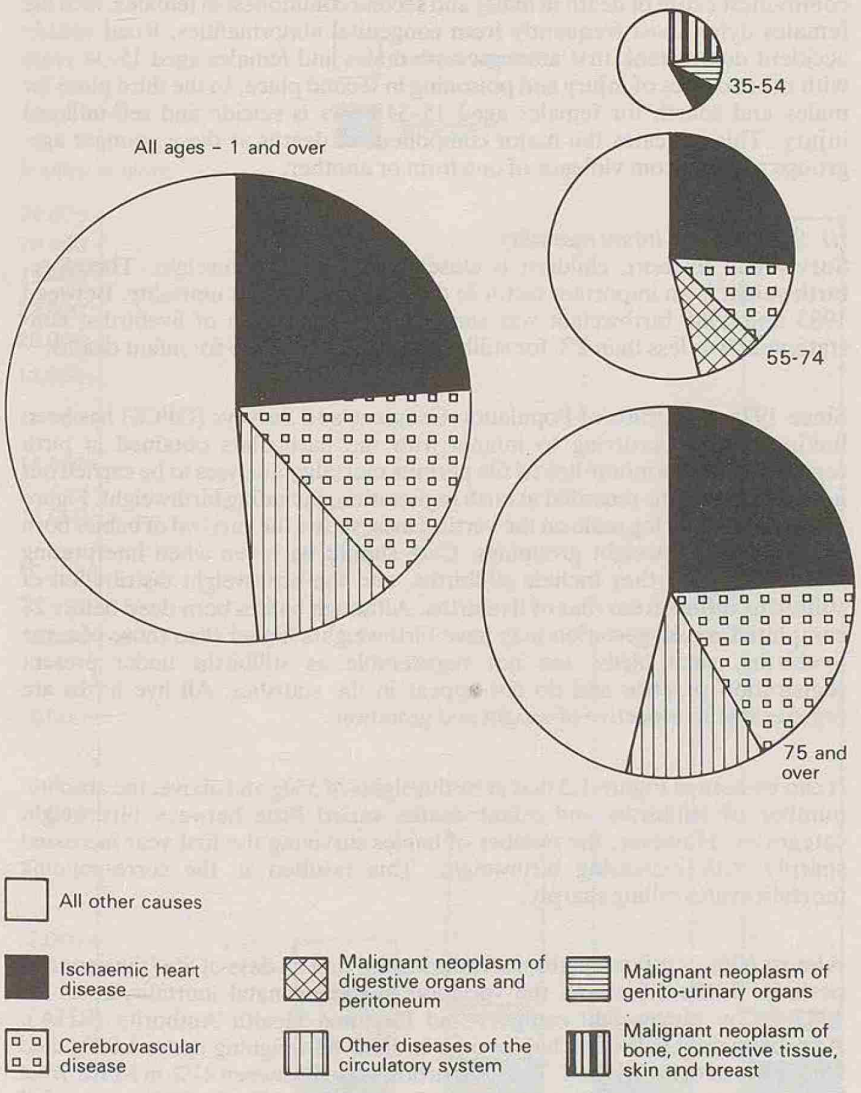


Figure 1.2: *Three main causes of death at different ages (as percentage of all causes of death) females, England, 1986*



An important point about the Figures is that the individual circles have their size adjusted to the numbers of deaths in the age-group, so that the Figures show both the proportion of deaths at any age from a particular cause, and the relative toll from mortality in the different age-groups.

Considering the age-group 1–14 years, road vehicles accidents are the commonest cause of death in males and second commonest in females, with the females dying most frequently from congenital abnormalities. Road vehicle accident deaths rank first amongst both males and females aged 15–34 years with other causes of injury and poisoning in second place. In the third place for males and fourth for females aged 15–34 years is suicide and self-inflicted injury. This indicates the major component of deaths at these younger age-groups coming from violence of one form or another.

(i) Stillbirth and infant mortality

Survival in liveborn children is closely related to birthweight. Therefore, birthweight is an important factor in the analysis of infant mortality. Between 1983 and 1985 birthweight was stated for almost 100% of livebirths; non-statement was less than 2% for stillbirths and less than 4% for infant deaths.

Since 1975 the Office of Population Censuses and Surveys (OPCS) has been linking deaths occurring to infants with the particulars obtained at birth registration. This infant-linked file permits mortality analyses to be carried out in relation to items recorded at birth registration, including birthweight. Figure 1.3, which uses a log scale on the vertical axis, shows the survival of babies born in 1984 by birthweight groupings. Care should be taken when interpreting these data since they include stillbirths, and the birthweight distribution of stillbirths differs from that of livebirths. Although babies born dead before 28 completed weeks gestation may have birthweights higher than those of some livebirths, such births are not registerable as stillbirths under present registration practice and do not appear in the statistics. All live births are registerable irrespective of weight and gestation.

It can be seen in Figure 1.3 that at birthweights of 550g and above, the absolute number of stillbirths and infant deaths varied little between birthweight categories. However, the number of babies surviving the first year increased sharply with increasing birthweight. This resulted in the corresponding mortality rates falling sharply.

Almost 60% of infant deaths occur during the first 28 days of life (the neonatal period). Table 1.5 shows the variation in the neonatal mortality rates for 1983–85 by birthweight category and Regional Health Authority (RHA). Approximately half of all babies born in 1983–85 weighing under 1,000g died within the neonatal period. This proportion varied between 41% in North West Thames RHA and 65% in West Midlands RHA. The mortality rates fell sharply with increasing birthweight up to 3,000g. At higher weights there was little variation in rates. High mortality rates were experienced in the 'birthweight not stated' category. Some babies dying soon after birth are never weighed; it is possible that this group may have included an excess of low birthweight babies and thus have been a biased sample.

Figure 1.3: *Infant mortality as experienced by the 1984 England births cohort*

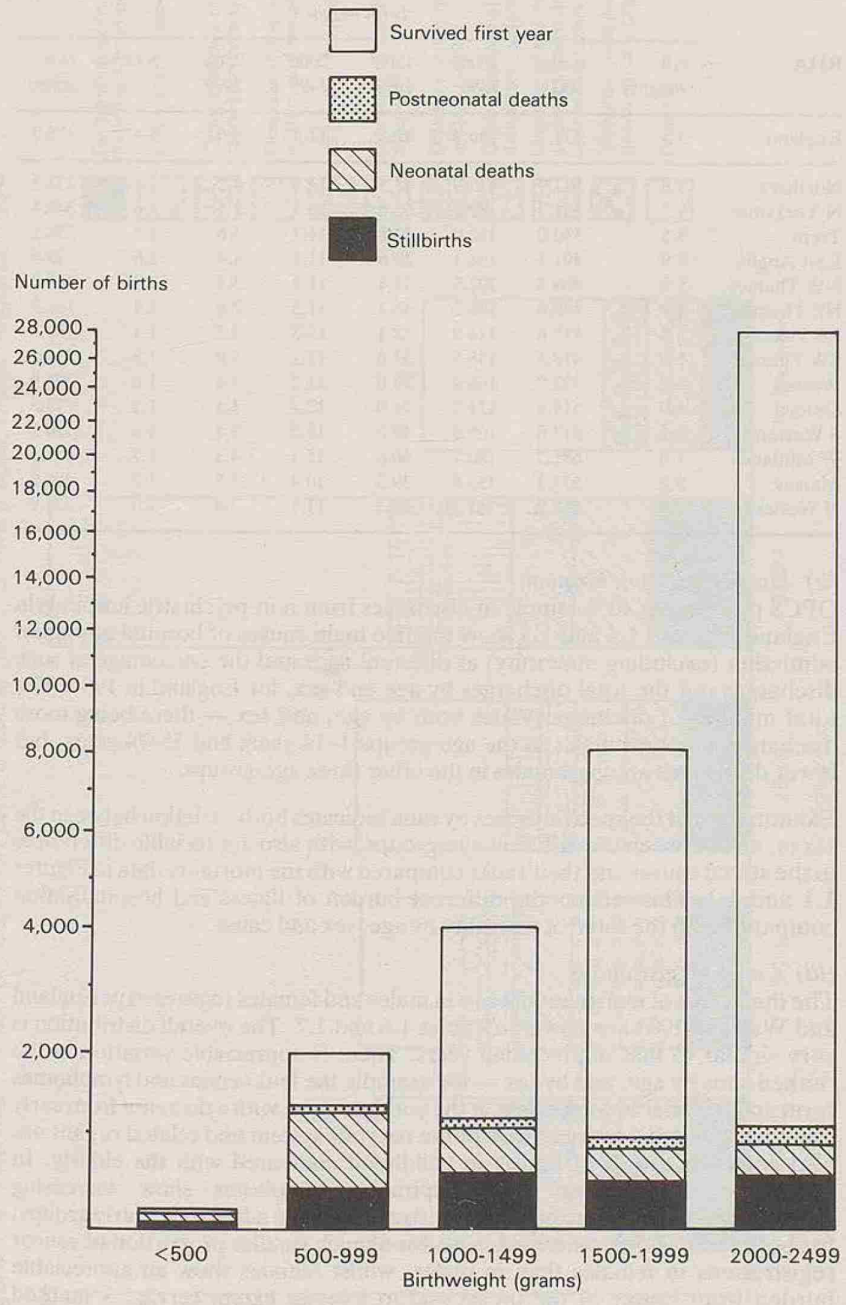


Table 1.5: *Neonatal mortality by birth weighting and RHA of residence 1983–85: Rates per 1,000 live births: England*

RHA	Birth weight							
	All weights	under 1000	1000–1499	1500–1999	2000–2499	2500–2999	3000+	Not stated
England	5.5	537.7	146.4	42.2	12.4	3.6	1.4	178.7
Northern	5.8	591.9	155.9	47.5	13.1	4.2	1.5	233.3
N Yorkshire	6.3	594.7	162.2	52.6	13.7	3.5	1.6	344.4
Trent	5.5	540.0	152.0	42.8	11.7	3.6	1.3	258.1
East Anglia	4.9	491.1	164.1	29.6	11.4	4.4	1.6	73.5
NW Thames	5.0	409.3	102.5	41.4	11.7	3.5	1.5	162.8
NE Thames	4.9	440.6	108.2	46.1	11.3	2.9	1.4	186.9
SE Thames	5.3	515.6	124.9	32.1	13.3	3.5	1.4	150.8
SW Thames	5.0	478.3	156.5	32.6	12.1	3.0	1.5	215.5
Wessex	5.2	572.7	168.9	39.0	11.2	3.4	1.6	306.9
Oxford	4.9	514.4	131.2	44.0	12.4	3.5	1.2	73.5
S Western	5.1	517.8	165.0	49.5	12.5	3.4	1.4	130.2
W Midlands	7.0	651.7	180.7	46.6	15.1	4.3	1.7	151.6
Mersey	5.2	551.1	153.8	39.5	10.4	3.5	1.2	298.9
N Western	5.6	562.2	141.2	37.3	11.1	3.8	1.3	232.9

(ii) Discharges from hospital

OPCS processes a 10% sample of discharges from non-psychiatric hospitals in England. Figures 1.4 and 1.5 show the five main causes of hospital in-patient admission (excluding maternity) at different ages and the percentage of such discharges out the total discharges by age and sex, for England in 1984. The total number of discharges varies both by age, and sex — there being more discharges amongst males in the age-groups 1–14 years and 55–74 years, but fewer discharges amongst males in the other three age-groups.

Examination of the specific causes by rank indicates both variation between the sexes, and between the different age-groups, with also appreciable differences in the stated causes and their ranks compared with the mortality data in Figures 1.1 and 1.2. This reflects the different burden of illness and hospitalisation compared with the force of mortality by age, sex and cause.

(iii) Cancer registrations

The main sites of malignant disease in males and females registered in England and Wales in 1983 are shown in Tables 1.6 and 1.7. The overall distribution is very similar to that in preceding years. There is appreciable variation in the ranked sites by age, and by sex — for example the leukaemias and lymphomas form an appreciable component at the younger ages, with a decrease from early adult life onwards; malignancies of the nervous system and related organs are also common causes of cancer in childhood compared with the elderly. In contrast the alimentary and respiratory neoplasms show increasing registrations as a proportion of all registrations in the adult and elderly groups, for both sexes. Lung cancer accounts for a much smaller proportion of cancer registrations in females than in males, whilst females show an appreciable burden from cancer of the breast and to a lesser extent cervix. A marked feature of the cervix cancer data is the relatively high proportion of neoplasms accounted for by this site in those aged 24–44 years.

Figure 1.4: *Five main causes of hospital in-patient discharges at different ages, males, England, 1984*

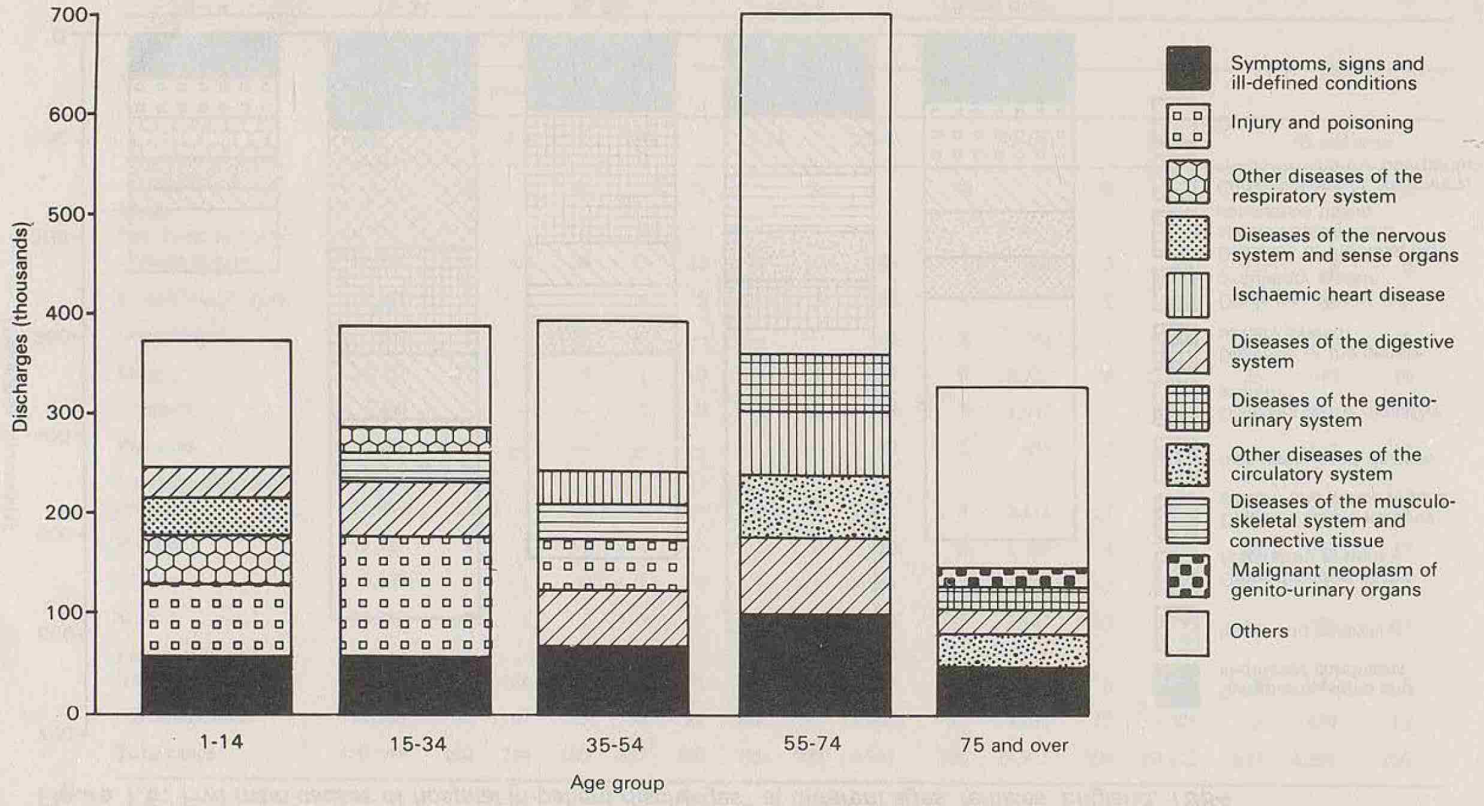


Figure 1.5: *Five main causes of hospital in-patient discharges* at different ages, females, England, 1984*

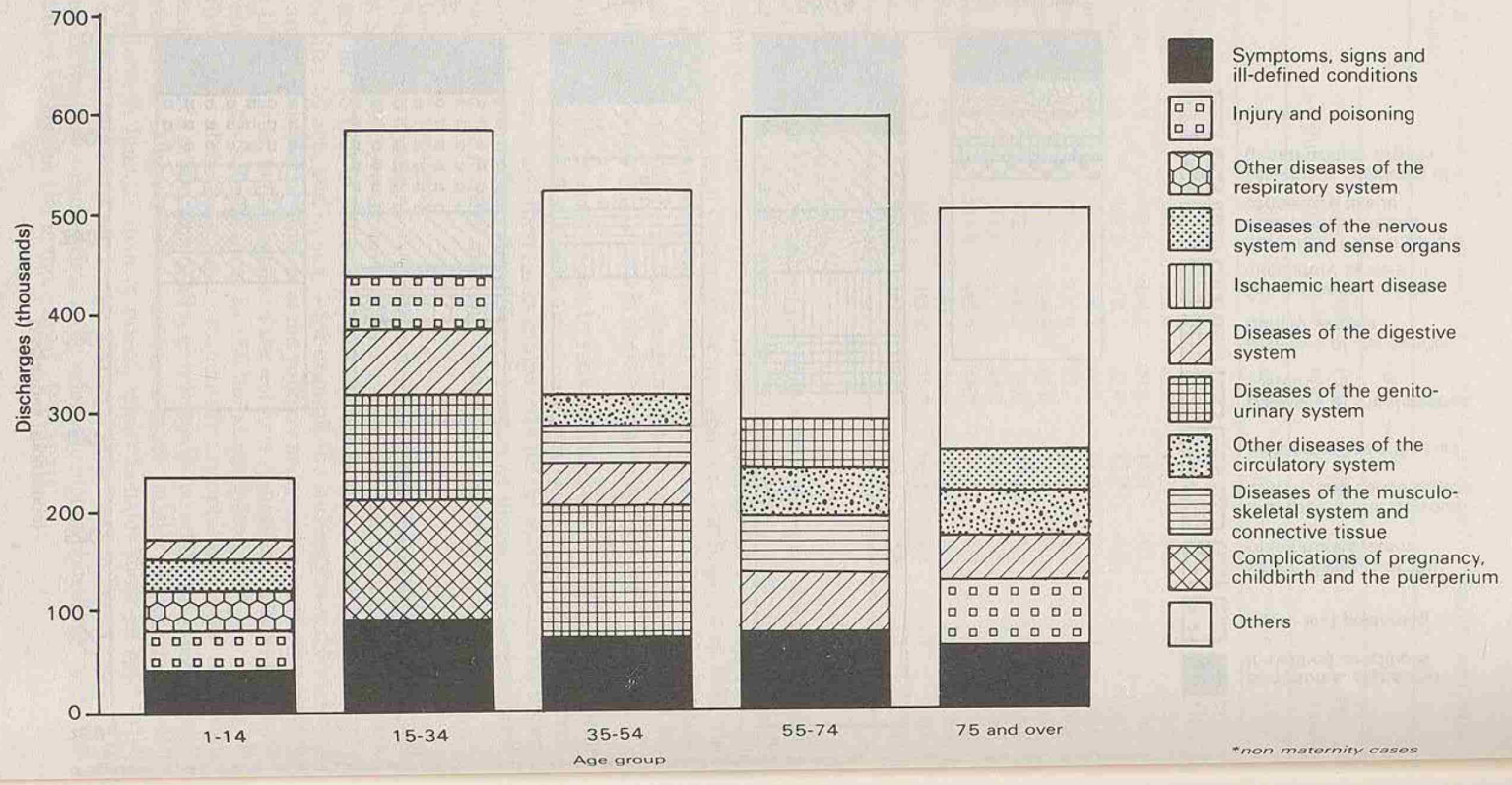


Table 1.6: *Cancer Registrations (1983) by sex, age, and site: England and Wales*

	All ages	Numbers and percentages														
		Age-group														
		0–4		5–14		15–24		25–44		45–64		65–84		85 and over		
			%		%		%		%		%		%		%	
Males																
Eye, brain and other nervous system	1,795	2	61	23	73	22	75	10	286	7	802	3	490	1	8	0
Mouth and pharynx	1,827	2	3	1	6	2	21	3	124	3	722	2	865	1	86	2
Oesophagus	2,294	2	—	—	—	—	—	—	63	2	743	2	1,378	2	110	2
Lung	26,757	27	1	0	1	0	4	1	388	9	8,522	28	17,051	28	840	18
Stomach	7,060	7	—	—	1	0	1	0	128	3	1,947	7	4,640	8	343	7
Pancreas	2,881	3	—	—	—	—	—	—	80	2	855	3	1,809	3	137	3
Large intestine and rectum	11,659	12	1	0	—	—	16	2	321	8	3,411	11	7,270	12	640	14
Prostate	9,127	9	2	1	—	—	2	0	10	0	1,189	4	7,127	12	797	17
Bladder	6,683	7	1	0	1	0	9	1	149	4	1,955	7	4,254	7	314	7
Skin	12,089	12	2	1	9	3	49	6	691	17	3,947	13	6,795	11	596	13
Leukaemias and lymphomas	6,168	6	126	48	173	51	296	39	704	18	1,791	6	2,837	5	241	5
All other cancer	12,305	12	67	25	73	22	282	37	1,067	27	4,031	13	6,306	10	479	10
Total cancer	100,645	100	264	100	337	100	755	100	3,961	100	29,915	100	60,822	100	4,591	100

Table 1.7: *Cancer Registrations (1983) by sex, age, and site: England and Wales*

	Numbers and percentages														
	All ages	Age-group													
		0–4		5–14		15–24		25–44		45–64		65–84		85 and over	
		%		%		%		%		%		%		%	
Females															
Eye, brain and other nervous system	1,416	1	47	22	62	24	62	10	206	3	568	2	449	1	22	0
Mouth and pharynx	1,098	1	—	—	—	—	9	2	61	1	338	1	603	1	87	1
Oesophagus	1,812	2	—	—	—	—	—	—	20	0	394	1	1,144	2	254	3
Breast	21,297	22	1	0	—	—	24	4	2,538	35	8,560	28	8,837	17	1,337	16
Lung	9,565	10	1	0	—	—	4	1	194	3	3,176	11	5,711	11	479	6
Stomach	4,493	5	—	—	—	—	3	1	66	1	714	2	3,034	6	676	8
Pancreas	2,752	3	—	—	—	—	2	0	43	1	568	2	1,807	4	332	4
Large intestine and rectum	12,453	13	3	1	—	—	12	2	303	4	2,920	10	7,623	15	1,592	19
Ovary	4,521	5	1	0	7	3	56	9	365	5	1,946	6	1,957	4	189	2
Cervix	3,875	4	—	—	—	—	38	6	1,293	18	1,405	5	1,041	2	98	1
Other uterus	3,874	4	1	0	—	—	5	1	136	2	1,742	6	1,792	4	198	2
Bladder	2,564	3	—	—	—	—	4	1	53	1	599	2	1,632	3	276	3
Skin	11,895	12	3	1	4	2	64	11	849	12	3,106	10	6,662	13	1,207	15
Leukaemias and lymphomas	5,283	5	95	45	114	44	208	35	469	7	1,267	4	2,666	5	464	6
All other cancer	10,706	11	61	29	72	28	106	18	580	8	2,757	9	6,025	12	1,105	13
Total cancer	97,604	100	213	100	259	100	597	100	7,176	100	30,060	100	50,983	100	8,316	100

(iv) Congenital malformations

The OPCS congenital malformation notification scheme only records those cases diagnosed within the first week of life. Therefore, malformations such as some heart defects, kidney conditions and sight and hearing defects, which are often not diagnosed until later in life, may not be included.

Table 1.8 shows for 1975, 1980 and 1985 the number of live and stillbirths with notified malformations to women resident in England, together with associated rates. The notification rate for live births remained steady over the period 1975 to 1985 but for stillbirths fell dramatically. However, these total rates conceal variations between individual conditions. The selected conditions given in the Table are those which have the largest number of notifications.

Over the period there was a sharp decline in notification rates for central nervous system defects. This group of malformations should be reasonably

Table 1.8: *Congenital malformation — Selected malformations, England 1975, 1980, 1985*

	Stillbirth*			Livebirth**		
Malformation	1975	1980	1985	1975	1980	1985
Any malformation						
Number	1,139	619	322	10,551	12,704	12,215
Rate	19.8	9.9	5.2	185.5	205.4	197.2
Central nervous system						
Number	929	497	114	1,159	880	571
Rate	16.2	8.0	1.8	20.4	14.2	9.2
Ear and Eye						
Number	13	22	17	340	432	673
Rate	0.2	0.4	0.3	6.0	7.0	10.9
Cleft Lip/Cleft Palate						
Number	44	49	19	767	815	758
Rate	0.8	0.8	0.3	13.5	13.2	12.2
Cardiovascular						
Number	21	16	12	574	802	775
Rate	0.4	0.3	0.2	10.1	12.9	12.5
Hypospadias/Epispadias						
Number	2	1	3	844	930	1,001
Rate	0.0	0.0	0.0	14.8	15.0	16.2
Polydactyly/Syndactyly						
Number	22	21	18	856	986	1,097
Rate	0.4	0.3	0.3	15.0	15.9	17.7
Talipes						
Number	84	43	19	2,061	2,318	1,873
Rate	1.5	0.7	0.3	36.2	37.5	30.2
Chromosomal						
Number	19	16	15	475	522	520
Rate	0.3	0.3	0.2	8.3	8.4	8.4

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

easily diagnosed at birth and therefore reported reliably. Thus the decline in notification rates probably reflects a true decrease in the incidence of these malformations. Screening and subsequent elective abortion has not been the major cause of the decline in central nervous system defect (*this Report* for 1985, p 20). The trends for some other malformations are very different to these for CNS defects.

Trends in asthma

Asthma mortality remained relatively stable from the start of the twentieth century until the beginning of the 1960s when a sharp increase was noted in several countries. Younger age-groups were particularly affected, and in the United Kingdom mortality from asthma in persons aged 5 to 34 years trebled between 1959 and 1966. Greenberg[1] suggested there was a hazard from excess use of aerosol bronchodilators for treatment of asthma, and in 1967 the Committee on Safety of Drugs issued a warning on their use to all doctors in England and Wales. Inman and Adelstein[2] demonstrated that following this both aerosol sales and deaths from asthma declined. However over-use of bronchodilators was never proven as the cause of the increased mortality, and it is now believed that excessive aerosol usage may simply reflect failure of this therapy to resolve severe attacks in some cases. Other causes have been proposed, such as inadequate therapy with systemic steroids early in the course of exacerbations of asthma.

Recently there have been reports of pronounced increases in asthma mortality in New Zealand[3] and to a lesser extent the USA[4]. Although a large increase in sales of several different drugs used in asthma treatment occurred during 1975–1981 in New Zealand, there is little evidence that the mortality trends are a direct reflection of drug toxicity[5]. Mortality trends in England and Wales have been examined by several investigators[6,7]. Khot and Burn[6] studied the mortality of children and young adults aged 5–34 years in England and Wales during 1960–82. They concluded that superimposed on seasonal variation, there had been a minimal upward drift in asthma mortality in the most recent years.

Burney[7] performed a more sophisticated analysis of asthma deaths up to the age of 64 years. This took account of a major change in coding rules relating to asthma introduced in the 9th International Classification of Diseases (ICD) in 1979, which resulted in an artefactual 28% increase in deaths attributed to asthma[8]. Burney reported a statistically significant annual mortality increase of nearly 5% a year in the age-group 5–34 years between 1974 and 1984. However interpretation of short-term trends is difficult as they reflect a wide range of inter-related factors such as changes in disease incidence, use of diagnostic aids, diagnostic fashion, disease natural history and effectiveness of treatment, as well as changes in death certification practice of doctors.

Figures 1.6 and 1.7 show selected age-specific trends for asthma mortality between 1951 and 1985. At younger ages numbers of deaths are small resulting in marked oscillations. Examination of long-term trends is complicated, particularly at older ages, by changes which have occurred in the ICD revisions. Nevertheless the figures do not suggest a recent major increase in deaths similar to that which occurred in the early 1960s. Data have also been examined according to year of birth, but this gives no clear indication of the occurrence of a cohort phenomenon.

Figure 1.6: *Deaths from asthma: year of death, males, England and Wales 1951-1985. Rate per million population.*

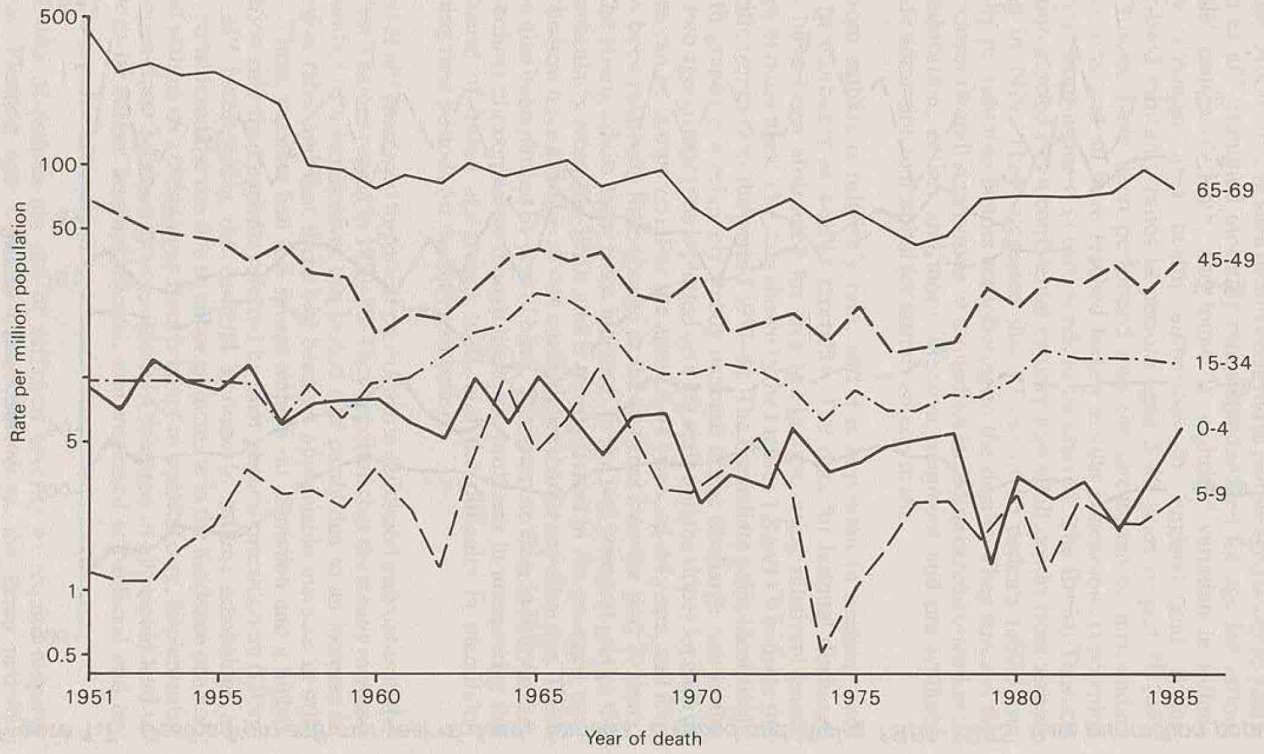
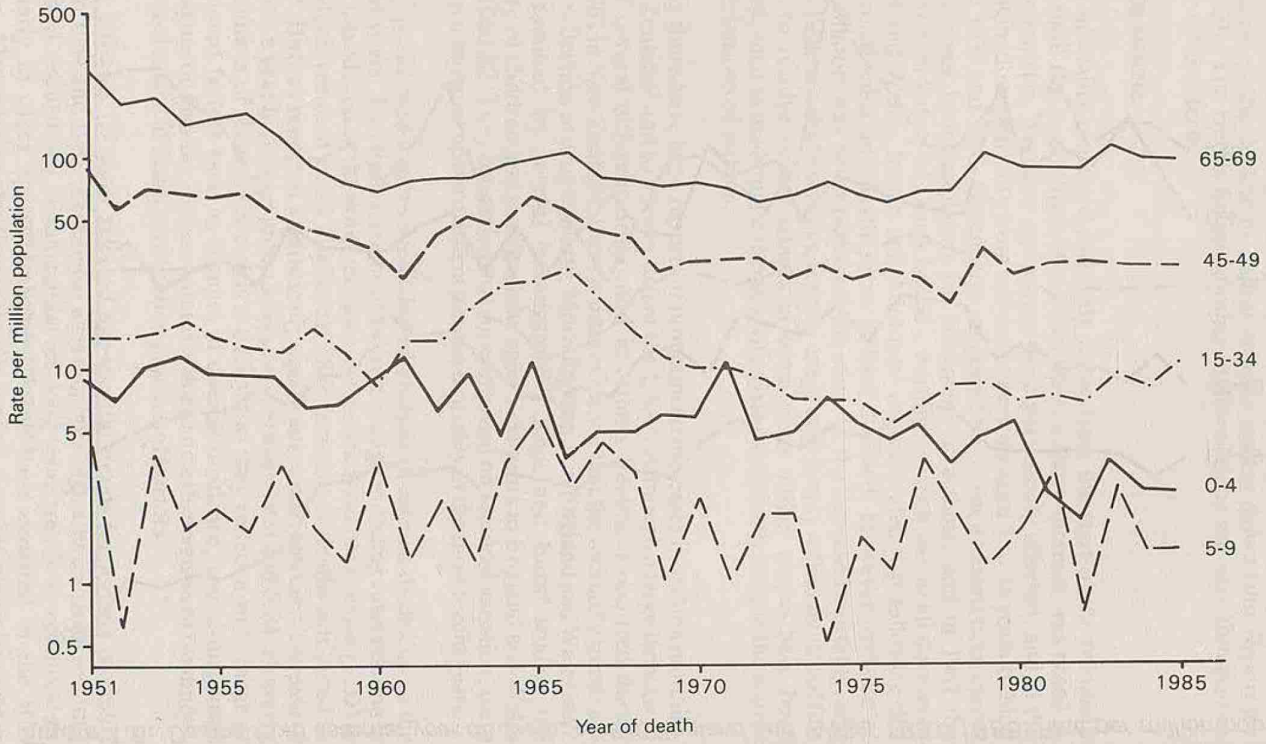


Figure 1.7: *Deaths from asthma: year of death, females, England and Wales 1951-1985. Rate per million population.*



There is a widespread belief that most deaths from asthma should be preventable[9]. However in England and Wales in 1985, 1,972 people died from the disease. About 50% of such deaths occurred in people aged under 65 years. Charlton et al[10] examined mortality ratios standardised for age for various 'avoidable' causes of death, and found an eightfold variation in asthma mortality amongst area health authorities in England and Wales. (Standardised mortality ratios in persons aged 5–49 years ranged 31–249). Several studies have been performed into the circumstances surrounding asthma deaths and all have reached largely similar conclusions concerning areas where improvement in care needs to be offered. The British Thoracic Association carried out a confidental enquiry into adult deaths from asthma occurring in 1979. They suggested that 77 out of 90 patients (86%) had potentially preventable factors contributing to the deaths. They stressed the need for closer overall supervision of asthmatics including careful attention to patient education, earlier and more intensive treatment and pre-arranged immediate admission to hospital for asthma emergencies.

Death from asthma is relatively rare, and it is important to examine data relating to morbidity as well as mortality. The data for hospital discharge statistics have been abstracted for five age-groups, using relatively broad categories at older ages. The data shown in the Figures 1.8 and 1.9 indicate the age-specific trends over the period 1957–84. The immediate point identifiable from both graphs is a relatively steady increase in the discharge rate in the younger two age-groups (this is plotted on a log scale and the slopes for each of the curves can be compared). For the ages 15–44 years, 45–64 years, and 65+ there has been relatively little change in the statistics over the past 20 years, though the young adults show some increase. In the two youngest groups the rise is particularly from the 1970s and is more marked in the youngest age-group, who now have a discharge rate much higher than at any other age. These data have also been plotted by year of birth. There was no clear indication that this is a cohort phenomenon, though there are problems in interpreting the data because of broad age-groups used, and the difficulty in identifying overlapping time periods for the different cohorts.

Anderson et al[12] examined in-patient care of acute childhood asthmatics in the South West Thames region in 1970–78. They reported that the steady increase in the number of admissions in this period was partly due to an increase in re-admission rate, and that there had been an appreciable increase in self-referrals. These patients had less severe asthma on admission and a higher re-admission rate than patients referred by their general practitioners (GPs). Khot et al[13] investigating the national increase in asthma admissions in children, considered the rise due to either an increase in the incidence of acute childhood asthma or a swing away from primary to hospital care. Implementation of 'open-door' schemes as proposed by Crompton et al[14] would lead to this pattern of earlier hospital referral, and increased self-referral and re-admission.

Many attacks of asthma are not of sufficient severity to require hospital admission. Fleming and Crombie[15] used data from the three national morbidity surveys performed in England and Wales in 1955–6, 1970–1 and 1981–2 to study asthma trends in general practice. The annual period prevalence of asthma reported in the first study was lower than that in either of the two subsequent studies. Detailed data were available from the later studies

Figure 1.8: *Hospital deaths and discharges from asthma: year of discharge, males 1957-81 England and Wales, 1982-1984 England*

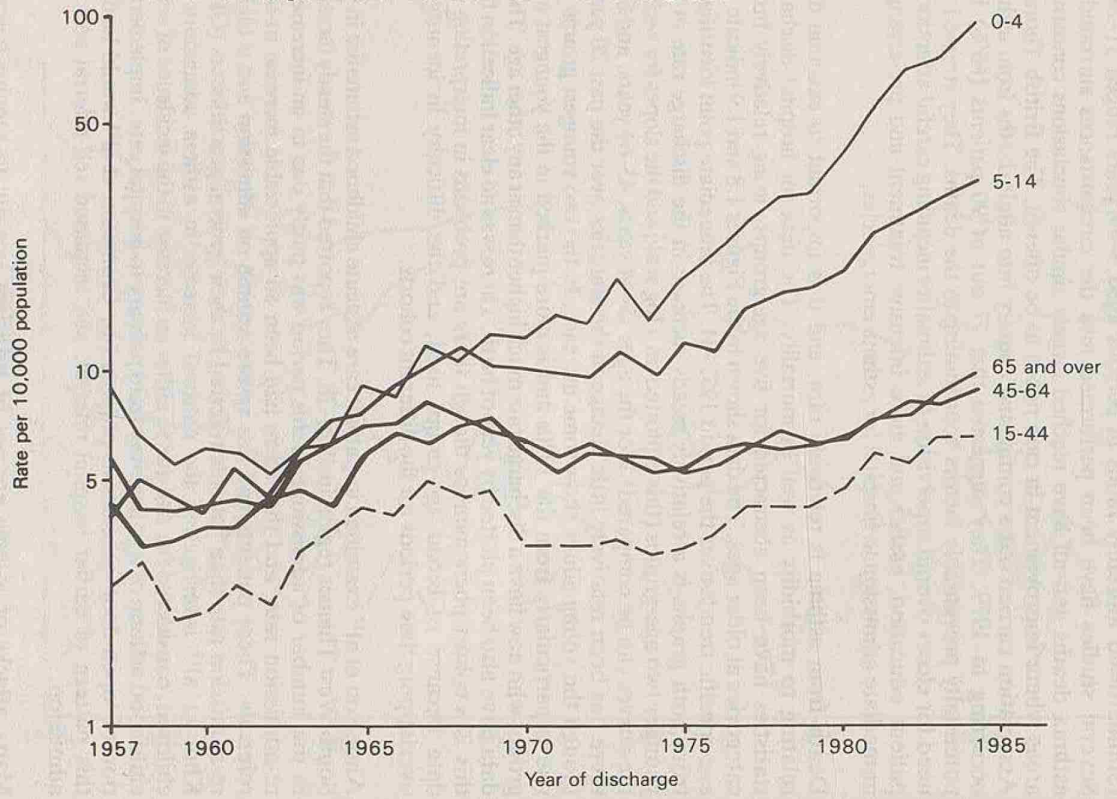
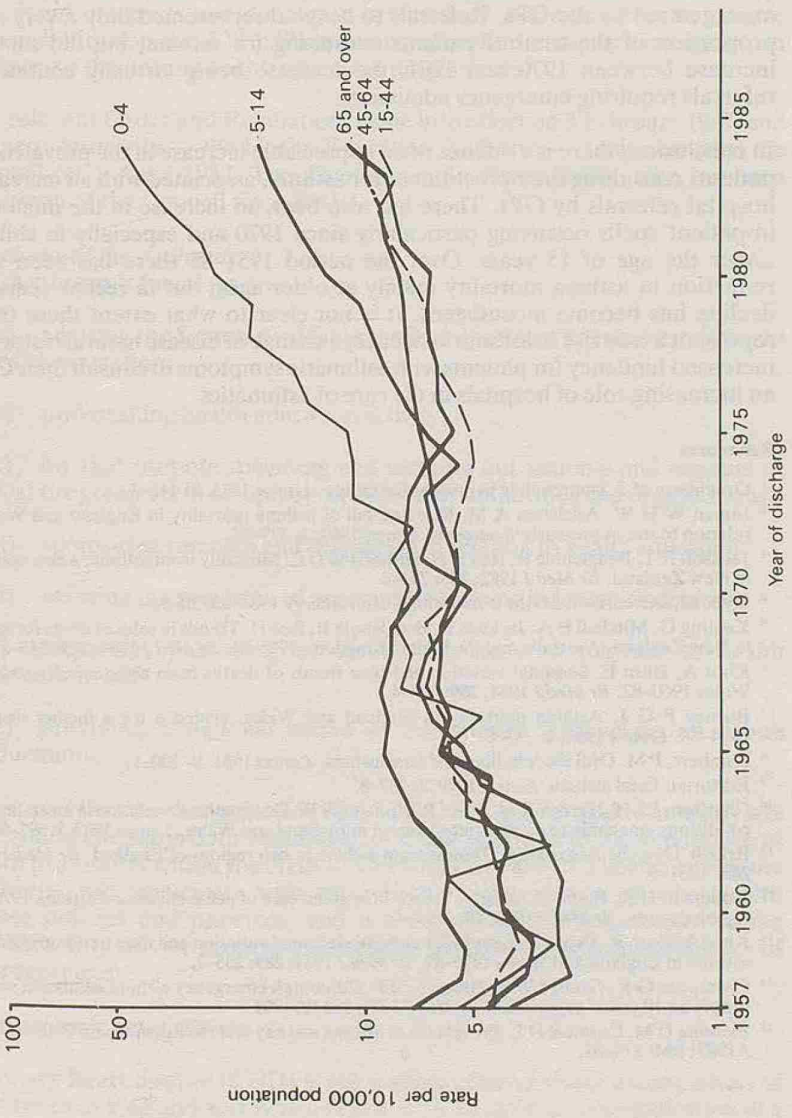


Figure 1.9: *Hospital deaths and discharges from asthma: year of discharge, females, 1957-81 England and Wales, 1982-1984 England*



by age and sex and demonstrated a rise in prevalence of asthma (approximately two-fold in boys) between 1970 and 1981 with some increase seen in all age-groups and in both sexes. Examination of further statistics on consultation patterns revealed that although there was an appreciable rise in the rate of patients consulting with asthma, the number of episodes and consultations for asthma per person consulting decreased between the two surveys in both men and women. This may indicate increased diagnosis of milder cases or improved management by the GPs. Referrals to hospital represented only a very small proportion of the total of patients consulting for asthma, but did show an increase between 1970 and 1981, the increase being virtually confined to referrals requiring emergency admission.

In conclusion, there is evidence of an appreciable increase in the prevalence of patients consulting their practitioner for asthma, associated with an increase in hospital referrals by GPs. There has also been an increase in the number of in-patient spells occurring particularly since 1970 and especially in children under the age of 15 years. Over the period 1951–85 there has been some reduction in asthma mortality mainly at older ages, but in recent years this decline has become inconsistent. It is not clear to what extent these trends represent a true rise in asthma incidence, a change in disease natural history, an increased tendency for patients with asthmatic symptoms to consult their GP or an increasing role of hospitals in the care of asthmatics.

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2. PREVENTION

(a) Health Education Authority

Background
On 21 November 1986, the Secretary of State announced that he had decided to reconstitute the Health Education Council (HEC) as a special health authority. The main purpose was to create a statutory body suitable to assume responsibility for the £20 million public education campaign on AIDS, in addition to the normal health education programmes.

The relevant Order and Regulations came into effect on 3 February 1987, and the new Authority — the Health Education Authority — took over from the Council on 1 April 1987. The Chairman is Sir Brian Bailey, who has been Chairman of the Council since 1983.

Functions of the Authority
The Authority's functions are:

(a) advising the Secretary of State for Social Services on matters relating to health education;

(b) undertaking health education activity;

(c) for that purpose, planning and carrying out national and regional or local programmes in co-operation with other authorities and organisations;

(d) sponsoring research and evaluation in relation to health education;

(e) assisting the provision of appropriate training in health education;

(f) preparing, publishing or distributing material relevant to health education; and

(g) providing a national centre of information and advice on health education.

It is hoped that the reconstitution of the HEC as a special health authority will give added emphasis both within the NHS and generally to the importance of health promotion within the NHS. As an integral part of the health service the Authority will participate with other health authorities in planning health service policies and priorities, and it is hoped that its involvement in the accountability service process will improve the effectiveness and efficiency of its programmes.

(b) Coronary heart disease

Coronary heart disease (CHD) is the leading cause of death among adults of both sexes in England and Wales (Table 2.1). In spite of some indication of a downward turn in the trend of mortality the countries of the UK are poorly situated in the ranking order in terms of deaths from this cause.

Steadily accumulating evidence from many countries, summarised in a series of WHO publications, the most recent in 1986[1], makes it clear that reduction in

the level of risk factors known to affect the level of mortality from CHD can reduce the incidence of the disease. In England success will require changes on the part of many people in behaviour and personal lifestyle with regard to such matters as smoking, diet and exercise.

Table 2.1: *Principal causes of death, England and Wales, 1985*

	Number		Percentage	
	Males	Females	Males	Females
Coronary heart disease	91,626	71,478	31.34	23.95
Cancer	74,324	67,294	25.42	22.55
Respiratory disease	34,065	30,542	11.65	10.24
Cerebrovascular disease	27,590	45,629	9.44	15.29
All other causes	64,722	83,464	22.14	27.97
Total deaths	292,327	298,407	100.00	100.00

Source: Office of Population Censuses and Surveys.

In 1984 *this Report* devoted a section to Diet and Cardiovascular Disease (p. 63) and reviewed the report of the COMA panel, published that year[2], which recommended changes in the national diet in the direction of reduced total fat intake and a reduced proportion of saturated fats. In 1985 an important publication[3] reported interim results from the Regional Heart Study. This survey looked at risk factors for major CHD (acute myocardial infarction or sudden death) in a study of 7,735 men aged 40 to 55 years drawn from general practices in 24 British towns. The report showed that after a mean follow-up of 4.2 years there had been 202 cases of major CHD. Serum total cholesterol, systolic and diastolic blood pressure, cigarette smoking and body mass index were all associated with an increased risk of CHD.

An important outcome of the Regional Heart Study has been the development of a method of estimating a 'risk score' which can be used in the conditions of general practice in order to identify men at high risk. In November 1986 the Department sponsored a conference at the Royal College of General Practitioners chaired by the Chairman of Council at which this work was presented together with other studies concerned with the prevention of CHD in general practice. This was to be followed up in the Spring of 1987 with a major one-day multidisciplinary scientific conference on progress in the prevention of CHD held at the Royal College of Physicians in London.

For some years the Government had been concerned about the high incidence of coronary disease in the UK in relation to that in some other countries. The prevalence of CHD is highest amongst the lower socio-economic groups and these have proved the hardest to reach effectively with health education messages. The Welsh Heart Programme is a major national demonstration project to promote good health in the Welsh population. It is particularly concerned with reducing the risks of cardiovascular disease throughout the whole population of the Principality by encouraging non-smoking, healthy nutrition, regular exercise, control of hypertension and first-aid for heart attacks. The programme, which is jointly funded by the Health Education Authority (HEA) and the Welsh Office, was publicly launched on 1 March 1985 for a five-year period under the title *'Heartbeat Wales'* and has already attracted considerable lay, professional, political and media interest, both at home and abroad.

In 1985 Ministers approved proposals for an extension of the CHD prevention programme in England involving:

(a) increased emphasis on the harmful effects of smoking with particular emphasis on young people;

(b) action on diet;

(c) a review of preventive health arrangements by Regional Health Authorities; and

(d) increased support for relevant voluntary bodies.

In particular an initiative was planned making extensive use of the media and with an explicitly popular image. The campaign was launched in April 1987 under the title *'Look after your Heart!'*. It is being funded and undertaken jointly by DHSS and the HEA. It will concentrate on direct communication with the public both nationally and locally, supported by parallel efforts directed at the medical profession and the NHS. It will also exploit the knowledge gained from the Welsh heart programme *'Heartbeat Wales'*. The immediate aim of the project is to increase public awareness and support for healthy lifestyles as a goal for all with particular emphasis on bringing about a decline in smoking, the adoption of healthier eating habits and of increased levels of exercise participation.

What is being sought over the longer term is a downward trend in the worryingly high incidence of CHD in England. Such an outcome will require a concerted national effort from many other statutory and voluntary bodies and the media in addition to Government, the NHS and the HEA. Improvement in other conditions related to the above risk factors, eg smoking related diseases and stroke, is also seen as an aim.

By contrast with North America, professional opinion in Britain has adopted a generally cautious approach to the possibility of preventing CHD by the population as a whole adopting lifestyle changes. However, following the Canterbury Conference of 1983, (*this Report* for 1983, p. 123), a National Co-ordinating Committee was set up under the auspices of the Royal College of Physicians to bring together the many professional and voluntary bodies with a contribution to make to the prevention of CHD. The unequivocal support of this Committee for a range of measures, including an expanded programme of health education, has been a significant factor in helping to generate a climate of opinion favourable to more positive action. Whether coincidentally or not, the year saw the publication in the national press of numerous articles on the subject of CHD, and several programmes devoted to 'healthy living' themes. The specific question of prevention of heart disease appeared on television (eg *'Don't Break your Heart'*). The public's response to this media activity appears to be favourable and positive although it will, of course, be a number of years before the outcome can be evaluated.

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(c) Smoking and health

Smoking prevalence
Prevalence of cigarette smoking in Great Britain fell from 46% in 1972 to 34% in 1984. Among men prevalence fell from 52% in 1972 to 36% in 1984, a decline of almost one-third. Among women the proportion who smoked cigarettes fell from 41% to 32% over the same period, a fall of about one-fifth. During this period, therefore, not only was there a substantial decline in the prevalence of smoking in both sexes but the gap between the sexes narrowed. Although the peak in the annual numbers of deaths from lung cancer occurring among men in England and Wales has passed, the toll among women continues to rise and now approaches about 10,000 deaths per year. This feature reflects the later spread of cigarette smoking among women.

Smoking among children
In terms of achieving an improvement in personal health it is never too late to stop smoking. Nevertheless, the most effective public health measures are those which prevent young people taking up the habit in the first place. As indicated above efforts to discourage the habit, some sponsored or supported by the Government, have achieved a measure of success in reducing the prevalence of smoking among adults. But the take-up of smoking among young people is still worryingly high. A 1986 OPCS survey, as yet unpublished, found that 10% of first to fifth formers were 'regular smokers'. This is an improvement on the 1984 position when the comparable figure was 13%[1]. The latest survey showed a prevalence rate for smoking in first to fifth form boys of 7% but among girls in the same group the rate remained virtually unchanged at 12%.

On past evidence many teenage smokers will persist in the habit as adults and thus run the risk of developing serious, possibly fatal, smoking-related diseases in adult life. Among women the position looks particularly serious.

Teenage anti-smoking campaign
In December 1985 the Department launched a £1 million pilot media campaign aimed at discouraging teenagers from smoking. The campaign which was carefully designed to appeal to the adolescent age-group, was carried out in two TV regions, using television and the cinema. An evaluation report is being prepared and the advisability of a national campaign will be considered in the light of the findings.

Protection of Children (Tobacco) Act 1986
This Act began as the Tobacco Products (Sales Restriction) Bill, a Private Member's Bill introduced by Mr John Home Robertson, MP. The proposals were widely welcomed, and the Government gave the measure its full support. The Act makes it illegal to sell any tobacco product to children aged under 16 years irrespective of the person for whose use the product is intended. By defining tobacco to include tobacco products intended for oral or nasal use, the Act brings Skoal Bandits and similar products within its scope. With all tobacco products on the same footing as cigarettes the law is simplified, clarified and made easier to enforce. There will no longer be room for doubt as to whether a vendor is acting illegally in knowingly selling a tobacco product to someone

under the age of 16 years. All concerned with enforcing these provisions, the aim of which is to protect children, are likely to welcome the clarification.

Voluntary agreements with the tobacco industry

The Government's policy for the limitation and control of advertising and sales promotion of cigarettes continues to rely on voluntary agreements freely negotiated and entered into by the tobacco industry. A new voluntary agreement to govern the advertising and promotion of tobacco products, and health warnings, came into effect on 1 April 1986 and will run until 31 October 1989. Its main provisions are:

(a) Advertising of cigarettes in cinemas to cease;

(b) In place of the present health warning for cigarettes and hand-rolling tobacco there will be 6 new messages that will be given roughly equal exposure on packs, posters and press advertisements. The wording of new warnings are:

— Smoking Can Cause Fatal Diseases
— Smoking Can Cause Heart Disease
— Smoking When Pregnant Can Injure your Baby and Cause Premature Birth
— Stopping Smoking Reduces the Risk of Serious Diseases
— Smoking Can Cause Lung Cancer, Bronchitis and Other Chest Diseases
— More than 30,000 People Die Each Year in the UK from Lung Cancer.

The new warnings are ascribed to the Health Departments' Chief Medical Officers;

(c) The space provided for the health warning and tar ratings on posters and press advertisements will be increased;

(d) The industry will spend £1 million each year for the duration of the agreement on a campaign with the retail trade, supported by media advertising and direct mail, against illegal sale of cigarettes to children under the age of 16 years;

(e) New rules to prevent cigarette posters being positioned close to schools; and

(f) No cigarette advertisements will appear in magazines with a female readership of over 100,000, where one-third or more of those readers are aged between 15 and 24 years.

The agreement represents an advance on the previous one. Not only are the public in general provided with clearer messages about the specific dangers to health from smoking, but steps are to be taken to protect particularly vulnerable groups in the population such as children, young people and young women in the early child-bearing years.

Included in the agreements was a provision for setting up a joint committee, including representatives of government and the tobacco industry, under an independent Chairman to monitor compliance not only with this agreement but also with the separate agreement, negotiated later in the year and

concluded in January 1987, on sports sponsorship by tobacco manufacturers. In November 1986, Sir Peter Lazarus, formerly Permanent Secretary at the Department of Transport, was appointed Chairman of the new committee which will be funded equally by the DHSS and the industry and will have a maximum of 14 members representing Government and the tobacco industry in equal numbers. It will meet at least 4 times a year. The Chairman is required to report annually to Ministers and the industry.

The Committee will fulfil its function in 2 main ways. It will consider complaints about breaches of the agreements sent to Government Departments or received direct, and make recommendations to resolve disputes. It will also appoint consultants to investigate aspects of the operation of the agreement and will make any necessary recommendations to the industry or Government arising from consideration of the consultant's report.

Passive smoking

There has been increasing concern over the effects of environmental tobacco smoke (so called 'passive smoking') on the health of non-smokers and during the year findings from a wide range of investigations have been published together with reviews by a number of organisations in the UK, USA and elsewhere[2,3,4,5]. In considering the additional information that has become available the ISCSH noted in an interim statement[6] that associations between passive smoking and exacerbation of respiratory and cardiovascular symptoms have been confirmed, while in respect of links with lung cancer there have been both positive and negative results. It was concluded that while none of the studies could on its own be accepted as unequivocal, the findings overall were consistent with a small increase in the risk of lung cancer among non-smokers from exposure to environmental tobacco smoke, possibly between 10% and 30%.

The vast majority of the 36,000 lung cancer deaths occurring annually in England and Wales are attributable to 'active' smoking, but the passive smoking risk could account for several hundred of the lung cancer cases arising annually in non-smokers. Attention was drawn in the statement not only to the home environment as an important source of tobacco smoke exposure, but also to the work and indoor leisure environments. The Committee noted that segregation was likely to provide better protection for non-smokers than increased ventilation. The publicity accorded to this topic through the HEC and otherwise is intended to encourage action on a voluntary basis for the provision of smoke-free environments for the two-thirds of the population who do not smoke, and the newly-formed HEA has been asked to take account of the ISCSH statement when considering educational work concerning the dangers of smoking.

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(d) Nutrition

Cardiovascular disease

The Panel on Diet and Cardiovascular Disease of the Committee on Medical Aspects of Food Policy (COMA) reported in 1984 (see reference[2] page 34). Since that time dissemination of its recommendations has led to growing public interest in the subject. Unprecedented media attention has fostered some less moderate views than those put forward by the Panel, and the Department has acted to provide a reliable source of information by collaborating with other Government Departments (eg DES) and the HEC (now HEA) to deliver the real message. Furthermore, to take account of rapidly increasing knowledge in this field, COMA has established an Ongoing Review Panel on Diet and Cardiovascular Disease which will provide up-to-date guidance on this matter as and when necessary.

Dietary sugars

International interest in the role of sugars in the diet has continued. The US Food and Drug Administration's Task Force on Sugars reported in 1986. This has been a major contribution to the discussion, but since it inevitably dealt with matters from a US perspective, the Department felt that it was necessary to look at the issues from the UK point of view. Accordingly COMA has agreed to set up a Panel to Examine the Role of Dietary Sugars in Human Disease, with particular emphasis on the UK aspects of the problem.

Children

High priority has continued to be given to the nutritional surveillance of children. One area of concern noted by the COMA Panel on Diet and Cardiovascular Disease was that of overweight in childhood. Furthermore, the change in legislation in 1980, which removed the requirement on local authorities to provide school meals to given nutritional standards, provided the stimulus for COMA to commission a Dietary Survey of Schoolchildren in Great Britain. In 1986 a preliminary report of this survey was published; 3,285 children aged between 10 and 11, and 14 and 15 years, who all prepared 7-day weighed dietary records, and underwent height and weight measurement, were examined in the survey. The main findings were in general reassuring — there was little evidence of nutritional deficiencies, although older girls tended to have rather lower intakes of iron and some other nutrients than the rest of the population. The proportion of energy which was derived from fat, however, was 39–45% — much higher than the 35% level recommended by the COMA Panel. It was concluded that further education of this sub-group of the population in nutritional matters was needed to bring about beneficial changes in their eating habits.

Adults

Up to now, the dietary intakes of members of the adult population have been derived from estimates of foods entering households. These were obtained by the National Food Survey, carried out by the Ministry of Agriculture, Fisheries and Food (MAFF). Direct measurements of dietary habits have been limited to smaller non-representative studies. In 1986, therefore, the Department in conjunction with MAFF and OPCS, set up a Dietary and Nutritional Survey of a nationally representative sample of 2,000 adults in Great Britain. Together with a 7-day weighed dietary record, heights and weights and other anthropometric measurements are being taken to give a better indication of body

fatness, as well as haematological and biochemical measures of nutritional status from those respondents willing to provide a blood specimen. In addition a 24 hour urine sample is being collected and blood pressure measured. It is hoped that this unique in-depth survey of a representative sample of the adult population will provide valuable baseline demographic information, and allow many interrelationships between diet and 'risk factors' for disease to be elucidated. The question of instituting a follow-up study of the sample is being considered.

(e) Drug misuse

Prevention remains a key element in the Government's overall strategy directed to drug misuse. The momentum of the prevention campaign has been maintained during the year. The mass media campaign, specifically targetted at young people, emphasised the adverse social consequences arising from drug misuse including those which bear upon personal relationships. Towards the end of the year, in the context of AIDS, the new dangers of injected drugs were highlighted. Evaluation so far suggests that the breakdown of social relationships has been a particularly effective message in reinforcing young people's attitudes away from drug use.

An educational video package, *'Double Take'*, for use with 13–15 year olds was made available to all secondary schools in 1986. An evaluation of its use and effectiveness is under way.

Following on the £17.5 million made available from central funds in 1984 to stimulate the development of local services for drug misuse, an additional £5 million was allocated to Regional Health Authorities (RHAs) in 1986/87 to develop these services. The Department is monitoring the use of these resources.

In addition to clinial services, it is pleasing to note the implementation of a wide range of advice and counselling centres, telephone helplines, and projects providing recreational facilities and work experience for young people at risk. These are all important preventive developments.

A Drug Advisory Service, under the auspices of the Health Advisory Service (HAS) has been set up to provide a source of advice and expertise to individual District Health Authorities (DHAs). The Drug Advisory Teams are unique in including a representative from the voluntary sector, who have long experience in early intervention and rehabilitation in the drug field. Five visits took place in 1986. It is encouraging that requests for visits have been received from other DHAs.

In addition, a major research project to review and assess the impact of the central funding initiative, and to evaluate the effectiveness of the projects began in October 1986.

(f) Alcohol misuse

Alcohol misuse now costs the nation more than £1800 million every year[1].

Financial costs are only one aspect of the burden of alcohol-related harm but give some idea of the magnitude of the problem. It is therefore a matter of great

concern that the annual consumption of alcohol per head of population rose again in 1985 to 9.3 litres and that indicators of alcohol-related harm are generally following the same upward trend.

This concern is reflected in a number of events which combined to focus attention more sharply on alcohol during 1986 and 1987.

Special reports on alcohol

The Royal College of Psychiatrists, Royal College of General Practitioners, Royal College of Physicians and the British Psychological Society each published a special report on alcohol.[2,3,4,5] The Reports emphasise the potentially serious consequences of the rising trend in alcohol consumption and call for preventive action at both national and local levels. Of particular importance is the recent appreciation of alcohol consumption as a major and potentially reversible cause of hypertension and a possible predisposing factor towards breast cancer in women. The professional bodies behind these and other reports co-ordinated their recommendations on safe levels of alcohol consumption at around 21 units per week for men and 14 units per week for women*. A British Medical Association Report on Young People and Alcohol[6] highlighted the special risks to the young from episodic consumption of large quantities of alcohol. Road accidents, many of them alcohol-related are a major cause of death among young people. The Department supported an international symposium on '*Young Drivers Alcohol and Drug Impairment*' organised in Amsterdam by the International Drivers' Behaviour Research Association.

The OPCS published the findings of its Review of Adolescent Drinking, commissioned by the Department[7]. The Report suggested that, while the most young drinkers consume only modest quantities, for a worrying minority, drinking to excess is an established habit. Underage drinking in pubs was reported to be a common occurrence.

Licensing laws

The Home Office announced Government support in principle for some relaxation of the present Licensing laws in England and Wales. The Home Secretary recognised the public health implication of any proposed increase in availability of alcohol and emphasised the importance of maintaining adequate and effective controls of licensed outlets.

Centrally funded research

The Department published a Review of Alcohol Detoxification Services[8] commissioned by the Homelessness and Addictions Research Liaison Group.

Conferences

Lack of awareness among doctors of alcohol-related problems is often identified as an obstacle to better treatment for problem drinkers. The Department organised a seminar on Alcohol-Related Problems in Higher

*1 Unit = ½ pint of ordinary beer or a standard measure of wine/spirits.

Professional and Post-graduate Medical Education. Medical Schools in England were surveyed to establish their current practice on teaching medical students about alcohol. A Conference on Alcohol Detoxification Services marked the publication of a review on this topic and brought together people in the field to discuss the way in which services should develop in the future. Most problem drinkers are in work and the special role of the workplace in prevention and detection of alcohol problems was emphasised by the Secretary of State in his speech to a Conference organised by ACCEPT (Addictions Community Centres for Education, Prevention Treatment and Research).

Prevention

All of these indications of the magnitude of the alcohol misuse problem highlight again the importance of preventing harm by promoting sensible drinking habits. At national level, the Government clearly has a role in this. The Secretary of State hosted a Departmental conference on Prevention of Alcohol Misuse attended by representatives of industry, advertising, media, treatment providers and organisations involved with young people.

At local level there is scope for a range of preventive activities. A useful practical guide appeared in the form of a book '*Preventing Alcohol Problems. A Guide to Local Action*'[9] supported by Departmental funding.

Services

The Department produced guidelines for use by the Hospital Advisory Service (HAS) in the assessment of services for problem drinkers.

An experimental project for the detoxification of problem drinkers in their own homes is currently being evaluated in Exeter, supported by Departmental funding.

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(g) Child abuse

The Department has completed a consultation exercise under the title 'Child Abuse — Working Together'. This has shown considerable support for the proposed procedures on inter-agency working. It is intended to publish this guidance, together with guidance in the handling of Child Abuse Inquiries, in 1987.

The Social Services Inspectorate report on the Supervision of Social Workers in the Assessment and Monitoring of Cases of Child Abuse[1] was issued in April 1986, and the Inspectorate are undertaking follow-up work with those agencies involved.

Recent statistics published by the National Society for the Prevention of Cruelty to Children (NSPCC)[2], who hold the Child Abuse Registers covering about 10% of the population, showed an overall increase of 42% in the number of children whose names were placed on these registers in one year. An increase of 126% in reported cases of child sexual abuse was noted.

Child sexual abuse

The statistics quoted in the previous section reflect at least in part an increased awareness of the problem of child sexual abuse, both by professionals and the public. One of the most pressing needs for professionals is for more and improved training on this subject at every level. To this end the Department has put in hand the first part of a strategy for training in the management of child sexual abuse. The training initiative was announced by the Secretary of State on 30 October 1986[3] — £100,000 is to be made available for each of 3 years to fund 2 training projects.

Firstly, to promote in-depth training, an additional training facility is to be funded at the Department of Psychological Medicine at the Hospital for Sick Children at Great Ormond Street. This proposal includes in-depth training and workshops. It is expected that trainees will be social workers, health visitors and medical practitioners seconded from different parts of the country. The hospital will train 6 people each year for 3 years, and the trainees are expected to be people who can develop their own skills to such an extent that they will be able to pass on what they learn within their own authority. A senior training lecturer is to be appointed.

Secondly, a Training Advisory Resource is to be based at the National Children's Bureau under the aegis of the Training Advisory Group on the Sexual Abuse of Children (TAGOSAC) formerly the CIBA group. The project is to stimulate multidisciplinary training for all types of practitioner by developing training materials and setting up an information resource. A project/development officer and a part-time Consultant will support the work of TAGOSAC.

It is hoped that these preliminary training initiatives will supplement both the specific training required for various professional groups, and facilitate the prevention and management of child sexual abuse. The Department's training strategy will be expanded in 1987, and will address child abuse generally.

A Department press release also announced DHSS support for 2 telephone counselling services.

(a) **Childline** — a national facility set up by the BBC Childwatch programme as a charity. The Department made a launching grant of £50,000.

(b) **Touchline** — an innovative local facility in Yorkshire for children and families, organised by the National Children's Home in consultation with Leeds Social Services. The Department has made a grant of £53,000 over 3 years, and the project will be evaluated.

It is hoped these ventures will offer help for older children suffering abuse, supported by back-up services.

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3. ENVIRONMENTAL HEALTH

(a) Committee on the Medical Aspects of Radiation in the Environment (COMARE)

This Committee, which was established following a recommendation in the Black Advisory Group Report 'to advise Government on the medical aspects of radiation in the environment' met 5 times in 1986. It published its first report[1] on 'The implications of the new data on the releases from Sellafield in the 1950s for the conclusions of the report on the Investigation of the Possible Increased Incidence of Cancer in West Cumbria', in July 1986, and also gave advice to Government on the health effects of radon in houses in December 1986.

COMARE's First report

The Advisory Group chaired by Sir Douglas Black had asked the National Radiological Protection Board (NRPB) to calculate the doses that were likely to have been received by the young people resident in Seascale village since the 1950s. In order to enable NRPB to do this the Group had asked BNFL to make available to NRPB all relevant monitoring and discharge data since the Sellafield site had begun its operations in 1952. NRPB based their dose estimates[2] on these data and the Black Advisory Group in their report[3], published in July 1984, referring to risk estimates based on these data, concluded (para 6.12) that 'these calculations do not support the view that the radiation released from Sellafield was responsible for the observed incidence of leukaemia in Seascale and its neighbourhood. However, it is important to stress the unavoidable uncertainties on dose in this situation and the model we have used does not exclude other possibilities'.

Included in the data provided by BNFL were details of an incident occurring between 1954 and 1955 when an estimated 440 g of uranium oxide spent fuel cartridges had inadvertently been released to the atmosphere. Following publication of the report further information became available (initially from a worker employed at the site in the 1950s) which caused BNFL to revise their estimate of the magnitude of this release upwards by a factor of more than 40 to about 20 kg.

Such a large revision upwards of releases from the site naturally raised the question of the completeness of the data provided to the Black Advisory Group and the impact of these changed calculations on the conclusions of the Group.

BNFL therefore instituted a major review of information relating to Sellafield discharges and environmental monitoring in early years and passed all additional information to NRPB who recalculated the dose estimates[4]. The Government asked COMARE to consider the implications of these new data for the conclusions drawn in the Black Advisory Group Report.

In its first Report[1] the Committee concluded that the increased doses were still well below those that would readily explain the observed cases of leukaemia in Seascale, using conventional risk estimates. Thus the substance and essential conclusions of the Black Advisory Group Report remain unchanged.

(b) Radon in houses

In 1984 the Royal Commission on Environmental Pollution[5] recommended that the Government consider whether there was a need for action to reduce levels of the radioactive gas, radon, in certain houses. In 1986 the NRPB completed a survey of the levels of radon in houses in England and Wales; COMARE was asked for advice on the health implications of their results.

Radon gas is released to the environment from certain types of rocks by the decay of uranium. While the gas quickly disperses in the open air, quite high levels of radon can develop in confined spaces or where there is limited ventilation, such as inside houses, or mines. In such situations the radon gas is inhaled and irradiates the lungs. A number of studies of miners have demonstrated increased rates of lung cancer from exposure to radon gas.

COMARE advised that exposure to radon gas in some houses must be considered a public health problem. It agreed that the 'action level' of 20 mSv per year suggested by NRPB for existing houses was a reasonable starting point. The Committee indicated that the dosimetry and risk estimation procedure employed included many uncertainties which the Committee wished to address in more detail at a later date.

For new buildings the Committee recommended that exposures should be as consistent as possible with the internationally recommended dose limits regarding annual exposure to members of the public from all artificial sources of radiation.

The Committee also recommended that the feasibility of a study of the effects of radon exposure in dwellings in the UK on members of the public be considered. DHSS and the Department of the Environment (DOE) are considering the best way of taking this recommendation forward in consultation with COMARE and the NRPB.

Since levels of radon in the environment relate to the geology of the area, most of the houses in England with levels of radon gas above the 'action' level are likely to be found in Devon and Cornwall. NRPB, in consultation with the DOE is conducting a more detailed screening programme which is aimed at identifying these houses and advising on remedial measures that can be taken to reduce the levels. The DOE have also published an information leaflet[6] on the subject.

Other work in progress

In December 1985 a Yorkshire Television Programme suggested that there were excess rates of cancer in young children living near the Atomic Weapons Research establishments at Aldermaston, the Royal Ordnance Factory at Burghfield and the Nuclear Submarine bases at Faslane, Rosyth and Holy Loch and that this was linked to the presence of these establishments.

At about the same time the Information Services Division (now Information and Statistics Division) of the Scottish Health Services Common Services Agency made public the results of studies of leukaemia rates within Scotland including the areas round the reprocessing plant at Dounreay[7,8,9].

A number of other studies on cancer rates in children have been published recently, including an analysis by independent researchers of the OPCS statistics relating to areas around nuclear installations in England and Wales[10].

COMARE has been asked to advise on all of the above studies. Obviously, completing such an extensive programme of work will take some time, especially since at each site there is a need for site-specific discharge and environmental monitoring data to be collated and assessed. Furthermore, as is the case with Aldermaston and Burghfield, there is frequently a need for more detailed epidemilogical studies of the areas before any conclusions can be drawn.

Advice from COMARE on the cancer rates around Aldermaston and Burghfield is at present expected by the end of 1987.

(c) Chernobyl

During the night of 26 April 1986 a serious accident involving an explosion and fire took place in the Number 4 Nuclear Reactor at Chernobyl in Byelorussia in the USSR. The plume of radioactivity released during the following 10 days was dispersed over a large part of the western hemisphere during the next few weeks and resulted in variable quantities of radioactivity being deposited on the ground within Western Europe, including the UK. Over a year later the impact of this event is still being assessed.

The radioactive cloud reached the United Kingdom on 2 May and moved from the south east of England in a north-westerly direction. In areas where rain fell while the radioactive cloud was overhead, additional radioactivity was washed from the cloud onto the ground including grass and vegetables, and into the sea and inland waters.

While the cloud was overhead rain fell mainly in parts of Scotland, North West England (including Cumbria and the Isle of Man) and North Wales, so that these were generally the most affected areas within the UK.

The NRPB, supported by laboratories in the nuclear industry and relevant government departments, carried out extensive monitoring of levels of radionuclides in the air, in rainwater, on the ground and in food and milk, to form a basis for decisions on the need for intervention.

The radionuclides in the cloud that were detected in significant quantities in the UK were Iodine-131, Caesium-137 and Caesium-134. Other radionuclides (such as Strontium-89 and Strontium-90) were detected in countries closer to the accident.

The levels of radionuclides in cow's milk in the UK were carefully monitored over the following days since both iodine and caesium are secreted in milk. However, although these radionuclides were detected in cow's milk, the levels did not rise sufficiently for any action to be necessary.

The first action that was necessary was to advise against the drinking of 'undiluted' rainwater in the most affected areas between 3–8 May.

As an emergency measure on 1 May, DHSS advised Port Health Authorities to hold and test imports of fresh fruit, vegetables fish and dairy products exported from Poland and Russia after 26 April. This advice was later extended to include other Eastern bloc countries (Bulgaria, Czechoslovakia, Hungary, Rumania and Yugoslavia). On 13 May the European Council imposed by Regulation a temporary ban on the import of food into the Community from the same countries. The ban continued until 31 May when it was replaced by a further Regulation which introduced arrangements for the monitoring of imports into the European Community from third countries.

Under these arrangements food imported into the UK from the 7 countries previously mentioned plus Austria, East Germany, Sweden and Turkey continues to be monitored to check compliance with the European control ('action') levels of 370 becquerels per kilogram (Bq/kg) of caesium 134/137 for milk and baby foods and 600 Bq/kg for all other foods. These arrangements will continue until the expiry of the Regulation on 31 October 1987. The UK received information on similar monitoring being carried out in other member states.

In June the levels of radiocaesium in young lambs not yet ready for market in some areas of Cumbria, North Wales and Scotland were sufficiently high for the Government to decide to use its powers under the Food and Environment Protection Act 1985 to prohibit the movement and slaughter of sheep in the affected areas. This prevented the affected meat from entering the food chain. Initially 4.2 million sheep (out of a national flock of 24.6 million) were affected by the order. Although most of the affected areas have now been released, some 300,000 sheep (as of April 1987) still remain subject to control.

The Community experienced considerable difficulty in agreeing the 'action' level for their Regulation and internationally there has also been considerable debate on the question of acceptable levels of radionuclides in food following a nuclear accident.

The dose or exposure any person will receive from a given radionuclide in food will obviously depend on how much of the food is consumed. Therefore 'acceptable' levels in the same food can, in theory, vary from one country to another depending on variations in consumption rates, and also on the extent of the contamination of other foods. Similarly, acceptable levels of radioactivity in different foods can also in theory vary depending on whether the food is a major or minor component of the diet. However, for international purposes any system of controls has to be considerably simplified in order for it to be practical. Agreement on the criteria for this simplification has not been easy to achieve.

In this context it may be helpful to explain that the becquerel (Bq) measures the amount of radioactivity present in any item, while the sievert (Sv) measures the dose that is received from a given exposure to radiation. Because these units were unfamiliar to many people before Chernobyl, the fact that every year we receive on average two thousandths of a sievert (or two millisieverts) from natural background radiation (eg radon in the home and cosmic rays from outer space), and that in Devon and Cornwall exposures of over 10 times this level per year from radon in a small number of houses have been detected, may help to put things in context. A chest X-ray will give a dose of about a twentieth of natural background (0.1 mSv) to the lung. Average consumers of lamb would

have received 0.15 mSv in the year if *all* the lamb they had consumed since Chernobyl had been contaminated at the maximum permitted level of 1000 Bq of caesium 134/137 per kilogram of lamb (which is very unlikely). NRPB have calculated that the average adult living in a high rainfall area is likely to have received 0.3 mSv over the last year from the consequences of Chernobyl[11]. It is therefore reassuring to find that the exposures in the UK as a result of Chernobyl have generally been small relative to background radiation.

There is, internationally, an appreciation of the fact that there were many areas where confusion arose because there was insufficient internationally agreed guidance on the management of such a severe nuclear accident. These problems are being addressed at present by a number of agencies including the World Health Organization (WHO), the International Atomic Energy Agency and the International Commission on Radiological Protection.

Immediately following Chernobyl a thorough review of the UK's contingency plans for dealing with nuclear accidents was instituted. The review concluded that existing plans continued to provide a valid basis for the response to any nuclear accident that occurred in the UK. However the Government decided planning was needed to provide more specifically for the responses to a nuclear accident outside the UK. This new plan is being developed as quickly as possible.

(d) Chlorination of drinking water

The normal disinfection of water by chlorination leads to the incidental formation of byproducts from traces of organic substances present in the source waters. Ingestion of large amounts of certain of the byproducts, such as some of the trihalomethanes (which include chloroform) is known to cause cancer in laboratory rodents. Furthermore, descriptive epidemiological studies conducted in the 1970s in the United States led to concern that the incidence of certain types of cancer in man might be increased by drinking-water containing the byproducts of chlorination. The later discovery that concentrated extracts of chlorinated water were mutagenic in bacterial assays added to the concern. In 1978, the Department's Joint Committee on Medical Aspects of Water Quality considered the trihalomethanes, and judged that

> "the evidence concerning a carcinogenic risk, from current levels of trihalomethanes, is inconclusive but any risk which may exist is likely to be extremely small".

Since 1978 there has been much analytical, epidemiological and toxicological research on chlorination byproducts, some of which has taken place in the UK, along lines suggested by the Joint Committee, as part of the programme funded by the DOE in the area of water quality and health. The results were assessed in 1986 by the Committee on Medical Aspects of Contamination of Air, Soil and Water (which succeeded the Joint Committee in 1984). In August 1986, the Committee stated that

> "We have found no sound reason to conclude that the consumption of the byproducts of chlorination, in drinking-water which has been treated and chlorinated according to current practices, increases the risk of cancer in humans".

The statement included recommendations for further research, designed in particular to elucidate the results of the mutagenicity assays, and this is in progress under funding from the DOE.

(e) Intolerance to food additives

In March 1987, the Food Advisory Committee of MAFF published its final report on colours in food[12]. The report includes an extensive evaluation of the toxicity of food colours by the DHSS Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT). One particular area addressed by the COT in the report is the question of intolerance to food additives including colours. While there is no scientific evidence that intolerance to food colours is an extensive problem, the COT was aware that this is nevertheless perceived as being a widespread phenomenon by many members of the public.

Adverse reactions have been reported in association with a wide range of foods and food ingredients, including food additives[13,14], but the prevalence of intolerance reactions has not been established. However, there is general agreement that intolerance reactions to foods and major food ingredients (such as cow's milk, eggs, wheat, fish, shellfish, citrus fruits, etc) are much more common, perhaps affecting up to 20% of the population at some time in their lives[13], compared with reactions to food additives which have been estimated to affect 0.03–0.15% of the population[15].

Although the proportion of people who show intolerance to certain additives is very small, the nature of the adverse reactions can be very unpleasant (for example urticaria, eczema, asthma and rhinitis). For those who have identified additives which provoke a reaction, the new labelling Regulations for foods, which came into full effect in July 1986 and require manufacturers to declare ingredients, including additives, on the label, will enable them to avoid foods containing those additives. The COT did not consider there was sufficient evidence that particular additives were more likely to cause adverse reactions than other additives, and thought there were therefore no grounds for taking any special action beyond that already undertaken on labelling of foods. An extensive research project commissioned by MAFF is now underway, which has as its initial aim the assessment of the likely prevalence of adverse reactions to food additives among the population at large. We will be reviewing our advice on this matter when the results of this study become available.

(f) Novel foods

One potentially important development in agricultural science and food technology is the possibility of producing novel foods for human consumption. A novel food can be defined as a food wholly or largely composed of material which has not hitherto been used for human consumption, or which has been produced using new processes not previously used in the production of food. Examples are foods made from single cell organisms such as bacteria or fungi; these organisms are typically grown in and harvested from large industrial fermentation vessels, and are then processed, coloured and flavoured to produce items which look and taste similar to traditional foods such as meat products. One such food derived from single cell organisms has been given Ministerial clearance and is available on the UK retail food market.

In the near future it is likely that the techniques of biotechnology, including the use of genetic manipulation, will be increasingly applied to novel foods. For example, there is a possibility of using genetically modified yeasts in the brewing and baking industries, or of applying genetic engineering to produce new varieties of traditional food crops which will have improved pest or frost resistance. Another possibility is the use of recombinant DNA techniques to produce veterinary medicines or other products used in animal husbandry; for example bovine growth hormone derived from genetically modified bacteria which could be used in the rearing of beef cattle.

All these developments offer the possibility of economic and other advantages to the consumer and industry. But, like other examples of technological innovation, they also raise questions about how the safety of the new products can be assured. A novel food may contain novel chemical substances which might present a toxicological hazard to the consumer. Novel foods may also differ in important nutritional respects from the traditional foods which they may replace, and could possibly have an unfavourable impact on the nutritional status of consumers. Finally there is the possibility that novel foods might pose special microbiological problems for consumers.

In 1982 Ministers appointed the Advisory Committee on Irradiated and Novel Foods (ACINF) to advise Health and Agriculture Ministers on matters relating to food irradiation or to the manufacture of novel foods. In the UK there exists a voluntary scheme whereby any company which is proposing to develop or import a product which appears to fall within the definition of a novel food is requested to notify MAFF. If necessary the company will be advised to seek formal Ministerial clearance, in which case all the data on the product will be submitted to ACINF, who may also seek the advice of other expert committees before reaching a conclusion. ACINF will advice Ministers of its conclusions and, if appropriate, a formal Ministerial clearance for the new product will be issued.

The ACINF has issued guidelines[16] specifying the type of safety data which companies should produce in support of any application for Ministerial clearance, and indicating how the committee will evaluate those data. If necessary ACINF will refer nutritional questions to the COMA Panel on Novel Foods. They have terms of reference which include the consideration of the nutritional aspects of any novel food or food process submitted by manufacturers. COMA advised in 1972 that any substance promoted as a replacement or alternative to a natural food should be the nutritional equivalent in all but unimportant aspects of the food it would simulate. In 1980 this advice was extended to require that novel foods intended to simulate meat should contain the major nutrients provided by meat — namely protein quantity and quality, thiamin and vitamin B_{12} — and that iron should be added to bring the substitute to a specified level.

At present the development of novel foods has only recently begun to make an impact in the food industry. However, the fact that procedures already exist which allow the proper safety evaluation of these products means that these potentially beneficial technological developments can occur without raising fears about adverse consequences for human health.

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4. COMMUNICABLE DISEASES

(a) Acquired immune deficiency syndrome (AIDS) and HIV infection

In 1986 there was a rapid escalation of public awareness of AIDS, and both in the UK and world wide the numbers of reported cases increased considerably. Moves were made towards international co-operation in tackling the problem of infection with the AIDS virus. This retro virus in early 1986 was still known by a variety of names, commonly HTLV III or LAV. In May 1986 the International Committee on Taxonomy of Viruses decided that the virus should henceforth be known as The Human Immune Deficiency Virus (HIV).

(i) Surveillance

In the UK AIDS and HIV infection is not a notifiable disease. The reason for this is that at present statutory notification would not facilitate prevention of spread nor increase the completeness of case ascertainment. Furthermore it is possible that in common with other sexually transmitted diseases anxieties about the maintenance of confidentiality might discourage patients with HIV from coming forward for advice if the condition were made statutorily notifiable.

The voluntary reporting system for AIDS cases set up by the Communicable Disease Surveillance Centre (CDSC) in 1982 continues to operate[1]. In England the clinician in charge of an AIDS patient reports the case in strict confidence to CDSC. Deaths ascribed to AIDS are also reported and provide a cross-check.

With regard to tests positive for anti-bodies to HIV all Public Health Laboratory Service (PHLS) laboratories in England, Wales and Northern Ireland report their results to the CDSC. NHS and private laboratories are also encouraged to make reports to CDSC. A small sample of laboratories report both positive and negative test. The information thus obtained provides incomplete evidence of the extent of HIV infection in the population. The results are also biased. For example, it is very probable that a larger proportion of haemophiliacs have been tested than is the case for, say, intravenous drug misuers.

(ii) AIDS

In the UK in 1986 there were 339 cases of AIDS reported of which 298 were reported from England. This brought the cumulative total in the UK to 578 at 31 December 1986 of which 551 were reported from England (Table 4.1). As may be seen from Table 4.1 the bulk of cases have been concentrated in the Thames Regions, notably in NW Thames.

The number of AIDS cases reported by the USA continued to dominate the international situation in 1986 with a total of 13,008 cases being notified to the Centre for Disease Control, Atlanta. WHO received reports[2] of AIDS cases from an increasing number of member states. In interpreting these reports it is necessary to recognise that reporting systems in some countries are rudimentary and that in many countries the facilities for diagnosing AIDS are very poor. It is widely recognised that the AIDS epidemic has reached major

Table 4.1: *England — Reports of AIDS to 31 December 1986 by Region of reporter*

Region	New cases (1986)	Cumulative total to 31 December 1986	Percentage of total reports
Northern	10	18	3
Yorkshire	7	7	1
Trent	8	10	2
East Anglia	3	5	1
N W Thames	149	274	50
N E Thames	44	103	19
S E Thames	36	52	9
S W Thames	5	14	3
Wessex	3	13	2
Oxford	4	6	1
South Western	2	9	2
West Midlands	8	12	2
Mersey	5	7	1
North Western	14	21	4
Total	298	551	100

Table 4.2: *AIDS cases up to 31 December 1986 in various European countries (as reported to WHO by 1 June 1987), comparable USA figures are given at the foot of the table*

Country	Population (million)	Cases reported for 1986	Cumulative cases to 31 December 1986	Cumulative cases per million population to 31 December 1986
Belgium	9.9	55	216	21.9
Denmark	5.1	59	131	25.5
France	54.6	648	1,221	22.4
Italy	56.9	343	539	9.5
Netherlands	14.5	112	218	15.0
Spain	39.0	134	264	6.8
W Germany	61.1	445	914	15.0
UK	56.0	311	577	10.3
USA	230	13,008	29,003	126.0

proportions in parts of central, east, and southern Africa, yet at the end of December 1986 the cumulative totals of cases reported to WHO form all of Africa was only 3,334.

The cumulative total reported from Europe up to 31 December 1986 was 4,577 of which 2,350 cases were reported in 1986. Table 4.2 shows the cumulative incidence rates in selected European countries. The cumulative incidence rate of AIDS in the USA is shown for comparison.

In England in common with many European countries and the United States by far the largest group of cases of AIDS is in homosexual and bisexual men (Table 4.3) and the sex ratio is 33:1. This contrasts with the experience in

Africa where the ratio of males to females affected is approximately 1:1[3], and with Scotland and some other European countries where the proportion of AIDS cases who are intravenous drug abusers is much higher[4]. The cumulative incidence of AIDS in England increases with age to the age-group 35–44 years after which it declines (Table 4.4).

(iii) HIV infection

By the end of 1986 2,150 individuals with positive tests for HIV anti-bodies had been reported in England. As for AIDS cases the largest group were homosexual or bisexual males (Table 4.5), but substantial numbers of positive tests in haemophiliacs, and intravenous drug abusers were also reported. In

Table 4.3: *Cumulative totals of reports of AIDS cases in England by transmission characteristic to 31 December 1986*

Transmission characteristics	Number of cases Male	Female	Total	Percentage
Homosexual/bisexual	488	0	488	88.6
Intravenous drug abuser (IVDA)	5	1	6	1.1
Homosexual & IVDA	7	0	7	1.3
Haemophiliac	21	0	21	3.8
Recipient of blood				
— abroad	3	3	6	1.1
— UK	2	1	3	0.5
Heterosexual:				
presumed infected abroad	7	4	11	2.0
presumed infected in UK	0	3	3	0.5
Child of HIV positive mother	1	2	3	0.5
Other	1	2	3	0.5
Total	535	16	551	99.9*

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

Table 4.4: *Cumulative total of AIDS cases in England by age to 31 December 1986 (both sexes)*

Age Group	Estimated population at mid 1986 (millions)	Number of cases	No of cases per million estimated population
0 – 14	8.9	5	0.6
15 – 24	7.7	24	3.1
25 – 34	6.8	61	23.7
35 – 44	6.5	09	32.2
45 – 54	5.1	92	18.0
55 – 64	5.1	23	14.5
65 – +	7.3	6	1.2
Age unknown	—	31	—
Totals	47.4	551	11.6

Table 4.5: *HIV positive cases reported in England in 1986 by transmission characteristics*

Transmission characteristics	Male	Female	Unknown	Total	(%)
Homo/bisexual	1,265	0	0	1,265	(59)
IVDA	117	58	4	179	(8.5)
Homo/IVDA	14	0	0	14	(0.5)
Haemophilia	404	1	0	405	(19)
Recipient of blood	16	10	0	26	(1)
Heterosexual contact					
a) of above groups	5	27	0	32	(1.5)
b) of other groups	30	14	1	45	(2)
c) no information	0	0	0	0	(0)
Child of HIV+ mother	5	3	1	9	(0.5)
Several risks	3	0	0	3	(0)
No information	159	12	9	180	(8)
Total	2,010	125	15	2,150	100

84% of the persons with positive tests there was insufficient information on which to assign them to a risk group. However as almost all of these were men it is likely that most were homosexuals or bisexuals.

The situation in England contrasts with that of Scotland, which has been the source of some 20% of the HIV positive cases reported in the UK. In Scotland there is a high proportion of intravenous drug abusers among the cases reported as HIV positive and about a quarter are women[4]. This is also seen in some other European countries, notably Italy and Spain[5]. It increases the potential for heterosexual transmission of HIV. Infected women can pass the virus to their unborn children.

Table 4.6: *Cumulative totals of HIV positive cases reported in England by region of reporter to 31 December 1986*

Region	Number of cases	(% of total)
Northern	195	(9)
Yorkshire	81	(4)
Trent	97	(4.5)
East Anglia	47	(2)
N W Thames	685	(32)
N E Thames	311	(14.5)
S E Thames	305	(14)
S W Thames	55	(3)
Wessex	102	(5)
Oxford	66	(3)
South Western	57	(3)
West Midlands	67	(3)
Mersey	27	(1)
North Western	55	(2)
Total	2,150	(100)

Table 4.6 shows the regional distribution of HIV positive cases reported in England to 31 December 1986. As for AIDS cases these are concentrated in the Thames regions but the relative contribution of other regions is greater than it is for AIDS cases.

Although undoubtedly some individuals are tested in regions other than those in which they live, which distorts the picture, there is no question but that the infection is spreading.

(iv) Measures taken to prevent the spread of HIV infection

In the absence of any effective vaccine or cure prevention of the spread of the underlying virus infection is the only strategy for dealing with AIDS.

Public education campaign
In March 1986 a campaign was launched with the aim of informing the public about AIDS, the ways by which the infection is and is not transmitted and how to protect themselves and others.

The initial phase involved advertisements in the national press, the publication of a leaflet from the HEC[6] and the establishment of a telephone service, which was run by the College of Health and funded by the DHSS. In addition, the Terrance Higgins Trust and the Standing Conference on Drug Abuse (SCODA) produced posters and leaflets and there were advertisements in the gas press. An interim evaluation of the Department's campaign in July 1986 revealed it had widespread support and further advertisements were placed in the national press. In November 1986 the campaign was greatly widened and intensified, newspaper advertising was increased and a campaign aimed at young people was started through magazines, cinema and radio advertisements.

The DHSS leaflet '*Protect your Health Abroad*' was revised to include a section on AIDS[7].

In April 1987 the HEC was reconstituted as a Special Health Authority and was given major executive responsibility for public education about AIDS (see p. 31).

Voluntary bodies
Throughout 1986 the involvement of voluntary organisations in AIDS related matters increased. The bodies have an important role in complementing statutory provision. In particular they can provide information to those in high risk groups and counselling and support services for people who are HIV positive or have AIDS. The largest voluntary organisation solely concerned with AIDS is the Terrence Higgins Trust. In addition there is a growing number of specialist bodies such as the Haemophilia Society and SCODA which provide support for particular categories of high risk individuals.

Needle exchange programmes
The spread of HIV infection among intravenous drug abusers is attributable to the practice of sharing injecting equipment.

In December 1986 it was announced that schemes would be set up in 1987 whereby drug abusers could exchange used needles and syringes for clean ones in an attempt to reduce equipment sharing.

Professional guidelines
In January and June 1986 letters were sent to all doctors in England dealing with problems relating to AIDS in children at school.

In April 1986 guidance was issued for surgeons, anaesthetists and dentists in relation to HIV infected patients and in July 1986 guidance for doctors about artificial insemination was published.

In addition DHSS guidelines were issued in 1986 concerning HIV antibody testing of blood donations outside the National Blood Transfusion Service (NBTS), planning in the health services and AIDS in relation to local authority staff.

In June The Advisory Committee on Dangerous Pathogens (ACDP) presented a revision of the guidelines it first produced in December 1984[7–17].

AIDS and blood transfusion
The screening of all blood donations collected by the NBTS for HIV antibody was first introduced in October 1985. Between January and December 1986 2,625,385 donations were tested, and 54 were confirmed positive (0.002%). From February 1986 a separate record was kept of donations given by newly recruited volunteers. During the year some 391,698 donations were received and 18 of these were confirmed as HIV antibody positive (0.004%).

All donors, 44 men and 10 women, who were confirmed positive have been asked to attend Regional Transfusion Centres where they have been interviewed by medical staff who have been specially trained to counsel patients with HIV infection. With the exception of 2 male donors all responded to recall. All but 4 of those interviewed admitted to being in high-risk groups.

A revised leaflet for blood donors was issued in September 1986[18]. Its purpose was to describe more explicitly the risk groups and in particular to emphasise the risk posed by the heterosexual nature of infection in Africa, so as to ensure that people who have been exposed to such risks would exclude themselves from donating blood. The rate of positive donors found in the UK is comparable to that found in volunteer donors in Scandinavian countries, and substantially lower than that in many other European countries or in the United States.

Blood products
During 1986 heat-treated coagulation factors both from commercial sources and supplied by the Blood Products Laboratory (BPL), Elstree, were made from plasma which had been screened for HIV antibody.

ACDP guidelines
Revised guidelines were published by ACDP providing health care staff with a review of AIDS in general and giving specific recommendations for precautions to be taken by health care workers when handling specimens believed to be or known to be infected with HIV[13]. More than 70,000 copies of

these guidelines have now been issued and have been well received. The steadily accruing epidemiological evidence on routes of transmission of AIDS infection allowed emphasis to be placed on the need to avoid needlestick injury. There was a lack of evidence that the infection was spread by airborne virus particles. Up to the end of 1986 there are only 4 health care workers who have seroconverted following accidents (all involving hypodermic needles), compared with many hundreds of recorded incidents of exposure to HIV infected blood, body fluids and needlestick injury in which there is evidence that the person who sustained the injury did not become infected.

The CDSC has records of over 150 incidents involving needlestick or contamination of mucous membranes in British health care workers. In only one case did the person concerned (a nurse) become infected.

HN(86)25 HIV antibody in diagnostic reagents[17]
Following concern expressed to the DHSS that quality control and calibration materials and other diagnostic reagents used in pathology laboratories might be contaminated with HIV the DHSS issued advice to the NHS on the purchase of such materials.

After consultation with the NHS and the manufacturers of the materials an implementation date of 1 January 1987 was set after which laboratories were recommended to purchase, where possible, only materials which had been tested at source for HIV antibody as individual donations, or had been treated to inactivate any possible HIV virus. Specific, short-term, exceptions were allowed for certain rare materials. At the same time advice was given to laboratories on the use of materials derived from volunteers and patients for quality control purposes. The UK was the first country to issue such detailed advice on HIV in diagnostic reagents. It should be emphasised that no case of infection in laboratory staff resulting from the use of these essential products has been reported, and it cannot be said often enough that within laboratories good standards of practice are the most effective method of reducing risk of infection from either HIV or any other contaminant of body fluids.

(v) New human retroviruses

The emergence of two apparently new human retroviruses was reported in 1986. LAV 2 and HTLV IV were described by French and American investigators respectively. LAV 2 was identified in patients with AIDS or an AIDS-like illness who were of West African origin. In contrast HTLV IV has so far been found only in health subjects in Senegal. The degree of similarity between these two viruses is only now becoming clear but importantly they are both reported to be more closely related to a known monkey retrovirus (STLV III) than to HIV (HTLV III/LAV). No person infected with either of these retroviruses has so far been identified within the UK. However, the situation with regard to blood donor screening is being kept under review.

(vi) Research

During 1986 there were major developments in the AIDS research programme by the MRC and the Departments of Health.

The main medical programme of Government — funded research into AIDS — was co-ordinated by the MRC through their Working Party on AIDS. The

Council works closely with the Health Departments who were represented on the Working Party. In December 1985, the Health Departments agreed to contribute jointly up to £295,000 per annum towards the cost of the UK Centre for the co-ordination of epidemiological research on AIDS, which was to be set up by the MRC. DHSS agreed to contribute up to £250,000 annually and the first payment was made in December 1986.

In January 1986 the MRC had awarded 6 grants and by December this number had increased to 21. Two of these are jointly funded with DHSS and a further 7 are supported from the Health Departments' contribution towards epidemiological studies. During the year the Council were able to fund all research proposals on AIDS submitted to them which met the necessary scientific criteria and standards. In December 1986 the DES allocated an additional £1m per year to the Council to enable it to continue the expansion of its AIDS research programme. At the end of 1986, the MRC put forward a suggestion for a direct programme of research to develop a vaccine to prevent infection and anti-viral drugs to treat those infected with the AIDS virus. Early in 1987 the Government allocated an additional £14.5m for this directed programme.

DHSS has also been able to fund all suitable research projects on AIDS in 1986 and by the end of the financial year had funded research to a total value of £260,000 in addition to the contribution made to the MRC programme. The projects funded by the Department include studies of the cost of services for patients with AIDS, behavioural studies of homosexual males, and effective ways of providing counselling for HIV antibody positive people. It was also agreed to fund an evaluation of the Needle Exchange Schemes for drug misusers. The DHSS Procurement Directorate has funded research into the screening of blood and donors for the AIDS virus and the Department's Health Building Directorate has undertaken background research on the accommodation required by patients with AIDS.

In December the Chief Scientist held the first meeting of the group that he has set up to review the Government-funded research programme. This was attended by Government Departments, research councils and Government agencies funding research in this area.

By the end of the year, many research groups and university departments had put forward suggestions for health services research and these ideas were to be considered for funding by DHSS in 1987.

(vii) Zidovudine (*'Retrovir'*)

This drug, otherwise known as azidothymidine (AZT) was first developed in 1964 by American researchers as an anti-cancer drug, but showed no promise. In 1984, the United States subsidiary of Burroughs Wellcome developed it as an anti-viral agent for the treatment of AIDS. It inhibits the enzyme, reverse transcriptase, necessary for replication of retroviruses such as HIV, arrests the infection and improves the health of people with AIDS but it does not provide a cure.

In trials in the United States, it has been shown to prolong life, arrest weight loss and increase the well-being of people with AIDS. The treatment reduces

the frequency of opportunistic infections and may also lead to improvements in the laboratory tests for immunodeficiency. Zidovudine also produces adverse effects in a high proportion of patients, including severe anaemia which may require blood transfusion. To sustain benefit treatment must be continued indefinitely.

In 1986 zidovudine was used in a few patients in England in clinical trial. There is a shortage of zidovudine but by the end of 1986 the Wellcome Foundation Ltd were increasing supplies and considering its application, licensing and distribution.

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(b) Measles

Although there was a slight reduction (12.3%) in the total number of cases of measles notified in 1986 as compared with 1985, 82,072 cases of this preventable disease were notified, and many thousands more which were not notified occurred. The immunisation rate improved from 63% in 1985 to 68% in 1986. Nevertheless both this average figure and the substantial variation between Districts remains unsatisfactory.

(c) Rubella

In 1986 laboratory reports confirmed 196 cases of rubella infection in pregnancy. Many of the pregnancies were terminated[1]. Figure 4.1 shows the number of such cases for the period 1975–86.

In 1983 and 1984 pregnancy was terminated in 537 women who had been associated with rubella — 295 women had or were suspected of having rubella, 77 had been in contact with rubella and 165 had been inadvertently vaccinated against rubella shortly before or during their pregnancy. More than half these terminations (51%) were in parous women for whom opportunities had existed to identify their susceptibility to rubella.

These findings and other evidence prompted the Joint Committee on Vaccination and Immunisation to recommend that the present policy about rubella vaccination should be augmented by the introduction of a combined vaccine against measles, mumps and rubella (MMR) to be given to children of both sexes at the age of 15 months.

In order to encourage immunisation the National Rubella Council produced audio-visual material entitled 'Why worry?' for presentation to women's groups and a video aimed at teenage girls.

(d) Whooping cough

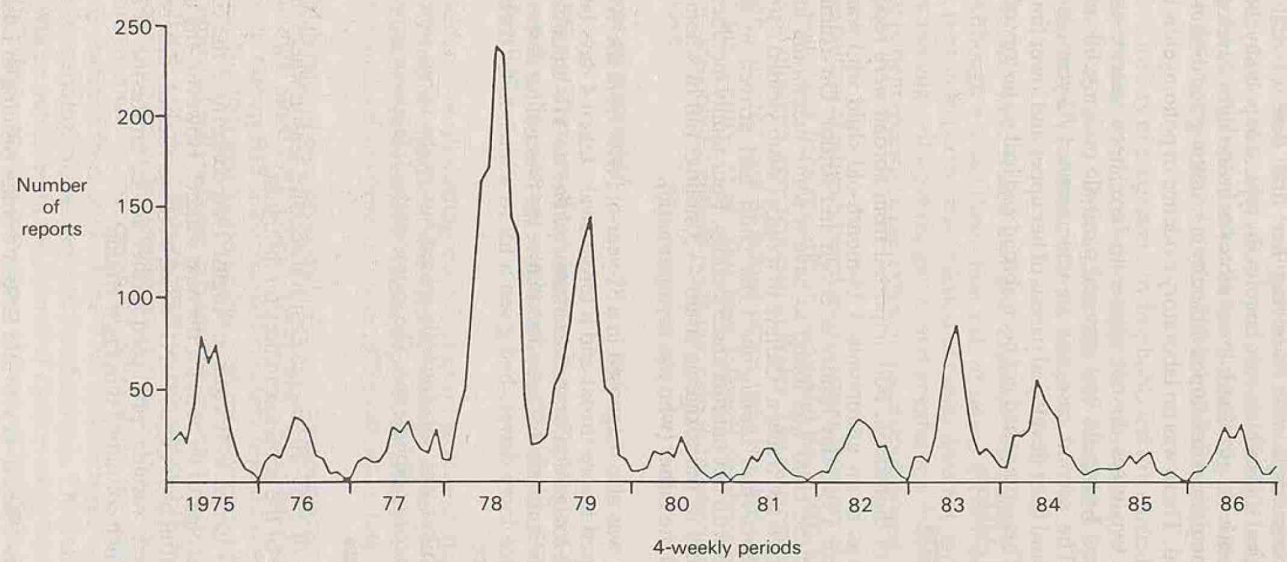
Notifications of whooping cough in 1986 (an epidemic year) were 36,500. Four deaths occurred. Although notifications were just over half those recorded in the equivalent epidemic years of 1978 and 1982, and the autumn peak observed in previous epidemic years, did not occur[2], it is to be hoped that no further epidemics of pertussis will occur within the UK. This will depend on further inprovements in the rate of immunisation. Nevertheless, strenuous efforts are needed to increase vaccination and break the 4-year epidemic cycle. The European Region of the WHO has suggested a target for uptake of pertussis vaccine of 90% by 1990.

(e) Poliomyelitis

Five patients with paralytic poliomyelitis were reported in 1986. Three of these appeared to be vaccine-associated:

(i) A 23-year-old married unimmunised man developed bulbar poliomyelitis. His son had been given oral poliovaccine 47 days before the onset of his father's illness;

Figure 4.1: *Laboratory confirmed rubella infections in pregnancy reported to the Communicable Disease Surveillance Centre, 1975-86*, England and Wales*



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(ii) A 15-year-old schoolboy developed an influenza-like illness 12 days and unilateral footdrop 22 days after receiving a booster dose of oral poliovaccine. This patient had not travelled abroad; and

(iii) Fifteen days after receiving her first dose of oral poliovaccine neurological signs which were not initially typical of poliomyelitis were noted in a 3-month old girl. Later lower motor neurone signs developed in all four limbs. The patient developed difficulty in breathing and died in spite of being ventilated. There was no laboratory evidence of poliomyelitis infection.

The other two cases do not appear to have been vaccine-associated. An unvaccinated 3-year-old boy acquired paralytic poliomyelitis after a visit to Pakistan. The second case was an unimmunised 62-year-old woman who became ill and later developed paresis of her upper and lower limbs and bulbar paralysis. This patient had not been abroad and had no history of close contact with young children.

(f) Diphtheria

Two cases of diphtheria, both imported from abroad were reported in 1986. The first was in an unimmunised 14-month-old child who was admitted to hospital with a two-day history of cough and stridor. On examination under anaesthetic the child was found to have a white membrane in the pharynx extending into the trachea. Culture of a throat swab yielded a toxigenic strain of *Corynebacterium diphtheriae*. The child had arrived in the UK from Bangladesh with her parents and 5 siblings. Four family members were found to be carriers of the toxigenic strain — 3 siblings (all of whom had injected fauces) and the father (who was asymptomatic).

Diphtheria was also diagnosed in a 31-year-old man from the West Midlands. He developed a sore throat and a throat swab, taken 4 days later, yielded a culture of a toxigenic *Corynebacterium diphtheriae*. His immunisation history could not be confirmed. Three days before the onset of his illness the patient, a long distance lorry driver, had given a lift to a hitch-hiker recently returned from Greece.

The hitch-hiker was subsequently traced but swabs taken were negative for *Corynebacterium diphtheriae*. The source of this infection was not found.

(g) Influenza

The winter of 1985–86 was the eighth successive season where there had been no increase of the epidemic indices for influenza.

Advice was issued to doctors in August 1986 concerning the composition of trivalent vaccine to be used for the next winter[3]. However, the appearance of strains of influenza A virus H1N1, which were significantly different from those in the current vaccine, prompted further advice on the use of a monovalent vaccine, which contained these new strains[4].

(h) Rabies

In mid-June 1986, a 46-year-old British woman residing in Lusaka, Zambia, was bitten on the arm and forearm when she attempted to break-up a fight

between her guard dog and a stray dog which broke into the compound of her home. The woman did not seek medical advice following the injuries because she thought she had been bitten by her own dog which had been immunised against rabies. She travelled to the UK to visit her family 2 weeks later and remained in good health until 9 August when she complained of extensive fatigue. Two days later she developed fever, flu-like symptoms and bradycardia, all of which resolved in 24 hours. However, over the next 3 days her condition deteriorated with recurrent fever and hallucinations.

By 15 August a history of progressive hydrophobia led to a clinical diagnosis of rabies and the patient remained under sedation on a ventilator. She died 14 days later on 29 August. Clinical diagnosis was confirmed by isolation of viruses from saliva and post-mortem brain tissue.

About 50 contacts were traced and post-exposure vaccination given where necessary. Although a small theoretical risk of rabies transmission via body fluids exists, person to person transmission of rabies does not normally occur. Strict barrier nursing, with gowns, gloves and goggles was followed and staff caring for the patient received a pre-exposure vaccination course.

In the UK the control of rabies is based on preventing the entry of animals with rabies. This policy has been remarkably successful since 1902 when the last indigenous case of rabies were reported in Wales. The case reported above is the eighteenth imported case of human rabies reported in the UK since the beginning of the century. Most cases have followed dog bites in the Indian sub-continent, the only exceptions being one case in Indonesia and the case described above.

(i) Meningococcal meningitis

There were 858 notifications of meningococcal meningitis in 1986. Figure 4.2 shows the 5-week rolling average number of cases notified to OPCS between 1984 and 8 May 1987.

While the incidence of all meningococcal infection increased, the increase of non-typable Group B organisms was disproportionate (from 24% in 1985 to 41% in 1986). But the most notable change in prevalence has been the increase in Group C organisms rising from 16.7% in 1977 to 40.3% in 1986 (Table 4.7).

Particularly high rates of meningococcal infection continued to be reported for some communities. Since 1981, Gloucester Health District has experienced an outbreak due to Group B15 sulphonamide-resistant organisms with 89 cases between 1 October 1981 and 31 December 1986 (an incidence of 5.7/100,000 per annum compared with national average notification rate of 1/100,000 per annum). A DHSS-sponsored project began in November 1986 to investigate the prevalence of carriers of and immunity to Group B Type 15 sulphonamide-resistant meningococci in the parish of Stonehouse in Gloucestershire. Samples were obtained from 98% of the 77% of Stonehouse residents who took part for bacteriological, salivary and blood analysis. The first two reports of this study will be published in the *Journal of Epidemiology and Infection* in December 1987. There was low prevalence of Group B15 Pi16 Sulphonamide-resistant strains in the community of Stonehouse at a time when it was

Figure 4.2: *Meningococcal meningitis: 1984-1987 (May) England and Wales*
Notifications: 5-week rolling averages

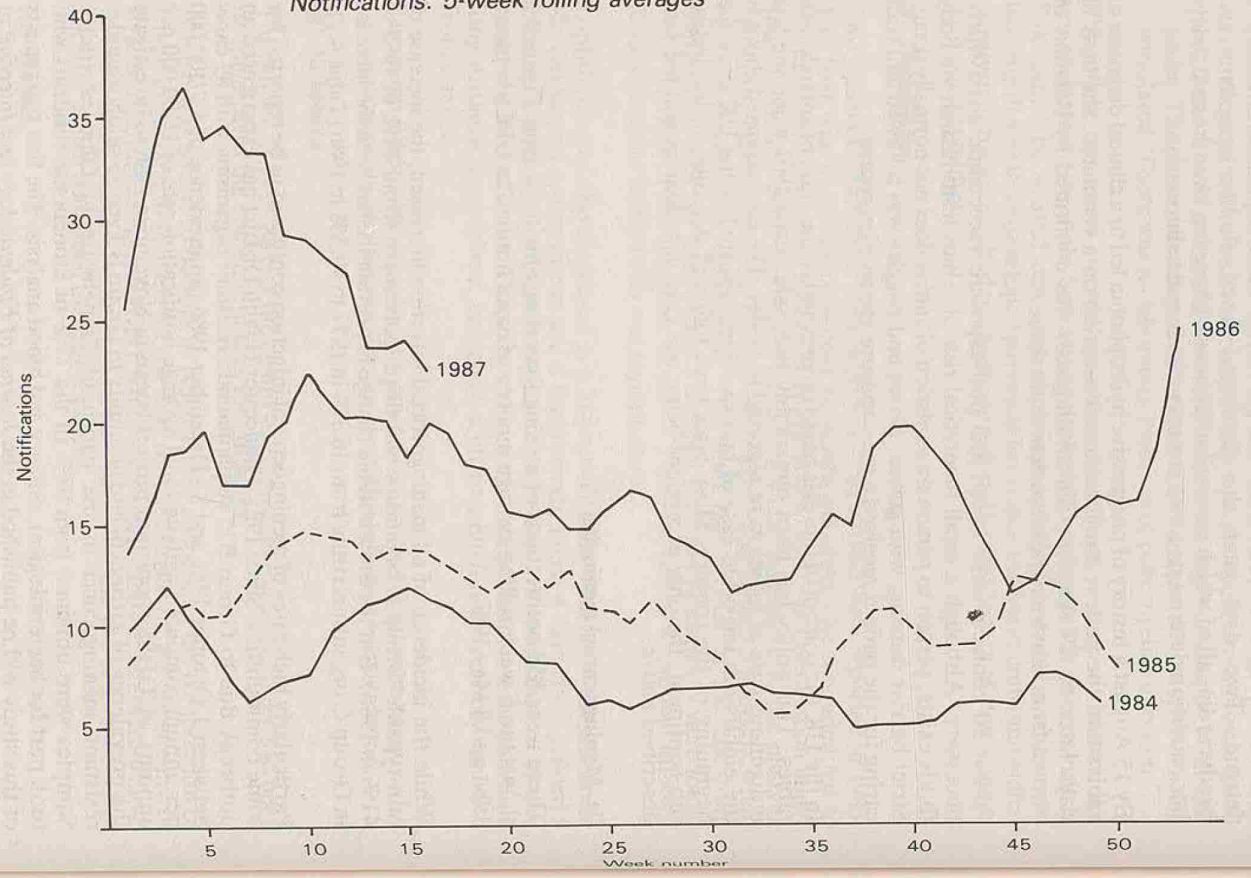


Table 4.7: *Meningococcal infections, 1977–1986, by Group as percentage of grouped organisms*

YEAR	GROUP A	GROUP B	GROUP C
1977	20.1	67.3	16.7
1978	17.4	61.4	17.4
1979	15.1	60.1	18.7
1980	12.1	62.7	20.0
1981	8.8	67.6	20.8
1982	3.9	67.1	26.0
1983	4.2	64.8	26.9
1984	3.9	65.8	27.5
1985	3.0	64.6	30.2
1986	3.3	54.8	40.3

experiencing an outbreak of meningococcal infection from this organism. The distribution of carriers by age-groups shows peak carriage rates in teenagers and young adults with a secondary peak in five to nine-year-old children. This study supports the hypothesis that Group B15 meningococcal infection is associated with low transmissibility but high virulence.

(j) Legionellosis

The *'First Report of the Committee of Inquiry into the outbreak of Legionnaires Disease in Stafford in April 1985'* was published in June 1986[5]. The Committee of Inquiry recommended that a Committee of Experts should be convened to consider biocides used against Legionella. Ministers accepted this recommendation and Dr E A Wright, Director of the Regional Public Health Laboratory, Newcastle upon Tyne, was appointed Chairman of the new Committee. Its terms of reference are 'to consider all aspects of the use of biocides including their efficacy and safety in minimising the risk of multiplication of *Legionella pneumophila* in hospital cooling tower water systems and other water systems in hospitals'. An interim report is expected towards the end of 1987.

In England and Wales, 188 cases (including 22 deaths) — 134 male, 53 female, 1 sex unknown — of Legionnaires disease were reported to the CDSC in 1986 as compared with 211 in 1985. Ninety two of the infections appear to have been acquired abroad. There were 7 clusters of 2 or more cases. Six clusters comprising 13 cases were associated with hotels abroad and there was one outbreak in Gloucester which produced 15 cases.

(k) Tuberculosis

The number of new cases of tuberculosis notified in England and Wales for 1986 was 5,992 and the number of registered deaths (including later effects of the disease) was 733. The trend over the past decade is given in Table 4.8. Examination of age and sex specific mortality data since 1979 reveals a consistent decline among males both for deaths attributed directly to tuberculosis and those attributed to 'late effects of TB'. In contrast, in females aged over 55 years no such consistent decline has occurred, and in some age-groups death rates have risen.

Table 4.8: *Tuberculosis — England and Wales, 1977–1986*

Year	*Notified new cases*	*Deaths*
1977	9,490	991
1978	9,673	900
1979	9,269	936
1980	9,144	903
1981	8,128	764
1982†	7,406	750
1983	6,800	699
1984	6,141	753
1985	5,857	773
1986	5,992*	733

† From 1982 onwards notifications associated with chemoprophylaxis are excluded
* Provisional

(l) Malaria

New cases of malaria notified within the UK almost invariably arise in people who have travelled to the UK from known malarious countries. Rarely, usually in the vicinity of an international airport, transmission by escaped infected mosquitoes can occur within the UK. (See *this Report* for 1983, p. 46).

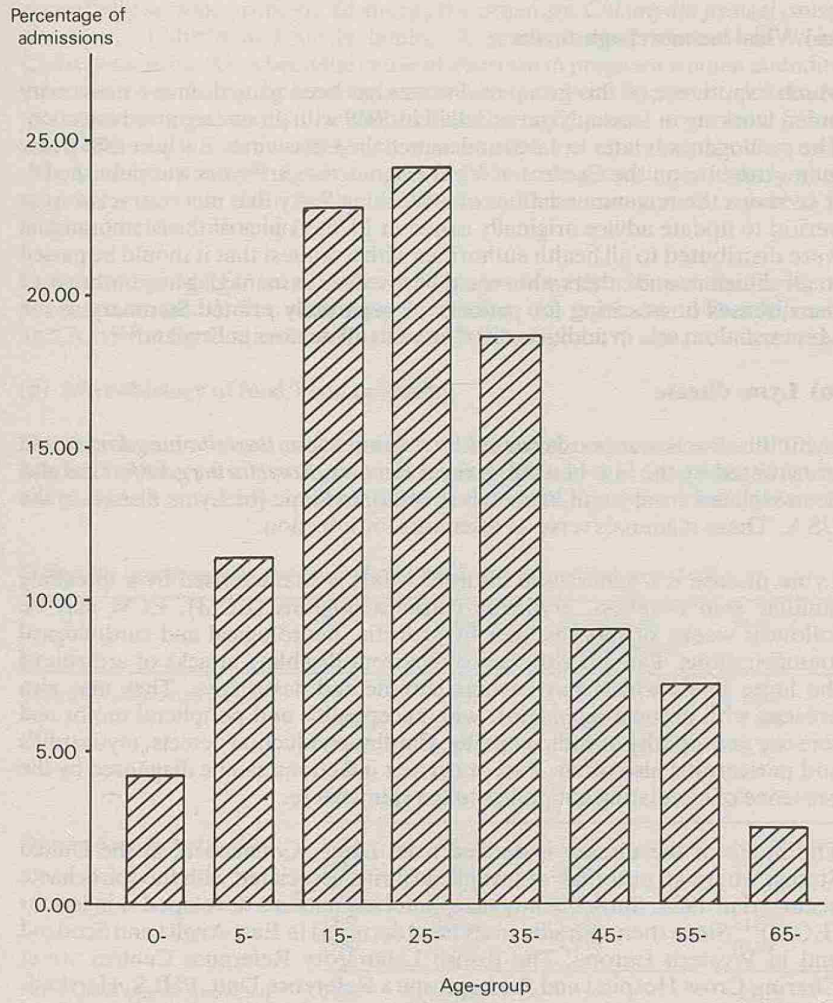
The annual cost of hospital in-patient treatment in England for malaria cases is of the order of £1 million. The number of cases occurring within the UK (1977 to 1986) and reported to the PHLS Malaria Reference Laboratory is shown in Table 4.9. Deaths average 6.5 each year. This table reveals no consistent trend. Figure 4.3 shows the age distribution of those admitted to hospital with malaria in England for the years 1982–84 (HIPE).

Table 4.9: *Malaria reported annually to PHLS Malaria Reference Laboratory (UK), 1977–1986*

Year	*Cases*	*Deaths*
1977	1,529	7
1978	1,909	10
1979	2,053	5
1980	1,670	9
1981	1,576	2
1982	1,471	10
1983	1,711	7
1984	1,934	6
1985	2,212	5
1986	2,209	4

Advice on malaria medication is provided for travellers in leaflet SA 35 '*Protect Your Health Abroad*' which is updated annually and distributed by the UK Health Departments to travel agents, vaccination centres and GPs. Travellers are advised to obtain detailed advice on drug prophylaxis from their GPs who may in turn consult the PHLS Malaria Reference Laboratory or other centres that manage infectious and tropical diseases.

Figure 4.3: *Malaria - England, 1982-1984, hospital admissions by age-group*



The emergence of resistant strains and the evidence of adverse effects for some of the drugs used require careful assessment and it is not surprising that consensus views on prophylactic regimens are difficult to obtain. The British National Formulary is a ready source of information for medical practitioners and an article on prophylaxis was published in the *Prescribers' Journal* in 1986[6].

(m) Viral haemorrhagic fevers

Much experience of this group of diseases has been gained since a missionary nurse working in Lassa, Nigeria, fell ill in 1969 with an undiagnosed infection. The pathogen was later isolated and named the Lassa virus. Early in 1986 a new memorandum on the Control of Viral Haemorrhagic Fevers was published[7,8]. It contains the recommendations of a Working Party that met over a two year period to update advice originally issued in 1976. Copies of the Memorandum were distributed to all health authorities with a request that it should be passed to all clinicians and others who would be involved in managing any outbreak of the diseases or in caring for patients. A separately printed Summary of the Memorandum was in addition distributed to all doctors in England[9,10].

(n) Lyme disease

Lyme disease is a zoonosis caused by a spirochaete *Borrelia burgdorferi* and transmitted by the bite of a tick (*Ixodes ricinus*). *Borrelia burgdorferi* has also been isolated from small mammals in areas endemic for Lyme disease in the USA. These mammals serve as reservoirs for infection.

Lyme disease is a generalised disorder which is characterised by a spreading annular skin eruption, erythema chronica migrans (ECM). ECM may be followed weeks or months later by arthritis, neurological and cardiological manifestations. Patients experience recurrent disabling attacks of arthritis of the large joints which may become chronic and destructive. They may also present with chronic meningitis, with encephalitis and peripheral motor and sensory neuropathy or radiculopathy. Cardiac conduction defects, myocarditis and pericarditis also occur. Past or current infections can be diagnosed by the presence of circulating antibodies to the spirochaete.

The name of the disease is derived from Lyme, Connecticut in the United States, where an outbreak of juvenile arthritis associated with the spirochaete occurred in 1985. Subsequently many infected patients developed skin lesions (ECM)[11]. Since then sporadic cases have occurred in East Anglia and Scotland and in Western Europe. The British Laboratory Reference Centres are at Charing Cross Hospital and the Leptospira Reference Unit, PHLS, Hertford. In 1986 there were 68 cases of Lyme diseases in the UK and the Republic of Ireland[12]. ECM was observed in 41 patients and 8 of them had associated neurological disease. The neurological disease without preceding skin lesion occurred in 13 further patients. Myocarditis was present in 1 patient. In 2 areas deer were found to be infected by *Borrelia burgdorferi* and 68% of 45 deer sera tested had significant antibody against *B. burgdorferi*. Early treatment with tetracycline or penicillin will abort the disease.

Several review articles on Lyme disease dealing with the ecology of ticks and with the epidimeology and laboratory diagnosis of the infection were published in the July 1987 issue of the PHLS *Microbiology Digest*.

(o) Ovine abortion

During 1986 veterinary and farming journals publicised the association between *Chlamydia psittaci* and human abortion[13,14]. Obstetricians working in agricultural areas should also be aware of this relatively uncommon but potentially serious problem. In sheep, the organism *Chlamydia psittaci* causes abortion, stillbirth and sickly lambs. A small number of cases in which *Chlamydia psittaci* has been the cause of abortion in pregnant women attending infective ewes during the lambing season have now been documented. Some of the women were severely ill with intravascular coagulation, acute renal failure and pulmonary oedema. Pregnant women who are attending lambing ewes should be informed about the dangers of *Chlamydia psittaci*, particularly when epidemics among their flocks are known. Three cases were reported in England in the Spring of 1986.

In December MAFF issued a Press Release about the risks of the disease to pregnant women[15]. The veterinary profession, the Agricultural Development and Advisory Service and the Health and Safety Executive also provide advice.

(p) Microbiology of food/Food poisoning

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 4.10

Table 4.10: *Food poisoning cases in England 1982–6 corrected notifications to OPCS*

	Year	*Formally notified*	*Ascertained by other means*	*Total*
Presumed contracted abroad	1982	866	421	1,287
	1983	1,006	559	1,605
	1984	1,062	685	1,747
	1985	1,022	653	1,675
	1986	1,352	837	2,189
Presumed contracted in GB	1982	7,022	3,085	10,107
	1983	8,651	3,503	12,454
	1984	9,607	5,403	15,010
	1985	8,862	4,168	13,030
	1986	11,239	4,858	16,097
Not known where contracted	1982	1,468	714	2,182
	1983	1,954	1,008	2,962
	1984	1,776	1,211	2,987
	1985	2,078	1,101	3,179
	1986	2,673	1,565	4,238
Totals	1982	9,356	4,220	13,576
	1983	11,611	5,410	17,021
	1984	12,445	7,299	19,744
	1985	11,962	5,922	17,884
	1986	15,264	7,260	22,524

Foot-Note: There were *53* reporting weeks in 1986.

gives extracts, relating to England only from the OPCS collations for 5 years 1982–6. The numbers of notifications and reports have increased steadily throughout the period and in 1986 outbreaks were the highest on record. Salmonellosis and campylobacter enteritis continue to be the most important foodborne infections in England. Provisional data from CDSC for 1986 show an increase of both laboratory identifications of Salmonellas to almost 15,000 and laboratory reports of campylobacter enteritis to around 24,500.

(i) Contamination of milk powder products

In December 1985 a food company withdrew its baby food mix powder products after an epidemiological investigation proved that *Salmonella ealing* contamination in the powder was causing illness in babies. The withdrawal operation, subsequent investigation and cleaning operation at the factory affected its viability and the parent company sold it. The new parent company immediately introduced procedures and controls which have led to the safe resumption of production and sale of baby food powders.

Following this experience major UK manufacturers of milk powder products reviewed their manufacturing procedures and quality controls and increased sampling surveillance of the factory environments and products. Mainly as a result of this increased surveillance there were 3 occasions in 1986 when manufacturers isolated Salmonella in product powders. In the detailed factory investigations which took place as a result of these findings Salmonellas were also discovered in the environments of the 3 factories concerned.

Withdrawals and detailed screening of various powder products were carried out with detailed factory cleaning and disinfection of surfaces and equipment. It was not possible to establish precisely how the milk powder became contaminated. Some form of post-process contamination was most likely because temperatures achieved during pasteurisation, evaporation and spray drying procedures will eliminate pathogenic organisms (including Salmonella) in the incoming raw milk.

The presence of Salmonella may be explained in several ways. Incoming raw milk may contain Salmonella which, while being handled in the factory prior to heat processing, contaminates surfaces, worker's clothing or equipment. This contamination may later be transferred to the area of the spray drier. Moisture must be eliminated from this environment because Salmonella accompanied by moisture and appropriate temperature can lead to the contamination of the internal surfaces of the drier. Salmonella may then contaminate milk powder during the final stages of the manufacturing process. It is also possible that birds carrying Salmonella may have entered the factories. Bird droppings were considered to be the source of a Salmonella contamination of a milk powder plant in Australia in 1977. The droppings on the roof led to contamination of the spray dry area. Another secondary hazard arises from animal faeces adhering to tanker tyres.

Following these experiences the Department, together with MAFF and the PHLS, met with the Association of British Preserved Milk Manufacturers to draw up guidelines for good hygienic practice in the manufacture of milk powders. A second draft of these guidelines prepared by the Association was under consideration at the end of 1986. They became available in 1987.

(ii) Milk

In March 1986 an outbreak of *Salmonella braenderup* in Cambridge involved 26 primary cases and several asymptomatic excreters. Pasteurised milk was identified as the vehicle of infection. A further 5 excreters of the salmonella were identified on a farm which supplied raw milk to the dairy associated with the outbreak. Organisms were found in bulk milk and dairy equipment at the dairy. The pasteurised milk may have been contaminated in the dairy by mixing with raw milk. The operational procedures in the plant were reviewed.

Salmonellosis from drinking raw cow's milk appears to be increasing, but infection due to pasteurised milk is exceptional. Milkborne disease in England and Wales between 1938 and 1982 was reviewed[16]. During this period there were 179 outbreaks of milkborne salmonellosis (3,818 cases and 7 deaths). Only one of them was associated with pasteurised milk. Outbreaks increased during the period under study — 10 between 1941 and 1950, 25 between 1951 and 1960, 50 between 1961 and 1970, 73 between 1971 and 1980 and 52 in the 4 years 1981–1984. The causative serotypes changed. Outbreaks due to *S. typhimurium* increased, whereas those due to *S. dublin* decreased during the 1970s. These changes have been attributed to changes in dairy practice such as increase in the size of herds, pipe-line milking and bulk collection of milk[17] as has been seen in Scotland. Compulsory pasteurisation would greatly reduce milkborne salmonellosis. However, recent outbreaks caused by dried and pasteurised milk emphasise that high standards of hygiene and maintenance in pasteurisation and milk drying plants are very important.

(iii) Salmonella contamination of creamed coconut

Late in 1986 a national distributor of confectionery and coconut products isolated a Salmonella in creamed coconut supplied by a small manufacturer in the West Midlands. The coconut is made into a paste and spread on to the surface of meals prepared in Indian restaurants. Detailed examination revealed several isolations of Salmonella. The Division of Enteric Pathogens (PHLS) confirmed 3 serotypes among the distributed products.

Sri Lankan desiccated coconut was found to be contaminated. Coconut supplied by brokers and scrapings of desiccated coconut taken from an emulsifier in the manufacturing plant were both affected.

A total of 5½ tonnes of packaged creamed coconut returned to the manufacturer and half of the Sri Lankan desiccated coconut were destroyed and the loss to the manufacturer was about £25,000. The manufacturing equipment was stripped and disinfected. A sample run using Ivory Coast desiccated coconut then proved negative for salmonella.

The incident was referred to the Sri Lankan High Commission who took the matter up with the Coconut Development Authority in Sri Lanka where the reasons for the contaminated import were investigated early in 1987.

No illness from the consumption of the desiccated creamed coconut was reported in the UK.

(iv) Salmonella in imported liquid whole egg

Two workers in a bakery in the North East of England became ill with *Salmonella enteritidis* after handling liquid egg used for glazing confectionery

products. A total of 120 employees at the bakery were screened. Six reported gastro-intestinal symptoms but only 2 were positive the *Salmonella enteritidis*. They were thought to have become infected as a result of handling the liquid whole egg.

The liquid egg came from an importer in the North East who obtained it from Belgium for processing and despatch from a liquid egg processing plant. The consignment at the bakery had been imported as a pasteurised product and had been given no further treatment prior to despatch.

The Liquid Egg (Pasteurisation) Regulations 1963 require imports of liquid whole egg to be pasteurised before or on arrival in the UK. The failure to pasteurise the product had been the cause of illness in the bakery workers and the importer seemed to have breached the Regulations.

All liquid egg stock at the bakery was returned for further pasteurisation and intensive sampling. Imported products are now being processed as a routine by the importer/processor. The Belgian Food Inspection Service was contacted and action was taken at the premises of the Belgian exporting plant.

The bakery produced a number of products in which liquid egg is used as an ingredient or as a glaze. Survival of low levels of Salmonellae after bakery processing is possible. The whole question of both liquid egg and eggs in shell being used in bakery and the survival of Salmonellae during the heat processing is being investigated.

(v) Shellfish

Twelve (12) incidents of gastro-enteritis associated with molluscan shellfish, particularly cockles, occurred during the 1986 pre-Christmas period; 250 persons were ill. Small round structured viruses and parvoviruses were found in stool specimens of affected persons and on one occasion pathogens were isolated from the shellfish samples. Outbreaks were similar to those reported in the winter of 1985/86 when there were 62 incidents affecting over 500 people.

The cockles originated from Leigh-on-Sea. Early in 1987 urgent action has been taken in the following areas:

(i) Upgrading the manufacturing processes in the Leigh cockle sheds.

(ii) A voluntary ban was applied to fishing cockles from known polluted estuarial water areas;

(iii) Improvement in labelling and identification of products; and

(iv) The Leigh cockle fishmen will meet regularly with the City of London Port Health staff and the Southend Borough Environmental Health staff to review procedures.

(vi) Gastro-enteritis on a cruise ship

During the months of May to June 1986 a cruise ship had outbreaks of gastro-enteritis on 7 successive cruises. Initially the causative organism was considered to be an enterotoxigenic strain of *Escherichia Coli* but later investigations and

isolations from faecal specimens of affected passengers revealed a small round Norwalk-like virus. It was thought to be associated with the ship's water supply. The victims developed a mild febrile illness with vomiting and diarrhoea which lasted about 24 hours and appeared on the 7th or 8th day of the cruises. Intensive improvements in sanitation procedures included increasing chlorine levels of the water supply, improved general hygiene in the galleys, and throughout the ship. Combined with the use of bottled drinking water these measures controlled the outbreak.

(q) Vaccination and immunisation

Table 4.11 shows the number and the percentage of children completing primary courses of vaccination over the last 10 years. The target level for immunisation against measles, whooping cough, diphtheria, tetanus, poliomyelitis and rubella is 90%. There has been an improvement in recent years and in 1985 86% of schoolgirls were vaccinated against rubella by the age of 14 years. However much greater increase in uptake of pertussis vaccine is desirable.

Table 4.11: *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 1975–1985*

Year	Diptheria	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	487.8 (75)	510.2 (75)	495.6 (75)	240.6 (38)	323.7 (47)	564.4 (74)
1977	490.0 (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 (73)
1979	528.6 (80)	543.7 (80)	533.6 (80)	205.3 (35)	331.7 (51)	563.9 (73)
1980	545.9 (81)	560.2 (81)	549.7 (81)	285.6 (41)	351.6 (53)	617.9 (81)
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)	584.8 (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 (72)*

* Provisional figure

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(r) Sexually transmitted disease

Clinics in England reported 605,306 (332,840 male and 272,466 female) new cases in 1985 (Tables 4.12 and 4.13). This represents an increase of 6.2% over 1984, being greater in females (9%) than in males (4%). The majority of the increase in case-load was attributable to attendances for non-specific genital infection (10,172 additional cases) and for diseases classified as 'other conditions', both those requiring and not requiring treatment (9,105 and 9,211 additional cases respectively). A large rise also occurred in attendance for genital warts, resulting in an increase of 18% over 1984.

The problems produced by the human immunodeficiency virus (HIV) influenced the work in clinics markedly. Clinics in London continued to treat increasing numbers of cases of AIDS and HIV infections, and smaller numbers of cases attended clinics elsewhere in England. The availability of tests for HIV antibody resulted in diagnosis of individuals with asymptomatic infection. These data have been presented elsewhere in this report.

Over the years clinics have adapted to increasing numbers of patients by increasing their management efficiency. However, patients with AIDS/HIV infection or concerned about such infection, require more time than those with other sexually transmitted diseases. This greatly adds to the already increasing workload being undertaken by the clinics.

(i) Gonorrhoea

A steady decline in the reported incidence of gonorrhoea masks important differences in secular trends at different ages. Age-specific data are presented in Figures 4.4 and 4.5 and illustrate how in recent years the decline in disease rate has, in both sexes, been greatest at older ages, particularly in those aged 35–44 years and to a lesser extent those aged 25–34 years. Gonorrhoea infection rates provide important clues to current patterns of sexual behaviour and the steepening in the rate of decline apparent from 1982 in males aged over 35 years, may represent a change in behaviour among homosexual men following publicity concerning the risk of AIDS infection. Of concern though is the lack of recent decline in males and females aged 16–19 years who have a high underlying disease rate. In fact, there was a small rise in disease rate in this age-group in both sexes in 1985. Monitoring of such age-specific trends will be a matter of considerable importance in the years to come.

Isolates of β-lactamase-producing totally penicillin-resistant *Neisseria gonorrhoea* fell for the second consecutive year. This contrasts with the situation in many other countries where these isolates are either increasing or maintaining a high incidence.

(ii) Syphilis

Between 1984 and 1985 there was a substantial fall in the total number of new cases of syphilis attending GUM clinics (Table 4.12). This mainly reflected a 35% decline in the incidence of primary and secondary syphilis. Figures 4.6 and 4.7 present age-specific time trends for these forms of the disease. In women, although there are inconsistencies, particularly at older ages where numbers of cases are few, a general pattern of decline is apparent in all age-groups. A more

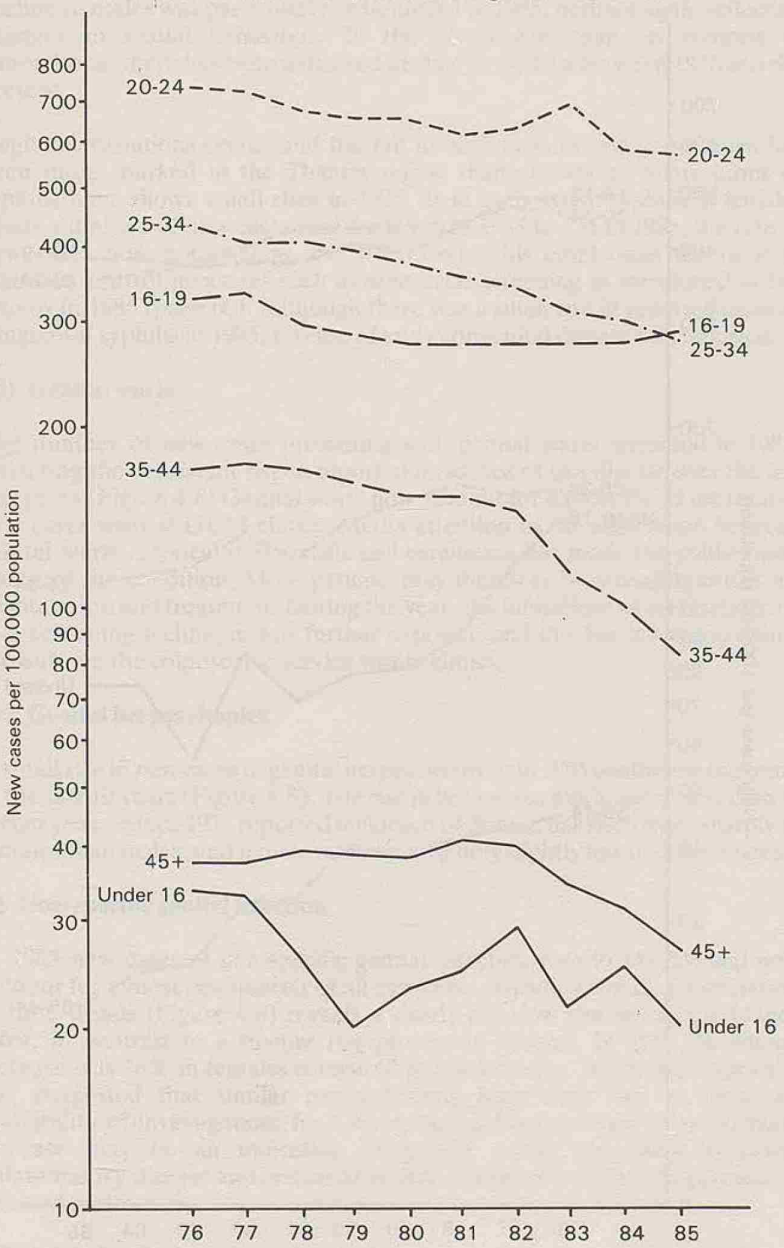
Table 4.12: *Cases of syphilis and gonorrhoea reported by NHS GUM clinics in England for the year ended 31 December 1985 with the figures for the year ended 31 December 1984 in parentheses*

	Total		Male		Female	
Syphilis						
Early	1,229	(1,702)	1,032	(1,475)	197	(227)
Primary and secondary only	691	(1,032)	625	(923)	66	(109)
Late	1,107	(1,167)	759	(815)	348	(325)
Congenital	68	(64)	28	(25)	40	(39)
Gonorrhoea						
All forms	46,314	(47,662)	28,759	(29,791)	17,555	(17,871)
Post-pubertal gonorrhoea						
All ages	46,294	(47,643)	28,751	(29,789)	17,543	(17,854)
Under 16 years	317	(360)	73	(94)	244	(266)
16–19 years	10,286	(10,295)	4,438	(4,398)	5,848	(5,897)
20–24 years	18,370	(18,285)	11,363	(11,188)	7,007	(7,097)
25–34 years	12,830	(13,343)	9,231	(9,709)	3,559	(3,634)
35–44 years	3,299	(3,952)	2,615	(3,187)	584	(765)
45 years and over	1,192	(1,408)	1,031	(1,213)	161	(195)

Table 4.13: *Other sexually transmitted diseases reported in England in the year ended 31 December 1985 with the figures for 31 December 1984 in parentheses*

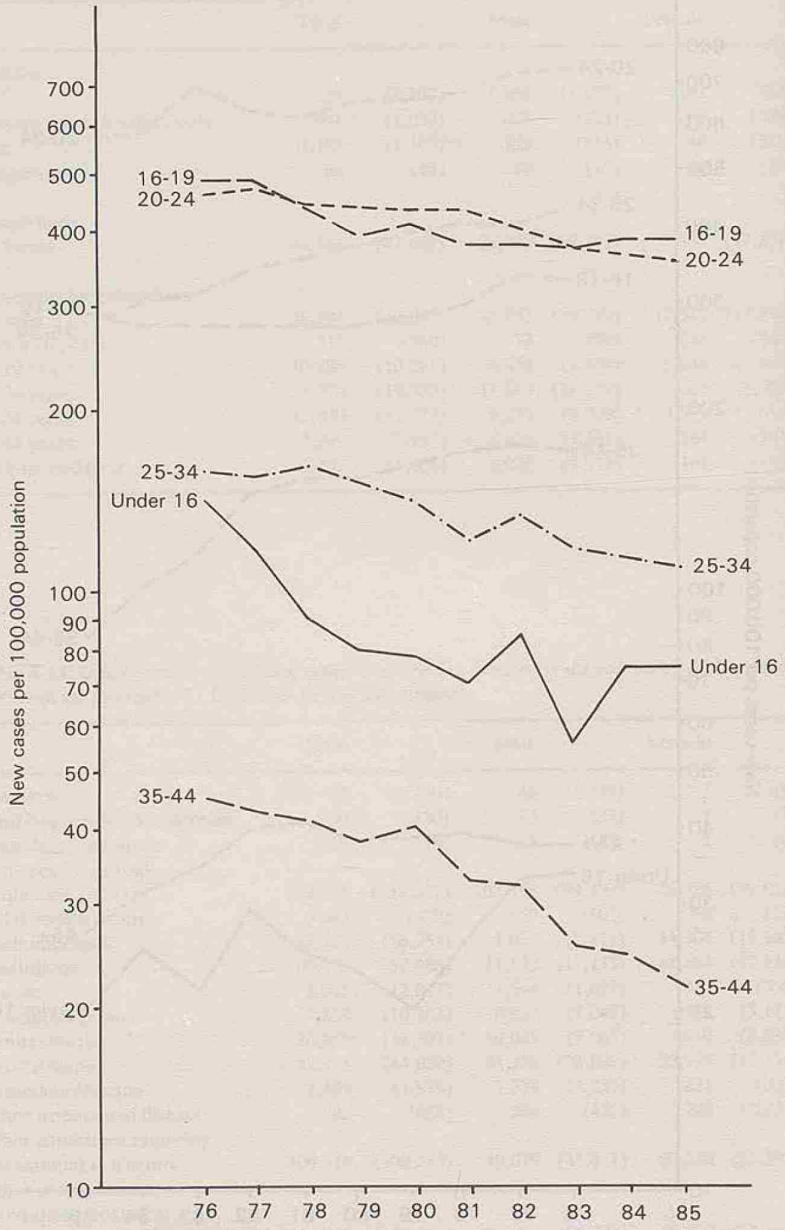
	Total		Male		Female	
Chancroid	61	(40)	48	(31)	13	(9)
Lymphogranuloma venereum	30	(30)	23	(23)	7	(7)
Granuloma inguinale	17	(19)	15	(15)	2	(4)
Non-specific genital infection (NSGI)	149,524	(139,352)	103,198	(99,497)	46,326	(39,855)
NSGI with arthritis	487	(428)	459	(407)	28	(21)
Trichomoniasis	15,381	(16,751)	1,077	(1,211)	14,304	(15,540)
Candidiasis	60,517	(59,688)	11,853	(12,133)	48,664	(47,535)
Scabies	2,015	(2,043)	1,644	(1,693)	351	(350)
Pediculosis pubis	9,859	(10,183)	6,817	(7,042)	3,042	(3,141)
Genital herpes	18,935	(18,301)	10,025	(9,663)	8,910	(8,638)
Genital warts	52,177	(44,050)	31,250	(26,899)	20,927	(17,151)
Genital molluscum	2,195	(1,928)	1,374	(1,230)	821	(698)
Other treponemal diseases	592	(658)	384	(425)	208	(233)
Other conditions requiring treatment in a centre	109,318	(100,213)	49,079	(47,817)	60,239	(52,396)
Other conditions not requiring treatment in a centre	130,162	(120,951)	82,242)	(76,789)	47,920	(44,162)
Other conditions referred elsewhere	5,318	(4,718)	2,754	(2,502)	2,564	(2,216)
Overall Total	605,306					

Figure 4.4: *New cases of post-pubertal gonorrhoea, males, age specific rates per 100,000 population, England 1976-1985*



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

Figure 4.5: *New cases of post-pubertal gonorrhoea, females, age specific rates per 100,000 population, England 1976-1985*



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

consistent decline has also occurred in males although above the age of 35 years the decline did not start until the early 1980s. In the three older age-groups the decline in males was particularly pronounced in 1985, perhaps again reflecting changes in sexual behaviour. In the 16–19 age-group, in contrast to gonorrhoea, there has been a marked decline in syphilis between 1976 and the present.

Regional variations occur, and the fall in both syphilis and gonorrhoea has been more marked in the Thames region than elsewhere. Some forms of syphilis have shown small rises in 1985, as in early latent syphilis in females where numbers of new cases rose from 118 in 1984 to 131 in 1985, the rate of new cases now approaching the 1975 level. This emphasises the need to maintain control measures such as ante-natal screening as mentioned in *this Report* in 1985 (page 60). Although there was a small rise in reported cases of congenital syphilis in 1985, no case of early congenital disease was reported.

(iii) Genital warts

The number of new cases presenting with genital warts increased in 1985, reflecting the consistent rise in reported incidence of this disease over the last few years (Figure 4.8) Genital warts now account for almost 9% of the total of new cases seen at GUM clinics. Media attention to the association between genital warts, cervical dyskaryosis and carcinoma has made the public more aware of the condition. More patients may therefore be attending clinics for examination and treatment. During the year, the limitations of cervical smears as a screening technique was further exposed, and this has led to increasing pressure on the colposcopic service within clinics.

(iv) Genital herpes simplex

A small rise in new cases of genital herpes occurred in 1985 continuing the trend of the last 10 years (Figure 4.8). The rise in both sexes was however less than in recent years. Since 1975 reported incidence of disease has risen more sharply in females than males, and female rates are now only slightly less than male rates.

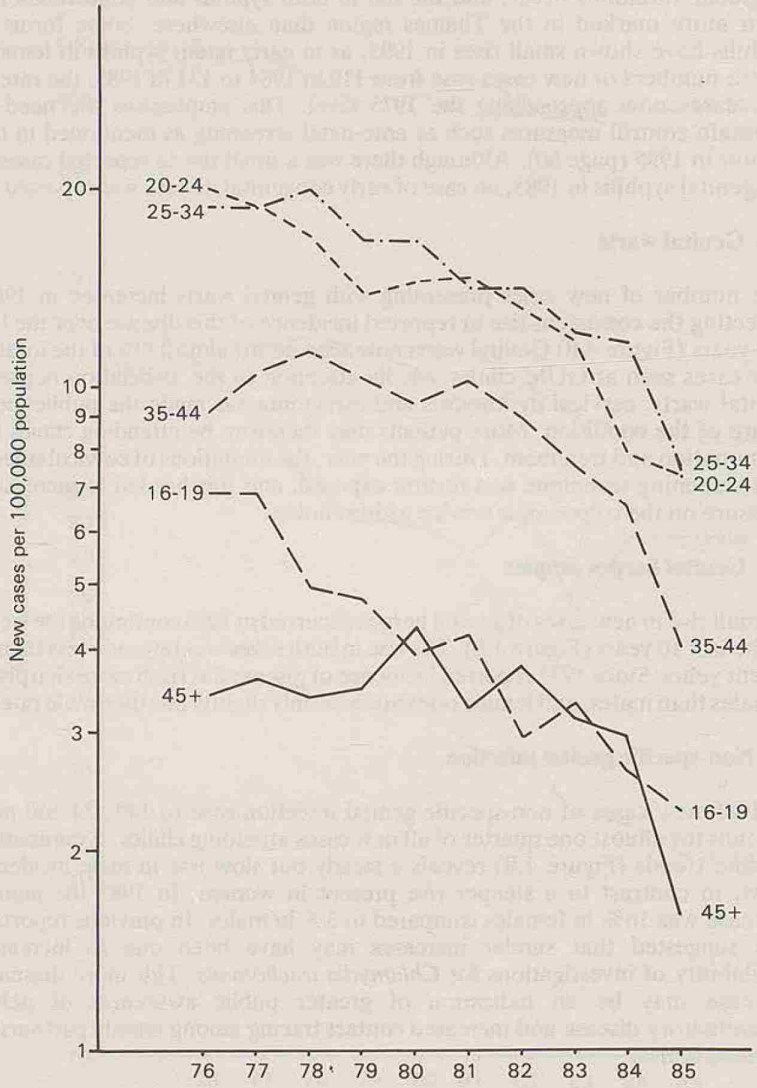
(v) Non-specific genital infection

In 1985 new cases of non-specific genital infection rose to 149,524 and now account for almost one quarter of all new cases attending clinics. Examination of time trends (Figure 4.8) reveals a steady but slow rise in male incidence rates, in contrast to a steeper rise present in women. In 1985 the annual increase was 16% in females compared to 3% in males. In previous reports it was suggested that similar increases may have been due to increased availability of investigations for *Chlamydia trachomatis*. This more dramatic increase may be an indication of greater public awareness of pelvic inflammatory disease and increased contact tracing among female partners of infected males.

(vi) Trichomoniasis and candidiasis

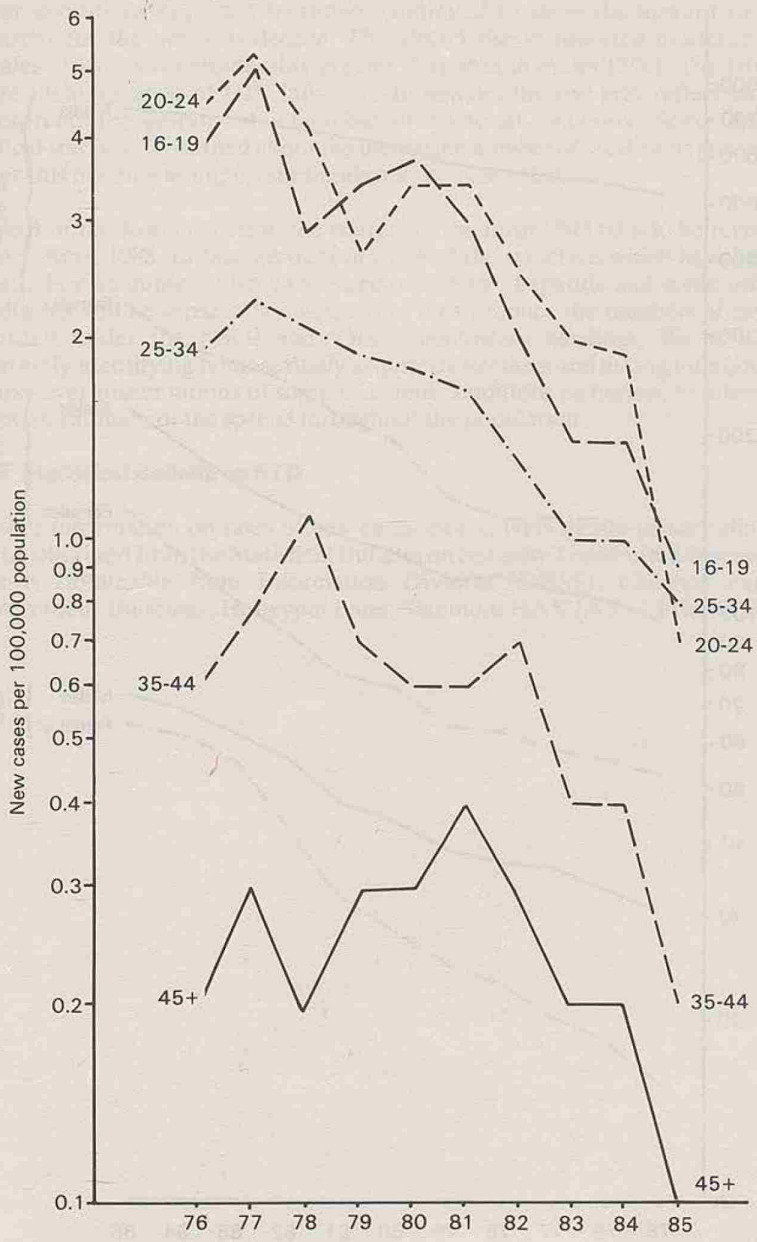
These diseases show differing trends. A steady fall in new cases of trichomoniasis has occurred in both sexes since 1980. The decline has continued in 1985 with a 12% fall in males and a 9% fall in females. Candidiasis rose steadily in both sexes over the same period until 1985, when the rise continued in females, but there was a small fall in males.

Figure 4.6: *New cases of primary and secondary syphilis, males 1976-1985, age specific rates per 100,000 population, England*



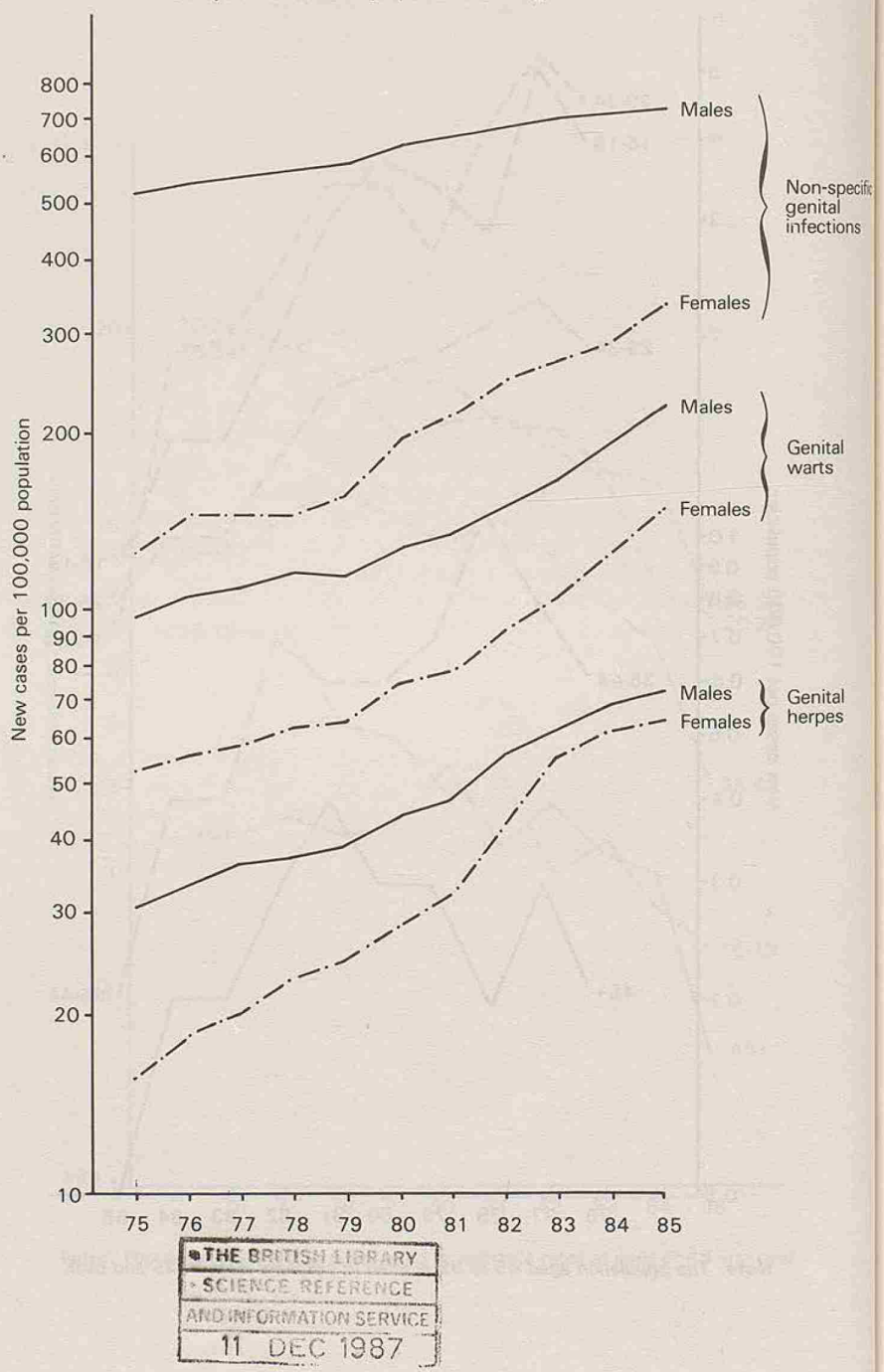
Note: *Population aged 45 to 59 is used to calculate rates at ages of 45 and over.*

Figure 4.7: *New cases of primary and secondary syphilis, females, 1976-1985, Age specific rates per 100,000 population, England*



Note: *The population aged 45 to 59 is used to calculate rates of 45 and over.*

Figure 4.8: *New cases of selected diseases, males and females, 1975-85, rates per 100,000 population, England*



(vii) Other conditions

Other conditions requiring treatment continued to show the upward trend apparent for the previous decade. The 1984/5 rise in reported incidence in females (14%) was considerably greater than that in males (2%). The latter figure includes cases of HIV infection. In females the rise may reflect more widespread recognition of anaerobic or bacterial vaginosis. Some clinic medical staff are concerned about the increasing number of conditions grouped under this heading as important trends may be concealed.

As part of the Körner review, the content of the form SBH 60 is to be revised from 1 April 1988, to take account of some of the criticisms which have been raised. For example, chlamydia, vaginosis, HIV, hepatitis and some other conditions will be separately identified to try to reduce the numbers of cases recorded under the NSGI and 'Other conditions' headings. We will be separately identifying homosexually acquired infections and asking for a count of first-ever presentations of some recurrent conditions eg herpes, to attempt to get an estimate of the spread throughout the population.

(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), Cannons Park, Government Buildings, Honeypot Lane, Stanmore HAY IAY — Price £1.00.

5. PRIMARY HEALTH CARE

This report for 1985 (p. 65) referred to the steady progress in primary health care in recent years with the improvement of premises, the employment of a wider range of staff and the development of new patterns of care, particularly for the elderly and people with mental illness and mental handicap. Simultaneously research, often undertaken in academic units, has increased knowledge about the activities in general practice and the opportunities which exist. The work of the Royal College of General Practitioners (RCGP) Research Unit based in Birmingham on the National Morbidity Surveys which are carried out in census years and cover roughly 300,000 patients and over 100 GPs, has shown how very slowly the nature of patients' complaints change although the nature of the GP's care may be different. The main categories of disease remain the same although practitioners are initiating more preventive procedures than they used to. Studies of workload, including the survey carried out jointly by the DHSS and the General Medical Services Committee (GMSC) in 1985/6 and other surveys from Canterbury and Manchester[1,2] revealed more about the pattern of a doctor's working day, the contact rates, and how these relate to types of area and list size. The Canterbury work supports the view that doctors differ in their interests, some being more interested in minor surgery, others in prevention and some with a particular concern for matters like the health problems of women. Workers in York identified other differences, for example groups of young doctors who invest highly in their practices often at a cost of their personal income, and other older doctors who tend to be more traditional in their approach but who show a greater willingness to undertake home visiting. It is sometimes stated that while the total costs of the family practitioner service are considerable, what GPs actually do is not known. That is only partly true; ignorance mainly concerns the way they do it, their style and the quality of their care. Like most aspects of the NHS general practice exhibits wide variations in performance.

The Department commissioned a project in the Northern Region in 1982 to see if GPs could improve their performance by working together in small groups to draw up explicit standards for care. Ten groups of trainers from 65 practices, working with the Department of Child Health and the Health Care Research Unit, have been setting clinical standards for 5 common childhood illnesses.

Scrutiny of medical records and interviews with parents are being used to test whether standard setting changes clinical conduct and improves the welfare of the children.

Other research work is helping to define the information required for good practice. Criteria for clinical records have been proposed. An increasing number of doctors are using microcomputers and this helps to define what should be recorded to ensure that patients receive the services they need, particularly in the field of preventive medicine and anticipatory health care. Some doctors keep computer held summaries of patients' past medical histories. With the increase in community care for the elderly and people with mental illness, and the many different disciplines involved effective communication and good records are essential. The Department is supporting a project in Wales using a 'smart card', which resembles a credit card but contains a memory and sometimes a minute processor. This allows the transfer of information between GPs and pharmacists and enables the use of technology in

treatment to be explored. Such systems are likely to have an increasing impact on clinical care.

Prescribing has also been a subject of interest because it is a useful model for methods of improving the quality of care. Research has explored the acceptability of feeding back prescribing information; when the information is concise and well presented it is welcomed.

This encouraged a study of the effectiveness of information to see whether or not GPs alter their prescribing habits if given data about their own performance and an opportunity to discuss them with other practitioners. Almost certainly this resulted in more thoughtful prescribing, and there were demonstrable reductions in the frequency and cost per item of prescribing once GPs were encouraged to discuss their routines with colleagues. A follow-up study of the same doctors 2 years later showed that most of the effects had worn off — though an increase in generic prescribing persisted. Continuing interest seems necessary to bring about lasting change. There has been an increase in the number of doctors seeking information about their own prescribing, in many cases so that they can discuss it with colleagues. There is also a small but growing interest in the development of local formularies. These initiatives by the medical profession itself are warmly welcomed.

Some developments have involved action research. The Norfolk Health Authority has developed a scheme which provides additional support to GPs, by attaching community dieticians, physiotherapists and psychiatric nurses to groups of practices. This is a welcome and practical example of a new way of organising primary health care. The King's Fund has also been looking at new approaches in the context of its London Programme and at the use of development workers. Good premises make it possible for the various disciplines to work with each other to the benefit of the patient. The work of the Medical Architecture Research Unit demonstrates how older premises can be converted to provide high quality accommodation for primary health care teams, particularly in London. The closeness of team working has been shown to correlate with the ability to house staff under the same roof, which remains a problem in some inner cities.

The Primary Health Care Discussion Document

In spite of this increasing knowledge and the progressive development in primary health care in recent years the government believed that good though the services were, they could be better still.

The introduction to the annual report for 1985 noted the publication in April 1986 of the Primary Health Care Discussion Document (CMND 9771)[3]. Simultaneously the Cumberlege Report on Community Nursing Services was published[4]. During the consultation period Ministers chaired 10 public meetings in various parts of the country on the proposals in these documents and at the end of the year Ministers began to consider the comments received.

The government stated, in publishing the Primary Health Care Discussion Document, that it aims were to improve primary health care services by making them more responsive to the needs of patients, raising standards of care, emphasising the promotion of good health and the prevention of illness, and

ensuring that the taxpayer received value for money. Were pharmacists being used to best advantage? Was the full potential of nurses being realised? Could family doctors be helped to make more effective use of their particular skills and knowledge?

Among other proposals the discussion document suggested the introduction of allowances to encourage and reward higher standards of performance, that the proportion of a doctor's pay which was related to the number of patients on his list should be greater, that there should be a compulsory retirement age for GPs, and '24 hour retirement' should be phased out. The government wished to see more detailed information about practices made more widely available, improvements to the complaints procedures and simplification of the system of changing doctors. A greater emphasis on primary care in medical education, and on prevention, was proposed with an increasing role for family doctors in the medical aspects of surveillance of children under school age.

The foreword of the Cumberlege Report said that nurses were at their most effective when they and GPs worked together as an active primary health care team delivering comprehensive care to the consumer.

Its main proposals were that community nursing services should be planned, organised and provided on a neighbourhood basis of 10–25,000, that more and better use could be made of nursing skills, that the effectiveness of primary health care teams needed to be improved and that consumer groups should have a stronger voice.

Topics for discussion

The trend to the organisation of health care services on a local basis is an important development which predates the Cumberlege Report. For a number of years many local authorities have been organising and delivering services like housing from a locally based unit rather than from a central and distant office. The experience has been that housing and social services are more accessible at the neighbourhood centres and that problems are put right more quickly and sensitively. In the health service this concept is also being explored, partly because of the need to provide care for the mentally ill and the mentally handicapped in the community rather than distant hospitals. GPs have, of course, always worked within and for a local population. Now that health authorities and local authorities are considering organistion on a similar basis there is a new opportunity to integrate services for the benefit of the patient.

Quality has become a major national issue both in public services and in industry. Indeed it is one of the hallmarks of a profession that it sets its standards and monitors performance and the establishment of the General Medical Council in 1858 was symbolic of this. From the viewpoint of the public health, quality is one of the most important issues in primary care, and this is recognised both by the GMSC and the RCGP. Much of the 1966 Charter was based upon the relationship between remuneration and the facilities provided. The Charter was largely about the structural features which made for quality in the general medical services.

Government can encourage changes but there is a limit to its ability directly to improve the standard of care provided to individual patients. As independent

contractors, GPs bear, both individually and as members of a profession, the main responsibility in this field. During the last 20 years it has become accepted practice for the practices to which vocational trainees are attached to be examined. The Joint Committee on Professional Training for General Practice identifies standards for such practices and indirectly this influences many others. The GMSC of the BMA has, from the mid-sixties onwards, argued that there should be a relationship between the payments system and the work undertaken by GPs. In 1979 a special conference of Local Medical Committees (LMCs) approved the principle of clinical audit of professional standards in general practice. The 'Quality Initiative' of the RCGP launched in 1985, took this a stage further, suggesting that there was support in the profession for the principle of linking performance review with a financial incentive. Since then many local projects have started, often based on peer review of the process by which care is delivered. Individual doctors and nurses are trying out new ideas and are increasingly providing information for leaflets for their patients. Some are producing annual practice reports for LMCs, colleagues or patients to explain what they are trying to achieve. Initiatives in this field include the launching of the King's Fund's Quality Assurance Project.

Disbursing as it does massive sums of public money on health services, the government is inevitably concerned with the quality of services and the value obtained. In the Primary Health Care Discussion Document it proposed the explicit financial recognition of high professional standards of practice. In the USA it has been customary for years for doctors to work within a framework of performance review. But direct linkage of pay with quality assessment and assurance is uncommon. The British proposal would therefore have broken new ground and there were inevitably questions about how such assessments could be fair; and the reasons for the rejection of awards in 1966 were re-iterated in 1986 during the consultation period. While performance related pay has been introduced elsewhere in the NHS, for example for senior managers of regional and district health authorities, the problems in medicine are certainly complex and require a consideration of clinical outcomes. Fundamental questions exist; who should judge, how could excessive rigidity in assessment and interference in clinical freedom be avoided? Those aspects of performance which are easily measured are not necessarily those of most importance to health care. Indeed consumer surveys show that the elements of care most significant to doctors are not always the same as those which matter to their patients. Should the same standards apply in the inner cities as in rural areas? Is there a problem of confidentiality? If money is to be used as well as the professional incentives of pride in one's work, an incentive needs to be devised not only to reward the good, but also to encourage all doctors to provide better standards of care. There are lessons to be learned from industry where rewards are seldom restricted to an elite, so that they are not seen as out of reach and irrelevant to the large majority of the staff on whose performance the well being of the organisation depends.

Such issues must be explored. But because they reach the heart of professional practice, doctors should take a lead. The problem of quality assessment has not been solved but it is not insoluble. The issue is now on the public agenda; there was support from consumer organisations as well as the profession for the idea of performance related pay. Commentators have suggested that there is a need for an incentive to innovate, evaluate and improve patient care. The tide is in the right direction and the way ahead may be for the profession and the health

departments to enter into constructive discussions. Practice of the highest quality is more widespread than it has ever been, with the rising quality of entrants, the impact of compulsory vocational training and academic departments of general practice, the introduction of clinics for women and children, increased use of information technology and improvement of premises. What is now necessary is to raise the standard of all practices to that of the best.

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6. CLINICAL SERVICES

(a) Committee on Safety of Medicines

(i) Terms of reference

The Committee on Safety of Medicines (CSM) was established in 1970 under Section 4 of the Medicines Act 1968. Its terms of reference are:

> To give advice with respect to safety, quality and and efficacy in relation to human use of any substances or article (not being an instrument, apparatus or appliance) to which any provision of the Medicines Act 1968 is applicable.
>
> To promote the collection and investigation of information relating to adverse reactions or the purpose of enabling such advice to be given.

(ii) Meetings

The Committee held 11 meetings during 1986. Two 2-day meetings, in May and September, were necessary to enable the Committee to complete its business.

(iii) Consideration of applications

Table 6.1 provides a statistical summary of applications for product licences (PLs) and clinical trial certificates (CTs) considered by the Committee during 1986.

Table 6.1: *CSM — 1986 Applications**

	Product Licences	*Clinical Trial Certificates*
First Consideration by CSM		
Grant advised	30 (32)	9 (6)
Grant provisionally not advised	47 (87)	1 (2)
Advice following hearings and written representations		
Hearings — Grant advised	7 (5)	3 (1)
Hearings — Grant not advised	5 (5)	0 (0)
Written representations — Grant advised	17 (16)	0 (0)
Written representations — Grant not advised	3 (13)	1 (0)

*1985 figures are given in brackets.

The total number of applications referred to the Committee for its advice in 1986 was about one-third fewer than in recent years. The reason for this may have partly been a reflection of a temporary manpower shortage in the medical secretariat to the Committee, which resulted in very few applications being assessed for presentation to the Committee in the last few months of 1986. Of the product licence applications which were considered by the Committee for the first time in 1986 39% were considered to be satisfactory for the grant of a licence, which compares with an average of 28% over the 3 preceeding years.