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THE BURDEN OF LUNG DISEASE

2nd Edition



A Statistics
Report from the
British Thoracic
Society 2006



Foreword

When the British Thoracic Society (BTS) first published the *Burden of Lung Disease* back in 2001, it marked an historic moment.

Statistics concerning over 30 lung conditions were pulled together for the first time into one document – and the huge health and economic burden of respiratory illness was laid bare. Deaths from respiratory disease had overtaken those from ischaemic heart disease. The results shocked the media and politicians alike but reflected what respiratory health professionals had known for some time: diseases of the lung are a growing and real issue that cannot be ignored.

We are now five years ‘down the line’ and our follow up report the *Burden of Lung Disease 2nd Edition* brings a mixed picture – with good and bad news.

The bad news is that the overall burden of respiratory disease is growing – it now costs the NHS an incredible £6.6 billion. Millions of ‘bed days’ every year are taken up by respiratory patients – and the most commonly reported illnesses in babies and children are lung-related.

The good news is that the overall death rate is improving – with one in five people dying from respiratory disease in the UK in 2004, compared with one in four in 1999. Despite this, the UK still has an unenviable record compared with our EU partners.

So what trends lie behind the stark statistic that one fifth of the population currently dies from a respiratory related illness? While deaths from lung cancer are falling, our report shows that mortality from other lung diseases such as tuberculosis, mesothelioma (an asbestos-related cancer of the lung) and occupational lung disease is on the up.

Respiratory illnesses are not all caused by smoking – there are genetic, nutritional, poverty-related and environmental factors involved in many conditions. It is a complex picture that requires specific responses in prevention, management and treatment.

We must also not forget the growing illness and suffering caused by these diseases. The extent of hospital admissions for chronic lung problems as well as GP consultations is reaching crisis proportions, emphasising the impact of lung diseases on patients and their carers, as well as the NHS.

So how do we tackle this wave of lung disease facing the NHS? Well, some progress has already been made – by dedicated NHS staff working together – and also in local and national policy.

The combination of Government action to reduce smoking, various pieces of guidance from NICE, new targets in primary care policy, and the National Action Plan for Tuberculosis are all welcome. However this present ‘policy patchwork’ fails to wholly cover many major disease areas and can only work if it leads to a co-ordinated strategy on the ground, backed by appropriate resources, to improve NHS services for people with lung diseases. Evidence suggests we have a long way to go.

We hope this publication will once again prove invaluable to those with an interest in the field – especially those working in the NHS and those who are developing both national and local policies and services to help reduce the burden of lung disease across the UK.

This report confirms that we urgently need to provide an improved NHS service for those with lung disease. There are signs that we are moving in the right direction but it is vital that we now all work together to achieve this.

Professor John Macfarlane, Chairman, British Thoracic Society



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Summary

Mortality

- ▶ More people die from respiratory disease – 117,456 deaths in 2004 – than from ischaemic heart disease (106,081)
- ▶ Respiratory disease now kills one in five people
- ▶ Lung cancer kills more women than breast cancer
- ▶ 27,478 people died as a result of Chronic Obstructive Pulmonary Disease (COPD) in 2004
- ▶ The number of deaths from occupational lung disease has risen by 15% between 1998 and 2004
- ▶ Social inequality causes a higher proportion of deaths in respiratory disease than any other disease area – 44% of all deaths from respiratory disease are associated with social class inequalities compared with 28% of deaths from ischaemic heart disease
- ▶ The standardised mortality ratio for respiratory diseases shows a threefold difference across all social classes

Morbidity/Illness

- ▶ The most commonly reported long-term illnesses in children and babies are conditions of the respiratory system
- ▶ Lung cancer is the second most common cancer in both men and women
- ▶ Survival rates for lung cancer are very low – the five-year survival rate for men is 6.3% and 7.5% for women
- ▶ In 2004, nearly 1 in 5 males and 1 in 4 females consulted a GP for a respiratory complaint
- ▶ In 2003/2003 nearly 25 million certified sickness absence days related to respiratory disease (not including days lost from self-certified illness)

Treatment

- ▶ Respiratory disease is the second most common illness responsible for emergency admission to hospital
- ▶ Cases of chronic obstructive pulmonary disease take up more than one million (1,099,440) hospital bed days a year in England
- ▶ More than 62 million prescriptions were used in the prevention and treatment of respiratory disease in 2004

Costs

- ▶ Respiratory disease cost the UK £6.6 billion in 2004 – £3.0 billion in NHS care costs, £1.9 billion in mortality costs and £1.7 billion in morbidity costs

All the above data is based on UK statistics

Introduction

Background

In 2001, the British Thoracic Society (BTS) published the *Burden of Lung Disease*. This report, compiled by researchers at the Department of Public Health at the University of Oxford, presented statistics covering the full range of respiratory diseases. Now, five years later, the BTS publishes the *Burden of Lung Disease 2nd Edition*, an update compiled by the Lung and Asthma Information Agency at St George's, University of London.

Aims

The *Burden of Lung Disease* aims to:

- Quantify the numbers of deaths and amount of disease caused by respiratory disease in the UK today;
- Compare the burden of respiratory disease with that of other major killers – ischaemic heart disease and cancer;
- Highlight recent trends in respiratory disease;
- Describe current levels of treatment for respiratory disease;
- Identify health inequalities in respiratory disease;
- Provide information on current economic costs of respiratory disease.

The report is divided into four main sections: mortality, morbidity, treatment and economic costs.

Defining respiratory disease

The World Health Organisation's (WHO) International Classification of Diseases (ICD) includes a chapter called 'Diseases of the Respiratory System'¹. This includes a broad range of respiratory diseases, such as acute respiratory infections, pneumonia, influenza, bronchitis, emphysema, asthma, chronic obstructive lung diseases, pleurisy and pneumoconiosis. However, other conditions that affect the respiratory system² such as respiratory tuberculosis and respiratory cancers, which are treated and managed by respiratory health professionals in the National Health Service, are included in other ICD Chapters.

In this report, respiratory disease is defined as including all diagnoses in the WHO's respiratory disease chapter, plus respiratory tuberculosis, cancers of the respiratory system, pulmonary circulatory disease, sarcoidosis of the lung, cystic fibrosis, congenital and perinatal respiratory disease and sleep apnoea.

Not all sources of data used to compile the *Burden of Lung Disease 2nd Edition*, permit us to combine the comprehensive range of respiratory diseases listed above. Some data are restricted to the WHO chapter 'Diseases of the Respiratory System', and will thus underestimate the full burden of respiratory disease. In addition, some important data are not routinely collected, such as out-patient attendances where, for example, many NHS sleep apnoea patients are seen and treated. Due to these limitations in the data sources, every table clearly indicates which diseases were combined to produce the 'all respiratory disease' figure. All our data sources have been clearly and fully listed in each table.

¹ Chapter J in ICD10 (10th revision) and Chapter VIII in ICD9 (9th revision).

² The respiratory system consists of the nasal cavities, pharynx, larynx, trachea, bronchus and lung.

Mortality

Total mortality

Diseases of the respiratory system account for 1 in 5 deaths in the UK today. In 2004, respiratory disease caused more than 117,000 deaths: 58,500 deaths in men and 59,000 deaths in women (Table 1.1 and Figures 1.1a, 1.1b and 1.1c).

More people die from respiratory disease in the UK than ischaemic heart disease (coronary heart disease) (106,000 deaths in 2004). Only non-respiratory cancers account for slightly more deaths than respiratory disease (122,500 deaths in the UK). This excess over ischaemic heart disease is most noticeable in women, where 19% of all deaths are attributable to respiratory disease compared with 16% attributed to ischaemic heart disease (Table 1.1 and Figures 1.1a, 1.1b and 1.1c).

Mortality by type of respiratory disease

Respiratory cancers are some of the biggest respiratory killers – nearly 35,000 people died from different respiratory cancers (30% of all respiratory deaths). These include the larynx (790), pleural mesothelioma (605) and, most importantly, the trachea, bronchus and lung¹ (33,000) (Table and Figure 1.2)

Pneumonia is another major respiratory killer, causing 34,000 deaths in the UK in 2004 (29% of all respiratory deaths). More women die from pneumonia than from any other respiratory disease: 20,700 deaths or 35% of all respiratory deaths in women (Table and Figure 1.2).

Chronic obstructive lung disease, mainly chronic obstructive pulmonary disease, is the third biggest cause of respiratory death, accounting for more than one fifth (23%) of all respiratory deaths (Table and Figure 1.2).

The remaining fifth of respiratory deaths (21,300 in 2004) are caused by a wide range of respiratory diseases, including tuberculosis, cystic fibrosis, acute respiratory infections, pulmonary circulatory disease, congenital anomalies and pneumoconioses (Table 1.2).

Mortality from lung cancer

Lung cancer remains the biggest cancer killer in the UK, with more than one in five cancer deaths attributed to lung cancer. In 2004, 24% of cancer mortality in men, and 18% of cancer mortality in women was due to lung cancer (Table and Figure 1.3).

Lung cancer continues to kill more women than breast cancer: 13,600 deaths due to lung cancer in women compared with 12,400 deaths due to breast cancer, and this gap has widened since 1999 (Table and Figure 1.3).

Trends in death rates in the UK

Deaths rates from respiratory disease in the UK have decreased by 40% since 1970. Over the same period, reported death rates from ischaemic heart disease fell by 53% and death rates from all cancers (excluding lung cancer) fell by 9% (Table 1.4).

However, the fall in respiratory disease deaths is partly due to changes in the rules on how pneumonia deaths are coded in the UK. In particular, the introduction of a coding rule in 1984 led to a sharp fall in the death rate for all respiratory disease between 1983 and 1984. Changes in coding rules between 1992-1993 and 2000-2001 also affected respiratory deaths.

Taking into account these coding changes, death rates from respiratory disease have changed little since 1984, whilst death rates from ischaemic heart disease have halved in the same period (Table and Figure 1.4).

The relative burden of respiratory disease in the UK is thus unchanging as the burden of ischaemic heart disease is decreasing.

¹ Cancer of the trachea, bronchus and lung is commonly known as lung cancer and will be referred to as such throughout this report.

Occupational lung disease

In 2002, there were 2,333 deaths from occupational lung disease in Great Britain. More than three quarters of these deaths were from mesothelioma, a type of cancer of the lining of the lung (pleura), caused by inhalation of asbestos dust (Table 1.5).

The number of deaths due to occupational lung disease has been rising rapidly since the early 1990s. This is mostly due to the large increase in mesothelioma deaths: from 1,097 in 1992 to 1,862 in 2002, an increase of 70% (Table and Figure 1.5).

Socio-economic differences

There are clear social class gradients in respiratory disease mortality. Social class gradients are steeper for respiratory disease mortality than for mortality in general, with deaths from chronic obstructive pulmonary disease and tuberculosis showing the most marked social class differentials.

Men aged 20-64 employed in unskilled manual occupations are around 14 times more likely to die from chronic obstructive pulmonary disease, and 9 times more likely to die from tuberculosis, than men employed in professional roles (Table 1.6).

Social inequality causes a higher proportion of deaths in respiratory disease than in any other disease area. It is estimated that in the early 1990s, 3,800 deaths and 29,000 working years were lost each year in men aged 20-64 years due to social class inequalities in death rates from respiratory disease. It is also estimated that 44% of all deaths from respiratory disease are associated with social class inequalities, and would have been prevented if all men had the same death rate for respiratory disease as men employed in professional and managerial classes (Table 1.7).

International comparisons

Data from the World Health Organisation (WHO) shows that death rates from diseases of the respiratory system in the UK are higher than both the European average and the European Union (EU) average. This difference is particularly marked for females: death rates from respiratory disease for females in the UK are about three times higher than those for females in France and Italy (Table 1.8).

Five countries of the former USSR (Kyrgyzstan, Tajikistan, Kazakhstan, Moldova and Uzbekistan) together with Ireland and Malta are the only seven countries which had death rates from respiratory disease higher than the UK in 2001 (Table and Figure 1.8).

WHO trend data show that between 1970 and 2003, death rates from respiratory disease fell by 46% in the UK, compared with falls of 50% for the EU and 51% for the WHO European region. As before, part of this decrease in the UK is due to the coding changes in the UK, which led to sharp falls between 1983 and 1984, and again between 2000 and 2001. Respiratory disease death rates prior to 2000 were nearly double that of the WHO European region (Table and Figure 1.9).

Death rates from lung cancer in 2001 in females in the UK were more than twice the European Region average, and were only exceeded by Denmark, Iceland and Hungary.

Table 1.1 Deaths by cause, sex and age. United Kingdom, 2004

		All ages	Under 35	35-44	45-54	55-64	65-74	75+
All causes (A00-R99, V01-Y89)	Males	284,014	7,683	7,424	14,601	32,143	61,740	160,423
	Females	303,794	4,037	4,491	9,596	20,806	43,396	221,468
	All	587,808	11,720	11,915	24,197	52,949	105,136	381,891
All respiratory disease (A15, A16, A19, A31.0, A37, A40, B90, C30-C34, C38.4, C39, C45.0, D02, D14, D15, D86.0, E84, I26-I28, J00-J99, P20-P28, Q31-Q34)	Males	58,351	467	499	1,825	6,302	13,600	35,658
	Females	59,105	411	398	1,394	4,126	9,455	43,321
	All	117,456	878	897	3,219	10,428	23,055	78,979
Influenza and pneumonia (J10-J18)	Males	13,231	81	137	277	607	1,503	10,626
	Females	20,755	61	73	178	372	1,205	18,866
	All	33,986	142	210	455	979	2,708	29,492
Cancers of the respiratory system (C30-C34, C38.4, C39, C45.0, D02, D14, D15)	Males	20,818	24	165	992	3,728	6,833	9,076
	Females	13,903	20	150	797	2,283	4,048	6,605
	All	34,721	44	315	1,789	6,011	10,881	15,681
Chronic obstructive lung disease (J40-J44, J47)	Males	14,592	10	33	251	1,193	3,371	9,734
	Females	12,886	5	12	174	929	2,858	8,908
	All	27,478	15	45	425	2,122	6,229	18,642
Asthma (J45, J46)	Males	502	61	32	43	69	82	215
	Females	879	47	39	51	79	114	549
	All	1,381	108	71	94	148	196	764
Pulmonary circulatory disease (I26-I28)	Males	1,495	24	27	70	170	370	834
	Females	2,431	31	42	84	161	397	1,716
	All	3,926	55	69	154	331	767	2,550
All diseases of the circulatory system (excluding pulmonary circulatory disease) (I00-I99 excl I26-I28)	Males	101,973	530	1,503	4,424	10,666	22,334	62,516
	Females	110,890	289	592	1,513	4,016	12,803	91,677
	All	212,863	819	2,095	5,937	14,682	35,137	154,193
Ischaemic heart disease / CHD (I20-I25)	Males	58,675	137	849	3,052	7,435	14,189	33,013
	Females	47,406	37	195	616	2,021	6,644	37,893
	All	106,081	174	1,044	3,668	9,456	20,833	70,906
Stroke (I60-I69)	Males	23,012	111	263	621	1,430	3,961	16,626
	Females	37,477	99	210	535	1,084	3,298	32,251
	All	60,489	210	473	1,156	2,514	7,259	48,877
All cancers (excluding cancers of the respiratory system) (C00-D48 excl C30-C34, C38.4, C39, C45.0, D02, D14, D15)	Males	61,114	759	1,080	3,281	8,834	16,705	30,455
	Females	61,398	749	1,640	3,950	8,589	13,794	32,676
	All	122,512	1,508	2,720	7,231	17,423	30,499	63,131
Colo-rectal cancer (C18-C21)	Males	8,658	27	123	431	1,329	2,599	4,149
	Females	7,511	30	108	277	812	1,661	4,623
	All	16,169	57	231	708	2,141	4,260	8,772
Breast cancer (C50)	Males	70	1	1	3	11	20	34
	Females	12,374	103	666	1,382	2,280	2,555	5,388
	All	12,444	104	667	1,385	2,291	2,575	5,422
Digestive diseases (K00-K93)	Males	13,175	249	873	1,775	2,285	2,520	5,473
	Females	15,493	166	477	966	1,349	2,275	10,260
	All	28,668	415	1,350	2,741	3,634	4,795	15,733
External causes of mortality and morbidity (V00-Y93)	Males	11,965	3,402	2,097	1,538	1,225	1,021	2,682
	Females	7,603	948	585	598	539	651	4,282
	All	19,568	4,350	2,682	2,136	1,764	1,672	6,964
All other causes	Males	37,436	2,276	1,372	1,758	2,831	5,560	23,639
	Females	49,305	1,474	799	1,175	2,187	4,418	39,252
	All	86,741	3,750	2,171	2,933	5,018	9,978	62,891

Source: Office for National Statistics (2005). Mortality statistics by cause. Series DH2 no. 31. The Stationery Office, London
 General Register Office (2005) Annual Report 2004. General Register Office for Scotland.
 General Register Office (2005) Annual Report 2004. Northern Ireland Statistics and Research Agency.

Figure I.1a Deaths by cause. United Kingdom, males and females, 2004

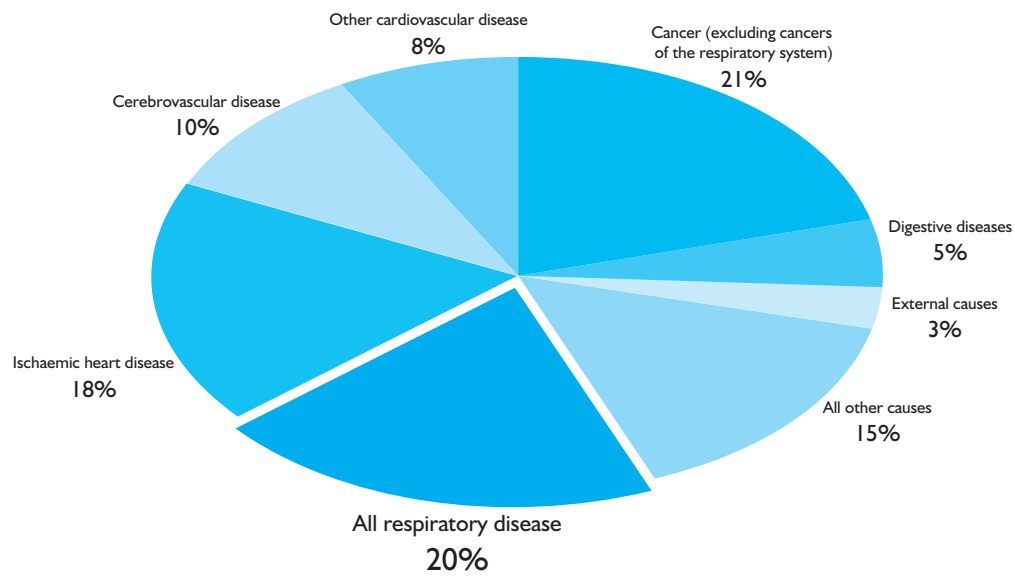


Figure I.1b Deaths by cause. United Kingdom, males, 2004

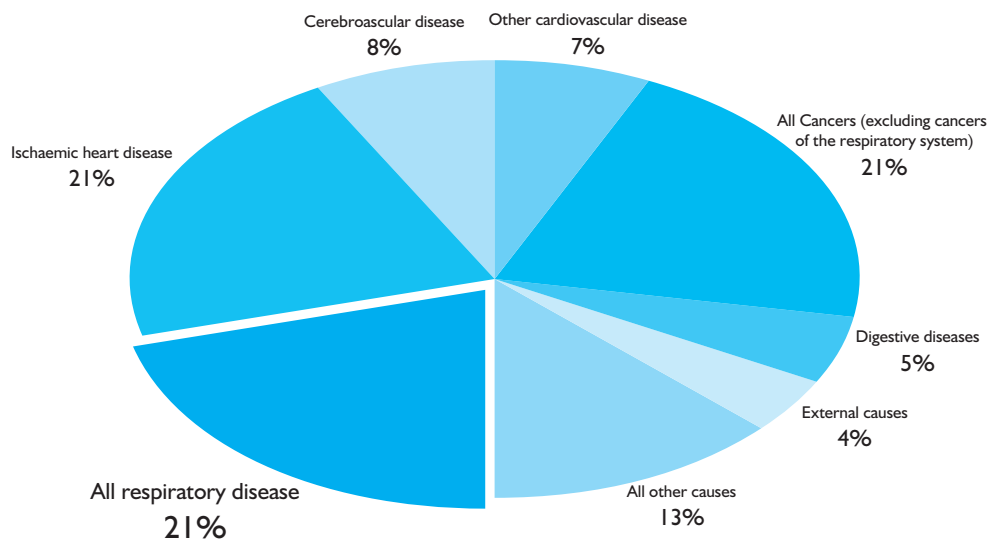


Figure I.1c Deaths by cause. United Kingdom, females, 2004

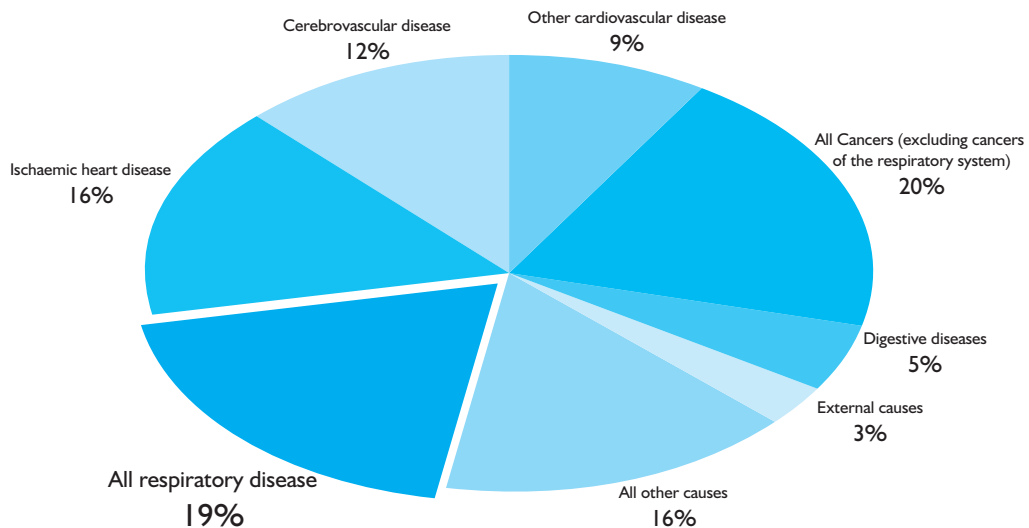


Table 1.2 Respiratory disease deaths by cause, sex and age. United Kingdom, 2004

		All ages	Under 35	35-44	45-54	55-64	65-74	75 & over
All respiratory disease (A15, A16, A19, A31.0, A37, A40, B90, C30-C34, C38.4, C39, C45.0, D02, D14, D15, D86.0, E84, I26-I28, J00-J99, P20-P28, Q31-Q34)	Males	58,351	467	499	1,825	6,302	13,600	35,658
	Females	59,105	411	398	1,394	4,126	9,455	43,321
	All	117,456	878	897	3,219	10,428	23,055	78,979
Tuberculosis (A15, A16, A19, B90)	Males	226	8	16	19	38	51	94
	Females	162	10	10	3	9	29	101
	All	388	18	26	22	47	80	195
Respiratory tuberculosis (A15, A16)	Males	175	6	12	17	28	38	74
	Females	103	4	8	3	5	18	65
	All	278	10	20	20	33	56	139
Miliary tuberculosis (A19)	Males	23	2	4	2	3	9	3
	Females	27	6	2	0	3	5	11
	All	50	8	6	2	6	14	14
Late effects of tuberculosis (B90)	Males	28	0	0	0	7	4	17
	Females	32	0	0	0	1	6	25
	All	60	0	0	0	8	10	42
Cancers of the respiratory system (C30-C34, C38.4, C39, C45.0, D02, D14, D15)	Males	20,818	24	165	992	3,728	6,833	9,076
	Females	13,903	20	150	797	2,283	4,048	6,605
	All	34,721	44	315	1,789	6,011	10,881	15,681
Cancer of the nasal cavities (C30, C31)	Males	74	4	7	5	12	26	20
	Females	60	1	1	3	7	11	37
	All	134	5	8	8	19	37	57
Cancer of the larynx (C32)	Males	623	1	6	52	162	183	219
	Females	167	0	3	17	28	38	81
	All	790	1	9	69	190	221	300
Cancer of the trachea, bronchus and lung (C33, C34)	Males	19,520	15	151	907	3,433	6,396	8,618
	Females	13,568	19	145	769	2,233	3,963	6,439
	All	33,088	34	296	1,676	5,666	10,359	15,057
Cancer of the pleura (C38.4)	Males	42	0	0	2	6	15	19
	Females	25	0	0	5	3	8	9
	All	67	0	0	7	9	23	28
Cancer of other and ill-defined respiratory sites (C39)	Males	10	0	0	1	1	4	4
	Females	6	0	0	0	1	4	1
	All	16	0	0	1	2	8	5
Mesothelioma of the pleura (C45.0)	Males	538	0	1	23	114	205	195
	Females	67	0	0	3	11	22	31
	All	605	0	1	26	125	227	226
Carcinoma in situ of middle ear and respiratory system, and benign tumours of the respiratory system (D02, D14, D15)	Males	11	4	0	2	0	4	1
	Females	10	0	1	0	0	2	7
	All	21	4	1	2	0	6	8
Pulmonary circulatory disease (I26-I28)	Males	1,495	24	27	70	170	370	834
	Females	2,431	31	42	84	161	397	1,716
	All	3,926	55	69	154	331	767	2,550
Pulmonary embolism (I26)	Males	1,340	13	24	59	152	324	768
	Females	2,178	13	35	70	134	346	1,580
	-							
Other pulmonary heart disease (I27)	Males	151	9	3	11	18	45	65
	Females	246	17	7	13	27	50	132
	All	397	26	10	24	45	95	197
Other diseases of pulmonary vessels (I28)	Males	4	2	0	0	0	1	1
	Females	7	1	0	1	0	1	4
	All	11	3	0	1	0	2	
Acute respiratory infections (J00-J06, J20-J22)	Males	554	20	17	11	31	75	400
	Females	886	20	5	14	31	65	751
	All	1,440	40	22	25	62	140	1,151
Influenza and pneumonia (J10-J18)	Males	13,231	81	137	277	607	1,503	10,626
	Females	20,755	61	73	178	372	1,205	18,866
	All	33,986	142	210	455	979	2,708	29,492
Influenza (J10, J11)	Males	13	1	1	0	2	1	8
	Females	16	0	0	0	0	0	16
	All	29	1	1	0	2	1	24
Pneumonia (J12-J18)	Males	13,218	80	136	277	605	1,502	10,618
	Females	20,739	61	73	178	372	1,205	18,850
	All	33,957	141	209	455	977	2,707	29,468

		All ages	Under 35	35-44	45-54	55-64	65-74	75 & over
Chronic obstructive lung disease (J40-J44, J47)	Males	14,592	10	33	251	1,193	3,371	9,734
	Females	12,886	5	12	174	929	2,858	8,908
	All	27,478	15	45	425	2,122	6,229	18,642
Asthma (J45, J46)	Males	502	61	32	43	69	82	215
	Females	879	47	39	51	79	114	549
	All	1,381	108	71	94	148	196	764
Pneumoconioses (J60-J70)	Males	1,721	14	17	41	111	292	1,246
	Females	1,303	12	14	28	57	132	1,060
	All	3,024	26	31	69	168	424	2,306
Congenital and perinatal respiratory disease * (P20-P28, Q31-Q34)	Males	113	111	0	0	1	0	1
	Females	83	80	1	0	1	1	0
	All	196	191	1	0	2	1	1
Respiratory disorders specific to the perinatal period (P20-P28)	Males	100	100	0	0	0	0	0
	Females	66	66	0	0	0	0	0
	All	166	166	0	0	0	0	0
Congenital anomalies of the respiratory system (Q31-Q34)	Males	13	11	0	0	1	0	1
	Females	17	14	1	0	1	1	0
	All	30	25	1	0	2	1	1
Other respiratory disease (A31.0, A36, A37, A40, D86.0, E84, J30-J39, J80-J99)	Males	5,099	114	55	121	354	1,023	3,432
	Females	5,817	125	52	65	204	606	4,765
	All	10,916	239	107	186	558	1,629	8,197
Pulmonary mycobacteria infection, whooping cough and streptococcal septicaemia. (A31.0, A37, A40)	Males	80	17	8	11	6	15	23
	Females	69	13	9	3	5	12	27
	All	149	30	17	14	11	27	50
Sarcoidosis of the lung (D86.0)	Males	19	0	2	1	4	11	1
	Females	12	0	0	0	2	7	3
	All	31	0	2	1	6	18	4
Cystic fibrosis (E84)	Males	59	47	9	1	2	0	0
	Females	80	69	8	2	1	0	0
	All	139	116	17	3	3	0	0
Other conditions of the upper respiratory tract (J30-J39)	Males	40	3	2	2	3	6	24
	Females	30	2	0	2	3	7	16
	All	70	5	2	4	6	13	40
Other respiratory disease (J80-J99)	Males	4,901	47	34	106	339	991	3,384
	Females	5,626	41	35	58	193	580	4,719
	All	10,527	88	69	164	532	1,571	8,103

* Deaths aged 28 days and over only.
Source: Office for National Statistics (2005). Mortality statistics by cause. Series DH2 no. 31. The Stationery Office, London
General Register Office (2005) Annual Report 2004. General Register Office for Scotland.
General Register Office (2005) Annual Report 2004. Northern Ireland Statistics and Research Agency.

Figure 1.2 Respiratory disease deaths by cause. United Kingdom, 2004

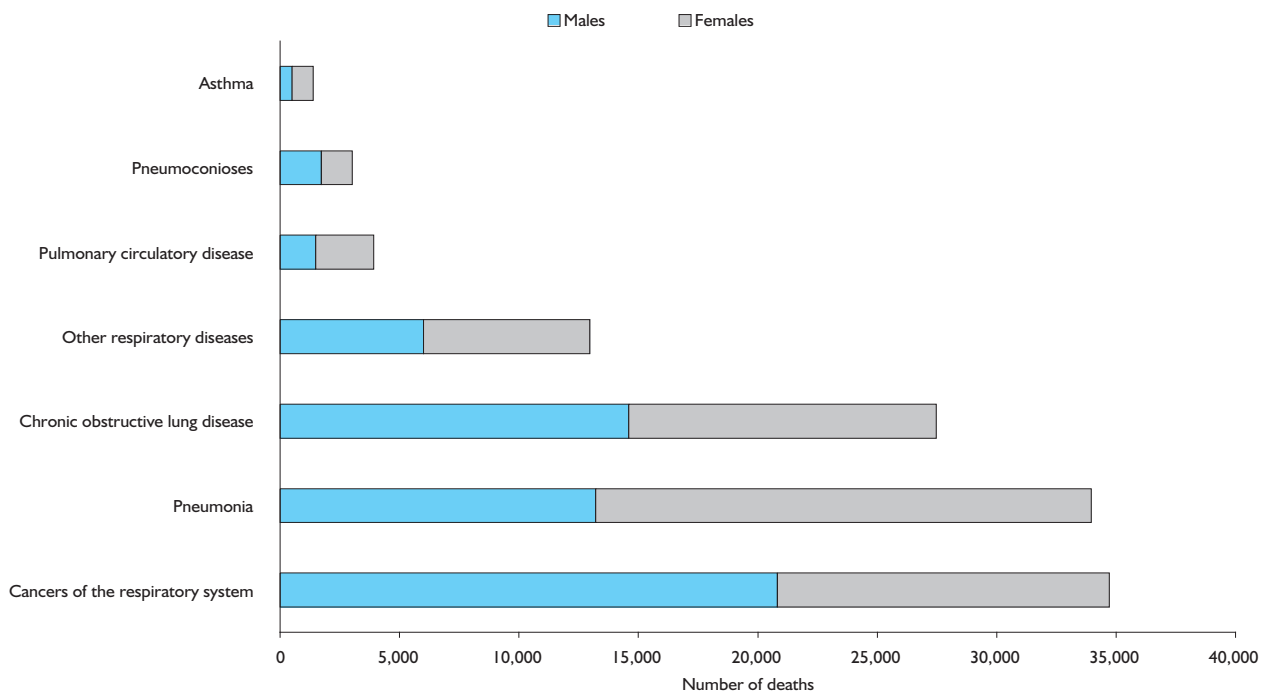


Table 1.3 Cancer deaths by type of cancer, sex and age. United Kingdom, 2004

		All ages	Under 35	35-44	45-54	55-64	65-74	75 & over
All malignant cancers (C00-C99)	Males	80,175	746	1,207	4,209	12,416	23,133	38,464
	Females	73,485	738	1,760	4,683	10,759	17,553	37,992
	All	153,660	1,484	2,967	8,892	23,175	40,686	76,456
Oesophagus (C15)	Males	4,669	4	85	353	921	1,423	1,883
	Females	2,568	3	15	104	286	560	1,600
	All	7,237	7	100	457	1,207	1,983	3,483
Stomach (C16)	Males	3,609	10	61	147	459	1,065	1,867
	Females	2,284	16	50	96	193	488	1,441
	All	5,893	26	111	243	652	1,553	3,308
Colon (C18)	Males	5,276	14	71	237	743	1,572	2,639
	Females	5,057	17	61	160	522	1,145	3,152
	All	10,333	31	132	397	1,265	2,717	5,791
Rectum (C19-C21)	Males	3,382	13	52	194	586	1,027	1,510
	Females	2,454	13	47	117	290	516	1,471
	All	5,836	26	99	311	876	1,543	2,981
Liver (C22)	Males	1,592	18	28	121	295	503	627
	Females	1,122	13	13	78	146	284	588
	All	2,714	31	41	199	441	787	1,215
Pancreas (C25)	Males	3,408	5	48	252	600	1,047	1,456
	Females	3,653	11	28	168	518	920	2,008
	All	7,061	16	76	420	1,118	1,967	3,464
Larynx (C32)	Males	623	1	6	52	162	183	219
	Females	167	0	3	17	28	38	81
	All	790	1	9	69	190	221	300
Trachea, bronchus & lung (C33, C34)	Males	19,520	15	151	907	3,433	6,396	8,618
	Females	13,568	19	145	769	2,233	3,963	6,439
	All	33,088	34	296	1,676	5,666	10,359	15,057
Mesothelioma of the pleura (C45.0)	Males	538	0	1	23	114	205	195
	Females	67	0	0	3	11	22	31
	All	605	0	1	26	125	227	226
Melanoma of skin (C43)	Males	1,006	27	76	116	211	262	314
	Females	778	26	62	91	136	162	301
	All	1,784	53	138	207	347	424	615
Breast (C50)	Males	70	1	1	3	11	20	34
	Females	12,374	103	666	1,382	2,280	2,555	5,388
	All	12,444	104	667	1,385	2,291	2,575	5,422
Cervix (C53)	Females	1,096	63	122	159	182	188	382
	All	1,096	63	122	159	182	188	382
Uterus (C54, C55)	Females	632	5	6	35	106	162	318
	All	632	5	6	35	106	162	318
Ovary (C56)	Females	4,355	26	108	347	916	1,272	1,686
	All	4,355	26	108	347	916	1,272	1,686
Prostate (C61)	Males	10,212	0	6	90	629	2,283	7,204
	All	10,212	0	6	90	629	2,283	7,204
Kidney and other urinary organs C64-C66, C68	Males	2,195	18	45	179	463	620	870
	Females	1,423	19	26	90	210	389	689
	All	3,618	37	71	269	673	1,009	1,559
Bladder (C67)	Males	3,164	3	13	65	304	777	2,002
	Females	1,654	3	9	35	116	280	1,211
	All	4,818	6	22	100	420	1,057	3,213
Brain (C71)	Males	2,033	145	155	306	487	555	385
	Females	1,381	105	97	164	298	381	336
	All	3,414	250	252	470	785	936	721
Non-Hodgkin's lymphoma (C82-C85)	Males	2,314	55	73	177	409	680	920
	Females	2,103	30	31	110	261	506	1,165
	All	4,417	85	104	287	670	1,186	2,085
Leukaemia (C91-C95)	Males	2,351	131	59	119	327	620	1,095
	Females	1,924	98	66	89	193	410	1,068
	All	4,275	229	125	208	520	1,030	2,163

Source: Office for National Statistics (2005). Mortality statistics by cause. Series DH2 no. 31. The Stationery Office, London
 General Register Office (2005) Annual Report 2004. General Register Office for Scotland.
 General Register Office (2005) Annual Report 2004. Northern Ireland Statistics and Research Agency.

Figure I.3 Proportion of cancer deaths by type of cancer and sex. United Kingdom, 2004

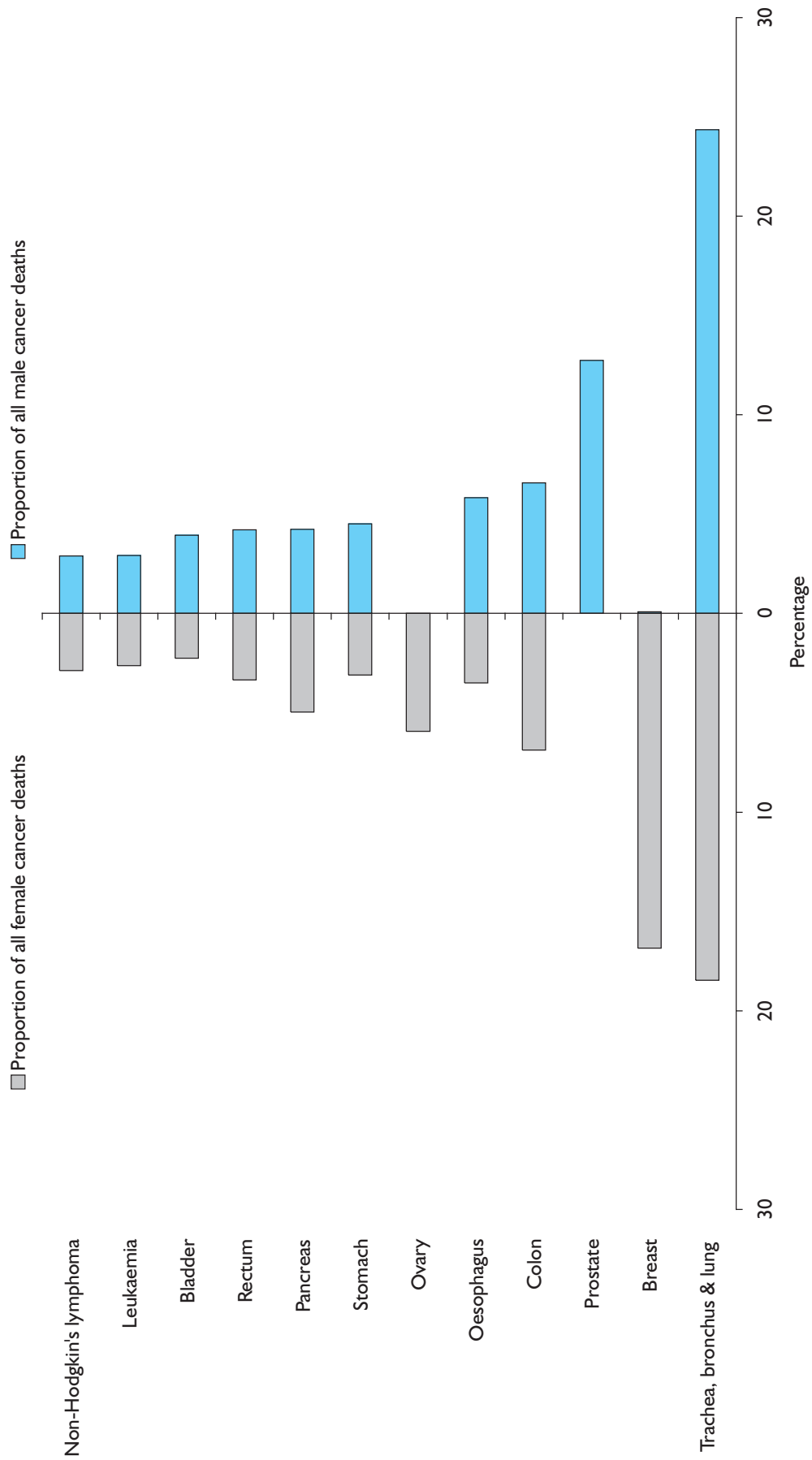


Table 1.4 Age-standardised death rates per 100,000 population from all respiratory diseases, IHD and cancer (excluding lung cancer). United Kingdom, 1970-2003

Men	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
All respiratory disease (A15-A19, B90, C33, C34, J00-J99)	343	308	333	327	318	314	341	308	310	312	300	292	296	290	237	247	238	218	221	226	210	206	196	232	212	219	210	208	202	207	196	158	157	161
Ischaemic heart disease (I20-I25)	387	390	407	402	402	399	398	394	403	390	380	375	368	369	363	367	354	342	331	320	309	305	293	291	266	260	248	233	226	215	200	191	182	174
Cancer (excl lung cancer) (C00-C97, excl C33 & C34)	173	172	173	173	173	172	175	172	174	175	174	175	174	178	186	185	184	187	189	190	190	190	192	189	186	185	182	178	174	177	174	174	173	171
Females	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
All respiratory disease (A15-A19, B90, C33, C34, J00-J99)	129	109	123	122	120	119	139	123	126	129	125	124	131	127	93	101	99	92	97	105	96	98	94	125	113	122	119	122	120	128	119	95	98	104
Ischaemic heart disease (I20-I25)	174	173	182	182	181	178	182	176	179	169	164	165	163	163	164	167	160	156	154	151	145	146	140	139	127	123	117	111	108	102	94	90	87	83
Cancer (excl lung cancer) (C00-C97, excl C33 & C34)	156	155	154	155	154	154	157	154	155	155	154	154	153	154	158	159	157	157	157	158	155	153	152	149	147	144	141	139	137	135	135	133	132	130
All	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03
All respiratory disease (A15-A19, B90, C33, C34, J00-J99)	213	188	205	202	197	194	217	194	197	199	192	188	194	189	148	156	152	141	144	151	140	140	134	166	151	160	155	156	152	159	150	121	122	127
Ischaemic heart disease (I20-I25)	264	264	277	275	274	271	273	268	274	263	256	255	250	251	249	252	243	236	230	223	216	214	206	204	187	182	174	164	159	151	140	134	128	123
Cancer (excl lung cancer) (C00-C97, excl C33 & C34)	160	159	159	159	159	158	161	159	160	160	159	160	159	160	166	166	165	166	167	168	166	166	166	166	163	160	159	156	153	149	151	149	148	146

ICD codes, 10th Revision, age-standardised using the European Standard Population

"All respiratory disease" includes tuberculosis, cancers of the trachea, bronchus & lung and all of the ICD respiratory chapter. The structure of the database means that non-respiratory TB is also included, and mesothelioma, cystic fibrosis, pulmonary circulatory disease, respiratory sarcoidosis, and respiratory disorders specific to the perinatal period are not included.

Source: World Health Organisation (2006), European Health for all Database www.euro.who.int/hfad

Figure I.4 Age-standardised death rates per 100,000 population from all respiratory diseases, IHD and cancer (excluding lung cancer). United Kingdom, 1970-2003

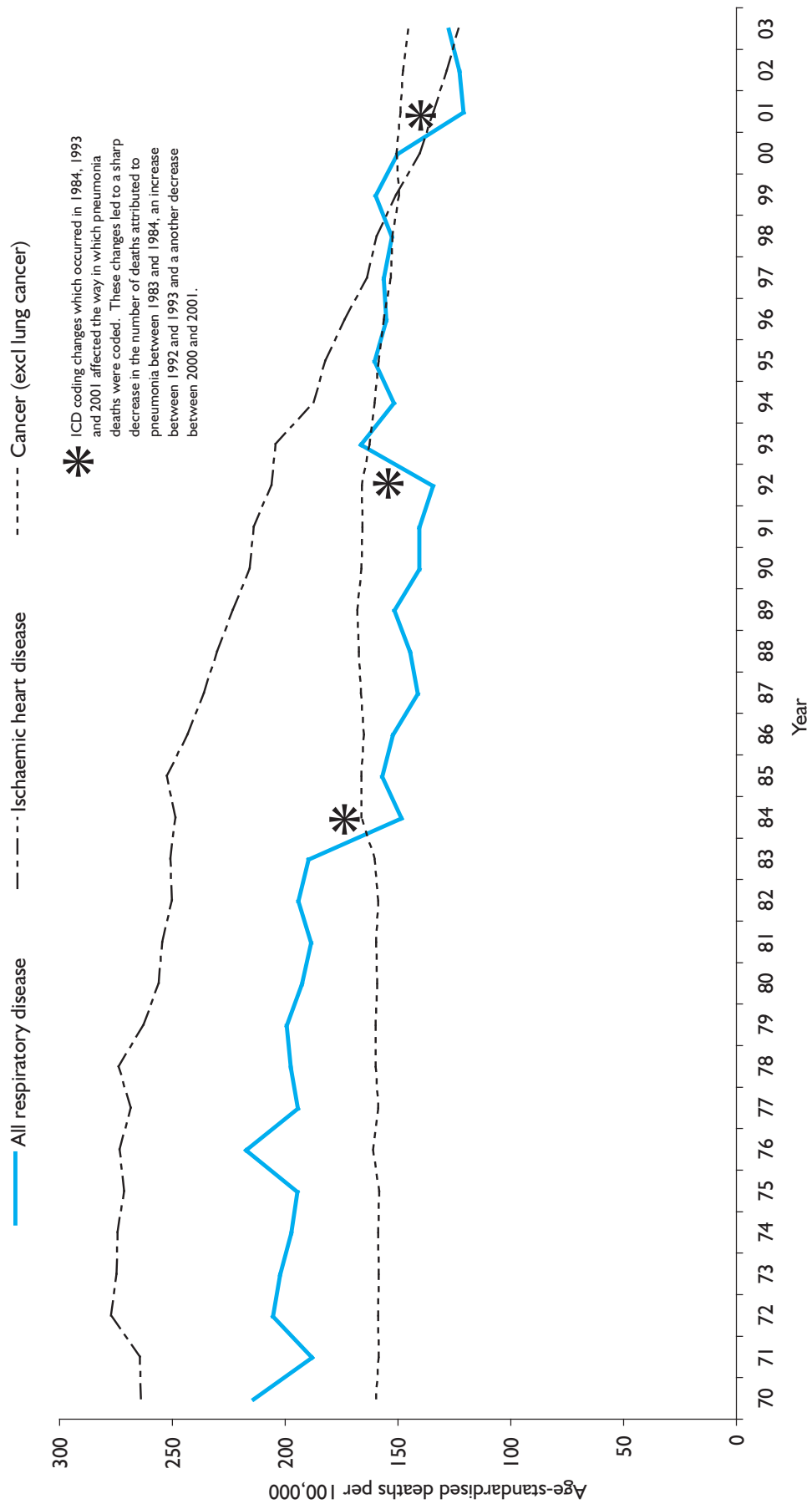


Table I.5 Deaths due to occupational lung disease. Great Britain, 1992-2002

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Cause of death											
Asbestosis (without mesothelioma)	150	173	174	166	196	191	165	171	186	208	194
*Mesothelioma	1097	1152	1246	1317	1322	1367	1541	1615	1631	1848	1862
Pneumoconiosis	274	281	276	287	223	230	268	321	279	240	271
Byssinosis	21	11	7	6	3	5	5	6	4	2	0
Farmer's lung and other occupational allergic alveolitis	4	12	10	10	1	5	8	9	7	7	6
Total	1546	1629	1713	1786	1745	1798	1987	2122	2107	2305	2333

* Mesothelioma deaths include mesothelioma of the pleura, peritoneum and other unspecified sites.

All occupational lung disease

Source: Office for National Statistics (2005) Annual Abstract of Statistics. TSO London. Data from Health and Safety Executive

Figure I.5 Deaths due to occupational lung disease. Great Britain, 1992-2002

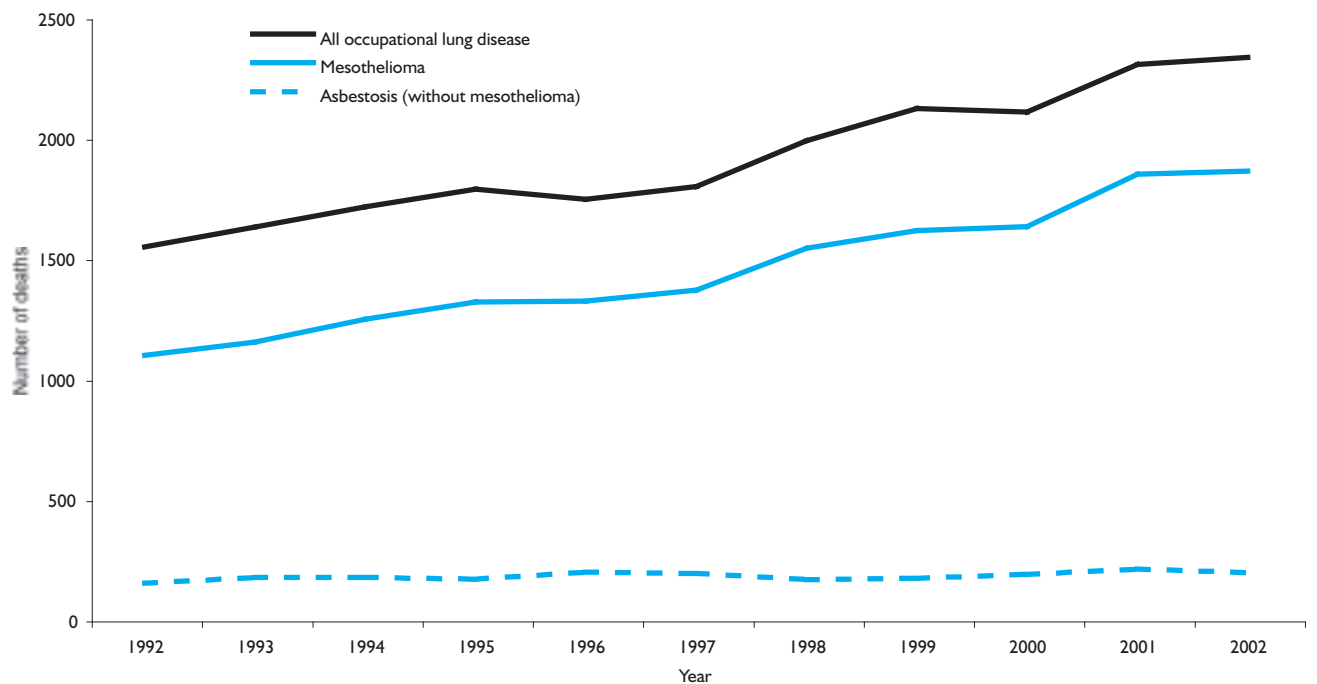


Table I.6 Standardised mortality ratios for selected diseases of the respiratory system by social class. England and Wales, men aged 20-64, 1991/93

Social class	All causes	Tuberculosis (10-18, 137)	Cancer of bronchus, trachea and lung (162)	Pneumonia (480-486)	Chronic obstructive pulmonary disease (496)	Bronchitis and emphysema (490-492)	Asthma (493)
I - Professional	66	32	45	58	21	44	51
II - Managerial and Technical	72	47	61	69	42	43	55
III N - Skilled (non-manual)	100	75	87	106	78	81	90
III M - Skilled (manual)	117	94	138	93	131	125	128
IV - Partly skilled	116	141	132	108	146	137	114
V - Unskilled	189	285	206	197	298	268	229
England and Wales	100	100	100	100	100	100	100
Ratio unskilled manual:professional	2.8	8.9	4.6	3.4	14.2	6.1	4.5
Number of deaths	175,847	252	16,082	2,916	3,095	1,331	910

ICD codes (9th revision) in parentheses.

Source: Office for National Statistics (Dever F and Whitehead M) Health Inequalities Decennial supplement. The Stationary Office: London.

Table I.7 Estimates of the numbers of deaths and working years lost per year associated with social class inequalities in mortality for selected causes. England and Wales, men aged 20-64, 1991/93

Cause of death	Numbers of deaths	Working years lost	Proportion of deaths associated with social inequalities
Respiratory disease (162, 460-519)	3,800	29,000	44%
Accidents (E800-949)	1,500	41,000	43%
Suicides (E950-959)	1,300	39,000	40%
Stroke (430-438)	900	9,000	32%
Coronary heart disease (410-414)	5,000	41,000	28%
Cancer - excluding lung cancer (140-161, 163-239)	1,700	21,000	13%
All diseases	17,200	240,000	29%

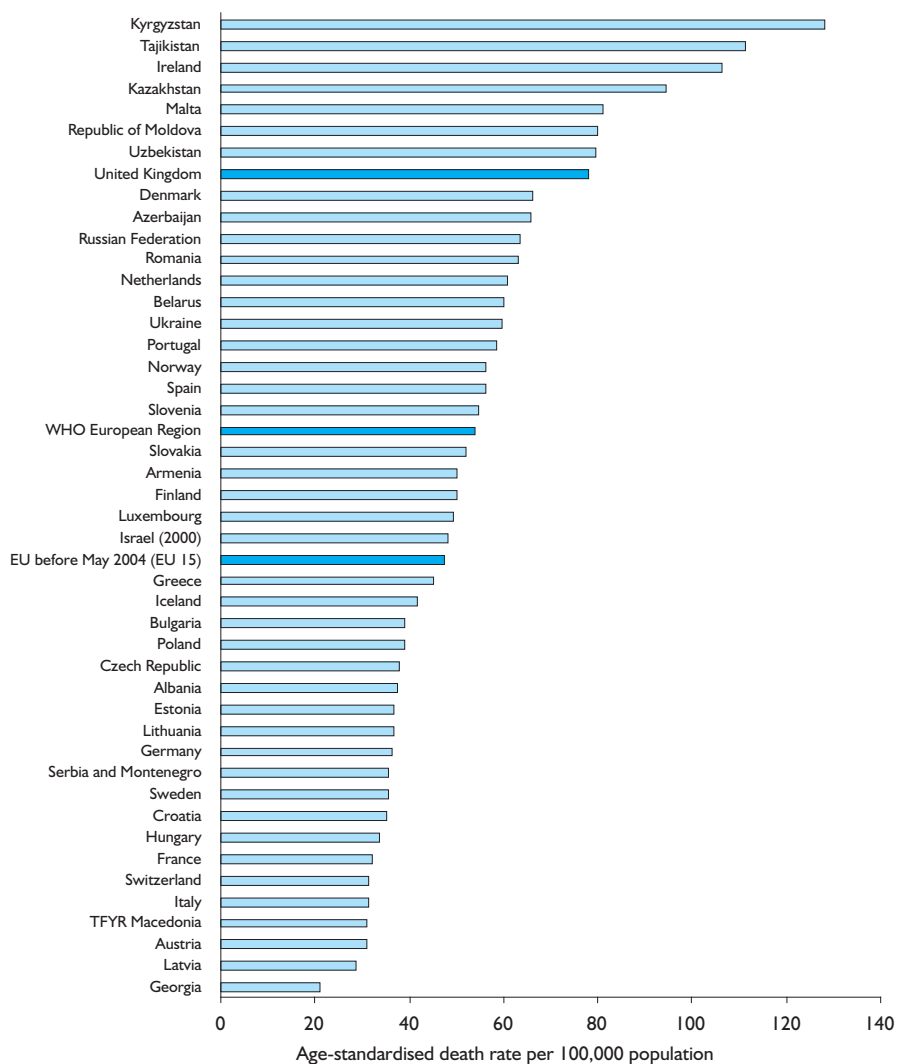
ICD codes (9th revision) in parentheses

Source: Acheson D (1998) Independent Inquiry into Inequalities in Health Report. The Stationary Office: London.

Table & Figure 1.8

Age-standardised death rates per 100,000 population from diseases of the respiratory system by sex. Selected European countries, 2001

	Males	Females	All
Albania	50.26	28.17	37.44
Armenia	78.78	31.35	50.29
Austria	45.49	22.45	30.92
Azerbaijan	79.54	55.43	65.63
Belarus	121.13	26.93	60.23
Bulgaria	55.94	25.93	39.1
Croatia	56.58	23.14	35.22
Czech Republic	55.56	26.59	37.93
Denmark	80.07	58.94	66.16
Estonia	69.83	15.99	36.74
Finland	80.06	34.5	50.26
France	48.89	21.86	32.3
Georgia	25.72	17.16	20.96
Germany	56.14	24.98	36.18
Greece	57.05	35.51	45.02
Hungary	52.44	22.06	33.58
Iceland	48.74	37.91	41.87
Ireland	135.49	87.9	106.23
Israel (2000)	59.32	40.01	48.35
Italy	50.57	19.61	31.26
Kazakhstan	156.21	58.03	94.38
Kyrgyzstan	185.35	90.31	128.04
Latvia	52.42	13.66	28.54
Lithuania	72.04	16.64	36.59
Luxembourg	79.45	32.86	49.25
Malta	110.6	61.13	81.2
Netherlands	90.6	43.89	60.63
Norway	74.04	46.05	56.16
Poland	61.22	25.16	38.87
Portugal	85.26	40.29	58.5
Republic of Moldova	128.13	46.79	79.78
Romania	87.48	44.02	63.08
Russian Federation	121.49	28.12	63.39
Serbia and Montenegro	48.36	25.78	35.7
Slovakia	78.01	35.81	52.1
Slovenia	93.2	35.49	54.85
Spain	89.48	34.16	56.04
Sweden	46.2	28.84	35.46
Switzerland	46.5	22.3	31.35
Tajikistan	131.88	98.22	111.27
TFYR Macedonia	41.37	23	31.04
Ukraine	114.02	27.06	59.5
United Kingdom	98.2	65.39	77.85
Uzbekistan	96.71	66.08	79.75
WHO European Region	85.65	34.66	54.09
EU before May 2004 (EU 15)	69.2	34.29	47.48



Source: World Health Organisation (2006), European Health for all Database www.euro.who.int/hfad.

Table I.9 Age-standardised death rates per 100,000 population from diseases of the respiratory system. United Kingdom, EU15 average and Europe average, by sex, 1970-2003

Year	Males			Females			Males & females		
	Average for EU before May 2004	WHO European region average	UK	Average for EU before May 2004	WHO European region average	UK	Average for EU before May	WHO European region average	UK
1970	144	166	236	73	87	111	101	117	158
1971	130	155	202	63	79	91	90	107	132
1972	130	153	225	62	77	103	89	105	148
1973	136	159	217	65	81	102	93	110	145
1974	125	146	208	59	73	99	85	100	138
1975	131	158	206	61	79	98	88	108	137
1976	130	155	232	62	77	117	88	106	159
1977	118	147	200	54	72	99	78	99	136
1978	118	146	201	54	69	102	78	97	138
1979	109	142	200	49	66	103	72	93	138
1980	110	143	191	49	67	99	72	94	132
1981	109	135	186	49	63	98	72	89	129
1982	105	127	192	47	58	103	68	83	134
1983	109	130	185	49	59	99	71	85	129
1984	94	124	134	40	54	63	60	79	88
1985	101	129	145	43	57	71	64	82	97
1986	99	116	139	43	52	69	63	75	94
1987	87	108	123	37	47	62	55	69	83
1988	87	107	126	37	47	65	56	68	87
1989	89	105	135	39	46	73	57	67	95
1990	89	104	121	39	44	65	58	65	85
1991	85	98	119	37	41	67	55	62	85
1992	81	97	112	36	40	63	52	61	81
1993	89	109	151	42	45	93	60	68	114
1994	83	109	134	39	44	82	55	68	101
1995	86	108	145	41	44	91	58	68	111
1996	84	103	138	41	43	88	57	65	107
1997	83	98	140	41	42	92	57	63	110
1998	83	94	135	41	41	89	57	60	106
1999	86	97	143	44	42	98	60	63	115
2000	80	96	134	41	40	89	56	61	106
2001	69	86	98	34	35	65	47	54	78
2002	71	88	98	36	36	68	49	56	80
2003	73	89	104	38	37	74	51	57	86

ICD codes 9th revision 460-519 and 10th revision J00-J99
 Source: World Health Organisation (2006) European Health for All Database. www.euro.who.int/hfad

Figure I.9 Age-standardised death rates per 100,000 population from diseases of the respiratory system. United Kingdom, EU15 average and Europe average, by sex, 1970-2003

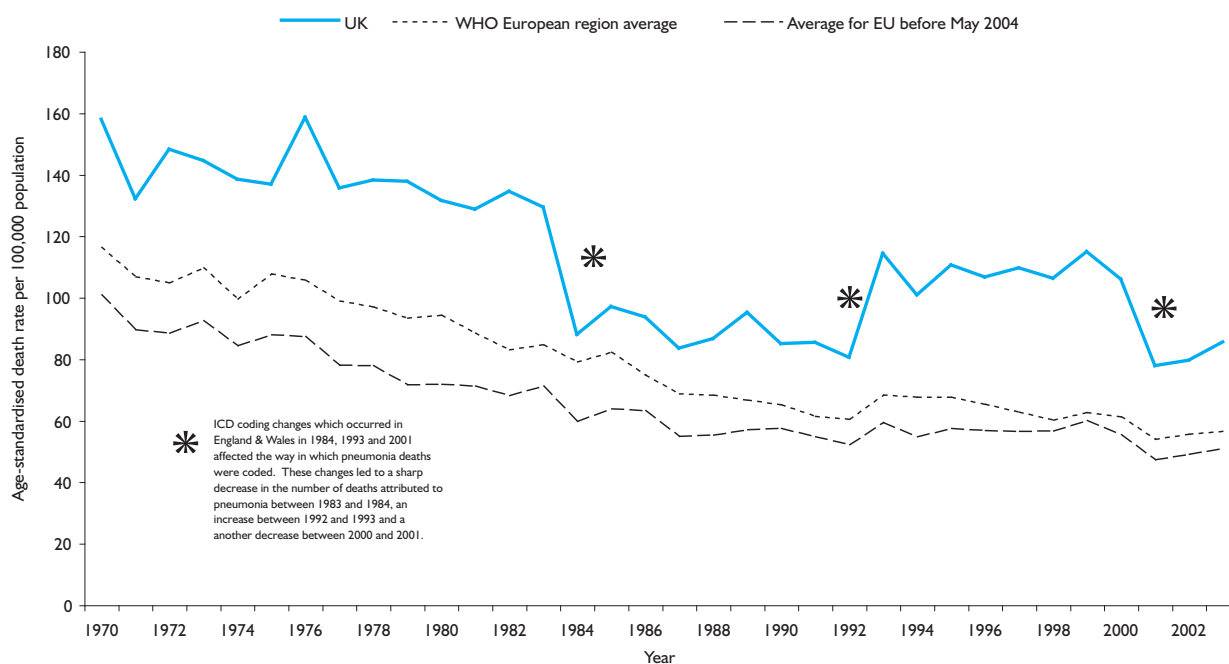
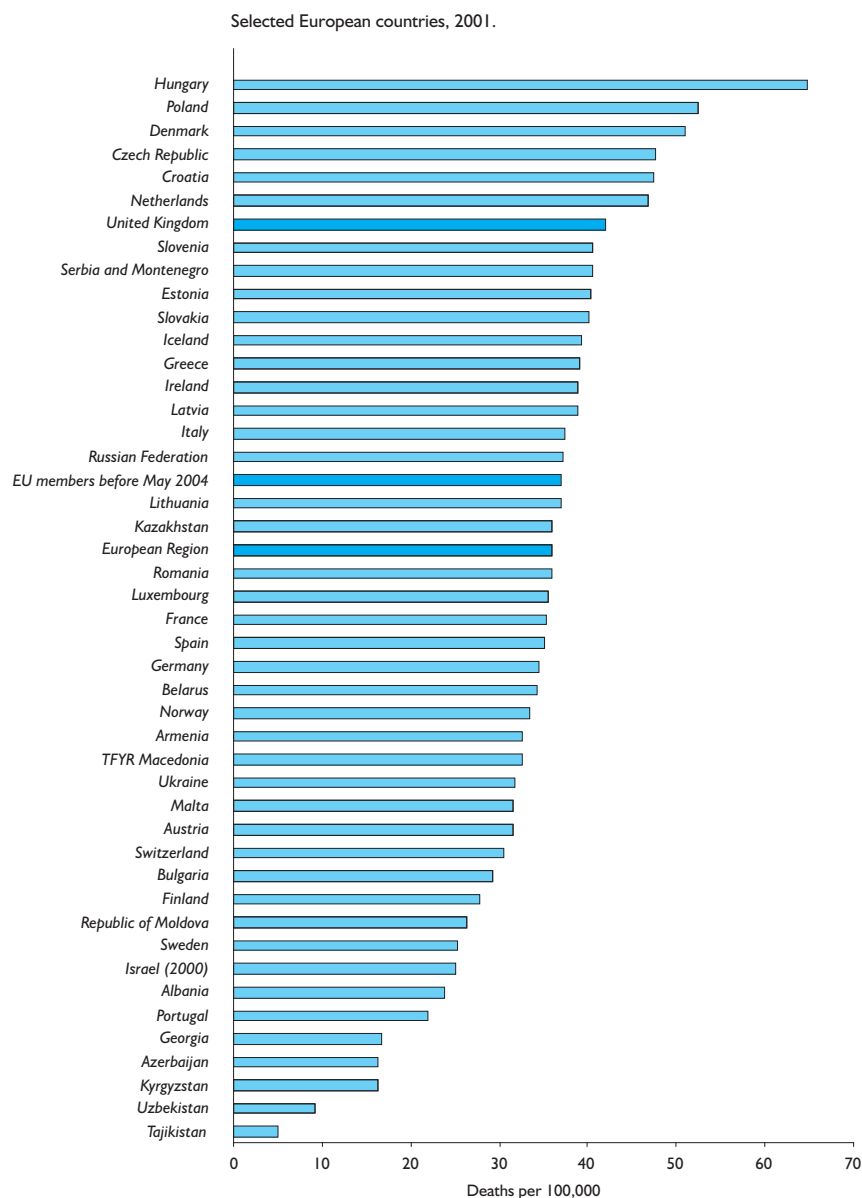


Table & Figure I.10 Age-standardised death rates per 100,000 population from lung cancer by sex. Selected European countries, 2001

	Males	Females	All
Albania	40.31	8.74	23.73
Armenia	64.25	8.67	32.6
Austria	52.44	15.71	31.46
Azerbaijan	29.67	5.52	16.39
Belarus	79.34	5.53	34.32
Bulgaria	53.46	8.95	29.26
Croatia	92.55	14.3	47.36
Czech Republic	85.78	19.15	47.55
Denmark	64.68	41.13	50.95
Estonia	88.73	11.65	40.3
Finland	51.34	12.16	27.85
France	65.05	10.9	35.21
Georgia	31.79	5.79	16.81
Germany	59.75	15.78	34.39
Greece	72.15	10.81	38.99
Hungary	113.67	30.41	64.84
Iceland	45.09	34.65	39.37
Ireland	56.15	25.37	38.85
Israel (2000)	39.03	13.88	25.04
Italy	69.45	12.65	37.39
Kazakhstan	73.82	11.03	35.93
Kyrgyzstan	28.64	6.87	16.31
Latvia	87.32	9.24	38.79
Lithuania	80.99	8.67	36.93
Luxembourg	61.95	15.32	35.5
Malta	60.85	8.71	31.5
Netherlands	78.17	24.37	46.82
Norway	45.62	24.02	33.34
Poland	99.66	18.53	52.49
Portugal	41.14	6.52	21.87
Republic of Moldova	49.53	9.2	26.31
Romania	65.39	11.33	35.89
Russian Federation	83.63	8.73	37.16
Serbia and Montenegro	68.93	16.42	40.63
Slovakia	81.53	10.74	40.13
Slovenia	76.36	15.83	40.64
Spain	69.72	6.88	35.02
Sweden	31.36	20.91	25.37
Switzerland	51.11	14.94	30.6
Tajikistan	6.62	3.43	4.97
TFYR Macedonia	58.33	9.92	32.59
Ukraine	68.67	7.59	31.72
United Kingdom	59.04	29.49	42.06
Uzbekistan	14.92	4.22	9.17
EU members	63.87	16.21	36.96
before May 2004			
European Region	67.75	13.25	35.91



Source: World Health Organisation (2006), European Health for all Database www.euro.who.int/hfadb.

Morbidity

Self-reported long-term respiratory illness in adults

Respiratory disease is the third most commonly reported long-term illness in Great Britain. In 2004, over 6% of men and women reported having a long-term respiratory illness. Rates are highest in the older age groups reaching almost 1 in 10 of the over 65 year olds (Table 2.1).

Trends in rates of chronic respiratory disease reported in Britain in adults as a whole have shown no signs of improving over the last decade and this is true of both men and women (Table 2.2).

Rates of self-reported respiratory morbidity vary with socio-economic status. In 2004 about 40% more men and women in routine and manual occupations reported long-term respiratory conditions than those in managerial and professional jobs (Table 2.3).

Self-reported rates of respiratory disease also vary by ethnic group. Rates are lowest in Chinese respondents and in Indian and Bangladeshi women (Table 2.4). In Indian men and women, endocrine and metabolic conditions replace respiratory system problems as the third most common type of long-term illness¹.

Self-reported long-term respiratory illness in children

Respiratory system disorders are by far the most commonly reported long-standing illness in both boys and girls in England. About 1 in 8 boys and 1 in 10 girls report a long-term respiratory disease. In boys this is followed by skin complaints and mental disorders and in girls by skin, ear and digestive complaints (Table 2.5 and Figure 2.5).

Visits to General Practitioners

The Royal College of General Practitioners carries out weekly surveillance of GP visits in a sample of practices in England and Wales. Rates of patients consulting are higher for respiratory conditions than for any other type of illness. In 2004 nearly 1 in 5 males and 1 in 4 females consulted a GP for a respiratory complaint. Rates are highest in infants and young children and in the elderly. In males this is followed by musculoskeletal, skin and nervous system disorders. In females it is followed by musculoskeletal and skin problems, and other unknown categories (Table 2.6 and figure 2.6).

Acute respiratory infections (such as colds, bronchitis and bronchiolitis) account for the highest respiratory rates followed by chronic obstructive diseases such as COPD and asthma (Table 2.7).

Days of work lost

Information on days of certified incapacity by disease in Great Britain is collected by the Department of Work and Pensions. In 2002/03 nearly 25 million days were claimed for respiratory disease. This does not include days lost from self-certified illness.

Prevalence of respiratory symptoms and asthma

In England, national surveys show that a history of wheezing is recalled in one third (33%) of children and adults. About one fifth of the population (19% of children and 20% of adults) have wheezed in the last year. Over a fifth of children (21%) have a diagnosis of asthma while in adults this stands at 15% (Tables 2.9 and 2.10). Prevalence of recent wheeze is higher in boys than girls though rates in younger adult men and women are similar (Figure 2.10). At the older ages wheezing is probably indicative of COPD as well as asthma.

¹ See Joint Health Surveys Unit (2001) Health Survey for England. The Health of Minority Ethnic Groups 1999. The Stationery Office.

A number of studies in children have shown that the prevalence of both recent wheeze and diagnosed asthma have increased considerably since the 1960s giving the UK one of the highest asthma prevalence rates in the world². More recent trends appear mixed³ but show that asthma is still very prevalent in the UK.

Lung cancer

Lung cancer is one of the most common cancers in adults, second only to prostate cancer in men and breast cancer in women. Between 1998 and 2001 there were over 67,000 cases diagnosed in men and nearly 42,000 cases in women. It has amongst the lowest survival rates of the major cancers with only 6.3% of men and 7.5% of women surviving more than 5 years. The only common cancer with lower survival is that of the pancreas (Table 2.11 and Figure 2.11). The incidence of lung cancer is falling in men but has been rising in women for the last 3 decades (Figure 2.12).

Tuberculosis notifications

In 2004 there were 4,333 notifications of pulmonary tuberculosis in the UK. Notification rates have risen since 1990 to a peak in 2000, mainly due to increases in London. Since then rates appear to have fallen but this may be an artefact of recent changes in surveillance⁴.

2 See special supplement to the Asthma Journal. The Asthma Journal (2001) Vol 6. Issue 3. 'Out in the Open: A true picture of asthma in the United Kingdom today'. www.asthma.org.uk.

3 See Burden of Lung Disease 2000 for prevalence estimates from 1996-97

4 See www.hpa.org.uk for more details on tuberculosis monitoring

Table 2.1 Prevalence of self-reported long-term illness in adults by selected conditions, sex and age. Great Britain, 2004

	All ages %	16-44 %	45-64 %	65-74 %	75 & over %
Men					
Musculoskeletal (XIII)	13.3	6.6	19.4	21.3	22.2
Arthritis and rheumatism	5.2	1.1	7.9	11.0	13.6
Back problems	4.4	2.8	7.1	5.9	2.1
Other bone and joint problems	3.7	2.6	4.4	4.3	6.5
Heart and circulatory (VII)	11.1	1.4	14.6	29.5	37.3
Hypertension	3.8	0.6	5.9	9.2	8.7
Heart attack	2.3	0.0	2.6	8.4	8.3
Stroke	0.8	0.1	0.8	1.7	5.4
Other heart complaints	3.2	0.5	4.4	7.5	10.6
Other blood vessel/embolic disorders	0.8	0.1	0.8	2.4	3.3
Respiratory (VIII)	6.3	5.6	5.5	10.3	9.8
Asthma	4.0	4.6	3.1	4.3	3.4
Bronchitis and emphysema	0.8	0.0	0.7	3.4	2.8
Hay fever	0.4	0.6	0.2	0.2	0.0
Other respiratory complaints	1.2	0.4	1.5	2.4	3.5
Endocrine and metabolic (III)	4.7	1.4	6.4	11.0	11.6
Digestive system (IX)	2.6	1.2	3.7	4.1	4.9
Nervous system (VI)	2.8	2.0	3.7	2.8	4.2
Women					
Musculoskeletal (XIII)	16.0	6.1	20.9	29.1	34.3
Arthritis and rheumatism	8.5	1.5	11.2	19.4	22.3
Back problems	3.6	2.6	5.6	3.7	2.6
Other bone and joint problems	3.8	2.0	4.1	6.0	9.4
Heart and circulatory (VII)	11.0	1.7	13.2	26.6	31.9
Hypertension	4.8	0.8	6.8	11.9	10.7
Heart attack	1.8	0.0	1.8	5.1	6.7
Stroke	0.6	0.0	0.5	1.2	2.8
Other heart complaints	2.9	0.6	3.1	6.6	9.4
Other blood vessel/embolic disorders	0.7	0.2	0.9	1.5	1.9
Respiratory (VIII)	6.4	5.3	6.6	9.1	8.3
Asthma	4.8	4.3	5.2	5.7	4.9
Bronchitis and emphysema	0.5	0.2	0.4	1.5	1.4
Hay fever	0.3	0.4	0.3	0.2	0.0
Other respiratory complaints	0.8	0.4	0.6	1.7	2.0
Endocrine and metabolic (III)	5.6	2.1	8.4	10.9	8.9
Digestive system (IX)	3.2	2.0	3.6	4.7	5.8
Nervous system (VI)	2.8	2.2	3.6	3.4	2.9

* International Classification Disease 9 chapters in parentheses

Source: Office for National Statistics, General Household Survey 2004. <http://www.statistics.gov.uk/ghs/>

Table 2.2 Prevalence of self-reported long-term respiratory illness in adults, by sex and age. Great Britain, 1995-2004

		16-44	45-64	65-74	75+	All ages
Men	1995	6.5	5.4	8.2	8.5	6.5
	2000	6.2	5.2	9.5	11.6	6.6
	2001	5.7	5.6	9.4	9.7	6.3
	2002	5.7	7.0	11.4	11.0	7.1
	2003	4.9	4.5	9.1	10.1	5.6
	2004	5.6	5.5	10.3	9.8	6.3
Women	1995	6.3	5.9	8.9	7.6	6.6
	2000	6.6	6.9	5.6	5.8	6.5
	2001	5.4	6.3	8.5	6.8	6.1
	2002	6.2	7.3	8.5	7.4	6.9
	2003	5.5	6.1	10.1	5.6	6.2
	2004	5.3	6.6	9.1	8.3	6.4

Source: Office for National Statistics, General Household Survey 2004. <http://www.statistics.gov.uk/ghs> and earlier surveys

Table 2.3 Prevalence of self-reported long-term respiratory disease by sex and socio-economic classification of household reference person. Great Britain, 2004

		%	Ratio to managerial and professional
Men	Managerial and professional	6.0	1.0
	Intermediate	4.4	0.7
	Routine and manual	8.1	1.4
Women	Managerial and professional	5.4	1.0
	Intermediate	6.1	1.1
	Routine and manual	7.6	1.4
All	Managerial and professional	5.7	1.0
	Intermediate	5.3	0.9
	Routine and manual	7.8	1.4

Source: Office for National Statistics, General Household Survey 2004. <http://www.statistics.gov.uk/ghs>

Table 2.4 Prevalence (%) of self-reported long-term respiratory disease by sex and ethnic group. England, 1999

	General population	Black Caribbean	Indian	Pakistani	Bangladeshi	Chinese	Irish
Men	9.9	12.1	7.4	7.8	11.2	6.1	10.0
Base	3558	546	625	620	532	301	537
Women	8.5	9.0	6.0	8.0	6.8	6.0	9.4
Base	4239	748	657	643	563	361	708

ICD (9th revision) Chapter VIII Respiratory disease (460-519)

Age-standardised percentages. See source for observed values

Adults aged 16 and above.

Source : Joint Health Surveys Unit (2001) Health Survey for England. The Health of Minority Ethnic Groups 1999. TSO: London

Table 2.5 Prevalence (%) of self-reported long-standing illness in children by selected condition group, sex and age. England, 2001-2002

Condition group (ICD 10 chapter)			Age								
			0-1	2-3	4-5	6-7	8-9	10-11	12-13	14-15	0-15
Boys	X	Respiratory system	4.9	9.9	12.0	11.6	14.9	13.9	16.7	13.4	12.3
	XII	Skin complaints	4.4	4.4	5.9	5.5	5.3	3.3	3.0	3.4	4.5
	V	Mental disorders	0.0	1.5	1.7	3.3	3.9	3.9	3.7	2.5	2.7
	VIII	Ear complaints	0.6	1.5	1.7	3.4	2.4	1.8	2.0	0.8	1.8
	XI	Digestive system	1.0	1.3	2.2	3.1	1.7	1.6	2.1	1.3	1.8
	VI	Nervous system	0.5	0.6	1.2	1.6	1.4	1.7	2.5	2.9	1.6
	XIII	Musculoskeletal system	1.1	1.1	0.8	1.1	1.9	1.6	2.5	3.1	1.6
	VII	Eye complaints	0.5	0.5	1.8	1.4	0.8	0.5	1.2	0.9	1.0
Girls	X	Respiratory system	2.3	7.4	10.8	10.2	12.2	12.5	11.1	11.9	9.9
	XII	Skin complaints	2.2	6.0	4.6	5.2	4.3	5.2	3.3	3.8	4.3
	VIII	Ear complaints	0.4	0.8	2.2	1.7	2.0	1.8	1.0	1.2	1.4
	XI	Digestive system	1.9	1.5	1.8	1.6	1.1	1.1	0.9	1.2	1.4
	XIII	Musculoskeletal system	0.4	0.6	0.5	1.1	1.1	0.9	2.7	3.5	1.3
	V	Mental disorders	0.2	0.4	1.0	0.8	1.5	1.3	2.1	0.8	1.0
	VI	Nervous system	0.4	0.5	0.5	0.7	0.8	1.1	1.8	2.4	1.0
	VII	Eye complaints	0.3	0.7	1.1	1.3	0.8	1.4	0.1	0.8	0.8

Source: Joint Health Surveys Unit (2003) Health Survey for England 2002, The Health of Children and Young People. TSO London

Figure 2.5 Prevalence (%) of self-reported long-standing illness in children by selected condition group, sex and age. England, 2001-2002

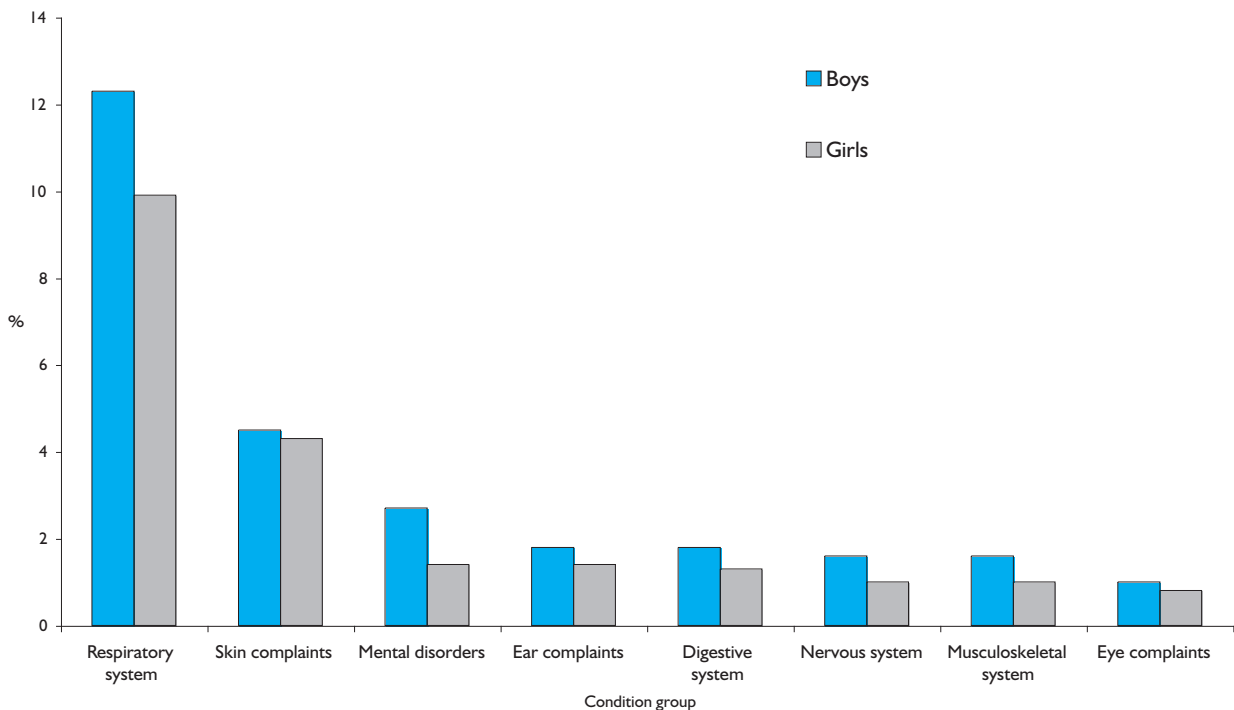


Table 2.6 Annual prevalence rates (persons consulting GPs) per 10,000 persons by International Classification of Diseases (ICD9), sex and age. England and Wales, 2004

		All ages	<1	1-4	5-14	15-24	25-44	45-64	65-74	75 and over
Males										
I	Infectious and parasitic	766	2,269	2,306	1,123	719	561	553	621	748
II	Cancers	297	57	44	79	132	191	323	805	1,247
III	Endocrine	559	41	39	35	87	230	931	1,822	1,860
IV	Blood	72	57	55	24	11	14	55	220	557
V	Mental	690	93	142	273	526	781	888	829	1,039
VI	Nervous	1,334	3,156	3,161	1,279	728	860	1,263	2,077	2,951
VII	Circulatory	1,182	21	20	22	97	321	1,782	4,267	5,578
VIII	Respiratory	1,942	5,621	4,573	2,273	1,671	1,438	1,520	2,349	3,034
IX	Digestive	702	897	585	223	362	610	862	1,325	1,624
X	Genitourinary	429	304	519	309	258	253	417	930	1,427
XII	Skin	1,339	2,754	2,261	1,301	1,394	996	1,207	1,771	2,175
XIII	Musculoskeletal	1,455	113	202	469	780	1,314	2,032	2,753	3,079
XV	Perinatal	11	707	44	2	1	1	0	2	1
XVI	Signs, symptoms and ill-defined	1,299	2,212	1,852	983	884	938	1,385	2,121	2,900
XVII	Injury & poisoning	927	428	940	951	1,228	904	783	893	1,100
Females										
I	Infectious and parasitic	1,027	2,170	2,407	1,376	1,172	1,007	730	691	735
II	Cancers	418	104	50	109	272	416	540	932	737
III	Endocrine	718	57	38	51	194	420	1,030	1,866	1,585
IV	Blood	153	21	32	28	76	124	154	234	532
V	Mental	1,006	93	73	143	912	1,273	1,229	997	1,396
VI	Nervous	1,691	2,980	2,938	1,521	1,182	1,325	1,675	2,127	2,768
VII	Circulatory	1,378	21	13	24	117	421	1,728	4,065	5,647
VIII	Respiratory	2,516	5,161	4,223	2,254	2,673	2,367	2,248	2,516	2,746
IX	Digestive	872	971	550	231	617	773	1,054	1,431	1,561
X	Genitourinary	1,462	130	307	386	1,707	1,786	1,746	1,326	1,578
XII	Skin	1,752	2,762	2,292	1,547	2,030	1,583	1,595	1,858	2,172
XIII	Musculoskeletal	2,019	145	169	461	1,026	1,692	2,902	3,606	3,872
XV	Perinatal	12	711	44	2	4	4	1	2	0
XVI	Signs, symptoms and ill-defined	1,784	2,336	1,792	1,100	1,566	1,536	1,876	2,356	3,030
XVII	Injury & poisoning	933	317	713	790	901	861	935	1,025	1,523

Source: Weekly Returns Service Annual Report 2004, RCGP Birmingham Research Unit. <http://www.rcgp.org.uk/bru>

Figure 2.6 Annual prevalence rates (persons consulting GPs) per 10,000 persons by International Classification of Diseases (ICD9), sex and age. England and Wales, 2004

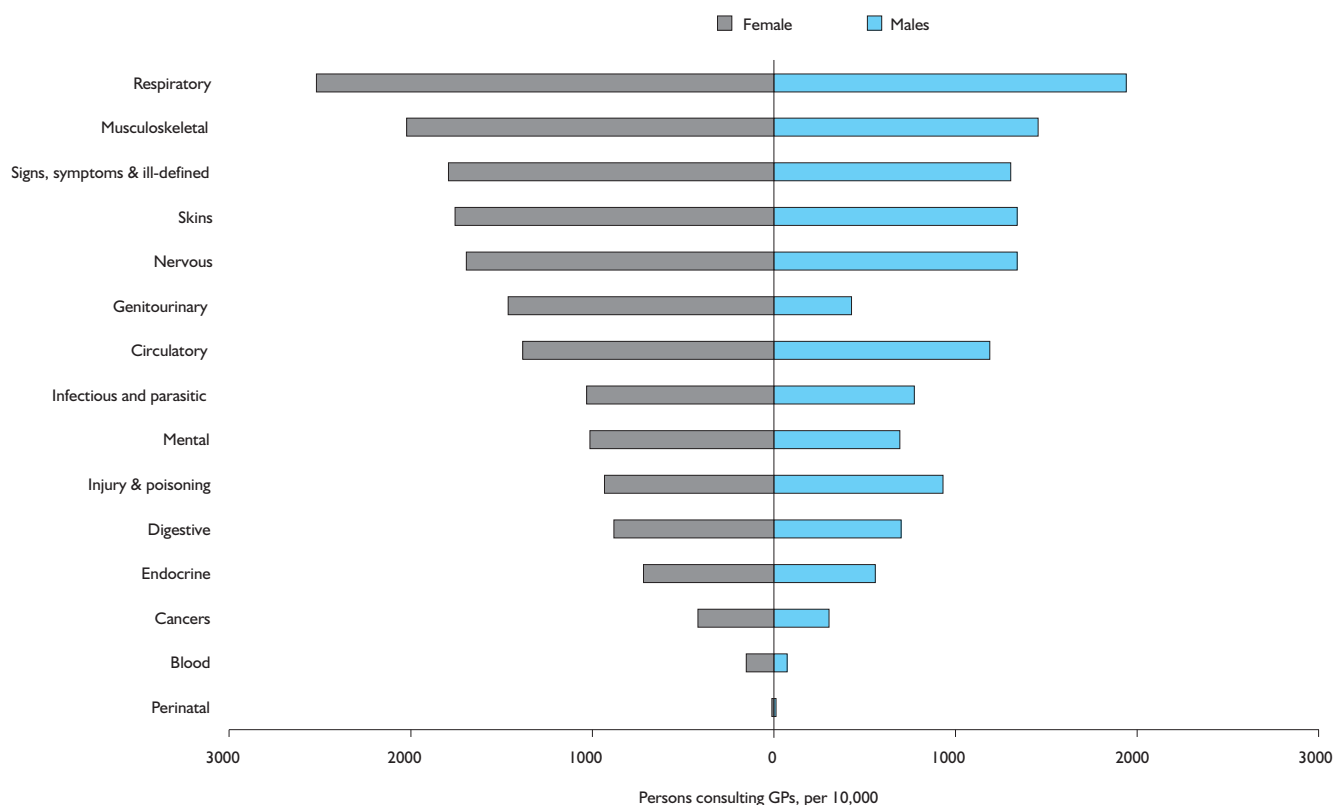


Table 2.7 Annual prevalence rates (persons consulting GPs) per 10,000 persons for selected respiratory diseases, by sex and age. England and Wales, 2004

		All ages	<1	1-4	5-14	15-24	25-44	45-64	65-74	75 and over
Acute respiratory infections (460-466)	Males	1,302	5,436	4,186	1,457	1,029	902	955	1,441	1,924
	Females	1,860	4,948	3,945	1,659	1,958	1,757	1,574	1,670	1,924
Upper respiratory tract diseases, other (470-478)	Males	266	175	231	383	316	238	223	277	262
	Females	307	197	174	292	403	342	296	270	221
Pneumonia & influenza (480-487)	Males	86	155	127	53	55	87	86	101	158
	Females	99	151	96	50	86	103	113	95	132
Pulmonary disease chronic obstructive & allied (490-496)	Males	530	119	475	697	449	367	452	914	1,223
	Females	601	73	307	509	618	496	626	922	896
Bronchitis not spec as acute or chronic (490)	Males	23	83	44	7	7	10	26	61	79
	Females	28	62	31	9	9	20	32	48	77
Asthma (493)	Males	409	41	440	690	441	353	323	429	396
	Females	484	16	282	501	609	472	488	546	411

ICD 9 codes in parentheses

Source: Weekly Returns Service Annual Report 2004, RCGP Birmingham Research Unit. <http://www.rcgp.org.uk/bru>

Table 2.8 Days of certified incapacity due to sickness and invalidity, by cause and sex. Great Britain, 2002/03

	Men	Women	Total
All causes	540,277	344,651	884,928
Mental and Behavioural Disorders (F00 - F99)	180,795	136,659	317,454
Diseases of the Musculoskeletal system (M00 - M99)	115,854	76,868	192,722
Diseases of the Circulatory System (I00 - I99)	53,152	12,988	66,140
Injury and Poisoning (S00 - U23)	36,993	15,470	52,463
Diseases of the Nervous System (G00 - G99)	24,595	22,065	46,660
Diseases of the Respiratory System (J00 - J99)	16,769	8,144	24,912
Diseases of the Digestive System (K00 - K93)	8,993	5,305	14,298
Endocrine, Nutritional and Metabolic Diseases (E00 - E90)	8,972	4,610	13,581
Neoplasms (C00 - D48)	6,622	5,783	12,405
Infectious and Parasitic Diseases (A00 - B99)	3,878	2,169	6,047
Diseases of the Skin and Subcutaneous System (L00 - L99)	3,298	2,150	5,448
All other causes	80,357	52,440	132,797

Figures are shown in thousands and rounded to the nearest thousand.

ICD codes (10th revision) in parentheses.

Figures are based on a 1% sample of claims to benefit.

Source: Department of Work and Pensions, Working Age and Children Analysis Team. <http://www.dwp.gov.uk/asd/tabtool.asp>

Table 2.9 Prevalence (%) of respiratory symptoms and doctor-diagnosed asthma in children by sex and age. England, 2002

	All	0-1	2-3	4-6	7-9	10-12	13-15
Boys							
Ever wheezed	36	30	41	37	37	35	37
Wheezed in last 12 months	20	27	25	19	17	16	18
Doctor-diagnosed asthma ever	23	7	15	20	28	28	29
Base	6,938	757	835	1,315	1,370	1,377	1284
Girls							
Ever wheezed	29	24	31	29	28	32	29
Wheezed in last 12 months	17	21	21	17	14	15	15
Doctor-diagnosed asthma ever	18	3	13	18	20	25	20
Base	6,864	779	835	1,289	1,356	1,344	1261
All children							
Ever wheezed	33	27	36	33	33	34	33
Wheezed in last 12 months	19	24	23	18	16	16	17
Doctor-diagnosed asthma ever	21	5	14	19	24	27	25
Base	13,802	1,536	1,670	2,604	2,726	2,721	2545

Source: Joint Health Surveys Unit (2003) Health Survey for England 2002, The Health of Children and Young People. TSO London

Table 2.10 Prevalence (%) of respiratory symptoms and doctor-diagnosed asthma in adults by sex and age. England, 2001

	All	16-24	25-34	35-44	45-54	55-64	65-74	75 and above
Men								
Ever wheezed	35	34	35	32	32	41	38	34
Wheezed in last 12 months	21	18	20	18	17	26	26	25
Doctor-diagnosed asthma ever	13	24	15	12	10	14	10	9
Base	6,966	810	1,139	1,320	1,210	1,054	883	550
Women								
Ever wheezed	32	34	33	32	31	34	32	28
Wheezed in last 12 months	20	21	19	18	19	22	21	21
Doctor-diagnosed asthma ever	16	25	20	16	13	14	13	12
Base	8,681	964	1,447	1,721	1,480	1,156	1,029	884
All adults								
Ever wheezed	33	34	34	32	31	37	35	30
Wheezed in last 12 months	20	20	19	18	18	24	23	23
Doctor-diagnosed asthma ever	15	25	18	14	12	14	12	11
Base	15,647	1,774	2,586	3,041	2,690	2,210	1,912	1,434

Source: Joint Health Surveys Unit (2002) Health Survey for England 2001. TSO London

Figure 2.10 Prevalence of wheeze in the last 12 months by sex and age. England 2001/02

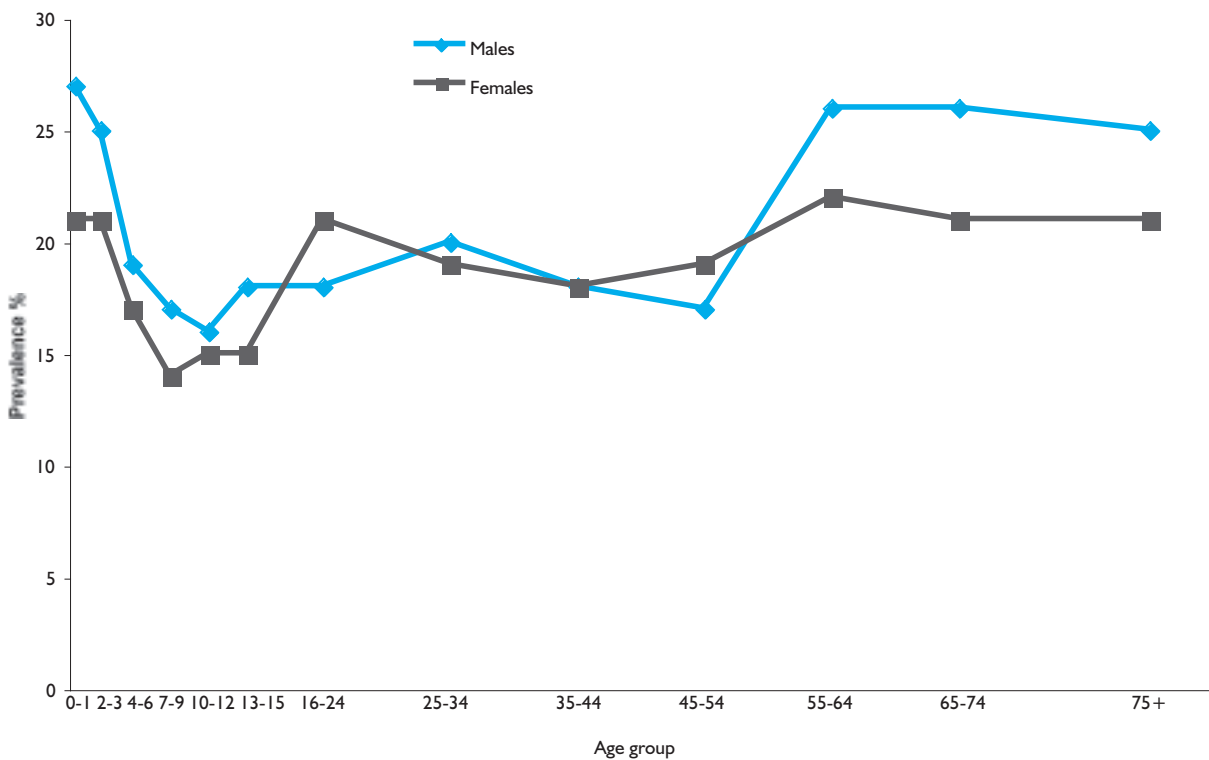


Table 2.11 Five-year age-standardised relative survival for adult patients diagnosed during 1998-2001 for 21 common cancers by sex. England

	ICD-10 codes	Number of patients	Five-year relative survival %
MEN			
Prostate	C61	88,802	70.8
Lung	C33, C34	67,502	6.3
Colon	C18	33,368	49.4
Bladder	C67	27,395	60.3
Rectum	C19 - C21	25,613	50.0
Stomach	C16	19,162	12.6
Non-Hodgkin's lymphoma	C82-85	15,315	50.9
Oesophagus	C15	13,864	8.1
Leukaemia	C91 - C95	11,367	38.2
Kidney	C64-C66, C68	11,183	44.9
Pancreas	C25	9,547	2.5
Melanoma	C43	9,473	79.0
Brain	C71	7,428	13.3
Testis	C62	6,662	96.6
Myeloma	C90	5,927	25.6
Larynx	C32	5,880	62.4
Hodgkin's disease	C81	2,740	80.0
WOMEN			
Breast	C50	132,292	79.9
Lung	C33, C34	41,774	7.5
Colon	C18	32,687	50.2
Ovary	C56, C57.0 - C57.7	20,945	38.3
Uterus	C54, C55	18,114	76.2
Rectum	C19 - C21	17,556	53.6
Non-Hodgkin's lymphoma	C82-85	13,676	54.7
Melanoma	C43	12,350	88.2
Bladder	C67	10,629	53.2
Stomach	C16	10,296	15.4
Cervix	C53	9,971	63.1
Pancreas	C25	9,925	2.2
Oesophagus	C15	8,653	10.7
Leukaemia	C91 - C95	8,502	39.1
Kidney	C64-C66, C68	6,645	44.9
Myeloma	C90	5,307	25.6
Brain	C71	5,298	15.4
Hodgkin's disease	C81	1,983	82.1

1 As cancer survival varies with age at diagnosis, the relative rates for all ages have been age-standardised to control for changes in the age profile of cancer patients over time, thus making them comparable with previously published figures

2 Total number of patients diagnosed between 1998 and 2001, aged 15-99 years

Source Office for National Statistics. Cancer Trends Updates 2005

Figure 2.11 Incidence and survival rates in the major cancers by sex. England 1998-2001 (Male)

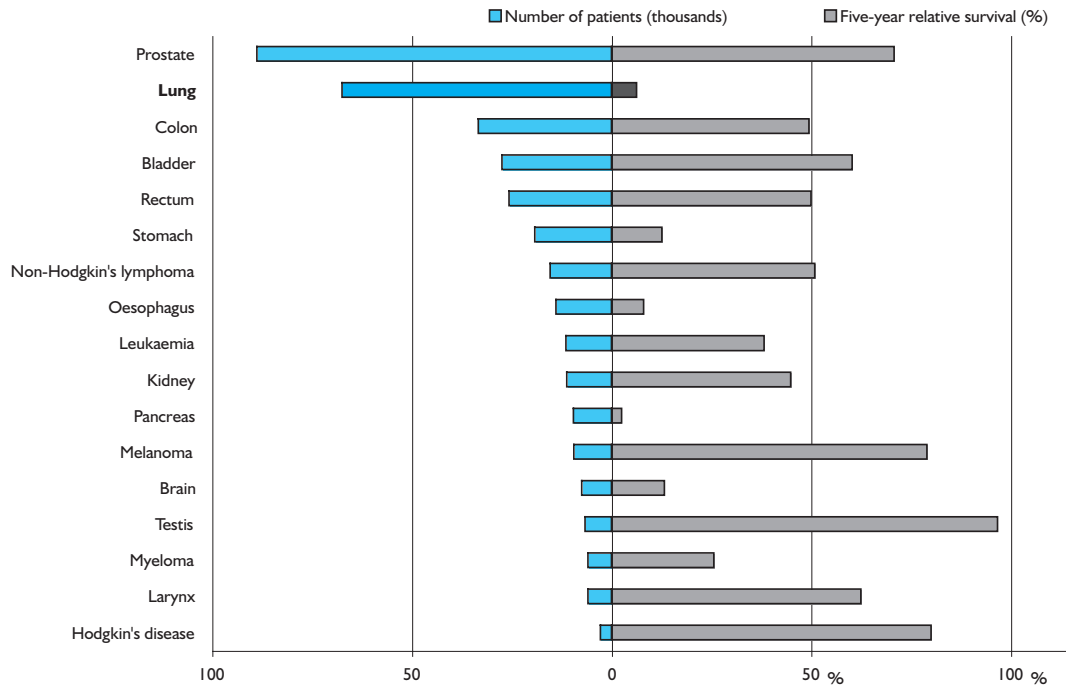
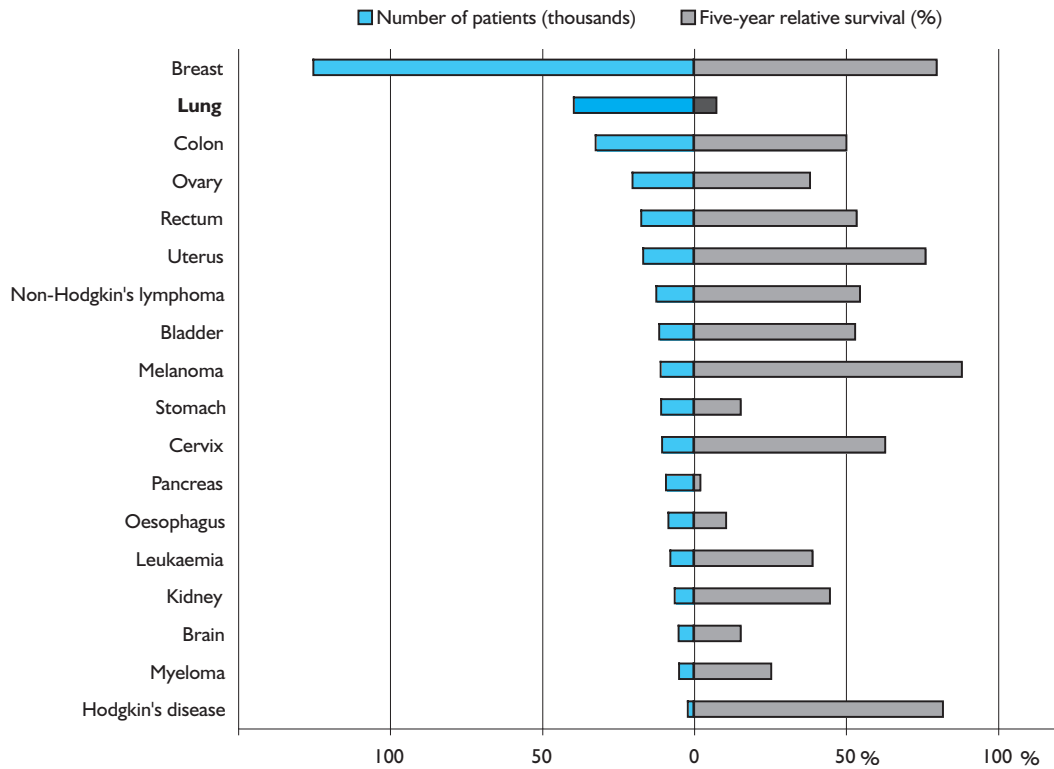


Figure 2.11 Incidence and survival rates in the major cancers by sex. England 1998-2001 (Female)



Total number of patients diagnosed between 1998 and 2001, aged 15-99 years.

Figure 2.12 Age-standardised incidence of lung cancer, by sex. England and Wales, 1971-2001

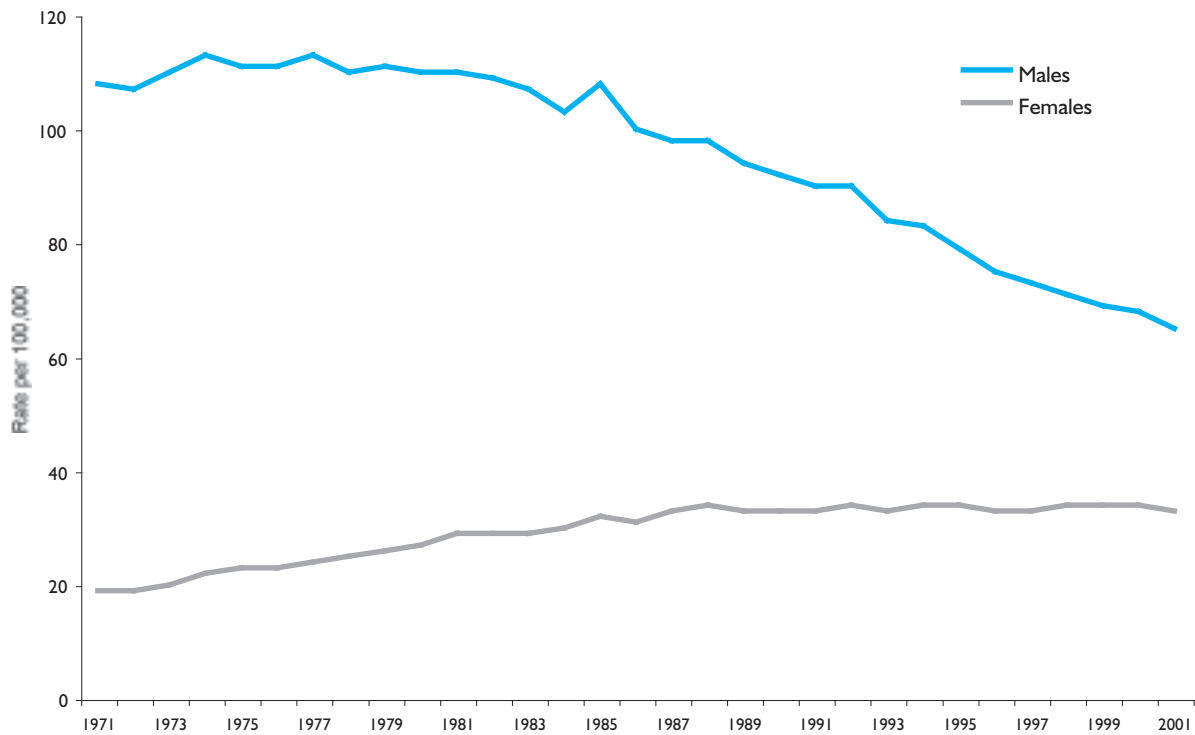
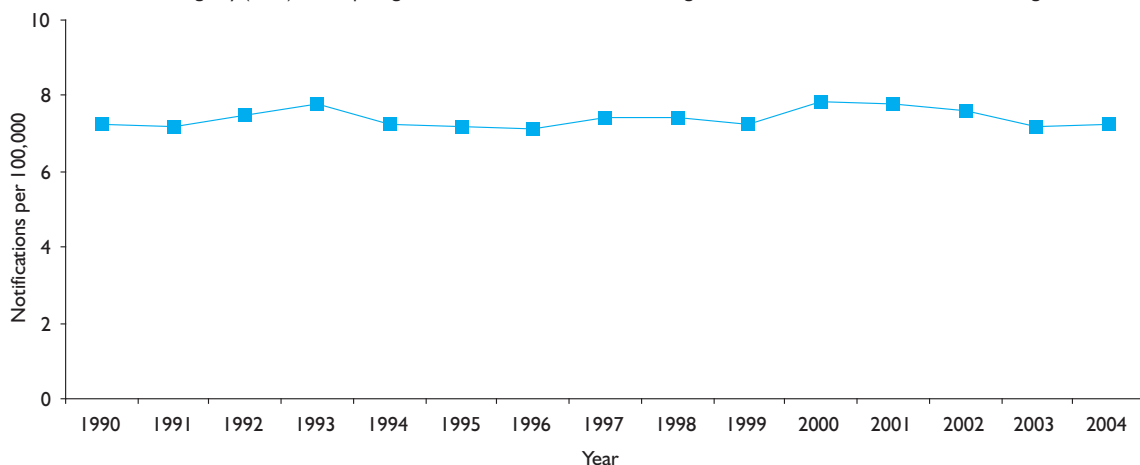


Table & Figure 2.13 Notifications for pulmonary tuberculosis. United Kingdom, 1990-2004

Year	Number of notifications	Rate per 100,000
1990	4,152	7.3
1991	4,114	7.2
1992	4,318	7.5
1993	4,482	7.8
1994	4,189	7.2
1995	4,162	7.2
1996	4,147	7.1
1997	4,338	7.5
1998	4,330	7.4
1999	4,249	7.3
2000	4,609	7.9
2001	4,591	7.8
2002	4,522	7.6
2003	4,294	7.2
2004	4,333	7.2

Source: Health Protection Agency (2005) www.hpa.org.uk, Scotland ISD www.isdscotland.org and CDSC Northern Ireland www.cdscni.org.uk



Treatment

Consultations in General Practice

In the UK there are nearly 24 million consultations in General Practice due to respiratory disease. On average there were 1.8 consultations per patient per year, rising to 2.2 per patient in the over 65s, and to 2.6 per patient in the under 1s (Table 3.1).

Inpatient hospital treatment

There were over 845,000 inpatient admissions for respiratory disease in National Health Service Hospitals in England during 2004/05. This represents nearly 7% of all admissions. Of these more than 550,000 were emergency admissions (13% of all emergency admissions). Respiratory disease accounts for 5.2 million bed days, nearly 10% of all hospital bed days (Table 3.2a and Figure 3.2a).

In children aged 0-14 years there are over 240,000 finished consultant episodes for respiratory disease, 14% of all episodes in this age group (Table 3.3).

Hospital treatment by type of respiratory disease

Almost two fifths (39%) of bed days used for respiratory disease treatment are due to pneumonia and other acute lower respiratory infections, one fifth (21%) are due to chronic obstructive lung disease and nearly one in ten (9%) are due to cancers of the respiratory system (Table 3.2b and Figure 3.2b).

In children aged 0-14 years, over two fifths (42%) of finished consultant episodes are due to acute infections. Nearly one in three (29%) episodes for patients over 60 years are for chronic obstructive lung disease and one in five (21%) are for pneumonia (Table 3.3 and Figure 3.3).

Drug treatment

In England in 2004 about 51 million prescriptions were dispensed in the community for the prevention and treatment of respiratory disease. Just under half of these (49%) are for bronchodilators used in the treatment of asthma and COPD while corticosteroids now account for over a quarter (26%) of respiratory drugs (Table 3.4).

Over the whole of the UK, respiratory prescriptions account for 7% of all prescribed drugs (Table 3.5).

Operations for respiratory disease

In 1999/2000 there were over 10,500 operations for respiratory disease. Of these 40% (4,288) were for the treatment of lung cancer.

Table 3.1 Rates of consultation with a GP and consultations per patient by sex and age in England and Wales and estimates of the total number of consultations. UK, 2004

	Rates of consultation in general practice for respiratory disease (per 10,000) England and Wales		Consultations per patient England and Wales		Estimates of total number of consultations (millions) in UK
	M	F	M	F	Total
<1	15,691	12,845	2.8	2.5	1.0
1-4	8,438	7,572	1.8	1.8	2.2
5-14	3,548	3,550	1.6	1.6	2.7
15-24	2,384	4,270	1.4	1.6	2.6
25-44	2,154	3,929	1.5	1.7	5.2
45-64	2,760	4,317	1.8	1.9	5.2
65-74	5,118	5,431	2.2	2.2	2.7
75 and over	6,575	5,470	2.2	2.0	2.7
All ages	3,420	4,525	1.8	1.8	23.8

Sources:

Weekly Returns Service Annual Report 2004, RCGP Birmingham Research Unit. <http://www.rcgp.org.uk/bru>

Office for National Statistics, mid-year population estimates 2004. www.statistics.gov.uk

Table 3.2a Hospital admissions by main diagnosis, sex and age. National Health Service hospitals, England, 2004/05

	Admissions			FCE *	Bed days
	Elective & emergency	Emergency	Day cases		
All diagnoses	12,102,006	4,428,680	3,847,632	13,706,765	54,554,697
All respiratory disease (A15, A16, A19, A31.0, A36, A37, A40, B90, C30-C34, C38.4, C39, C45., D02, D14, D15, D86.0, E84, I26-I28, J00-J99, P20-P28, Q31-Q34)	845,107	554,921	88,388	1,091,763	5,205,698
Ischaemic heart disease (I20-I25)	311,533	169,970	60,920	421,397	1,830,984
Other cardiovascular disease (I00-I99 excl I20-I28)	541,001	301,392	118,596	743,635	5,443,904
Cancer, excl cancers of the respiratory system (C00-D48, excl C30-C34, C38.4, C39, C45.0, D02, D14, D15)	1,227,714	136,877	761,151	1,320,532	3,859,312
All diseases of the nervous system (G00-G99)	235,352	96,953	82,792	275,250	1,730,040
All diseases of the digestive system (K00-K93)	1,210,193	409,161	607,655	1,415,945	3,653,359
All diseases of the genitourinary system (N00-N99)	762,064	219,388	338,373	847,055	2,370,653
Complications of pregnancy and childbirth (O00-O99)	1,251,641	139,557	88,327	1,277,954	2,002,435
Injury & poisoning	770,293	642,714	34737	877,719	5,245,502
All other diagnoses	4,947,108	1,757,747	1,666,693	5,435,515	23,212,810

* A finished consultant episode (FCE) is a period of care under one consultant. A patient may have more than one FCE in an admission. Admissions are defined as FCEs which are the first in the spell of admission for treatment (episode number=1) and thus the admitting episode.

Source: Department of Health (2005). Hospital Episode Statistics www.hesonline.nhs.uk

Figure 3.2a Emergency admissions to English NHS hospitals by main diagnosis, 2004/05

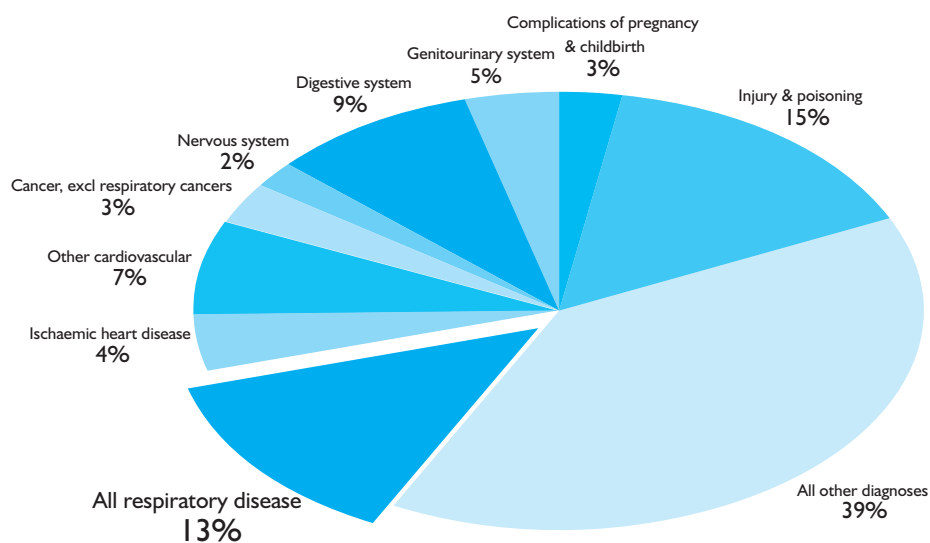


Table 3.2b Hospital admissions for respiratory disease by diagnosis. National Health Service hospitals, England 2004/05

	Admissions			FCE *	Bed days
	Elective & emergency	Emergency	Day cases		
All respiratory disease (A15, A16, A19, A31.0, A36, A37, A40, B90, C30-C34, C38.4, C39, C45.0, D02, D14, D15, D86.0, E84, G47.3, I26-I28, J00-J99, P20-P28, Q31-Q34)	845,107	554,921	88,388	1,091,763	5,205,698
Tuberculosis (A15, A16, A19, B90)	2,694	2,028	285	4,069	43,818
Cancer of the trachea, bronchus & lung (C33, C34)	74,277	21,360	38,180	89,903	399,042
Other respiratory cancers (C30-C32, C38.4, C39, C45.0, D02, D14, D15)	11,628	2,062	3,138	12,975	67,342
Cystic fibrosis (E84)	10,383	3,932	2,427	10,944	65,881
Sleep apnoea (G47.3)	13,460	626	1,924	13,721	18,424
Pulmonary circulatory disease (I26-I28)	19,832	14,922	2,792	29,868	195,509
Acute upper respiratory infections (J00-J06)	84,554	78,135	1,240	87,535	96,955
Acute lower respiratory infections (J20-J22)	104,401	100,028	59	139,863	779,505
Influenza (J10, J11)	830	758	7	986	4,961
Pneumonia (J12-J18)	101,687	96,080	1,019	160,578	1,262,987
Chronic diseases of the upper respiratory tract (J30-J39)	126,949	10,830	24,655	128,306	1,385,67
Chronic obstructive lung disease (J40-J44, J47)	121,406	111,077	4,389	186,564	1,099,440
Asthma (J45, J46)	70,907	68,416	1,000	88,630	2,201,77
Pneumoconioses (J60-J70)	7,625	6,862	164	13,817	151,224
Congenital & perinatal respiratory disease (P20-P28, Q31-Q34)	42,636	2,936	332	49,697	174,662
Other respiratory disease (A31.0, A36, A37, A40, D86.0, J80-J99)	51,838	34,869	6,240	74,307	487,204

* A finished consultant episode (FCE) is a period of care under one consultant. A patient may have more than one FCE in an admission. Admissions are defined as FCEs which are the first in the spell of admission for treatment (episode number = 1) and thus the admitting episode.

Source: Department of Health (2005). Hospital Episode Statistics www.hesonline.nhs.uk

Figure 3.2b Respiratory emergency admissions to English NHS hospitals by main diagnosis, 2004/05

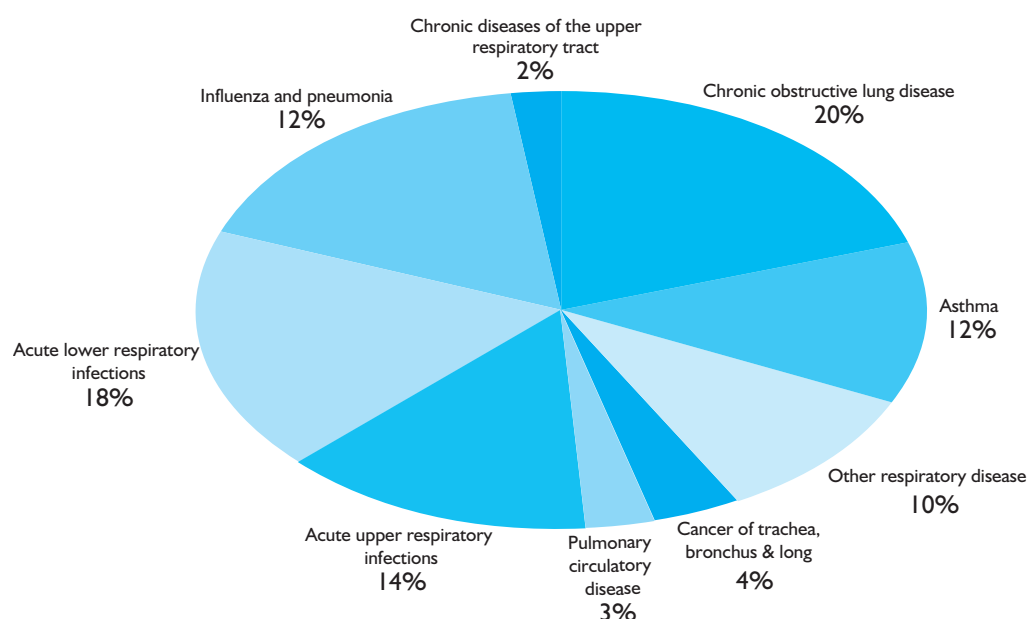


Table 3.3 Finished Consultant Episodes for respiratory disease by diagnosis, sex and age. National Health Service hospitals, England, 2004/05

	Total	Finished Consultant Episodes *					
		Males	Females	0-14	15-59	60-74	75 and over
All respiratory disease (A15, A16, A19, A31.0, A37, A40, B90, C30-C34, C38.4, C39, C45.0, D02, D14, D15, D86.0, E84, G47.3, I26-I28, J00-J99, P20-P28, Q31-Q34)	1,091,763	573,601	518,162	240,577	296,470	245,157	309,182
Tuberculosis (A15, A16, A19, B90)	4,069	2,472	1,597	180	2,908	527	435
Cancer of the trachea, bronchus & lung (C33, C34)	89,903	53,619	36,284	40	21,729	44,309	23,814
Other respiratory cancers (C30-C32, C38.4, C39, C45.0, D02, D14, D15)	12,975	9,742	3,233	411	4,475	5,502	2,586
Cystic fibrosis (E84)	10,944	5,233	5,711	4,282	6,639	17	6
Sleep apnoea (G47.3)	13,721	10,189	3,532	2,361	8,292	2,746	322
Pulmonary circulatory disease (I26-I28)	29,868	13,023	16,845	250	10,424	9,503	9,684
Acute upper respiratory infections (J00-J06)	87,535	48,127	39,408	65,935	17,639	1,940	1,992
Acute lower respiratory infections (J20-J22)	139,863	67,870	71,993	33,909	24,851	22,785	58,236
Influenza (J10, J11)	986	474	512	270	416	120	177
Pneumonia (J12-J18)	160,578	82,708	77,870	13,794	29,692	32,617	84,388
Chronic diseases of the upper respiratory tract (J30-J39)	128,306	68,259	60,047	36,264	76,651	11,884	3,498
Chronic obstructive lung disease (J40-J44, J47)	186,564	94,725	91,839	551	25,786	77,031	83,151
Asthma (J45, J46)	88,630	38,358	50,272	28,713	41,800	10,279	7,816
Pneumoconioses (J60-J70)	13,817	7,889	5,928	336	2,429	3,024	8,022
Congenital & perinatal respiratory disease (P20-P28, Q31-Q34)	49,697	28,117	21,580	49,447	176	30	26
Other respiratory disease (A31.0, A36, A37, A40, D86.0, J80-J99)	74,307	42,796	31,511	3,834	22,563	22,843	25,029

* A finished consultant episode (FCE) is a period of care under one consultant. A patient may have more than one FCE in an admission.
Source: Department of Health (2005). Hospital Episode Statistics www.hesonline.nhs.uk

Figure 3.3 Inpatient days for cases of respiratory disease by main diagnosis. English NHS hospitals, 2004/05

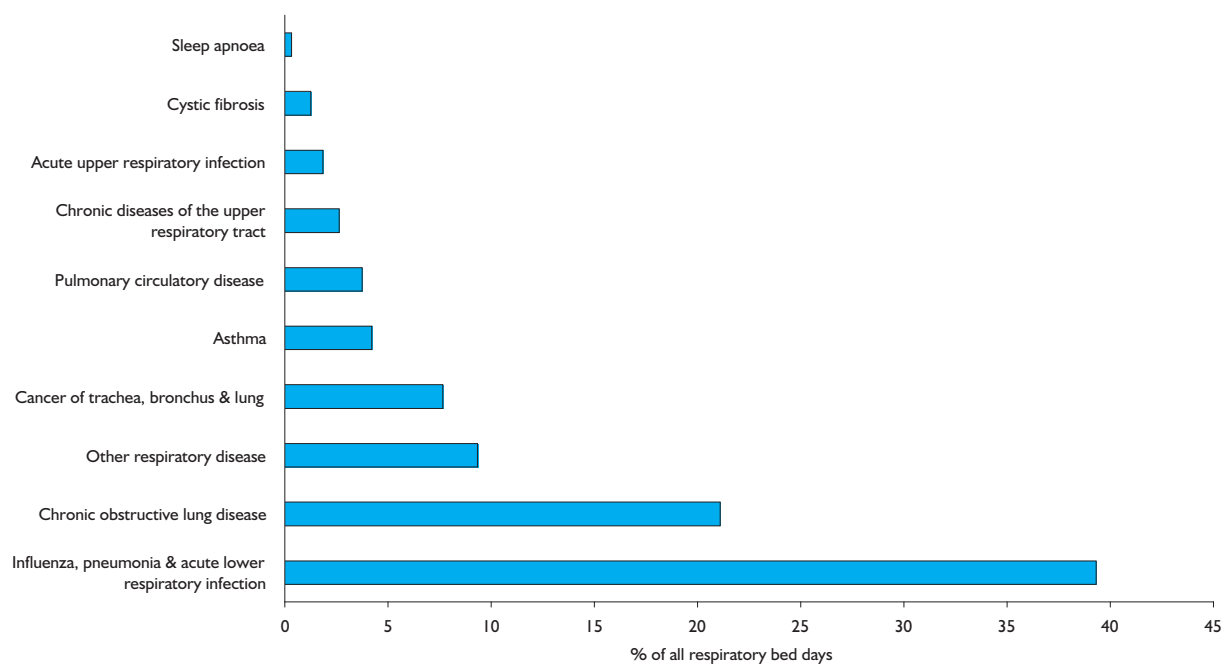


Table 3.4 Prescriptions used in the prevention and treatment of respiratory disease. England, 2004

	Prescriptions (thousands)
General respiratory drugs	
Inhaled bronchodilators	24,785
Inhaled corticosteroids	13,480
Cromoglycate and related therapy	74
Leukotriene receptor antagonists	597
Antihistamines, hyposensitisation and allergic emergencies	8,741
Oxygen	704
Mucolytics	97
Aromatic inhalations	22
Cough preparations	1,672
Systemic nasal decongestants	624
Antituberculous Drugs	71
Cystic fibrosis drugs (pancreatin)	153
Total	51,018

This table does not include drugs dispensed in hospitals.

This table only includes drugs which are clearly only used in the treatment of respiratory disease. For example steroid tablets and antibiotics may be commonly used in the treatment of the exacerbations of asthma but the cost to the NHS could not be separated from their general use.

Source: Department of Health, England <http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsStatistics/>

Table 3.5 Number of prescriptions by selected BNF chapters. United Kingdom, 2004

	BNF Chapter UK	Number (thousands)
1	Gastro-intestinal system	64,575
2	Cardiovascular system	244,410
3	Respiratory system	62,616
4	Central nervous system	154,087
5	Infections	50,958
6	Endocrine system	65,489
7	Obstetrics, gynaecology, & urinary-tract disorders	19,512
9	Nutrition & blood	26,260
10	Musculoskeletal & joint diseases	36,659
11	Eye	18,824
13	Skin	43,275
	All prescriptions	842,989

Sources:

Department of Health, England <http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsStatistics/>Scottish Health Statistics http://www.isdscotland.org/isd/info3.jsp?pContentID=1041&p_applic=CCC&p_service=Content.show&Health of Wales Information Service <http://www.wales.nhs.uk/page.cfm?orgid=1&pid=975>Central Services Agency, Northern Ireland <http://www.centralservicesagency.com/display/statistics>**Table 3.6** Operations for respiratory disease. United Kingdom 1999/2000

		Number of operations
Lung cancer	Primary tumour	3,701
	Secondary tumour	360
	Benign tumour	227
	Total	4,288
Pleural cancer	Mesothelioma	273
	Other malignancy	196
	Benign	101
Pneumothorax		561
Pleuropulmonary sepsis		897
Tuberculosis		121
Other inflammatory lung conditions		399
Trauma		45
Other lung conditions		177
Video assisted surgical procedures		3,450
Total operations		10,508

Source: Society of Cardiothoracic Surgeons of Great Britain and Ireland (2001) United Kingdom Thoracic Surgical Register: Annual Report 1999-2000 www.ctsnet.org/doc/853

Costs

Total cost of respiratory disease to the NHS (£2972.7 million)

Primary care (£501 million)

There are an estimated 24 million consultations to general practitioners in the UK. This is derived by applying known rates of consultation in a large sample in England and Wales to the whole UK population. Multiplying this by the estimated unit cost of a GP visit gives a total cost of £501 million (Table 4.1).

Secondary care (£1496.4 million)

There were 933,000 admissions for respiratory disease in England in 2004/05. This gives an estimated one million admissions for the whole of the UK. Applying unit costs for elective inpatient, emergency inpatient and day case care for respiratory conditions gives total costs of hospital care of £1,496.4 million (Table 4.2).

These estimates do not include accident and emergency admissions nor other outpatient episodes for respiratory disease, since national data on these are not available by cause. From routine statistics collected in hospitals, there were about 71 million outpatient attendances in the UK in 2001/02*. Respiratory disease accounts for 8% of all inpatient episodes in England and Wales; if it accounted for the same proportion of outpatient episodes this would mean a further 6 million UK respiratory related outpatient visits, with attendant costs.

Drugs (£975.3 million)

Data on the number and cost of prescriptions given out in the community in the UK can be obtained from each of the UK nations. The number of respiratory drugs prescribed has increased year on year and in 2004 the cost stood at £975.3 million (Table 4.3). This does not include steroid tablets and antibiotics used in respiratory disease, as these cannot be separated from other uses. Nor does it include any drugs prescribed in hospitals, as this is not reported nationally. Therefore this is an under-estimate of the true cost of respiratory drugs.

Production losses due to respiratory disease (£3643.0 million)

Mortality (£1914.5 million)

To estimate production losses caused by mortality from respiratory disease it was assumed that men would have worked until 65 and women until 60, had they not died.

The number of working years lost due to deaths from respiratory disease was estimated by multiplying the estimated number of deaths in each age-sex group by the number of working years left to those who died. An estimated 99,000 working years were lost from deaths due to respiratory disease in the UK in 2004. This figure was adjusted to take account of the fact that not everyone was in employment, and was then multiplied by the average annual earnings for men and women in April 2005. This gives an estimated cost of respiratory related mortality of £1,914.5 million (Table 4.4).

Morbidity (£1728.5)

The Department for Work and Pensions records show that in Great Britain 24.9 million working days were lost from certified incapacity due to respiratory disease. Multiplying this by the average daily earnings for men and women in April 2005 and scaling up for the UK population produces an estimate of £1728.5 million of lost production due to respiratory disease (Table 4.5). This does not include days lost from self-certified sickness and so will under-estimate the true cost of morbidity production loss.

* Compendium of Health of Statistics 2003-04

Table 4.1 Estimates of the number of consultations for respiratory disease and of their cost to the NHS. United Kingdom, 2004

	Estimate of national number of consultations for respiratory system diseases (thousands)								Total	Total cost (millions)
	<1	1-4	5-14	15-24	25-44	45-64	65-74	75 and over		
M	567	1,160	1,360	938	1,832	1,979	1,215	1,129	10,011	210
F	441	991	1,294	1,617	3,388	3,181	1,444	1,548	13,830	290
Total	1008	2,152	2,654	2,555	5,220	5,160	2,659	2,677	23,841	501

Sources:

Weekly Returns Service Annual Report 2004, RCGP Birmingham Research Unit. <http://www.rcgp.org.uk/bru>
Unit Costs of Health and Social Care 2004, Lesley Curtis, Ann Netten, PSSRU, University of Kent

Table 4.2 Hospital admissions for respiratory disease in England, 2004/05, and estimates of their costs to the NHS in the United Kingdom, 2004

	Number of admissions	Number of admissions	Cost, millions
	England	UK	UK
Elective inpatient admissions	290,186	328,889	625.0
Emergency inpatient admissions	554,921	628,932	834.6
Day cases	88,388	100,176	36.9
All admissions	933,495	1,057,997	1496.4

Department of Health (2005). Hospital Episode Statistics www.hesonline.nhs.uk

Department of Health Reference Costs 2004. <http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/FinanceAndPlanning/NHSReferenceCosts/fs/en>

Table 4.3 Number and cost of community prescriptions used in the treatment of respiratory disease. United Kingdom, 2004

	Prescriptions (thousands)	Estimated net ingredient cost (thousands)
Bronchodilators	30,591	312,989
Corticosteroids	16,519	503,322
Cromoglycate & related therapy	875	27,705
Antihistamines & hyposensitisation	10,717	76,232
Oxygen	865	19,310
Mucolytics	120	9,121
Aromatic inhalations	26	22
Cough preparations	2,087	1,314
Systemic nasal decongestants	816	1,401
Tuberculosis drugs	86	2,116
Cystic fibrosis drugs	202	21,742
Total cost		975,274

Source: Department of Health, Prescription Cost Analysis 2004 <http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsStatistics/>
Scottish Health Statistics 2004/05 http://www.isdscotland.org/isd/info3.jsp?pContentID=1041&p_applic=CCC&p_service=Content.show&
Health of Wales Information Service 2004 <http://www.wales.nhs.uk/page.cfm?orgid=1&pid=975>

Central Services Agency, Northern Ireland 2004 <http://www.centralservicesagency.com/display/statistics>

This table only includes drugs which are clearly only used in the treatment of respiratory disease. For example, steroid tablets and antibiotics may be commonly used in the treatment of the exacerbations of asthma, but the cost to the NHS could not be separated from their general use. Also, it does not include hospital prescribing.

Table 4.4 Working years lost due to mortality from respiratory disease and estimates of production losses. United Kingdom, 2004

Age	Working years lost			Production loss (£, million, 2004)		
	Men	Women	Total	Men	Women	Total
<35	13,973	10,760	24,733	308.8	144.3	453.1
35-44	9,331	5,954	15,285	206.2	79.8	286.1
45-54	20,477	10,427	30,904	452.5	139.8	592.4
55-64	23,569	4,629	28,199	520.9	62.1	583.0
All ages	67,350	31,771	99,120	1488.4	426.1	1914.5

Source: Office for National Statistics (2005). Mortality statistics by cause. Series DH2 no. 31. The Stationery Office, London

General Register Office (2005) Annual Report 2004. General Register Office for Scotland.

General Register Office (2005) Annual Report 2004. Northern Ireland Statistics and Research Agency.

Office for National Statistics (2004) Labour Force Survey

Office for National Statistics (2005) Annual Survey of Hours and Earnings, London

Table 4.5 Days of certified incapacity due to morbidity from respiratory disease¹ in Great Britain 2002/03 and estimates of production losses. United Kingdom, 2004

	Days of certified incapacity (thousands)			Production losses (£, millions)		
	Men	Women	All adults	Men	Women	All adults
Under 20	64	38	102	5.6	2.0	7.1
20-29	403	352	755	35.3	18.7	52.4
30-39	929	534	1,463	81.3	28.4	101.5
40-49	1,781	2,272	4,053	155.8	120.6	281.2
50-54	2,101	1,991	4,092	183.9	105.7	283.9
55-59	3,790	2,602	6,393	331.6	138.2	443.5
60-64	6,900	356	7,255	603.7	18.9	503.4
Over 65	800	-	800	70.0	0.0	55.5
All ages	16,769	8,144	24,912	1467.3	432.4	1728.5

¹ Incapacity from ICD codes J00-J99

Sources: Department for Work and Pensions, personal communication
Annual Survey of Hours and Earnings 2005, NS, London

Table 4.6 Health care costs of selected diseases in £ million. United Kingdom, 2004

Disease group	Direct health care cost	Source
Respiratory disease	2973	Present study
Respiratory disease	3061	Burden Lung Disease 2000
Alzheimer's disease	2445	Gray and Fenn 1993
Coronary Heart Disease	2208	Maniadakis and Rayner 1998
Back pain	2033	Maniadakis and Gray 2000
Stroke	1316	Dale 1989
Arthritis	991	Wyles 1992
Epilepsy	217	Griffinn and Wyle 1991
Insulin dependent diabetes	150	Gray et al 1995
Benign prostatic hyperplasia	145	Drummond et al 1993
Multiple sclerosis	57	O'Brien 1987

All costs have been inflated to 2004 prices using the hospital and community health service pay and price index

Results from the above studies may not be directly comparable due to varying methodologies used and different costs included

Figure 4.7 Direct medical care cost of respiratory disease, United Kingdom, 2004

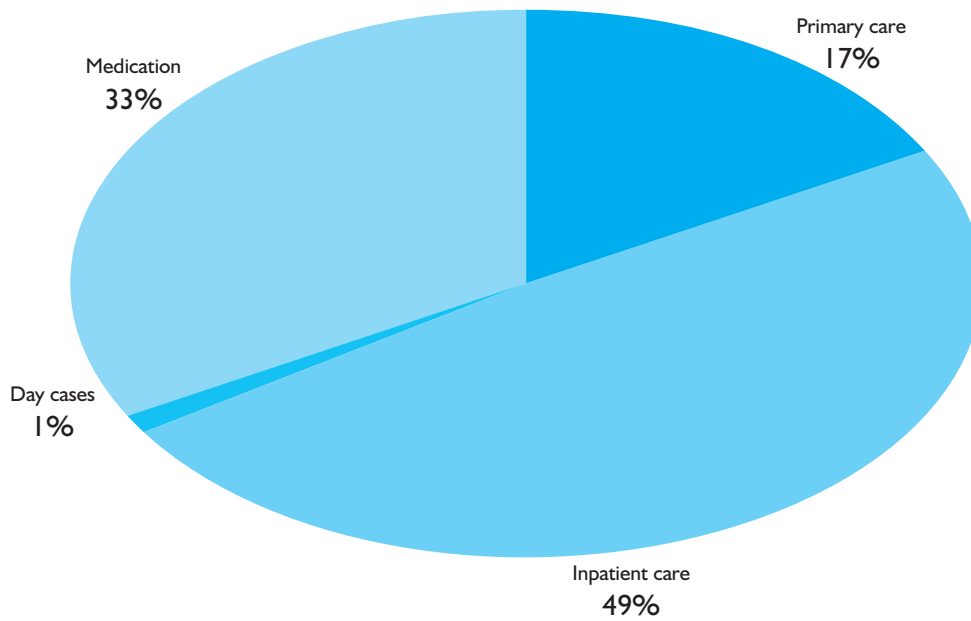
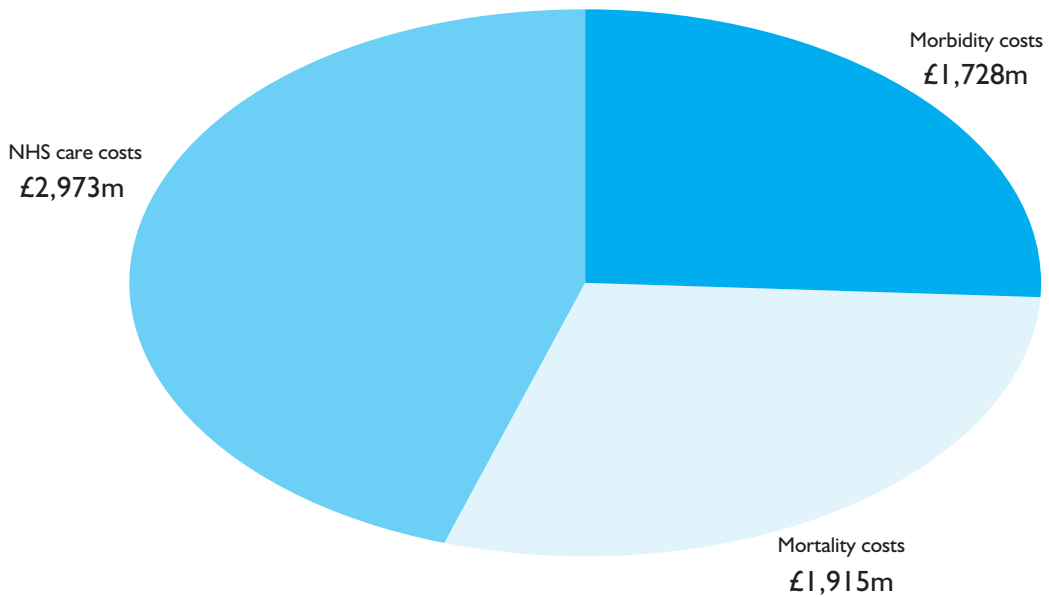


Figure 4.8 Total cost of respiratory disease, £million. United Kingdom, 2004



Total cost of respiratory disease, UK = £6,616 million

The British Thoracic Society

The British Thoracic Society (BTS) is the national representative body for respiratory medicine in the UK. Formed in 1982 from the amalgamation of the British Thoracic Association and the Thoracic Society, the BTS has over 2,500 members. Reflecting the diversity of respiratory medicine, these include doctors, nurses, physiotherapists, clinical scientists and any professional with an interest in lung diseases.

The main aims of the Society are to improve the health and care of people with lung diseases, and to further their interests, by working to increase the profile and understanding of respiratory medicine with Government, the National Health Service, the general public and the media. The commitment to this goal is reflected in the Society's dedication to promote the highest standards of clinical care, training and research, and to raise the level of resources available to fight lung disease to match the European average.

As a major British advocate for improvements in the care of people with lung diseases, the BTS facilitates research into the causes, prevention, treatment and management of respiratory diseases, disseminating this information through the production of Guidelines for health professionals, its journal *Thorax*, scientific and educational meetings, peer review, and communications activity. The Society works closely in partnership with other organisations which are also committed to improve the care of people with lung diseases.

The BTS is a registered charity and company limited by guarantee.

Production of the Burden of Lung Disease 2006

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