



Lung & Asthma
Information Agency

Lung & Asthma Information Agency, Department of Public Health Sciences, St George's Hospital Medical School, Cranmer Terrace, London SW17 0RE

The burden of respiratory disease

Introduction

Respiratory disease has a major effect on morbidity and mortality at all ages. Acute upper respiratory infections are among the commonest illnesses experienced at all ages and lead to absence from school and work, visits to GPs, and heavy use of "over the counter" medicines. Similarly, acute lower respiratory infections such as acute bronchitis, bronchiolitis and pneumonia account for substantial morbidity at all ages. In children, asthma is one of the most common chronic diseases, and in adults, chronic lower respiratory diseases such as chronic bronchitis, emphysema, and chronic obstructive airways disease (COAD) are important contributors to sickness absence (LAIA factsheet 92/4), premature retirement, disability and mortality. Other major respiratory diseases include tuberculosis (LAIA factsheet 92/3), lung cancer (LAIA factsheet 93/1) and cystic fibrosis (LAIA factsheet 95/2).

Mortality

Diseases of the respiratory system accounted for 10.8% of all deaths in 1992. This compared with 45.6% attributed to diseases of the circulatory system (30.4% heart disease and 15.2% cerebrovascular disease), and 26.1% from cancers (figure 1). Lung cancer accounted for 6% of all deaths.

The pattern of mortality from respiratory disease varies with age (figure 2). In children, about 3% of deaths are attributed to lower respiratory disease. Although asthma has a high mortality profile, it accounted for only 20 deaths in 1992 among those aged 0-14 (0.3% of all deaths in this age group). Deaths from cystic fibrosis currently occur among children and young adults, although life expectancy is increasing. Lung cancer is an important cause of death up to the age of 70, after which pneumonia, chronic bronchitis, emphysema and COAD account for a greater proportion of all deaths.

Hospital admissions

In 1991/2, 6.5% of all hospital admissions were for respiratory diseases. Pregnancy and perinatal conditions were the commonest reasons for admission (13.6%), followed by diseases of the digestive system, the circulatory system, cancers and injury & poisoning (figure 1).

As with mortality, the pattern varies with age (figure 3). In children respiratory diseases account for 11% of admissions in those aged 0-4,

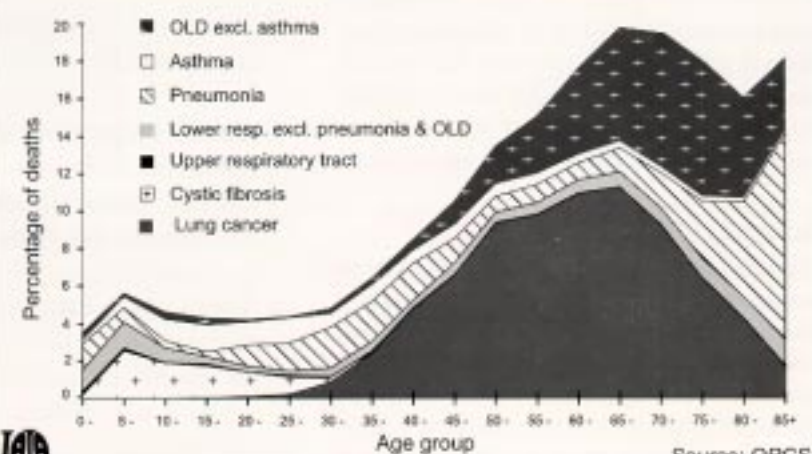
Figure 1: Mortality, hospital admissions and consultations with a General Practitioner by disease group, 1991/2

	ICD Chapter	Mortality %	Admissions %	GP cons. %
Diseases of the respiratory system	VIII	10.8	6.5	17.8
Cancers	II	26.1	9.1	1.4
Mental disorders	V	2.3	3.3	5.1
Nervous system	VI	2.1	5.3	8.2
Circulatory system	VII	45.6	8.8	6.9
Digestive	IX	3.4	9.5	4.3
Pregnancy & perinatal	XI, XV	<0.5	13.6	4.5
Skin & subcutaneous tissue	XII	<0.5	2.0	6.6
Musculoskeletal	XIII	1.0	5.4	6.8
Injury & poisoning	XVII	3.0	7.1	5.6
Signs & symptoms	XVI	0.9	6.9	6.7
Other	I, III, IV, X, XIV	4.0	13.2	14.3
Other reasons for contact with the health services		—	9.3	13.7



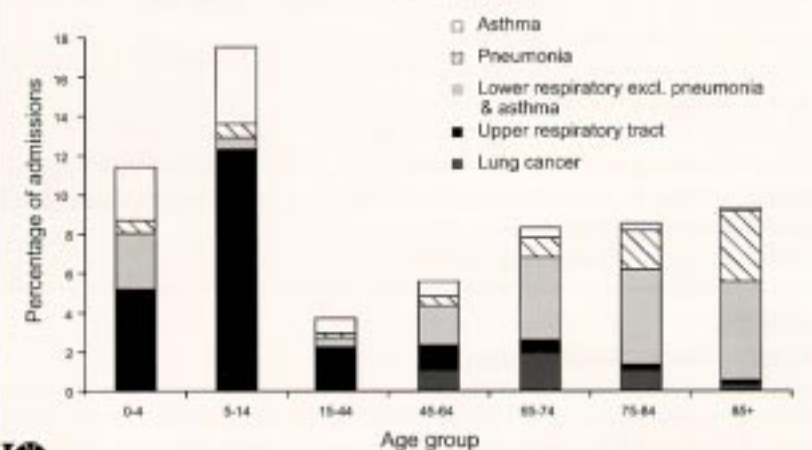
Source: OPCS & Dept of Health

Figure 2: Percentage of deaths attributable to respiratory disease, by 5-year age group, England & Wales 1992.



Source: OPCS

Figure 3: Percentage of hospital admissions attributable to respiratory disease, England 1991/2.



Source: HES, Department of Health

split evenly between upper and lower respiratory tract diseases. In those aged 5-14, they account for 17%, the majority of which are for upper respiratory tract complaints such as tonsillitis. Asthma, one of the commonest single causes for admission among children, accounts for 3% and 4% respectively in each age-group. Upper respiratory tract infections continue to be important in young adults. However, from age 45 onwards, lung cancer and lower respiratory diseases such as pneumonia assume greater importance.

Consultations with GPs

More people consult their GP for respiratory disease than for any other group of diseases. During a 12 month period in 1991/2, 30% of the population consulted their GP at least once for respiratory disease, accounting for 18% or 1 in 6 of all consultations.

The most common respiratory complaints are acute upper respiratory tract infections (8.6% of all consultations), acute bronchitis & bronchiolitis (3.1%) and asthma (2.6%). The pattern of consultations varies with age (figure 4). Among children, 33% of all consultations are for respiratory diseases, with upper respiratory tract diseases accounting for two thirds of these. In adults, respiratory diseases account for 13-14% of all consultations. Diseases of the upper respiratory tract are still important among young adults, whereas among the elderly, lower respiratory tract diseases account for a greater proportion of consultations.

General morbidity

In the 1988 General Household Survey, 7% of those questioned reported diseases of the respiratory system as a cause of long-standing illness, disability or infirmity. This was the third most common complaint, behind the musculoskeletal system (12%) and the heart & circulatory system (8%). Respiratory diseases were the most commonly reported group in children, whereas in adults, other diseases were more important. Asthma was the commonest respiratory complaint, followed by bronchitis and emphysema.

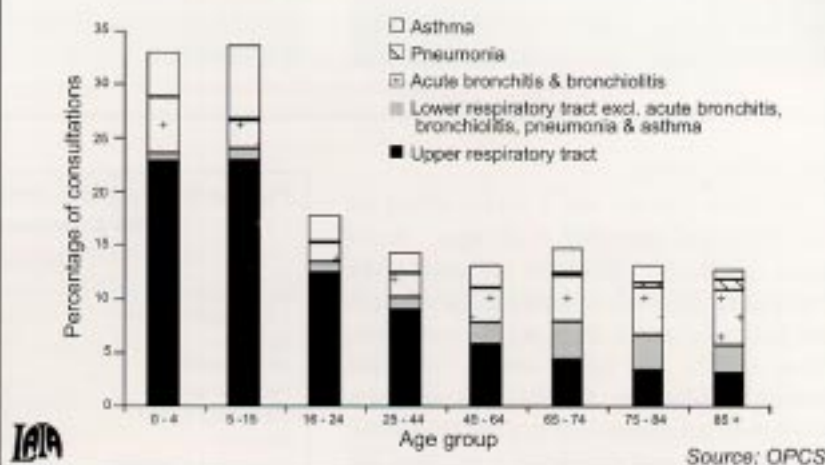
Sickness benefit statistics relating to 1982/3 show that respiratory problems were the largest single reported cause of spells of certified absence (33% of all spells). However, they were less important in terms of working days lost, with diseases of the circulatory system, the musculoskeletal system and mental disorders accounting for larger proportions of lost working time (LALA factsheet 92/4).

Footnote

Classification of health statistics

Health statistics described here are classified using the Ninth Revision of the International Classification of Diseases (ICD). Most respiratory diseases are now grouped together in ICD Chapter VIII, ICD codes 460-519, with sub-categories covering upper respiratory tract diseases (ICD 460-65, 470-78) and lower respiratory tract diseases (ICD 466, 480-519). ICD codes for those lower respiratory tract diseases described here are: acute bronchitis & bronchiolitis (466), pneumonia (480-86), chronic bronchitis (491), emphysema (492), asthma (493), chronic obstructive airways disease (COAD) (496) and obstructive lung disease (OLD) (490-96). Respiratory diseases classified in other ICD chapters include respiratory tuberculosis (ICD 10-12), whooping cough (ICD 33), lung cancer (ICD 162), and cystic fibrosis (ICD 277.0).

Figure 4: Percentage of consultations with a GP attributable to respiratory disease, England & Wales, 1991/2.



Prescriptions

In 1991, 10% of all prescriptions were for the respiratory system. They were the fourth most commonly prescribed drugs, after drugs for the nervous system (18%), the cardiovascular system (17%) and infections (12%). Half of the respiratory prescriptions were for bronchodilators and a further 15% for inhaled corticosteroids (LALA factsheet 93/2).

Summary

- Respiratory diseases have a major effect on morbidity and mortality at all ages.
- Lower respiratory diseases account for 3% of deaths in children. In the middle-aged and elderly, lung cancer, chronic bronchitis, emphysema, pneumonia and COAD are among the principal certified causes of death.
- Respiratory conditions account for 13% of paediatric admissions; asthma is one of the commonest single causes of admission among children. Lower respiratory infections such as pneumonia account for 6.8% of all admissions in the elderly.
- Three in ten people consult their GP at least once a year for respiratory disease. The most common respiratory complaints are acute upper respiratory tract infections.
- Diseases of the respiratory system are reported by 7% of the population as a cause of long-standing illness, disability or infirmity. They are the single largest cause of spells of certified sickness absence; drugs for the respiratory system account for 10% of all prescriptions.