Lung & Asthma Information Agency

Trends in emergency hospital admissions for lung disease

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Introduction

Hospital admissions in England are recorded using the Hospital Episode Statistics (HES) system (see factsheet 96/2 for details of HES). From April 1987 to March 1995 diagnoses in HES were classified using the International Classification of Diseases, 9th revision (ICD 9). From the financial year beginning April 1995 onwards these were classified using ICD 10. This factsheet presents an overview of trends for the most common causes of emergency admissions for lung diseases in England through the 1990s, a period covering the change in coding.

Table 1. ICD codes; number and rates of emergency admissions, April 1999-Mar 2000; percentage change in rates from 1991/92 to 1999/00.

	ICD 9	ICD 10	Number	All ages rate per million	Age-specific rate per million				% change 1991/92 - 1990/00
					0-14	15-44	45-64	65+	
Chronic obstructive respiratory diseases									
COPD[1]	490-492, 494-496	J40-44, J47	97857	1967	38	71	1769	9712	51
Asthma	493	J45-46	63975	1286	3005	869	862	938	-27
Respiratory infections									
Pneumonia	480-486	J12-18	73401	1475	1053	313	838	6062	27
Acute bronchitis/ bronchiolitis	466	J20-21	23391	470	2298	12	32	122	-5
Other lung diseases									
Pneumothorax	512	J93	5124	103	4.8	131	85	175	-11
Cystic fibrosis	277.0	E84	3526	71	160	95	2	0.5	34
Other IPD with fibrosis[2]	516.3	J84.1	2486	50	0.9	3	41	251	156[3]
Respiratory tuberculosis	10-12	A15-16	1677	34	10	37	32	56	-0.3

1 Comprises bronchitis unspecified, chronic bronchitis, emphysema, bronchiectasis, extrinsic allergic alveolitis and chronic airways obstruction not elsewhere classified. 'Bronchitis unspecified'in children is likely to be a marker of an acute condition.
2 'Fibrosing alveolitis'under ICD 9 is included in 'Other interstitial pulmonary diseases with fibrosis'in ICD 10.
3 One third of this percentage rise is estimated to be due to the change in ICD coding

For many conditions the definition has changed little from ICD 9 to ICD 10. For others, for example fibrosing alveolitis, the ICD10 description is less specific (see Table 1).

Current numbers of admissions

There were 162,000 emergency hospital admissions for chronic obstructive respiratory diseases in England during the financial year 1999/2000 (see Table 1). These included 75,600 COPD admissions (excluding asthma) in the 65 year olds and over and 28,500 admissions for asthma in children. The lower respiratory infections, pneumonia and acute bronchitis, accounted for 97,000 admissions. Of these 47,200 were for pneumonia in the 65s and over and 21,800 were for acute bronchitis in children. The numbers of emergency admissions for the other conditions presented here are relatively low.

Trends in admission rates

Trends are apparent in several of these conditions. The update in ICD coding has not resulted in any major step change in rates though there is some evidence of an effect on fibrosing alveolitis and COPD.

Age-adjusted admission rates for **COPD** (excluding asthma) have risen over 50% in the last 9 years. Rises occurred in all the adult age groups particularly from 1995/96 (see figure 1).

Asthma admission rates have fallen 27% from 1991/92 to 1999/00 (see figure 2). Rates have fallen in all age groups with the greatest percentage decline (40%) occuring in children aged 0-14 (for more details see 96/2).

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Emergency admissions for **pneumonia** have risen in all adult age groups (see figure 3). In the over 65s rates have risen by 32%.

Admissions for **acute bronchitis** have fluctuated over the period but there is no marked annual trend (see figure 4). Following the ICD change there was a drop in 1995/96, particularly in the adults (58% in 65s and over). In children, for whom these admissions may include various wheezing illnesses, rates were relatively stable.

There has been a slight fall in admission rates for primary **pneumothorax** over the period (see 2000/2 for more details of the disease) and in 15-44 year olds the rate has fallen from 158 to 130 per million (see figure 5).

Cystic fibrosis admission rates have remained stable in the 0-14 year olds, ranging from 130 to 167 per million over the period (see figure 6). In the 15-44 year olds rates have risen over 80%, possibly as a result of improved survival (see 95/2).

From 1991/92 to 1994/95 there was an upward gradient in **fibrosing alveolitis** from 20 per million to 24 per million (see figure 7) mirroring rises in mortality (see 97/1). After the change to ICD 10 the category expanded to 'Other interstitial pulmonary diseases with fibrosis' and there was a marked increase (40%) to 34 per million in 1995/96. The trend since then has continued upwards in adults.

Overall there does not appear to be any trend in national emergency admissions for respiratory **tuberculosis**, with rates between 30 and 35 per million over the period (see figure 8). In children the rates have risen slightly to 10.2 per million and in 65s and over they have fallen from 62 to 56 per million.

Figures 1-8: Trends in emergency hospital admission rates in England & Wales, financial years Apr 1991 – Mar 2000

Figure 1: COPD (excl asthma) admission rates

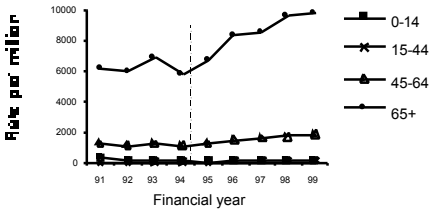


Figure 2: Asthma admission rates

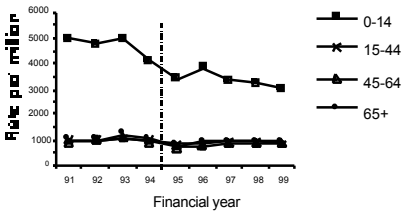


Figure 3: Pneumonia admission rates

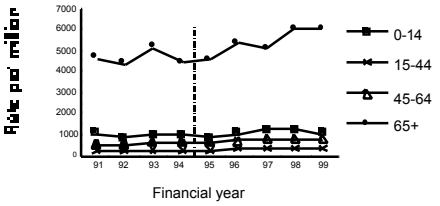


Figure 4: Acute bronchitis admission rates

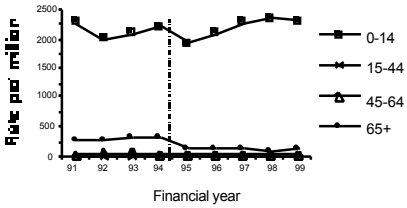


Figure 5: Pneumothorax admission rates

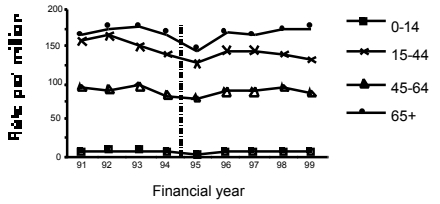


Figure 6: Cystic fibrosis admission rates

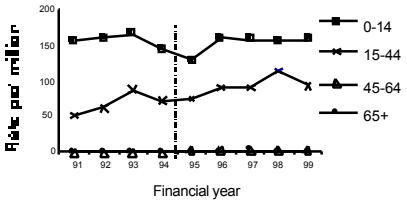


Figure 7: Fibrosing alveolitis / other IPD with fibrosis admission rates

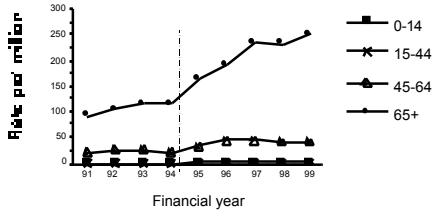
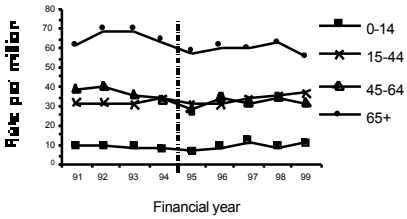


Figure 8: Respiratory tuberculosis admission rates



Source: DH