

Trends in hospital admissions for asthma

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Introduction

The total number of hospital admissions in England and Wales with a discharge diagnosis of asthma rose considerably through the 1970s and 1980s (figure 1), increasing from just under 20,000 per year in the early 1960s to 80,000 per year by the late 1980s. Recently, numbers appear to have stabilised at around 100,000 per year. The increase is most noticeable in children who currently account for almost half of all asthma admissions.

Possible reasons for this increase include changes in:

- Prevalence (LAA factsheet 93/6);
- Disease severity or chronicity;
- Medical care, lowering the threshold of admission or increasing the number of re-admissions;
- The information systems (see footnote);
- The diagnosis and coding of disease (LAA factsheet 92/1).

Children

The largest increases in admission rates occurred in children, most notably in the youngest age-group (figures 2 and 3). In England and Wales among pre-school children, admissions went up from 4 per 10,000 in 1962 to almost 80 per 10,000 by 1985. Rates now appear to have stabilised at around 100 per 10,000 per year. A similar pattern is seen in children aged 5-9, where rates have increased six-fold, peaking at 40 per 10,000 in the mid-1980s. In Scotland, the rates began to rise later and there is a suggestion that they are still increasing.

Special studies have established that these increases cannot be completely explained by an increase in re-admissions, diagnostic transfer from related categories such as acute bronchitis, bronchiolitis or pneumonia, or changes in the threshold of admission.

Figure 1: Hospital admissions for asthma, males & females combined, England & Wales 1962-91.

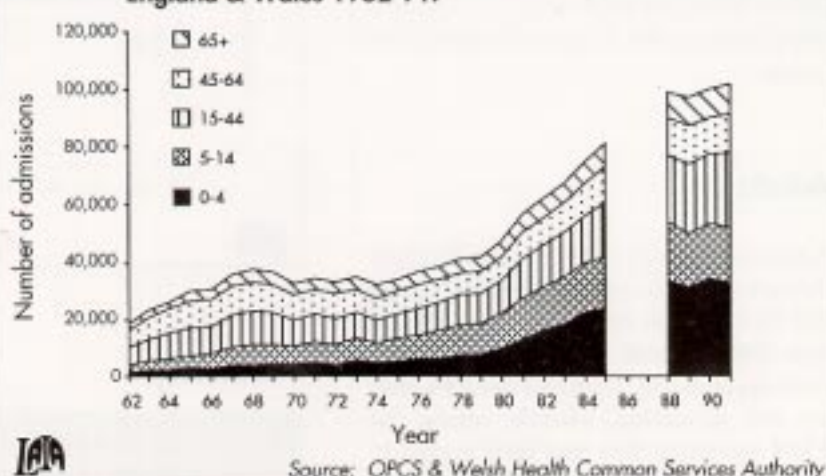


Figure 2: Age-specific hospital admission rates for asthma in children, males & females combined, England & Wales 1962-91.

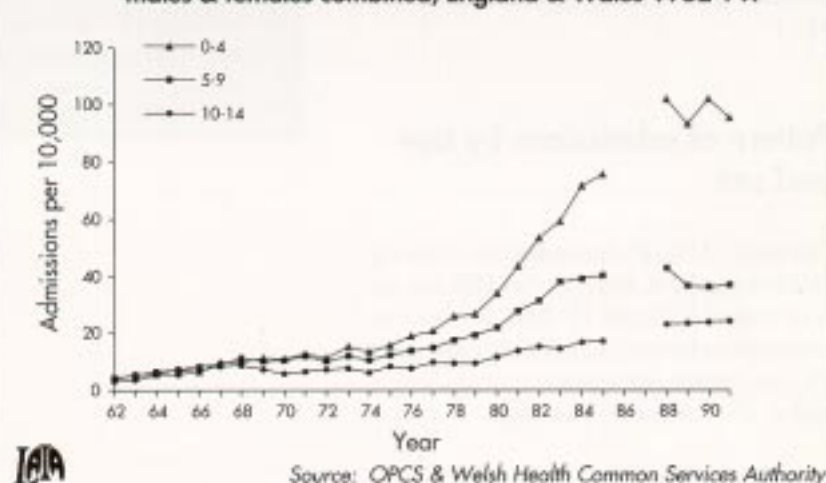


Figure 3: Age-specific hospital admission rates for asthma, ages 0-44, males & females combined, Scotland 1968-91.



The proportion of all paediatric admissions attributable to asthma is increasing, and it is thought that the pattern of medical care in acute childhood asthma has been changing. A variety of factors have been suggested including more self-referral to accident and emergency departments during acute attacks, and an increase in referral by G.P.s of acute asthma to hospital. These would tend to increase the likelihood of children with acute asthma being admitted to hospital, regardless of any change in the occurrence of these acute attacks.

Adults

Admission rates in adults increased slightly through the 1960s, but then declined during the 1970s before beginning to rise again from 1980 (figure 4). Current trends are not entirely consistent. Up to the age of 44, rates are still increasing, whereas among the 45-64 age-group they may have started to decrease. Rates among those aged 65 and above, are still increasing, perhaps due to diagnostic transfer from other categories of obstructive airways disease (LATA factsheet 92/1).

Pattern of admissions by age and sex

Currently, 32% of admissions occur among children aged 0-4, and a further 19% among 5-14 year olds (figure 1). Boys are twice as commonly admitted as girls. After the age of 15, this pattern reverses and women have a higher admission rate than men.

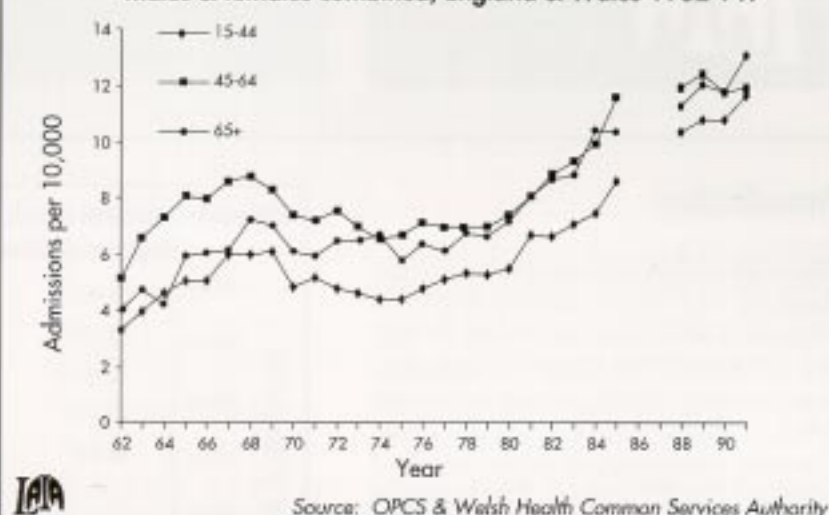
Footnote

Data sources

Until 1982, data on hospital admissions for England and Wales were available in the form of a random 10% sample of all discharges and deaths (Hospital In-Patient Enquiry - HIPE). In 1982, Wales started collecting their data separately with 100% coverage. The 10% sampling continued in England until, and including, 1985. In April 1987, changes were implemented in the NHS information systems in England following recommendations made by the Körner committee and the English data are now collected under the Hospital Episode Statistics system (HES). The published data are based on a 25% sample, aggregated by financial years. Wales continued collecting data under the HAA system until they too changed to the HES system in April 1991. Under the HES system, discharges and deaths are identified as "finished consultant episodes" where a consultant episode is a period of care spent under one consultant. The HES figures for England presented in this factsheet are based on re-aggregation of 100% HES data by calendar year. As diagnostic coverage was incomplete in the earlier years, the numbers of admissions have been adjusted using the published multiplying factors.

Scottish data on admissions is more complete. The numbers have been based on 100% coverage since 1968, and there has been no break or change in the data collection system. The data is also published in calendar years, rather than financial years.

Figure 4: Age-specific hospital admission rates for asthma in adults, males & females combined, England & Wales 1962-91.



Summary

- The rate of hospital admissions coded as due to asthma rose considerably through the 1970s and 1980s.
- The increase is most noticeable among children.
- In England and Wales, rates among children now appear to have stabilised, but adult trends are inconsistent. In Scotland, rates may still be increasing.