Trends in asthma hospitalisation: is this related to prevention inhaler usage?

R MacFaul

Sunderland and Fleming show declining episodes of acute asthma seen in general practice and make reference to increasing hospitalisation for childhood asthma between 1970 and 1990. Whilst overall paediatric admissions have risen since 1990, I present data here which shows that there has been a decline in hospital asthma admissions for children in England since 1990. This is the case even when the trend to describe some hospital admissions as due to viral wheeze or wheezy bronchitis is taken into account—“a diagnostic transfer” also considered by Sunderland and Fleming. Hospital episode statistics for England were analysed for 11 years up to 2001, examining the various codes used for describing wheeze diagnoses. Data are presented for age 0–4 years and 5–14 years separately.

The hospital episodes for England coded as shown in table 1 were summarised into two groups. Firstly, those where the term asthma was used, and secondly episodes likely to be wheeze illnesses. Bronchiolitis and lower respiratory infection episodes were excluded.

Data on trends in prescription of prevention inhalers based on the general practice research database were summarised from the Office of National Statistics report and are shown in table 2.

Trends in hospitalisation of children for asthma and wheeze by age are shown in table 3 and fig 1 with an overall decline in hospitalisation being evident. Figure 1 also shows trends in prescription of prevention inhalers over some of the years.

Use of diagnostic descriptions and codes vary by age strata and this is shown in figs 2 and 3.

The results of this analysis show a decline in asthma and wheeze admissions and no evidence of a misleading decline which might follow differences in use of viral wheeze or wheezy bronchitis as descriptions for asthma admissions. This decline mirrors the reported decline in GP contacts for acute asthma, although the latter may miss the quite frequent access to acute care following self referral to accident and emergency departments where breathing difficulty, including asthma, is the commonest non-trauma presentation in children.

Trends in asthma and wheeze admissions confirm the primary care observation of an apparent true decline in
Figure 1  Trends in hospital admissions of children (male and female) with asthma and wheeze in total shown with trends in use of prevention inhalers in males only.

Figure 2  Wheeze and asthma codes used on discharge. Numbers per year, England, age 0–4 years.
childhood asthma morbidity. Part of the explanation may lie in the increased prescription of asthma inhalers and better supervision of their use.

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**Figure 3** Wheeze and asthma codes used on discharge. Numbers per year, England, age 5–14 years.

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**Figure 3** Wheeze and asthma admissions age 5–14 years.

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