

Research letter

Follow-up of the Finnish Asthma Programme 2000–2010: reduction of hospital burden needs risk group rethinking

The Finnish Asthma Programme 1994–2004 focused on early intervention and disease control, thereby resulting in a significant reduction of asthma morbidity. During the follow-up period from 2000 to 2010, the number of hospital days continued to fall by 54%. Patients ≥ 65 years, especially women, accounted for 39% of the hospital days, and they need attention if the hospital burden is to be reduced further.

In Finland, which has a total population of 5.4 million, 191 000 asthma patients in 2000 and 233 000 (4% of the population) in 2010 (a 22% increase) were entitled to a special reimbursement of drug costs, according to the Social Insurance Institution (figure 1A). In adults, after hypertension, asthma was the second most common chronic disorder in the

reimbursement register, indicating the need for regular medication. In children ≤ 15 years, asthma was the most frequently compensated chronic disorder. In Helsinki, the prevalence of self-reported physician-diagnosed asthma in adults has increased from 6.8% in 1996 to 9.4% in 2007.¹

The improved care provided by the Finnish Asthma Programme 1994–2004 resulted in a reduction of the disease burden; for example, the yearly total costs for asthma were reduced by one-third.² Similarly, the Finnish Allergy Programme 2008–2018 aimed to reduce emergency visits due to asthma by 40%.³ In this study, we report the temporal trends of hospital use for asthma in the 11-year period from 2000 to 2010.

The patient numbers and hospital days were derived from the Finnish Hospital Discharge Register by the National Institute for Health and Welfare (ICD-10 J45–J46). The data for chronic obstructive pulmonary disease (COPD; ICD-10 J44) were compared for reference. The 2010 data for asthma were analysed by age groups.

In 2000, 5894 patients diagnosed with asthma used 32 000 hospital days

compared with 2938 patients using 15 000 hospital days in 2010 (an absolute decrease of 54%); 65% taking into account the number of patients with asthma in the reimbursement register (figure 1A)). The average stay in hospital was reduced from 4.3 days to 4.2 days. For patients diagnosed with COPD, the hospital days were reduced from 44 000 to 23 000 (an absolute decrease of 46%; figure 1A). In 2010, 39% of the hospital days were due to asthma and 61% were due to COPD. During the study period, any diagnostic transfer between asthma and COPD is unlikely as the hospital days decreased at a similar rate and diagnostic practices did not change.

In 2010, 39% of the hospital days for asthma were used by patients ≥ 65 years old (figure 1B), 15% by patients ≤ 15 years old and 12% by children ≤ 5 years old (figure 1C). However, in the case of older patients, the number of hospital days decreased by 60% during the study period. Older patients with asthma, especially women, needed attention, since the majority of the hospitalisations involved women ≥ 65 years old (figure 1D). Co-morbidities of asthma, such as COPD and cardiovascular diseases, may

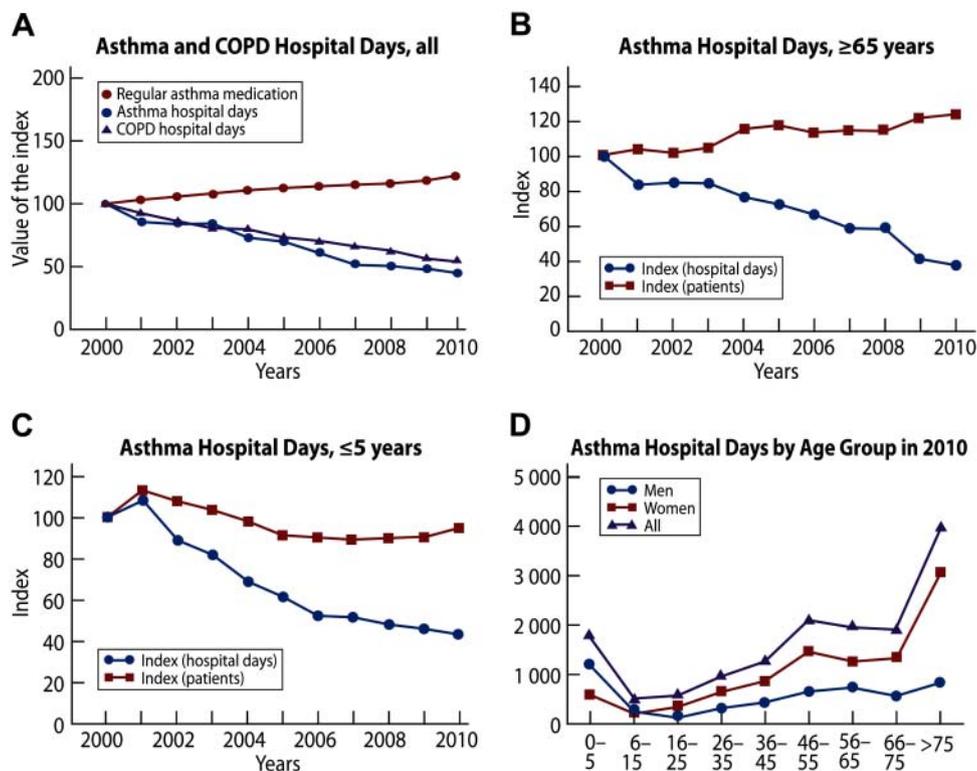


Figure 1 (A) Increase in the number of patients with asthma entitled to special reimbursement for their drug costs and decrease in hospital days due to asthma and chronic obstructive pulmonary disease (COPD). Numbers are relative changes after 2000 (index, 2000=100). Changes in the number hospital days and in the number of asthma patients aged ≥ 65 years (B) and ≤ 5 years (C) during the period 2000–2010. (D) Trend for hospital days due to asthma by different age groups in 2010. This figure is only reproduced in colour in the online version.

complicate treatment in older patients.^{4 5} The other group that needs attention is infants/toddlers who experience wheezing attacks during viral respiratory infections.

The decrease in the hospital days for asthma probably indicates early detection, more effective treatment, and actively implemented guided self-management to prevent exacerbations. In our experience, the latter is the key as it provides simple tools for patients (and parents) to stop asthma attacks proactively.³

To conclude, the burden of asthma has continued to decrease in Finland during the last decade as the costs attributed to asthma (including disability, medication, hospital care, outpatient visits) decreased considerably during the period 1994–2004,² and this trend has continued. In older patients, memory impairment and co-morbidities remain as challenges. The Global Initiative for Asthma launched the Asthma Control Challenge in May 2010 with the aim of reducing hospitalisations due to asthma by 50% over the next 5 years,⁶ and based on the trends observed in our study this seems to be an achievable goal.⁷

**Paula Kauppi,¹ Miika Linna,²
Jaana Martikainen,³ Mika J Mäkelä,¹
Tari Haahtela¹**

¹Department of Allergy, Skin and Allergy Hospital, Helsinki University Central Hospital, Helsinki, Finland

²Centre for Health and Social Economics, Institute of Health and Welfare, Helsinki, Finland

³Research Department, Social Insurance Institution, Helsinki, Finland

Correspondence to Dr Paula Kauppi, Department of Allergy, Skin and Allergy Hospital, Helsinki University Central Hospital, Meilahdentie 2, PO Box 160, FI-00029 HUS, Helsinki, Finland; paula.kauppi@hus.fi

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