

Statistical Brief #13

Asthma Treatment: Use of Medications and Devices, 2000

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Introduction

Asthma is a chronic lung disease caused by inflammation of the lower airways and episodes of airflow obstruction. Asthma episodes or attacks can vary from mild to life-threatening. Data from the 2000 Medical Expenditure Panel Survey (MEPS) of the Agency for Healthcare Research and Quality (AHRQ) show that approximately 25.3 million people (18.2 million adults aged 18 years and older and 7.1 million children 0-17 years) have been told by a physician or other health care provider that they had asthma. Of those who were ever told that they had asthma, 6.5 million adults aged 18 and over and 3.2 million children 0-17 years had an asthma episode or an attack within the twelve months preceding the MEPS interview.

In 2000, the National Heart, Lung and Blood Institute (NHLBI) guidelines recommended treating mild episodes with inhaled short-acting medicines to relieve asthma symptoms. The NHLBI also indicated that for adults and children over five years old the most effective long-term control medication for "persistent" asthma, that is, asthma severe enough that symptoms require the use of quick relief medicines more than twice a week, is inhaled corticosteroids.

Another element of long-term management includes regular monitoring using a peak flow meter. A peak flow meter is a portable hand-held device used to measure the user's ability to expel air from the lungs.

In this report data from the 2000 MEPS are used to examine the prevalence of asthma episodes or attacks within the last 12 months, as well as the use of asthma medications, and whether or not people reporting asthma have a peak flow meter in the home.

Definition of Asthma

Estimates for this report are derived from the Quality (Priority Condition) Section of the 2000 MEPS. Data were collected using Computer Assisted Personal Interviews (CAPI). One household respondent reported information for all members of the household. The 2000 MEPS has a sample size of 23,839 respondents and a response rate of 65.25 percent. People with asthma are restricted to those who had both a medical diagnosis of asthma ("Have you ever been told by a physician or other health care provider that you had asthma?") and had an asthma episode or attack in the twelve months preceding the interview ("In the last 12 months, have you had an asthma episode or attack?"). This classification identifies a person as having active asthma. All references to asthma in this report refer only to people who have active asthma. Thus, those whose asthma is under control are not included in this report.

Findings

Approximately 3.5 percent (9.7 million people) of the US civilian noninstitutionalized population in 2000 reported having an asthma episode or attack in the last 12 months (Figure 1). About 4.4 percent (3.2 million) of children 0-17 years old had an asthma episode or attack in the last 12 months compared to 3.1 percent (6.5 million) of the adult population 18 years of age and older. Females (4.1 percent) were more likely than males (2.8 percent) to report an asthma episode or attack in the last 12 months. However, among

children between 0-17 years old, males were more likely (5.4 percent) than females (3.4 percent) to experience an asthma episode or attack in the last 12 months. Females aged 18 years and older were more than twice as likely as males to report an asthma episode or attack in the last 12 months (4.3 percent compared to 1.9 percent, respectively).

Approximately 86.5 percent of the asthmatic population use some type of asthma medication (Figure 2). Among asthmatics, children between the ages of 0-17 years old were more likely (91.2 percent) than adults aged 18 years and older (84.3 percent) to use asthma medication. However, adults aged 18 and over (53.5 percent) were more likely than children between 0-17 years old (42.3 percent) to use inhaled steroids for the treatment of asthma. Some of this difference is attributable to the fact that steroids were not recommended for children younger than 6 years of age. It should be noted that inhaled steroids may be used in conjunction with other non-steroid medication for the treatment of asthma. Nearly one-third (31.3 percent) of the population reporting an asthma episode or attack in the last 12 months also reported having a peak flow meter in the home.

Females were more likely (55.1 percent) than males (41.8 percent) to use inhaled steroids for the treatment of asthma (Figure 3). Females with asthma also were more likely than males to have a peak flow meter in the home (35.5 percent vs. 24.8 percent).

Briefly Stated

- In 2000 about 3.5 percent of the U.S. civilian noninstitutionalized population reported having an asthma episode or attack in the last 12 months.
- Children between 0-17 years old were more likely (4.4 percent) than adults aged 18 and older (3.1 percent) to have had an asthma episode or attack within the last 12

months.

- Among children between 0-17 years old, males were more likely (5.4 percent) than females (3.4) to experience an asthma episode or attack in the last 12 months.
- For adults, females aged 18 years and older were more than twice as likely as males to report an asthma episode or attack in the last 12 months (4.3 percent compared to 1.9 percent, respectively).
- Among those who had an asthma episode or attack in the last 12 months, children between 0-17 years old were more likely (91.2 percent) than adults aged 18 years and older (84.3 percent) to use asthma medication.
- Over half (53.5 percent) of adults aged 18 and over who had an asthma episode or attack in the last 12 months reported using inhaled steroids compared to 42.3 percent of children between 0-17 years old with asthma.
- Nearly one-third (31.3 percent) of the population reporting an asthma episode or attack in the last 12 months also reported having a peak flow meter in the home.
- Among those who had an asthma episode or attack in the last 12 months, females were more likely (55.1 percent) than males (41.8 percent) to use inhaled steroids for the treatment of asthma.

About MEPS

- For more information about MEPS, call the MEPS information coordinator at AHRQ (301-594-1406) or visit the MEPS Web site at <http://www.meps.ahrq.gov/>.
- For a detailed description of the MEPS survey design, sample design, and methods used to reduce sources of nonsampling error, see the following publications:

Cohen J. Design and methods of the Medical Expenditure Panel Survey Household

Component: Rockville (MD) Agency for Health Care Policy and Research; 1997. MEPS

Methodology Report No. 1. AHCPR Pub. No. 97-0026.

Cohen S. Sample design of the 1996 Medical Expenditure Panel Survey Household

Component. Rockville (MD) Agency for Health Care Policy and Research; 1997. MEPS

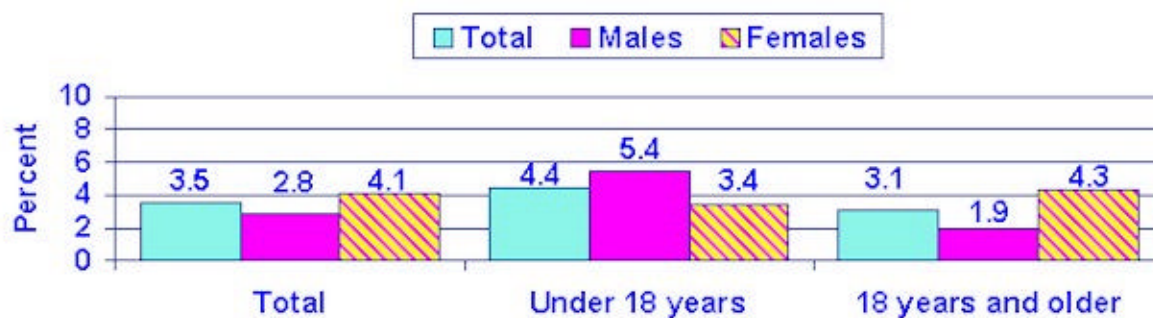
Methodology Report No. 1. AHCPR Pub. No. 97-0026.

- For more information on the guidelines for the diagnoses and management of asthma see the following source:

Expert Panel Report 2: Guidelines for the Diagnoses and Management of Asthma,

National heart, Lung and Blood Institute, National Institutes of Health, May 1997.

Figure 1
Percent of population with active asthma by age and sex



Children under the age of 18 were more likely than adults to have active asthma.
Among children, males are more likely than females to have active asthma.
Among adults, females are more likely than males to have active asthma.

Source: Center for Cost and Financing Studies, AHRQ, Medical Expenditure Panel Survey, 2000



Figure 2
Asthma medication and peak flow meter use for asthmatics by age



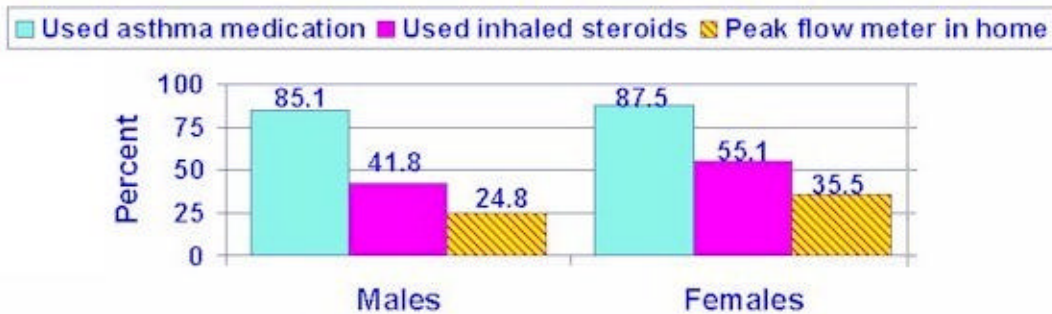
Children under the age of 18 were more likely than adults to use asthma medications, but less likely than adults to use inhaled steroids. About one-third of asthmatics have a peak flow meter in the home.

Note: Inhaled steroids may be taken in conjunction with other asthma medications.

Source: Center for Cost and Financing Studies, AHRQ, Medical Expenditure Panel Survey, 2000



Figure 3
Asthma medication and peak flow meter use for asthmatics by sex



Females were more likely than males to use inhaled steroids. Females also were more likely to have a peak flow meter in the home.

Note: Inhaled steroids may be taken in conjunction with other asthma medications.

Source: Center for Cost and Financing Studies, AHRQ, Medical Expenditure Panel Survey, 2000

