

Clinical Economics

Asthma

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OVERVIEW

More than 9% of U.S. children and 8% of adults have asthma, according to the United States Centers for Disease Control and Prevention (CDC). This equates to approximately 1 in 12 patients, or 25 million people. The number of patients with asthma continues to grow: a 1% increase in prevalence was reported by the American Academy of Allergy & Immunology (AAAAI) between 2001 and 2009.

Approximately 14.2 million primary care visits and 1.8 million emergency department visits are attributed to asthma. Based on data from the AAAAI, more than half (59%) of children and one-third (33%) of adults who experienced an asthma exacerbation had to miss time at school or work. Children missed an average of 4 days of school, while adults missed 5 days of work.

Costs associated with asthma add up to \$56 billion when medical expenses, missed school and work days, and early deaths are totaled, an average of \$3,300 spent per patient with asthma annually.

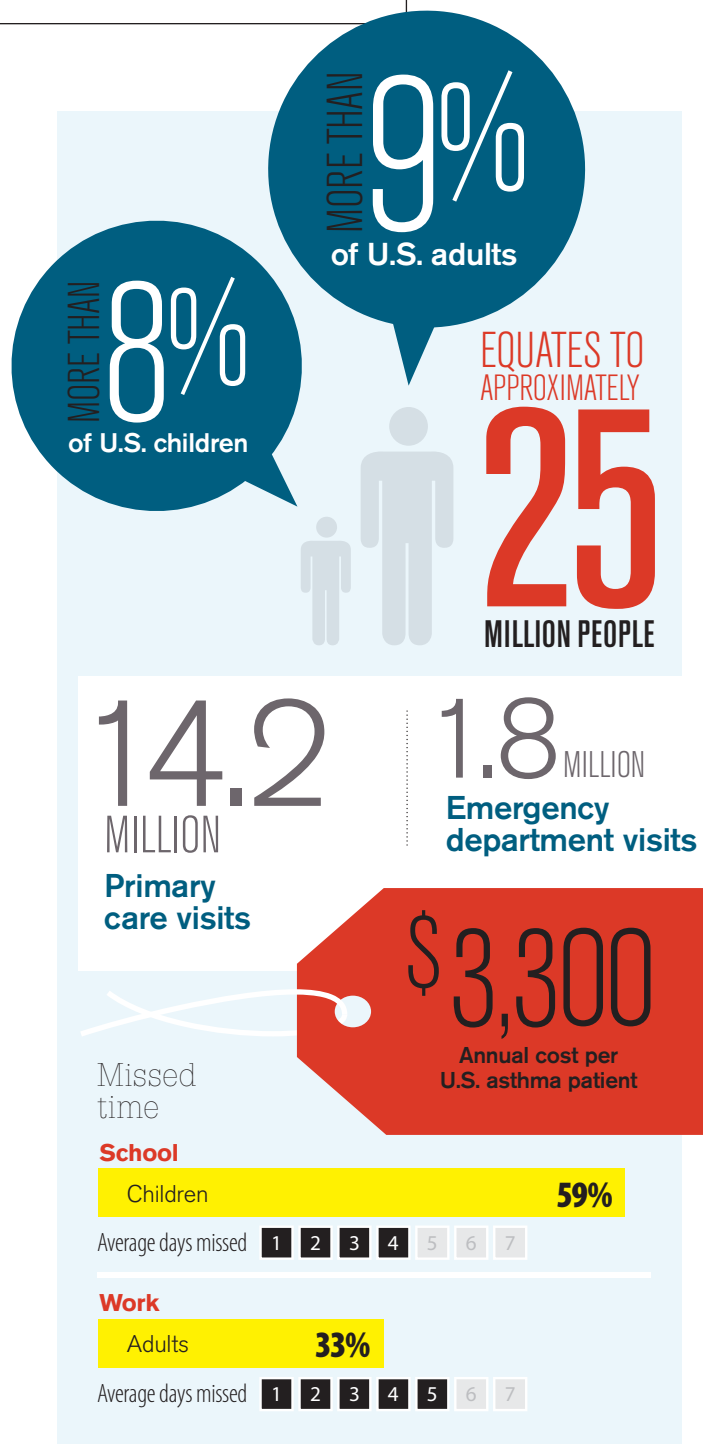
"Asthma continues to be major public health concern with a large financial impact on families, the nation, and our health care system," says Christopher J. Portier, PhD, director of the CDC's National Center for Environmental Health and the Agency for Toxic Substances and Disease Registry. "A key component for adults and children is to create and follow an asthma action plan."

Because asthma requires chronic management and is associated with high rates of healthcare utilization, the creation of effective patient asthma action plans is an important call to action for primary care physicians.

PATIENT MANAGEMENT TIPS SEE PAGE 20

- Assess and monitor continuously
- Control contributing factors
- Optimize record-keeping for treatment team
- Facilitate communication
- Create an asthma action plan
- Partner with patients through education

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Source: U.S. Centers for Disease Control, AAAAI

PATIENT MANAGEMENT TIPS

Assess and monitor continuously

Once a patient has been diagnosed with asthma, a chronic disease management model should be followed. Asthma can vary in severity over time, so regular assessment of a patient's level of functional and objective impairment is necessary. This can include a regular review of symptom severity and the degree to which symptoms are controlled by therapy. This can provide an opportunity to establish whether a patient has required emergency care for an asthma exacerbation, missed school or work, or had limitation of activities since the last visit.

Many asthma symptoms, such as chest tightness, wheezing, cough, shortness of breath, ability to engage in activities, and quality of life, are subjective. Therefore, objective assessments of respiratory function are critical for clinical decision-making. Spirometry, specifically forced expiratory volume in 1 second (FEV1), and its reversibility post-bronchodilation, is the gold standard test for assessing impairment, monitoring treatment effectiveness, and estimating the risk of future asthma events. The use of daily peak flow monitoring is also important, especially in those patients who have a poor perception of their symptoms. Peak flow monitoring can enhance compliance while demonstrating improvement with proper adherence. The treatment goal is to maintain normal or near-normal pulmonary function through regular pharmacological treatment and proactive management of exacerbating factors.

Control contributing factors

In addition to selecting appropriate pharmacological agents, successful treatment includes identifying factors that may exacerbate a patient's asthma symptoms and providing recommendations to minimize them. These can include:

- avoiding exposure to allergens or irritants, such as smoking, pet hair, and dust mites,
- minimizing exposure to respiratory viruses

when possible,

- managing comorbid conditions, such as sinusitis, rhinitis, gastroesophageal reflux, obesity, and sleep apnea,
- identifying dietary contributors,
- covering the nose and mouth in cold, dry weather, and
- addressing and managing life stressors

Optimize record-keeping treatment team

Using chart reminders or "flags" to identify patients with asthma can help treatment team members quickly see when asthma symptoms should be discussed, even if a patient has come to the office for other reasons. Including an asthma management flow sheet in the patient chart also can help medical staff take a proactive role in measuring FEV1, asking about symptom control, and reminding patients about flu vaccination.

Facilitate communication

Successful physician-patient communication can help patients better manage their condition and enhance adherence. Because many asthma symptoms are subjective, it is important to allow sufficient time for discussion of symptoms, especially when an asthma exacerbation or its

follow-up care is the reason for the visit.

Having the patient or caregiver complete an asthma self-assessment questionnaire, such as the Asthma Control Test, can provide time to evaluate recent asthma control and identify the symptoms he or she wants to discuss. It may also be helpful to have a nursing staff member take extra time to discuss symptoms, review medications, and assist with the questionnaire prior to meeting the physician.

Create an asthma action plan

All patients should have a written asthma action plan developed by the patient and provider. Each plan should address symptom severity, appropriate use of medication, and how to identify when emergency care is needed. It should also include information on the patient's asthma triggers and how to avoid them, along with how and when peak flow monitoring fits into the action plan. The action plan can be used to provide a framework for follow-up appointments.

Partner with patients through education

Patient self-management and self-monitoring are critical components of successful asthma treatment, and education is the key to developing these skills.

At each visit, physicians should confirm that patients and their families are able to recognize symptom patterns, can identify contributing factors and how to avoid them, and learn how to control exacerbations. It is important to review the asthma action plan thoroughly and address any patient questions before the patient leaves the office to ensure clarity concerning guidelines for managing exacerbations, recommendations and techniques for the use of medication, and when emergency medical intervention is necessary. This includes repetitive teaching of skills such as use of metered dose inhalers, spacers, and nebulizers, as well as measuring peak flows.

—Nicole Klemas, ELS

—Reviewed by Gary Rachelefsky, MD,
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PATIENT RESOURCES

American Academy of Asthma

Allergy & Immunology

Conditions and Treatments: Asthma

<http://bit.ly/1KMBelg>

American Academy of Family Physicians

Information from Your Family Doctor:

How to Treat an Asthma Attack

<http://bit.ly/1AYdXTT>

American Lung Association

Learning More About Asthma

<http://bit.ly/1z22ewB>

National Institutes of Health

Sample asthma action plan

<http://1.usa.gov/1CU87IO>

KEY CODING CONSIDERATIONS

► **ASTHMA IS** defined in the ICD-9-CM Expert for Physicians-Volumes 1 & 2 as “status asthmaticus: severe, intractable episode of asthma unresponsive to normal therapeutic measures.” You need to be specific in your ICD-9 coding for asthma because there are several codes available. If the documentation indicates that the asthma is both exacerbation and status asthmaticus, assign only the code for status asthmaticus.

The main asthma category (493) requires a fourth and fifth digit, as shown in the table below. To code asthma, use the following steps:

1 Identify the asthma’s source with a fourth digit. The fourth digit identifies what caused the patient’s asthma. CPT contains four options for the fourth asthma digit:

- 493.0x Extrinsic asthma
- 493.1x Intrinsic asthma
- 493.2x Chronic obstructive asthma
- 493.9x Asthma, unspecified

2 Use a fifth digit to describe the asthma’s status. To identify the asthma’s current state during the patient’s visit, assign the appropriate fifth-digit subclassification.

- 0 without mention of status asthmaticus or acute exacerbation or unspecified
- 1 with status asthmaticus
- 2 with acute exacerbation

For patients who do not have status asthmaticus or acute exacerbation, use the fifth digit of “0.” Code 493.x0 is appropriate when the patient presents for a checkup and his or her asthma is controlled.

The fifth-digit “1” indicates that the patient has status asthmaticus, which is a medical emergency and usually treated in the emergency department.

Assign a fifth-digit “2” for patients who present with asthma that is currently exacerbated. This means some-

ICD-9

493.0 : Extrinsic asthma

5th digit:
0: Unspecified
1: With status asthmaticus
2: With (acute) exacerbation

493.1 : Intrinsic asthma

5th digit:
0: Unspecified
1: With status asthmaticus
2: With (acute) exacerbation

493.2 : Chronic obstructive asthma

5th digit:
0: Unspecified
1: With status asthmaticus
2: With (acute) exacerbation

493.9 : Asthma, unspecified

5th digit:
0: Unspecified
1: With status asthmaticus
2: With (acute) exacerbation

493.8 : Other forms of asthma, including:

5th digit:
493.81: Exercise induced bronchospasm
483.82: Cough variant asthma

ICD-10

J45.2 : Mild intermittent asthma

5th digit:
0: Uncomplicated
1: With (acute) exacerbation
2: With status asthmaticus

J45.3 : Mild persistent asthma

5th digit:
0: Uncomplicated
1: With (acute) exacerbation
2: With status asthmaticus

J45.4 : Moderate persistent asthma

5th digit:
0: Uncomplicated
1: With (acute) exacerbation
2: With status asthmaticus

J45.5 : Severe persistent asthma

5th digit:
0: Uncomplicated
1: With (acute) exacerbation
2: With status asthmaticus

J45.90 : Unspecified asthma

6th digit:
1: with (acute) exacerbation
2: with status asthmaticus
9: Uncomplicated

J45.99 : Other asthma

6th digit:
J45.990: Exercise induced bronchospasm
J45.991: Cough variant asthma
J45.998: Other asthma

thing made the patient’s asthma worse.

3 Paint an accurate picture with both digits. ICD-9 instructs coders to “assign fifth-digit subclassification codes for those categories where they are available.” The fourth and fifth digits are important because they paint a more complete picture of the patient’s condition at the time of the encounter. Without

a complete picture, the payer may deny the claim for lack of medical necessity.

4 Because there are overlapping conditions between COPD and asthma, there are variations in documenting these conditions. Look to subcategory 491.2 if the patient has obstructive chronic bronchitis or category 492 for emphysema. ■

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