



PREVENTION OPPORTUNITIES UNDER THE BIG SKY

Seasonality of Asthma Hospitalizations

Asthma is a respiratory disease characterized by airway inflammation and recurring episodes of bronchoconstriction. About 9% of adults and 7% of children in Montana currently have asthma.¹ For most people, the cause of their asthma is unknown and the disease cannot be cured, however, asthma control can be attained and maintained in the ambulatory care setting by using effective, evidence-based treatments and education. Nevertheless, from 2000 to 2010 an average of 680 hospitalizations for asthma occurred annually in Montana.

This issue of *Montana Public Health* presents asthma hospitalization data and provides information for assessing asthma control and helping your patients avoid asthma triggers. Data presented here are from the Montana Hospital Discharge Data System (MHDDS) which are made available through the Montana Hospital Association. For this report, hospitalizations occurring in 2000-2010 with a primary diagnosis of asthma (ICD-9-CM code 493) were included.

Asthma hospitalization On average, the most asthma hospitalizations occur in February, March and April and the fewest in June, July, and August (Figure 1).

An asthma hospitalization can lead to a costly and lengthy stay in the inpatient setting. The average length of stay for an asthma admission is 3 days although this ranges from 1 to 51 days for persons aged greater than 60 years to 1 to 14 days for person aged less than 5 years. The rate of asthma hospitalization was 8.0 per 10,000 Montana residents during 2001 to 2005, and 6.6 per 10,000 from 2006 to 2010. (Figure 2) Establishing and maintaining asthma control can help prevent an asthma hospitalization.²

Respiratory tract infections can exacerbate asthma.³ The NIH Expert Panel Report (EPR-3) guidelines recommend people with current asthma receive vaccination against common infections like influenza (beginning at age 6 months) and pneumococcus (beginning at age 19).^{2,4} However, only 50.6% (46.0%-55.2%) of adults with current asthma reported having an influenza vaccination in the past year, and only 44.7% (40.2%-49.2%) reported having received a pneumococcal vaccine in their lifetime.⁵

Figure 1. Average number of asthma hospitalizations by month, Montana, 2000-2010

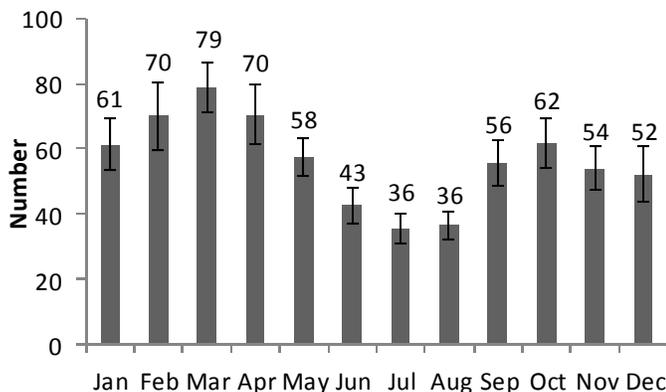
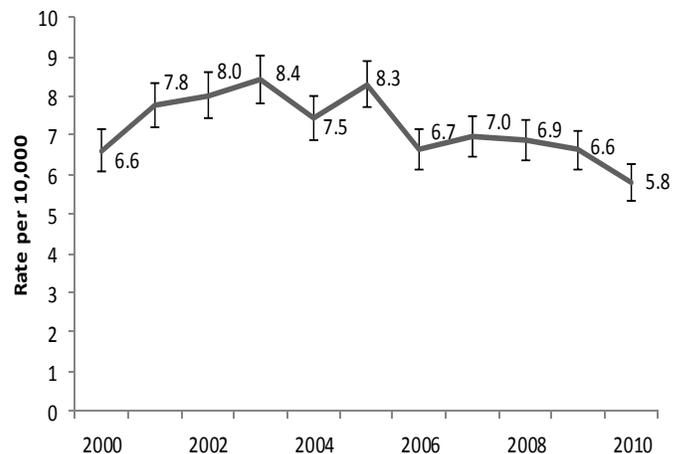


Figure 2. Rate of asthma hospitalization by year, Montana, 2000-2010



Well Controlled Asthma The EPR-3 guidelines recommend that people with asthma have two routine medical visits for asthma each year. During these visits, the patient's asthma control can be assessed and the patient can receive necessary vaccinations. Only 22.0% (18.3%-25.7%) of adults with current asthma reported having at least two routine medical visits for their asthma in the last year.⁵

More Important Information from the Public Health and Safety Division (Use the QR code in the upper right corner of this page to access these recent surveillance reports).

- Q Fever in Montana. Surveillance Snapshot, February, 2012
- Multiple births in Montana, 2001-2010. Montana Hospital Discharge Data System Surveillance Report, September, 2011

The guidelines define well-controlled asthma for patients aged 12 years and older as:

- Symptoms no more than two days per week
- Nighttime awakenings no more than two days per month
- Albuterol use for symptoms no more than two days per week
- No activity limitations
- FEV₁ or peak flow values greater than 80% predicted
- An Asthma Control Test score of 20 or greater
- No more than one exacerbation requiring oral steroids per year

Recommendations for healthcare providers

- A. Question patients about the seasonality of their symptoms and emphasize steps to avoid severe exacerbations.
- B. Assess patient's asthma control at every visit based on EPR-3 criteria. Consider using a validated clinical tool like the Asthma Control Test.
- C. Providers with systems to support recall/reminder of their asthma patients should use that system to recall:
 - Patients who have not been seen for more than a year
 - Patients not known to have had a 2011-2012 influenza vaccine
 - Patients who are not known to have ever had a pneumococcal vaccine
- D. Providers who do not have a system in place to recall patients can contact the Montana Asthma Control Program to learn more about the Asthma Care Monitoring System, a free system that allows providers to track their asthma patients and capture each patient's level of asthma control, exacerbations, medications, self-management education, and produce reminder letters to patients to schedule an office visit or get vaccinated.

For more information, contact Katie Loveland, Program Manager, Montana Asthma Control Program, www.dphhs.mt.gov/asthma, 406-444-7304.

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