Asthma Control in Montana

The Goal of Asthma Therapy
Achieving and maintaining good asthma control is the primary goal of asthma therapy. Asthma control is a central tenet of the Expert Panel Report-3 (EPR-3) clinical asthma guidelines. The guidelines define criteria for well-controlled asthma (below). The ongoing assessment of a patient’s level of asthma control is emphasized as the key tool in the guidelines that drives clinical decision making for asthma treatment. The guidelines emphasize that regardless of a patient’s underlying disease severity, with proper treatment all asthma patients should expect to achieve well-controlled asthma. People with asthma should lead lives free of frequent symptoms and activity limitations.

Guidelines for Well-Controlled Asthma
Current guidelines define well-controlled asthma for people 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 due to asthma
- 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

Measuring Asthma Control in Montana
The Montana Asthma Call-back Survey (ACBS) is a telephone survey of non-institutionalized adults aged 18 years and older. Participants are recruited from the Behavioral Risk Factor Surveillance System survey if they indicate that they had or currently have asthma. These individuals are then called back and asked more in-depth questions about their experience with asthma. Montana has participated in this survey, sponsored by the Centers for Disease Control and Prevention, since 2006.

For the purpose of this report, the levels of control among Montanans were estimated from the Asthma Call-back Survey for adults with current asthma. An algorithm combining responses from several questions about impairment was used to classify the level of control. The algorithm includes four measures. The not well and very poorly controlled categories were combined for analysis purposes as “uncontrolled.” The following report includes weighted statewide estimates on well-controlled and uncontrolled asthma among adults in Montana based on survey respondents.

References
2. Current asthma is assessed by responding yes to the questions:
   (a) Have you ever been told by a doctor, nurse, or health professional that you had asthma? -and-
   Do you still have asthma?
   -or– (b) Have you taken asthma medication in the last year?
   -or– (c) Have you had asthma symptoms in the last year?
What defines asthma control?

All components of asthma control must meet well-controlled standards to have an overall classification of well-controlled; having just one component in the not well or very poorly controlled category changes the classification. The percent of adults reporting symptoms indicating their asthma may be uncontrolled (not well-controlled or very poorly controlled) has not changed significantly over time (Figure 1). Experiencing activity limitations or experiencing daytime symptoms more than two times per week were the most common reasons for not having their asthma in control (Figure 2).

Addressing asthma control

There were no significant differences in uncontrolled asthma prevalence by sex, body mass index (BMI), education, or marital status (Figure 3). Adults aged 45-55 years, aged 65 years and older, or people with a household income less than $25,000 had a higher prevalence (in blue) of uncontrolled asthma than people aged 18-44 years and those earning greater than $50,000, respectively.

Figure 1. Adults with symptoms indicating uncontrolled asthma by year

Figure 2. Adults with uncontrolled asthma by component of control

Figure 3. Adults with uncontrolled asthma by demographic and socioeconomic categories

Note: some demographic and socioeconomic categories were not included due to statistical instability

Data source: Montana ACBS, 2012-2014
Uncontrolled asthma not only affects a person’s health but also their quality of life. Uncontrolled asthma has been associated with obesity and poor cardiovascular fitness, learning disabilities and school performance, depressive symptoms and anxiety disorders, and an increase in the risk of pneumococcal pulmonary infections and exacerbations after upper respiratory infections. Poor asthma control is also associated with increased risk of adverse perinatal outcomes during pregnancy. Adults with uncontrolled asthma reported poor mental health, fair or poor general health, and missed work days more frequently than adults with well-controlled asthma (Figure 4). As mentioned in the introduction of this report, asthma medication plays a key role in asthma management. Twenty-nine percent of adults with uncontrolled asthma had no asthma medication (Figure 5).

Many people with asthma are also managing other chronic conditions. The EPR-3 Guidelines suggest that asthma control could improve by identifying and treating comorbid conditions that may impede asthma management. Overall, about 10% of adults with asthma reported having four or more other chronic conditions. The burden of four or more chronic conditions was higher for adults with uncontrolled asthma than those with well-controlled asthma (Figure 6).
Report Highlights:
In Depth Look at Asthma Control

- Over half of adults with current asthma reported symptoms consistent with uncontrolled asthma.
- Income and age were associated with having uncontrolled asthma.
- Uncontrolled asthma had a significant impact on quality of life.
- Adults with uncontrolled asthma frequently have other chronic conditions.

Clinical Recommendations

- Evaluate asthma control at each visit according to EPR-3 guidelines.
- Recall asthma patients for semi-annual visits to discuss asthma symptoms, trigger avoidance, medication adherence, and control.
- Prescribe all patients with persistent asthma an inhaled steroid controller medication.
- For severe and difficult to control asthma, consider referral for specialty consultation (pulmonology or allergy).

For more information contact:
Jessie Fernandes
Program Manager | Epidemiologist
(406) 444-9155
jfernandes@mt.gov