Quality Improvement Report

Report Highlights:

◊ Recent research related to patients living with asthma, including:
  • Growth and decline in lung function;
  • Cost savings;
  • Vitamin D; and
  • Health care utilization.

◊ Information about staying safe in the upcoming wildfire season.

◊ Program updates and upcoming educational opportunities.

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News

The Chronic Disease Prevention and Health Promotion Bureau (CDPHPB) is surveying physicians, physician assistants, and nurse practitioners to learn more about opinions towards chronic conditions and referral practices. To participate, visit: https://www.surveymonkey.com/r/MTChronicDisease2016ProviderSurvey

Please consider forwarding the link to your colleagues!

Do you know a child with asthma going into 2nd grade to 9th grade? Send them to Camp Huff n’ Puff in Elliston, MT from July 10-15! Camp registration is $100 per camper, and limited scholarships are available. Contact Kendra Procacci at kendra.proacci@umontana.edu for more information.

Research Updates

Growth and Decline in Lung Function

684 patients living with persistent childhood asthma were tracked using longitudinal measurements of growth and decline in lung function. Male sex and childhood impairment of lung function were the most significant predictors of abnormal patterns of lung-function growth and decline. Researchers concluded: “Children with persistent asthma and reduced growth of lung function are at increased risk for fixed airflow obstruction and possibly COPD in early adulthood.”

Safety and Cost of Stepping Down Medication

4235 patients from the Medical Expenditure Panel Survey met requirements for persistent asthma. 29.9% of patients identified were eligible to step down in medication. 89.4% of those who stepped down preserved their asthma control, compared with 83.5% who were similarly eligible but maintained their treatment level. Average monthly savings for patients who stepped down was $34.02 per month.
Use of Health Care

Health service use prior to death

Note: EPR-3 Guidelines highlight health care-related decisions that could lead to an increased risk of death or severe exacerbations, including, but not limited to, daily treatment with salmeterol added to usual asthma therapy and use of higher dose formoterol. Risks are also associated with frequent use of oral corticosteroids; consider treating patients who had two or more exacerbations requiring oral corticosteroids in the past year the same as patients who have persistent asthma and referring them to an asthma specialist. Start patients on an ICS while in the emergency department to improve likelihood of long-term ICS adherence.


Researchers identified 1503 cases of people who had died of asthma from April 1996 to December 2011 in Ontario, Canada, and matched them with 4 to 5 live asthma controls by age, sex, rural/urban residence, socioeconomic status, duration of asthma, and a co-diagnosis of COPD. In the year prior to death, cases were found to be:

- 8 times more likely to have been hospitalized 2 or more times;
- 13 times more likely to have had 3 or more ED visits; and
- 4 times more likely to have had 5 or more physician visits for asthma.

More than one hospital admission, 3 ED visits, or 5 physician visits significantly increased the asthma mortality risk.

Complementary and Alternative Medicine (CAM)

Note: EPR-3 Guidelines state there is insufficient evidence to permit recommendations for CAMs. Additional research has also shown that acupuncture can have a negative impact on asthma management.


7685 individuals aged 55 years or older with current asthma were identified from the Asthma Call-Back Survey (ACBS), a survey conducted among individuals reporting asthma on the annual Behavioral Risk Factor Surveillance Survey (BRFSS). 39% of these individuals reported using CAM, and breathing techniques were the most commonly reported CAM therapy. The following demographic characteristics were associated with CAM use:

- Female gender;
- Possession of at least one college degree;
- Cost barriers to health care; and
- Living in the western U.S.

Older adults who reported using CAM also reported decreased asthma control. Older adults who had received an asthma action plan, were current smokers, or had impaired asthma control were more likely to use CAM.

Some chronic conditions, like asthma, can be heavily affected by Adverse Childhood Experiences (ACEs). Learn more about ACEs, how they can influence the health of your patients, and what is being done in Montana to address this issue at:

http://www.cdc.gov/violenceprevention/acesstudy/ and

http://www.elevatemontana.org/.
**Wildfire Season**

*Wildfire season* is coming up! The Montana Asthma Control Program participated in a group of stakeholders to develop recommendations for outdoor activities based on air quality.

Find information from the Montana Department of Public Health and Human Services regarding *staying healthy when it is smoky.*

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**Vitamin D**


Studies have demonstrated a link between vitamin D deficiency and risk of developing respiratory diseases (such as asthma, COPD, and TB). The authors conducted a literature review and identified 46 articles regarding vitamin D and asthma, 11 about the vitamin and COPD, and 28 about its connection to TB. All articles reviewed stated that vitamin D deficiency is very common among patients with respiratory diseases. While present data regarding vitamin D and asthma is controversial, data about the connection with COPD and TB is more promising. As such, the authors conclude the “relationship between vitamin D and the respiratory system remains inconclusive,” and call for larger clinical trials that lead to more comparable data.


While recent studies have suggested that there could be a link between both vitamin D and marine omega-3 fatty acids and reduced risk for pneumonia, acute exacerbations of respiratory diseases such as COPD and asthma, and decline of lung function, adequate prevention trials are lacking. This ongoing study plans to conduct a 5-year U.S.-wide randomized, double-blind, placebo-controlled trial of vitamin D and marine omega-3 fatty acid supplementation. The primary focus of the VITAL study is cardiovascular disease and cancer, but lung function will be measured as well.
PROGRAM UPDATES

Congratulations to Carrie Bates, RRT, and her team at North Valley Hospital for becoming the first emergency department recognized for continuous quality improvement in asthma care!

Do you need educational materials? Access our updated order form for free materials for adults and children here. You can find additional materials online recommended by the MACP here.

The Montana Asthma Control Program (MACP) has had a number of staff changes:

- Megan Burton is our new Quality Improvement Coordinator. Please contact Megan to learn more about the health care quality improvement opportunities available.
- BJ Biskupiak now leads the School Health Program. Contact BJ to learn more about work being done to help children manage chronic conditions in schools.
- Jessie Fernandes is now the Section Supervisor for the Health Improvement section in the Chronic Disease Prevention and Health Promotion Bureau. She now oversees work related to asthma, diabetes, and cardiovascular health.

Online Resources

dphhs.mt.gov/asthma

- Montana Asthma Control Program State Asthma Plan and Strategic Evaluation Plan
- Reports on the burden of asthma and environmental asthma triggers in Montana
- Archived asthma-related webinars with free CEUs
- Archived surveillance reports on asthma-related subjects