Report Highlights:

Program updates and upcoming events.

Recent research about:
- Asthma and pregnancy,
- Inhaled corticosteroid use while in the yellow zone,
- Occupational health concerns, and
- Poor asthma outcomes tied with low income.

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Quarterly Asthma Newsletter

News

We had a great turnout at the 2018 Big Sky Pulmonary Conference. Coming up next is the Certified Asthma Educator Exam Review Course in Helena, May 18-19. This is an informative course that serves attendees well regardless of their intention to take the Certified Asthma Educator exam. Course details and registration are available online.

Research Updates

Oral corticosteroids (OCS)

As continuous exposure is associated with adverse health effects, researchers attempted to determine risk of intermittent exposure. Researchers conducted a retrospective cohort study, with 72,063 subjects in the OCS and 156,373 subjects in the no OCS cohorts respectively. Subjects who took 4 or more OCS prescriptions, current and past, resulted in 1.20 times the odds of having an adverse event during the study year. The authors believe these results suggest that each OCS prescription “might result in cumulative burden on current and future health regardless of dose and duration,” and strategies to limit OCS use are of extreme importance.

Asthma APGAR tool

After introducing the APGAR (Activities, Persistent, triGGers, Asthma medications, Response to therapy) tool into primary care practices, authors compared outcomes in patients with persistent asthma aged 5 to 45 years who used the tool against those who did not. 692 patients completed both baseline and 12-month questionnaires. Introduction of the APGAR tool was shown to improve rates of asthma control, reduce asthma-related ED, urgent care, and hospital visits, and increase practice adherence to asthma management guidelines.
Asthma and pregnancy


Authors enrolled 1,283 women in their study over an 8-year period. In order to be included, women had to be 1) diagnosed with asthma, 2) prescribed a rescue inhaler, at a minimum, and 3) had the first visit to the respiratory outpatient clinic within the first 18 weeks of pregnancy. Women who experienced asthma exacerbations had larger gestational weight gain in the first trimester of their pregnancy and overall compared with women who did not experience exacerbations. The authors found a dose-dependent relationship, with increases of gestational weight gain leading to increased risk.


The objective of this study was to conduct a systematic review on the association between acid-suppressive drug exposure during pregnancy and childhood asthma. The authors screened 556 articles and found 8 population-based studies to include in the final analysis. The overall risk of asthma in childhood increased among proton pump inhibitor users and histamine-2 receptor antagonist users according to the 8 included studies. This evidence suggests that prenatal, maternal, acid-suppressive drug use is associated with an increased risk of childhood asthma.

Follow-up from the 2018 Big Sky Pulmonary Conference:

We've received questions about a point made during one of the presentations regarding baby aspirin and the prevention of preeclampsia. We received the following clarification from the speaker: *asthma increases the risk of preeclampsia, and baby aspirin reduces the risk overall, not specifically in patients with asthma.* Recommendations currently state low-dose aspirin can be used in women who are at high risk for preeclampsia after 12 weeks of gestation as a preventive medication, unless there is a contraindication.

Social determinants of health


The purpose of this study was to examine three socioeconomic status (SES) correlates independently to review level of risk for treatment failure and asthma exacerbations; low household income, low education, and high perceived stress were included. After adjusting for race and other confounders, participants with lower income had higher rates of treatment failure and exacerbations. Education level and perceived stress were not significantly associated with either outcome. The authors conclude that people living with asthma with lower income were more likely to experience adverse asthma outcomes, independent of education, perceived stress, race, and medication adherence.
Occupational health


A total of 270 cases of physician-diagnosed work-related asthma (WRA) connected to fragrance were identified in the California Work-related Asthma Prevention Program’s surveillance database, representing almost 4% of all cases. 242 of the fragrance-related cases were associated with perfume or cologne. Women were more likely to have WRA caused by fragrances, and nearly a quarter of the cases were classified as new-onset asthma. The authors conclude fragrance in the workplace is associated with WRA, particularly in office, health, and education jobs.


Female nurses who participated in the Nurses’ Health Study II were invited to complete two supplemental questionnaires to learn about their occupation and asthma, with 4,055 respondents. Nurses without well-controlled asthma were found to have a dose-response relationship between frequency of arm hygiene tasks and poor asthma control. These results suggest an adverse effect of products used for surgical hand/arm antisepsis, and could indicate an occupational risk factor.

Inhaled Corticosteroids (ICS)

In 2014, “Management of acute loss of asthma control in the yellow zone: A practice parameter” was published in the Annals of Allergy, Asthma, & Immunology. Summary statements included the following, among others:

- Instruct patients to escalate asthma therapy when they experience a loss of asthma control that puts them in the yellow zone; and
- Advise patients currently treated with daily low-to-moderate dose ICS therapy to consider increasing the total ICS dose per 24 hours (ie, quadrupling) for managing loss of asthma control in the yellow zone.

In the March 2018 *New England Journal of Medicine*, researchers reported patients with asthma who “quadrupled their dose of inhaled glucocorticoids when asthma control started to deteriorate resulted in fewer severe asthma exacerbations than a plan in which the dose was not increased.”

However, in the same edition of the New England Journal of Medicine, an article was published called “Quintupling Inhaled Glucocorticoids to Prevent Childhood Asthma Exacerbations” that suggests the rate of severe asthma exacerbations in children who followed this recommendation did not differ significantly from those who followed a different plan. Instead, authors concluded that “in children with mild to moderate persistent asthma treated daily with glucocorticoids, quintupling the dose at early signs of loss of asthma control did not reduce the rate of severe asthma exacerbations or improve other asthma outcomes...” It appears that this topic is still under debate.
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UPCOMING EVENTS

Worksite Wellness Program Webinar  
“Beating Burnout: 4 proven steps for flexing your resilience and becoming a stronger you!”  
April 4, 2018  
Online  
For an invitation, please contact  
Kara Hughes at khughes3@mt.gov

Montana Diabetes Advisory Coalition  
Meeting  
April 20, 2018  
Bozeman, MT  
For more information, please contact  
Sarah Brokaw at sbrokaw@mt.gov

Montana Asthma Advisory Group Meeting  
May 10, 2018  
Great Falls, MT  
For more information, please contact  
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Association of Asthma Educators Exam  
Review Course  
May 18-19, 2018  
Helena, MT  
For more information, please contact  
Anna Bradley at abradley@mt.gov or visit the online registration page

PROGRAM UPDATES

• Megan Burton, the MACP Quality Improvement Coordinator, has moved on from her job to pursue a new adventure with her family. Contact Sarah Brokaw at sbrokaw@mt.gov to inquire about QI activities until her position has been filled.

• The Certified Asthma Educator Exam Review Course will be held May 18-19, 2018 in Helena, MT. This course will help prepare attendees for taking the exam, and is a great refresher for those who aren’t planning on taking the exam, too!

Limited scholarships are available for attendees who decide to take the exam upon completion of the course.

ONLINE RESOURCES

Montana Asthma Control Program website: dphhs.mt.gov/asthma

Free education opportunities from the National Environmental Education Foundation (NEEF): www.neefusa.org/online-courses

CE credits from the Asthma and Allergy Foundation of America: www.aafa.org/page/continuing-education-for-health-care-professionals

Online “Asthma Basics” and “Breathe Well, Live Well” trainings from the American Lung Association: www.lung.org/our-initiatives/education-and-training/take-a-class.html

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