

Quality Improvement Report

Report Highlights:

- Recent research findings related to patients living with asthma
- An overview of asthma-related practice parameters
- An in-depth look at new evidence about treating loss of asthma control in the yellow zone
- Program updates and upcoming educational opportunities

Montana Asthma Control Program

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Introduction

This new quarterly report series from the Montana Asthma Control Program is designed to provide you with a summary of some of the latest research on asthma-related subjects and on the state of various quality improvement activities in Montana. Please read on for research regarding the importance of parent education in pediatric asthma management, asthma and a correlation to depression in rural areas, and practice parameters for the treatment and control of asthma.

Asthma Research Updates

Asthma and Parent Education

Garbutt, J.M., Yan, Y., Highstein, G., & Strunk, R.C. (2015). A cluster-randomized trial shows telephone peer coaching for parents reduces children's asthma morbidity. *The Journal of Allergy and Clinical Immunology*, 135 (5), 1163-1170.

A cluster-randomized trial of 11 intervention and 11 usual care pediatric practices evaluated whether enhancing primary care management for persistent asthma with telephone-based peer coaching for parents reduced asthma impairment and risk in children 3 to 12 years old. After 12 months, intervention participation resulted in 20.9 more symptom-free days per child than in the control group. After 24 months, visits to the ED were reduced, indicating a delayed intervention effect.

Asthma and Depression in Rural Areas

Bush, J.S., Ownby, D.R., Waller, J.L., Tingen, M.S. (2015, February). Risk Factors for Depression in Rural Adolescents with Asthma. In 2015 AAAAI Annual Meeting (February 20-24, 2015). AAAAI.

This study examined the relationship between depression and asthma symptoms in adolescents using a randomized controlled trial in four rural Georgia high schools. In a sample of 2,523 adolescents, the overall rate of depression was significantly higher than both national averages and studies specific to adolescents with asthma. Female students with undiagnosed asthma were more likely to be depressed. Depression was not correlated with age, race, nor parental depression.

Guidelines-Based Care

Providing Quality Asthma Self-Management Education

Note: The EPR-3 Guidelines emphasize the important of self-management education and its role as an integral component of effective asthma care. Self-management education can be cost-effective and it improves patient outcomes.

Gardner, A., Kaplan, B., Brown, W., et al. (2015). National standards for asthma self-management education. *Annals of Allergy, Asthma, & Immunology*, 114, 178-186.

Representatives from several national medical organizations such as the American Lung Association, the American Academy of Allergy, Asthma, and Immunology, and the American College of Chest Physicians gathered to develop a standardized curriculum as a guideline for payer reimbursement. It was developed to establish the minimum standard for asthma self-management education when teaching patients or caregivers how to effectively manage asthma in conjunction with the professional health care team. In total, 16 standards are outlined to help medical professionals develop sustainable and thorough asthma self-management education programs.

The MACP continues to advocate for reimbursement of asthma self-management education.

Environmental Control

Note: The EPR-3 Guidelines recommend reducing exposure to irritants or inhalant allergens in order to “reduce inflammation, symptoms, and need for medication.” Asthma self-management is multifaceted, and requires controlling environmental triggers whenever possible.

Asthma-related Practice Parameters

The Joint Task Force on Practice Parameters (JTF) was formed in 1989 by 13 members representing AAAAI, ACAAI, and JCAAI to develop practice parameters for diagnosing and managing allergic and immunologic diseases. Several practice parameters that are related to asthma and environmental trigger control have been recently developed or updated, including:

- Dinakar, C., et al. (2014) Management of acute loss of asthma control in the yellow zone: A practice parameter. *Annals of Allergy, Asthma, and Immunology*, 113 (2), 143-159.
- Portnoy, J., Miller, J.D., Williams, P.B., et al. (2013). Environmental assessment and exposure control of dust mites: A practice parameter. *Annals of Allergy, Asthma, and Immunology*, 111 (6), 465-507.
- Portnoy, J., Chew, G.L., Phipatanakul, W., et al. (2013). Environmental assessment and exposure control of cockroaches: A practice parameter. *The Journal of Allergy and Clinical Immunology*, 132 (4), 802-808.
- Phipatanakul, W., Matsui, E., Portnoy, J., et al. (2012). Environmental assessment and exposure reduction of rodents: A practice parameter. *Annals of Allergy, Asthma, and Immunology*, 109, 375-387.
- Portnoy, J., Kennedy, K., & Sublett, J. (2012). Environmental assessment and exposure control: A practice parameter—furry animals. *Annals of Allergy, Asthma, and Immunology*, 108, 223e1-223e15.

See more in-depth information on page 3!

You can download these parameters and more at <http://www.allergyparameters.org/published-practice-parameters/alphabetical-listing/>.

Asthma Action Plans

Note: The EPR-3 Guidelines recommend that every patient with asthma be provided with an Asthma Action Plan that includes instructions for both daily management and actions to manage worsening asthma. They are particularly recommended for patients with moderate or severe persistent asthma, a history of severe exacerbations, or poorly controlled asthma.

Dinakar, C., et al. (2014) Management of acute loss of asthma control in the yellow zone: A practice parameter. *Annals of Allergy, Asthma, and Immunology*, 113 (2), 143-159.

A workgroup consisting of medical professionals considered to be experts in the field of asthma management was commissioned by the JTF to develop practice parameters that address management of acute loss of asthma control in the yellow zone. Workgroup members developed 8 summary statements as a result of their literature review and expert opinion consensus. As a disclaimer, the authors mention that options were explored in developing the parameters that are not currently approved by the Food and Drug Administration. The authors do not recommend any one specific regimen but rather present several recommendations based off of current literature to allow clinicians to make choices from an evidence-based perspective. The 8 summary statements are as follows:

- 1. Asthma action plans typically follow a “traffic light” model with green, yellow, and red zones. Provide patients with an asthma action plan (written and/or electronic) that includes instructions for recognition of loss of control and activation of the yellow zone intervention plan (recommendation).**
- 2. Instruct patients to activate the yellow zone intervention plan when there is acute loss of asthma control in a setting outside a medical care facility, such as at home. The yellow zone (or zone of acute loss of control) is defined as: an increase in asthma symptoms; an increase in use of reliever medications; a peak flow rate (PEFR) decrease of at least 15% OR a PEFR lower than 80% of personal best; the presence or increase in nocturnal asthma symptoms (strong recommendation).**
- 3. Instruct patients to activate the yellow zone plan at the onset of an upper respiratory tract infection if this is a previously identified trigger (strong recommendation).**
- 4. Instruct patients to escalate asthma therapy when they experience a loss of asthma control that puts them in the yellow zone (recommendation).**
- 5. Advise patients to use a short-acting b2 agonist (SABA) for reliever use in the yellow zone at a dose of 2 to 4 puffs every 4 to 6 hours in addition to their escalated yellow zone treatment. If SABA use exceeds 12 puffs per day, advise patients to contact their provider for further guidance (recommendation).**
- 6. Advise patients currently treated with daily low-to-moderate dose inhaled corticosteroid (ICS) therapy to consider increasing the total ICS dose per 24 hours (ie, quadrupling) for managing loss of asthma control in the yellow zone (option).**
- 7. For children younger than 6 years with recurrent wheezing and risk factors for subsequent asthma (ie, positive modified asthma predictive index), consider initiating high-dose ICS or oral montelukast at the early signs of wheezing illnesses to decrease intensity of symptoms (option).**
- 8. For patients with mild to moderate asthma, consider recommending symptom-driven use of ICS with concomitant inhaled b agonist for control of yellow zone symptoms (option).**

Contact the MACP for requests for topics to be covered either in this quarterly report or in our webinar series at asthmainfo@mt.gov.

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Upcoming Events

**Montana Asthma Control Program Summer Webinar:
Reactive Airway Disease vs Asthma with Dr. Michael
Zacharisen**

August 20, 2015 (Online)

*For more information, please email Anna von Gohren at
avongohren@mt.gov*

Montana Asthma Advisory Group Summer Meeting

August 21, 2015
Helena, MT

*For more information, please email Jessie Fernandes at
jfernandes@mt.gov*

PROGRAM UPDATES

You can find the MACP's most recent webinar, *Talking with People about Tobacco*, provided by Clare Lemke, RN, BSN, CTTS, at our website: <http://dphhs.mt.gov/Asthma/webinars>.

Congratulations to Shilo Rasmussen, RRT, AE-C, and her team at Kalispell Regional Medical Center for being the next recipients of MACP's \$5,000 grant for asthma-related quality improvement activities in an emergency department setting! Contact Anna von Gohren at avongohren@mt.gov for more information on how to apply for the grant.

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
- Resources for health care facilities, asthma educators, schools and school nurses, coaches, day care providers, and people living with asthma