

Achieving Guidelines-Based Care for People Living with Asthma

What Is Asthma?

- Asthma is a chronic, or life long, lung disease that makes it harder to move air in and out of your lungs.
- Asthma can be fatal if not appropriately treated. The disease can be managed effectively using evidence-based practices including avoiding or limiting exposure to allergens and irritants, and using the correct asthma medications.

Asthma Facts and Stats

- In 2012, it was estimated that 25.5 million Americans currently have asthma, including 6.8 million children under 18.¹
- Of these, 13.2 million Americans (4.1 million children) had an asthma episode or attack.²
- In 2012, it was estimated that 9.3 percent of all children under 18 and 8.0% of adults have asthma.³
- Asthma is the third leading cause of hospitalizations for children under the age of 15 and is a leading cause of school absences due to a chronic disease.⁴
- Asthma is responsible for \$50.1 billion annually in healthcare costs, 14.4 million missed school days; and 14.2 million missed days of work and costs \$5.9 billion in lost productivity.^{5,6}
- Asthma kills 3,345 people each year.⁷

Why Is Guidelines-Based Care Important?

- Asthma is a costly, chronic disease that can significantly impact a person's quality of life. In some cases, it can be fatal.
- The goal for anyone living with asthma is making sure the disease is controlled, which reduces both current impairment and future risks of asthma.⁸
 - *Reduced impairment* in order to maintain normal or near normal lung function and activities, and to prevent the use of fast-acting rescue inhalers.
 - *Reduced Risk* to prevent asthma exacerbations (attacks), preventing loss of lung function/growth, minimize need for hospitalization, missed school and missed work.

What Is Guidelines-Based Care?

- The National Heart Lung and Blood Institute and National Asthma Education and Prevention Program (NAEPP) Guidelines, last released in 2007 through [NAEPP's Expert Panel Report 3](#)⁹ provides evidence-based recommendations on how asthma can best be managed to help people who have asthma be active and healthy.
- **The American Lung Association strongly supports and believes that care for asthma patients should be based on the recommendations in the NAEPP Guidelines.**

What are the Key Recommendations from the NAEPP guidelines?

1. Assessment and Monitoring of Patients with Asthma

- A. At planned follow-up visits, doctors should assess their patients' level of asthma control based on severity of asthma, control of asthma symptoms and responsiveness to asthma therapy.
- B. A patient's impairment and risk can be measured using diagnostic tools, such as: detailed medical history, physical exam, pulmonary function testing, asthma diaries and questionnaires to assess exacerbations and quality of life measures as well as health care utilization in order to guide decisions to either maintain or adjust treatment.

2. Education about Asthma Self-Management

- A. All patients who have asthma should receive a written asthma action plan to guide their self-management efforts.
- B. Asthma self-management education is essential to provide patients with the skills necessary to control asthma and improve health outcomes. Studies demonstrate the benefits of programs provided in patient's home for multifaceted allergen control.

3. Control of Environmental Exposures that Affect Asthma

- A. For patients with persistent asthma, health care providers should use the patient's medical history and in vitro (blood) or skin testing to determine sensitivity to indoor allergens.
- B. Patients should avoid or reduce exposure to known respiratory allergens (e.g., mold and mildew, pollen, animal dander) or irritants (e.g., chemicals, fragrances, secondhand smoke or smoke from wood-burning stoves and fireplaces) at home, in school and at work.
- C. Patients should get an annual influenza vaccination.
- D. Patients should avoid or reduce exertion outdoors when levels of outdoor air pollution are high.

4. Medications to Treat Asthma

- A. Patients should use FDA approved long-term control medications to achieve and maintain control of persistent asthma.
- B. Patients should have and use quick-relief medications to treat acute asthma symptoms and exacerbations.

What Must Medicaid Cover to Ensure Patients Have Access To Guidelines-Based Asthma Care?

- All NAEPP-recommended short and long-term acting asthma **medications**. Every patient must have access through the preferred drug list/formulary to multiple medications in order to be compliant with guidelines-based care:
 - Access to each of the 3 categories simultaneously without restriction
 - Access to at least one medication in every class
 - Access without barriers:
 - No supply or quantity limits
 - No age restrictions
 - No prior authorization requirements
 - No out-of-pocket costs (or reduced costs)
 - No stepped care therapy requirements
- Access to NAEPP-recommended **allergy testing** without barriers for patients with persistent asthma, including
 - Skin testing; and
 - Blood testing.
- **All devices** necessary for the proper delivery of medications and measurement of lung function as patients often require all three devices concurrently for the treatment of their disease, including:
 - Nebulizers;
 - Valved holding chambers/Spacers; and
 - Peak-flow meters.

Medications Indicated for Use in the NAEPP Guidelines

| Type | Class | Other | Medication Examples |
|---|----------------------------------|------------------------------------|---|
| Fast-Acting | SABA | Inhaled, MDI Inhaled, Nebulized | albuterol sulfate, levalbuterol |
| | Anticholinergics | Inhaled, MDI Inhaled, Nebulized | ipratropium, ipratropium with albuterol |
| Long-Term | Inhaled Corticosteroids | Inhaled, DPI Inhaled, MDI | beclomethasone, budesonide, ciclesonide, fluticasone propionate, mometasone furoate |
| | Systemic Corticosteroids | Tablet | methylprednisolone, prednisolone, prednisone |
| | LABA* | Inhaled, DPI | formoterol fumarate, salmeterol xinafoate |
| | Combined Medication | Inhaled, DPI Inhaled, MDI | fluticasone propionate and salmeterol, mometasone furoate and formoterol fumarate, budesonide and formoterol fumarate |
| | Cromolyn and Nedocromil | Inhaled, MDI Inhaled, Nebulized | Cromolyn, Nedocromil |
| | Leukotriene Receptor Antagonists | Tablet | montelukast, zafirlukast |
| | 5-Lipoxygenase Inhibitor | Tablet | zileuton |
| | Methylxanthines | Liquids, Tablet, Capsules | theophylline |
| | Immunomodulators | Injection | omalizumab |
| Key: DPI, dry-powdered inhaler; IgE, immunoglobulin E; LABA, long-acting beta ₂ -agonist; MDI, metered-dose inhaler; SABA (short-acting beta ₂ -agonist) *To be used only in conjunction with inhaled or systemic steroids | | | |

These medications are in the USP category of Respiratory Tract/Pulmonary Agents

¹ Centers for Disease Control and Prevention: National Center for Health Statistics, National Health Interview Survey Raw Data, 2012. Analysis by the American Lung Association Research and Program Services Division using SPSS and SUDAAN software.

² Ibid.

³ Ibid.

⁴ Centers for Disease Control and Prevention: National Center for Health Statistics, National Hospital Discharge Survey, 2010. Analysis by the American Lung Association Research and Health Education Division using SPSS software.

⁵ Barnett SB, Nurmagambetov TA. Costs of Asthma in the United States: 2002-2007. *Journal of Allergy and Clinical Immunology*. 2011; 127:145-52.

⁶ Centers for Disease Control and Prevention: National Center for Health Statistics, National Health Interview Survey Raw Data, 2008. Analysis by the American Lung Association Research and Health Education Division using SPSS and SUDAAN software.

⁷ Centers for Disease Control and Prevention, National Center for Health Statistics. CDC WONDER On-line Database, compiled from Compressed Mortality File 1999-2011 Series 20 No. 2Q, 2014.

⁸ U.S. Department of Health and Human Services. National Institutes of Health. National Heart Lung and Blood Institute. Asthma Care Quick Reference. http://www.nhlbi.nih.gov/files/docs/guidelines/asthma_qrg.pdf. Accessed October 17, 2014

⁹ U.S. Department of Health and Human Services. *National Asthma Education and Prevention Program Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma*. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Heart Lung and Blood Institute, NIH Publication Number 08-5846, October 2007.