Asthma Treatment Outcomes with Allergist Care

Asthma is among the most common chronic diseases among children and adults, with an annual cost to society of $82 billion, yet studies show that the majority of patients receive substandard and needlessly costly care.

A large survey of national health care data identified two major trends inconsistent with asthma best practices:

Overuse of rescue medications (up to 60%).

Underuse of preventive medicine (70%).

Both are strongly associated with poor disease control, risk for an "asthma attack" and high treatment costs.

Source: Slejko, et al. JACI. 2014.

It is well-documented that **asthma care managed by allergists results in improved outcomes and more cost-effective use of health care resources.** With their years of specialty training and clinical experience in asthma management, allergists are more likely than nonspecialists to:

- Have access to the diagnostic tools that are often essential to assess the unique characteristics that may play a role in confirming the diagnosis, type and severity of asthma in individual patients.
- Manage asthma based on the latest clinical study findings.
- Identify and implement procedures to reduce allergy triggers for the disease.
- Follow consensus guidelines and state-of-the-art treatment plans that improve outcomes.
- Have expertise in the use and management of the latest techniques for addressing patients with severe asthma who have not responded to standard treatments, including:
  - Biologics. These agents are genetically engineered proteins that control asthma symptoms by targeting the underlying cellular and mediator changes that cause asthma.
  - Allergen-specific immunotherapy. This treatment is an option when allergy plays a prominent role in a patient's asthma. The technique exposes patients to progressively higher doses of allergens over time to induce desensitization or tolerance to the allergen.

Improvement in diagnosis and prevention of misdiagnosis

The best strategy for diagnosing asthma often remains unclear and can be complicated by the lack of appropriate diagnostic tools in the primary care setting. **Confirmation of asthma diagnosis is important to avoid unnecessary treatments, prevent misdiagnosis and avoid missing other important diagnoses** with symptoms that may be mistaken for asthma.

- In a study of more than 600 adults, a diagnosis of asthma was ruled out in 33% and 2% had serious cardiorespiratory conditions that had been misdiagnosed as asthma. **An asthma diagnosis was less likely to be confirmed in patients who had not had lung function testing** performed at the time of diagnosis, as recommended by guidelines.
- An evaluation of 301 U.S. worker's compensation claimants with work-related asthma found that only 36.9% of the workers were treated by specialists and fewer than half received an objective evaluation of pulmonary function. **Those treated by specialists were significantly more likely to have received appropriate diagnostic testing (83%) compared to those treated by generalists (20%).**

Improvement in asthma control

- A survey of nearly 2,000 patients enrolled in 12 U.S. managed care organizations analyzed the relationship between physician specialty and treatment outcomes. **Asthma care provided by specialists was consistently associated with better patient outcomes across a range of relevant indicators** compared to care provided by generalists, including fewer hospitalizations and emergency room visits, higher ratings for the quality of care, fewer restrictions in activities and improved physical function.
- One multicenter study of 369 children and 555 adults hospitalized for asthma exacerbations at 25 hospitals across 18 U.S. states found that guideline-recommended management of the disease was suboptimal. Among adult patients with frequent hospitalizations only 25% had undergone a previous evaluation by an asthma specialist. **Of those with frequent hospitalizations, 64% were not referred to an asthma specialist post-discharge.**

American College of Allergy, Asthma & Immunology

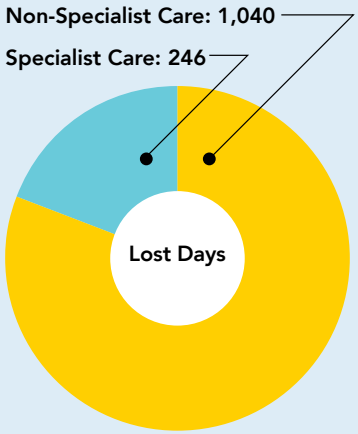
allergist

AllergyandAsthmaRelief.org
college.acaai.org/betteroutcomes

Every dollar spent on asthma control programs can save $71 in health care expenses by shifting care from costly hospital/emergency department settings to doctor offices and outpatient clinics.

Source: National Asthma Control Program: An Investment in America's Health. Centers for Disease Control and Prevention. 2013.

Lost Work/School Days Due to Asthma



77% reduction in time lost from work or school with asthma specialty care

Source: Castro, et al. Am J Resp Critical Care Med. 2003

- A survey conducted among 1,412 primary care clinicians and 233 asthma specialists found that **specialists expressed stronger agreement, higher self-efficacy and greater adherence with guideline recommendations** than primary care clinicians.
- A large university hospital studied children discharged with a diagnosis of asthma from 2009 to 2013 to determine the effects of a post-discharge referral to an asthma specialist. **Patients who adhered to the recommendation for specialist follow-up had significantly fewer subsequent visits to the pediatric intensive care unit, days in the ICU and days in the hospital.**
- In a random sample of 3,568 patients with persistent asthma enrolled in a managed care plan, **patients who were treated by asthma specialists reported significantly higher general physical and asthma-specific quality of life (QoL), less asthma control problems, less severe symptoms, higher satisfaction with care and greater self-management knowledge** compared with patients followed by primary care physicians. Patients of allergists were less likely to be hospitalized, have unscheduled visits for asthma care or to overuse beta-agonist medications.

Diagnosis of comorbid conditions

- Comorbid conditions are common in patients with asthma and can significantly affect the diagnosis and management of the disease. **Guidelines recommend patients with conditions such as severe rhinitis, sinusitis, nasal polyps, aspergillosis, vocal cord dysfunction, gastroesophageal reflux disease (GERD), chronic obstructive pulmonary disease (COPD), obstructive sleep apnea and dysfunctional breathing should be referred to a specialist.** These conditions affect how asthma is treated; they also may be triggers that exacerbate asthma. A three-year observational study of patients aged 6 to 12 years found that a higher number of asthma triggers was associated with greater asthma severity, number of asthma exacerbations and lower QoL.
- The link between allergic rhinitis and asthma was substantiated in a retrospective cohort study that found evidence for atopy in 52% of asthmatic patients who had skin-prick tests.
- In one study, persistent or allergic rhinitis was reported by 76 percent of patients with asthma. The study also found that **chronic allergic or persistent rhinitis was predictive of uncontrolled asthma at 12-year follow-up.**
- Indoor environmental exposures are major contributors to asthma morbidity in children, and environmental control practices to reduce these exposures are an integral component of asthma management. **Individually tailored environmental control to reduce asthma symptoms and exacerbations can be similar in efficacy and cost to controller medications.**

Improvement in adherence to medications and other therapies

Strategies to improve access and adherence to evidence-based therapies can be effective in reducing the economic burden of asthma. Studies have demonstrated that adherence is improved when asthma specialists are involved.

- A retrospective study found that pediatricians were less likely to prescribe inhaled corticosteroids than pediatric allergists. **There was greater improvement in FEV1 among children who received care with pediatric allergists** than those seen by pediatricians and pediatric respirologists.
- A systematic review of the literature characterized behavioral interventions at the child, family, home, medical system and community level improves asthma management among adolescents. The researchers compared populations, intervention characteristics and levels, study designs, outcomes and settings across studies to evaluate behavioral interventions to improve asthma management for adolescents. They concluded that **effective strategies to objectively increase controller medication adherence for adolescents include allergist and/or immunologist feedback** and school nurse directly observed therapy.
- The ratio of controller medication to total asthma medications was analyzed for 38,000 individuals with persistent asthma. Standardized performance measures indicate higher ratios (an indicator of adherence) were seen in patients who were treated by asthma specialists. The authors concluded that **provider knowledge and communication skills influence adherence to asthma treatment, and specialist providers may be better at communicating complex regimens to their patients.**