Allergies are the sixth leading cause of chronic disease in the United States, and cost the health care system over $18 billion annually.
An allergy is an inappropriate reaction by your immune system to harmless substances. These substances can trigger sneezing, wheezing, coughing, itching and severe, potentially fatal reactions. Allergens enter the body in several ways. Airborne particles such as pollen, dust and mold spores are breathed in through the nose and mouth; insect venom is injected through stingers; foods are ingested or swallowed. Medicines that can cause allergic reactions are injected or ingested. Many people suffer needlessly from allergies because they have never sought medical diagnosis or cannot identify the specific allergen. However, with proper management and patient education, allergies can be controlled and people with allergies can lead normal and productive lives.

Allergies and related conditions, such as asthma, are becoming more common and can be seasonal or yearlong. The American Academy of Allergy, Asthma, and Immunology (AAAAI) estimates that allergies are the sixth leading cause of chronic disease in the United States, and cost the health care system over $18 billion annually. More than 50 million Americans—about one of every five adults and children—suffer from allergies, including allergic asthma. Long regarded as trivial, patients and physicians are now beginning to realize that allergies are serious disorders that may demand advice from a physician. Furthermore, over-the-counter treatments may prove less effective and have more side effects when addressing allergic disorders.

A number of diseases can appear to be allergies, but upon professional examination prove to have other causes. For example, a runny nose and nasal congestion can be a result of chronic and repeated infections, but can appear similar to allergies. However, it is important to show proof of allergy whenever it is suspected because the treatments for allergic and non-allergic disease can be quite different. Treating allergies requires avoiding allergic triggers, drug therapy to relieve and prevent chronic symptoms, and in severe cases, allergy shots to desensitize the patient to specific allergic triggers. Oral antihistamines and nasal sprays are the primary forms of drug therapy. Although nasal sprays have been shown to be effective, antihistamines remain the main drug treatment for allergies. Newer, second-generation antihistamines (widely available over the counter), which have been shown to cause irritability, insomnia, anxiety, depression, dry mouth, and drowsiness.

The growing prevalence of allergies highlights the importance of practice guidelines for their diagnosis and treatment. AAAAI, the National Institute of Allergy and Infectious Diseases (NIAID), and 20 other medical associations, advocacy groups, and government agencies recently published a report illustrating the best practices in the treatment of allergic disorders. Treatment recommendations include avoiding allergic triggers and using less-sedating or non-sedating antihistamines, or nasal sprays. Non-sedating antihistamine-decongestant combinations are recommended by the AAAAI for patients with heavy congestion, and have been shown to reduce asthma symptoms among people diagnosed with both allergies and asthma. The Joint Task Force on Practice Parameters in Allergy, Asthma and Immunology also states in its guidelines that non-sedating antihistamines should be considered before sedating antihistamines because they cause fewer side effects.

From an employer’s perspective, these therapies appear to be cost saving. The relatively high numbers of people who suffer from allergies and the lost productivity associated with them make allergies one of the most expensive diseases for employers. However, estimates suggest that employers can save $2 to $4 for each $1 spent to increase the use of non-sedating rather than sedating antihistamines. The risk of workplace injury, for example, is significantly higher among workers taking sedating antihistamines. Productivity is also reduced when workers use sedating antihistamines. According to one study, if 50 percent of workers treated for allergies use sedating antihistamines and therefore functioned at 75 percent efficiency, the estimated lost productivity cost would be $2.4 billion for men and $1.4 billion for women. The estimated cost of lost workdays would be an additional $108 million.
Like baldness, height and eye color, the capacity to become allergic can be an inherited characteristic. If one parent has allergies, there is a 50 percent chance their children will have an allergy. If both parents have allergies, it is much more likely (66 percent) that their children will have allergies. Yet a genetic predisposition to allergies does not necessarily mean allergic sensitivity. Developing allergic sensitivity is dependent on genetics, exposure to one or more allergens to which there is a genetically programmed response, and the degree and length of exposure. Other allergic reactions, such as those produced by many plants, dyes, metals, and chemicals in deodorants and cosmetics, have no genetic basis.

In addition to direct medical costs of $4.5 billion per year for the treatment of allergies, there are also indirect costs associated with allergies due to absenteeism and reduced productivity from the sedating effects of older drugs used in treatment. Data from the 1987 National Medical Expenditure Survey suggests that:
- Americans miss 811,000 days of work due to allergies;
- Americans miss 824,000 days of school due to allergies; and,
- Americans have 4.2 million days of reduced activity per year due to allergies.

More recently, a 1999 report from the American Academy of Allergy, Asthma, and Immunology (AAAAI) estimates 3.8 million lost work and school days due to allergies.

Employers can save $2 to $4 for each $1 spent to increase the use of non-sedating rather than sedating antihistamines.
AMERICANS SPEND $4.5 BILLION EACH YEAR TREATING ALLERGIES.

A CLOSER LOOK AT SPENDING FOR ALLERGY MEDICATIONS

Spending on pharmaceuticals was analyzed for individuals who received health benefit coverage from large employers in 1994 and 1997. The sample included individuals who were diagnosed with allergies or conditions for which allergy medicines are often prescribed. A similar analysis was conducted for individuals enrolled in private managed care plans from 1997 to 1999.

FACTORS INFLUENCING DRUG SPENDING FOR ALLERGIES 1994-1997

Spending for allergy medications rose 67 percent from 1994 to 1997. Volume factors (increased numbers of people with allergies receiving antihistamines and allergy-related prescriptions, and increased intensity and duration of drug therapy) accounted for roughly four-fifths of the total increase. Price factors had a relatively modest impact on spending growth.

<table>
<thead>
<tr>
<th>Factors Influencing Growth in Rx Expenditures:</th>
<th>% Positive Impact</th>
<th>% Negative Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Growth in Expenditures</td>
<td>+67</td>
<td></td>
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<tr>
<td>Growth Due to Volume Factors</td>
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<td>Changes in the Number of Prescriptions per Person for Established Drugs</td>
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<td>-38</td>
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<tr>
<td>Changes in the Number of Prescriptions per Person for New Entrants</td>
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<td>+48</td>
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<tr>
<td>Changes in Days of Therapy for Established Drugs</td>
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<tr>
<td>Changes in Days of Therapy for New Entrants</td>
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<tr>
<td>Patients per 1000 Health Care Enrollees</td>
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<td>Growth Due to Price Factors</td>
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<tr>
<td>Inflation</td>
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<td>Changes in Mix of Established Drugs</td>
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<tr>
<td>Price of New Entrants</td>
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</tbody>
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Source: MEDSTAT’s Marketscan database
METHODODOLOGY

This study separately analyzed prescription drug spending growth for two large national claims databases, one representing managed care plan enrollees and the other representing those covered by large employer-provided health benefit plans. The study defined and assessed several factors affecting the price per day of therapy and the volume of therapy — the number of days of therapy received and the number of patients receiving drug therapy. The analysis also examined the effects of price and volume changes for established drugs on the market during the entire period of analysis and for new drugs that were first marketed during this period.

FACtORS INFLUENCING DRUG SPENDING FOR ALLERGIES 1997-1999

Spending for allergy medications rose 89 percent between 1997 and 1999. Again, volume factors (increased numbers of people with allergies receiving antihistamines and allergy-related prescriptions, and increased intensity and duration of drug therapy) accounted for the majority of the increase. Increased numbers of patients being treated alone accounted for nearly half of the overall increase in spending.

<table>
<thead>
<tr>
<th>Factors Influencing Growth in Rx Expenditures:</th>
<th>% Positive Impact</th>
<th>% Negative Impact</th>
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<td>Patients per 1000</td>
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Source: Protocare Sciences managed care database
ABOUT THIS PUBLICATION:

“A Closer Look at Allergies” is a joint publication of the Asthma and Allergy Foundation of America and the National Pharmaceutical Council.

The Asthma and Allergy Foundation of America (AAFA) is the premier patient organization dedicated to improving the quality of life for people with asthma and allergies, and their families through education, advocacy and research. AAFA, a not-for-profit organization founded in 1953, provides practical information, community based services, support and referrals through a national network of chapters and educational support groups. AAFA also raises funds for asthma care and research.

Since 1953, the National Pharmaceutical Council (NPC) has sponsored and conducted scientific, evidence-based analyses of the appropriate use of pharmaceuticals and the clinical and economic value of pharmaceutical innovation. NPC provides educational resources to a variety of health care stakeholders, including patients, clinicians, payers and policy makers. More than 20 research-based pharmaceutical companies are members of the NPC.

For more information about AAAAI or for additional resources, please contact:

The National Pharmaceutical Council
1894 Preston White Drive
Reston, VA 20191-5433
Phone: 703-620-6390
Fax: 703-476-0904
www.npcnow.org

FOR MORE INFORMATION ABOUT ALLERGIES, PLEASE CONTACT:

Asthma and Allergy Foundation of America (AAFA)
www.aafa.org
1-800-7-ASTHMA

American Academy of Allergy, Asthma and Immunology (AAAAI)
www.aaaai.org
1-800-822-2762

American College of Allergy, Asthma and Immunology (ACAAI)
www.allergy.mcg.edu
1-800-842-7777

National Centers for Disease Control and Prevention (CDC)
www.cdc.gov
1-800-CDC-1311

National Institute of Allergy and Infectious Diseases (NIAID)
National Institutes of Health/Office of Communications and Public Liaison
www.niaid.nih.gov
301-496-5717


2 The Asthma and Allergy Foundation of America. What are Allergies? Asthma and Allergy Answers. 1999.


5 Rachelesky GS. National guidelines needed to manage rhinitis and prevent complications. Annals of Allergy, Asthma, & Immunology 1999;82:296-305.


