



The 2016 Arizona Asthma Burden Report



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Executive Summary

Asthma is a common chronic respiratory condition that affects millions of Americans across the age span on a daily basis. In Arizona, it is estimated that more than 615,000 residents have asthma. Asthma can be a life-threatening condition – almost 100 Arizona residents die every year due to asthma. In addition, asthma affects the quality of life for a majority of the individuals with asthma by limiting physical activity and causing work and school absenteeism.

Asthma is unevenly distributed throughout society. Among youth, boys are more likely than girls to have asthma, and among adults, females are more likely than males to have asthma. By race, African Americans are more likely to have asthma, to be hospitalized due to asthma, and to die from asthma. In addition, low-income and less educated individuals are more likely to have asthma, as are smokers and obese individuals.

Fortunately, asthma episodes can be controlled through proper medical care and individual self-management. Health care providers can decrease the impact of asthma through ongoing monitoring of individuals with asthma, prescription of medications that decrease the likelihood of asthma episodes, and co-creating action plans for individuals with asthma. For their part, individuals can manage their condition through proper use of medications and avoiding exposure to asthma triggers, such as dust and pollen, air pollution, and tobacco smoke.

Asthma exacts a significant toll on the health care industry. Nationally, the health care cost due to asthma is estimated to be more than \$50 billion annually. Much of this cost is preventable with proper care and disease management. In addition, the annual indirect cost (i.e., work absenteeism and missed school days) attributable to asthma is estimated to be \$6 billion.

In Arizona, more than 27,000 emergency department and hospital discharges were attributable to asthma in 2014. The estimated cost of this care was \$115 million. By payer source, the single largest source of asthma-related care is the State Medicaid program, known as the Arizona Health Care Cost Containment System (AHCCCS).

On a local, state and national level, the impact of asthma can be lessened through the implementation of clean air policies, increasing resources and support for home-based interventions and disease management programs, and additional education of health care professionals and the general public about asthma, its detection and risk factors.

Interested individuals can get involved in decreasing the impact of asthma in Arizona by contacting the American Lung Association in Arizona at (602) 258-7505 and/or by visiting www.breatheeasyaz.org or by contacting Ms. Barbara Burkholder, Arizona Asthma Coalition, at barbburk5@msn.com.

Background

Asthma basics

Asthma is a highly prevalent chronic respiratory condition seen among children and adults. During an asthma episode, the muscles surrounding the airways tighten, causing the airways to narrow. Symptoms of asthma include coughing, wheezing, chest tightness, and shortness of breath. Disease severity ranges from mild with occasional symptoms to severe with persistent symptoms that can impact quality of life. Furthermore, asthma episodes can be life-threatening for both children and adults.



Individuals are at increased risk for developing asthma based upon a number of factors: family history, tobacco use, having another allergic condition such as hay fever, body mass index (i.e., overweight and obesity), exposure to secondhand smoke, exhaust fumes or other types of pollution, and exposure to chemicals used in farming, hairdressing and manufacturing. Certain circumstances or exposures (known as “triggers”) can lead to an asthma episode. These triggers differ from person to person but may include allergens such as dust and pollen, chemicals and other irritants such as smoke or pollution, physical activity, and even some foods.

There is no cure for asthma; however, the condition can be controlled. Quality health care, correct medications, and good self-management skills are necessary for people with asthma to live healthy and productive lives. In addition, policies at an institutional level (e.g., schools and workplaces), community level and governmental level can assist in reducing individual and population-based exposure to asthma triggers and assist in making high quality health care more accessible to individuals with asthma.

More than 24 million persons



were estimated to have asthma in the United States in 2014.

Risk Factors, Severity and Clinical Management

Risk for asthma episodes

Asthma triggers can include exposure to tobacco smoke, air pollution, allergens such as mold, pet dander, dust, and pollen, and exposure to certain chemicals. In addition, asthma episodes are associated with physical activity and certain foods. Moreover, lack of medical insurance or assistance makes it difficult for some individuals with asthma to afford the medications and care necessary to control their disease.

Classifying asthma severity

The National Asthma Education and Prevention Programs (NAEPP) Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (EPR-3) has established standardized criteria for asthma severity classification. Based on level of asthma severity, health care providers determine appropriate medication and intensity of asthma management (see the table below).

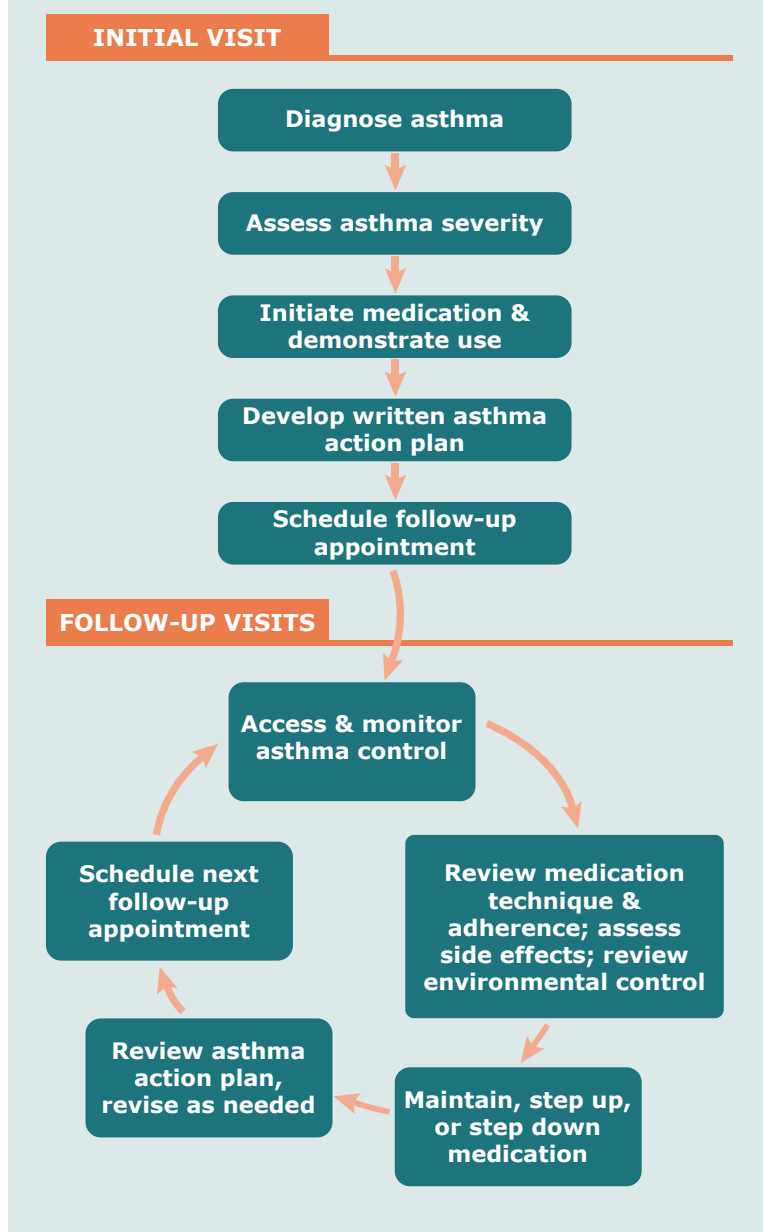
Risk for asthma episodes is unique to each individual and can include smoking or exposure to secondhand smoke, exposure to allergens, poor outdoor air quality, and indoor air quality issues such as mold and pet dander.

Table 1. Criteria for classifying asthma severity

	DAYS WITH SYMPTOMS	NIGHTS WITH SYMPTOMS
Intermittent asthma	No more than 2 days each week	No more than 2 nights each month
Mild persistent asthma	3 days or more per week but not daily	3 nights or more a month
Moderate persistent asthma	Every day	More than 1 night a week
Severe persistent asthma	Throughout the day every day	Often



Figure 1. Clinical Management of Asthma



Clinical management

According to the National Heart, Lung, and Blood Institute (NHLBI), quality asthma care involves not only initial diagnosis and treatment to achieve asthma control, but also long-term, regular follow-up care to maintain control.¹

Figure 1. provides a flow chart depicting the steps involved in offering quality care to individuals with asthma.

Asthma control focuses on two domains: (1) reducing impairment – the frequency and intensity of symptoms and functional limitations currently or recently experienced by an individual with asthma; and (2) reducing risk – the likelihood of future asthma episodes, progressive decline in lung function, or medication side effects. Proper care and management in this regard will reduce the effects of asthma on individuals with this chronic disease, improve their quality of life, and reduce costly emergency department (ED) and hospital visits.

Asthma management strategies include adequate patient education, smoking cessation, consistent use of preventive medication, and control of environmental factors that affect asthma (home-based, multi-trigger multi-component interventions). These strategies have been shown to be effective in improving the health of individuals affected by asthma and are integral to reducing the impact of asthma in the United States.^{2,3,4} Appendix A provides a table summarizing guidelines for the diagnosis and management of asthma from the aforementioned National Asthma Education and Prevention Programs (NAEPP) Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (EPR-3).

Self-management

Asthma self-management refers primarily to the education, self-assessment skills, use of medication, and actions taken by people with asthma to prevent or control asthma episodes. With appropriate asthma self-management knowledge and skills, people with asthma can better manage their disease and improve their quality of life. Asthma quality of life is defined as the extent to which people have control of their asthma and asthma symptoms, which reduces disruptions in their lives and increases perceived health status. Asthma quality of life can be measured by information such as missing work or school and by a person's ability to carry out usual activities.

The National Asthma Education and Prevention Programs (NAEPP) Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (EPR-3) includes the following recommendations regarding self-management:⁵

- People with asthma should receive self-management education and a written asthma action plan, with regular review of medications and asthma control with a medical practitioner. Written asthma action plans are especially recommended for those with moderate or severe persistent asthma.
- Policies that support provision of and reimbursement for trained health professionals to provide asthma self-management education should be considered to improve patient outcomes.

Clearly, receiving self-management education, including having a written asthma action plan, is an important component in managing the condition. However, people with asthma are not getting actions plans from their providers: less than 50% of children receive an asthma action plan, and less than 33% of adults receive an asthma action plan.⁶



People with asthma are not getting action plans from their providers:
< 50% of children and
< 33% of adults receive an asthma action plan



Asthma as a Public Health Priority



HEALTHY PEOPLE 2020 GOALS

- ✓ Reduce asthma deaths
 - ✓ Reduce asthma hospitalizations
 - ✓ Reduce hospital emergency department visits for asthma
 - ✓ Reduce activity limitations among persons with asthma
- ✓ Reduce the proportion of persons with asthma who miss school or work days

During the past 20 years, asthma prevalence has increased throughout the United States, and asthma ranks as one of the most common chronic diseases. More than 24 million persons (one in every 13 people) were estimated to have asthma in the United States in 2014.⁷ This includes 17.7 million adults and 6.3 million children. Because of the prevalence and seriousness of this condition, the U.S. Department of Health and Human Services has developed guidelines for state health agencies to establish asthma programs,⁸ and asthma is included as a public health priority in the Healthy People 2020 national health plan.⁹

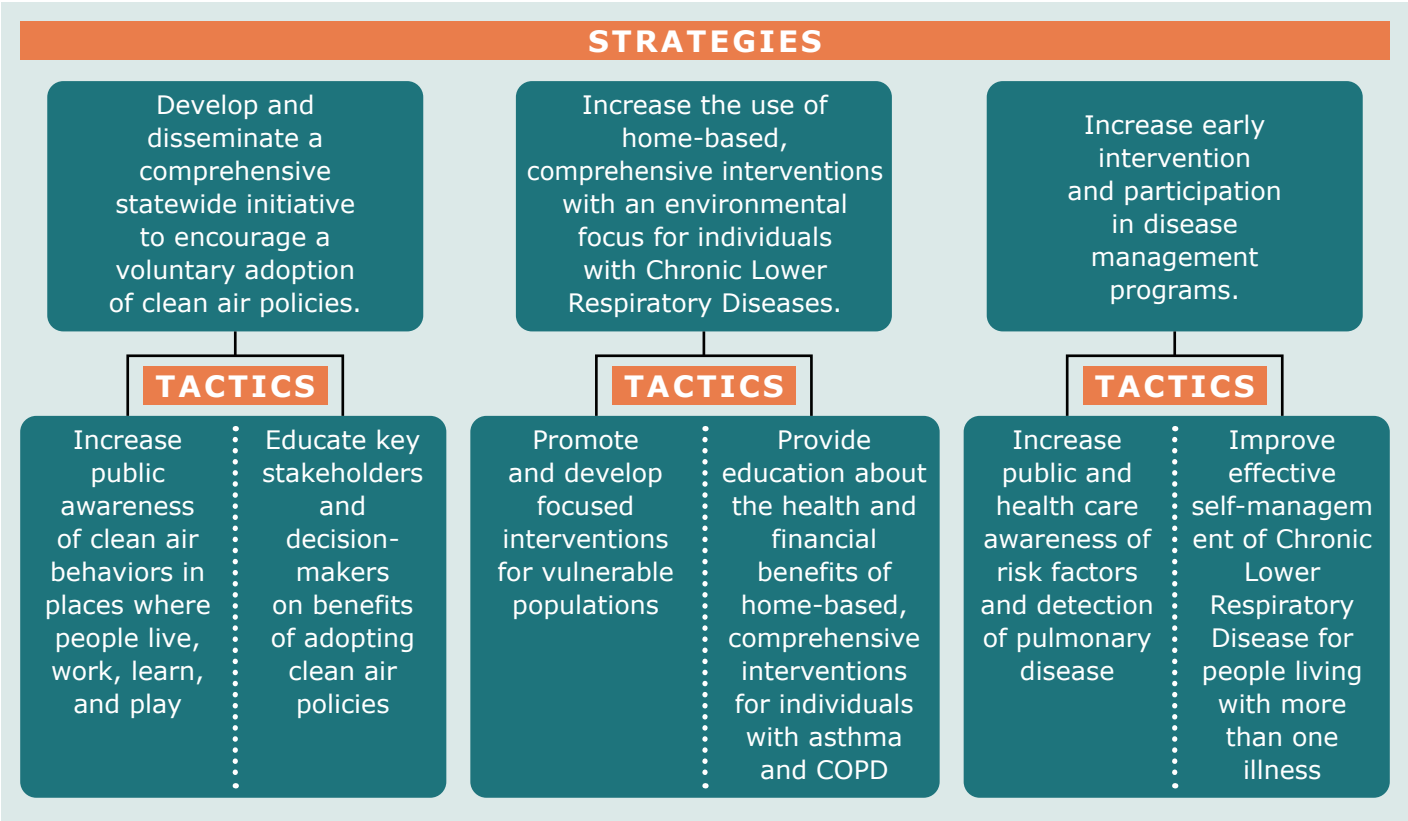
Much of the disability and disruption of daily lives (e.g., school and work absenteeism and emergency department visits) due to asthma is unnecessary because effective treatments for asthma are available.¹⁰ A pressing concern remains the identification of persons with poorly controlled asthma and referral to appropriate asthma care. In addition, appropriate self-management of asthma can be facilitated through the development of a written asthma action plan, which less than half of all individuals with asthma currently have. Lastly, data indicates that African Americans have higher prevalence rates of asthma than other racial/ethnic groups and are 2 to 3 times more likely to die from asthma. There is substantial room for improvement in offering effective asthma treatment and management services to all individuals with asthma and an ethical obligation to decrease the disparities observed among African Americans and other racial and ethnic minorities.



Asthma as a priority in Arizona

The Arizona Department of Health Services has identified Chronic Lower Respiratory Disease (i.e., asthma, emphysema and chronic bronchitis) as a leading health priority in Arizona. Indeed, CLRD is the third leading cause of death in Arizona, responsible for almost 3,300 deaths a year.¹¹ The Arizona 2020 goal is to reduce CLRD mortality by 10%. Table 2. below summarizes the strategic approach outlined in the Arizona Health Improvement Plan towards meeting that goal.¹² It should be noted that although these strategies apply to CLRD as a group of lower respiratory conditions, they are equally applicable to asthma as an individual disease condition.

Table 2. Arizona State Health Improvement Plan



The Distribution of Asthma in Arizona

Compared to all U.S. residents, Arizonans are disproportionately impacted by asthma. In 2014, 9.6% of **adult Arizonans** reported having asthma, compared to a national rate of 8.9%.¹³ This equates to more than 484,000 Arizona adults with asthma. In addition, 10.9% of **Arizona youth** (17 years and younger) reported having asthma, compared to a national rate of 9.2%. This equates to more than 174,000 Arizona youth with asthma.¹⁴ So, in total, more than 615,000 Arizonans reported having asthma, or 1 in every 11 residents.

This asthma prevalence among Arizonans is increasing slowly over time for both children and adults (Figure 2. below).

Figure 2. Current asthma prevalence, Arizona, United States, 2004 – 2014¹⁵

Note: Data for 2010 is not included in the chart below because the method for weighting US data was different from the method used in Arizona in that year. In addition, due to changes in survey methodology beginning in 2010, prevalence estimates from 2000 to 2009 are not comparable to estimates beginning in 2011.

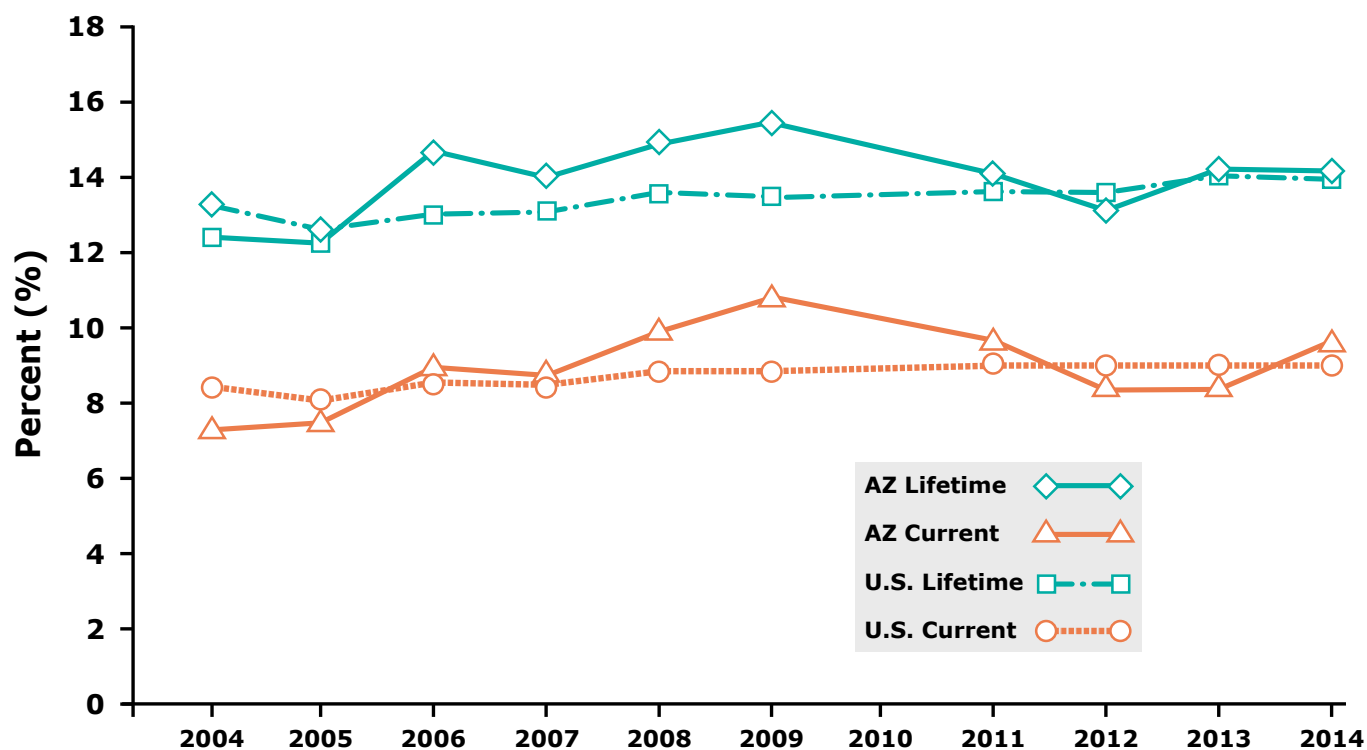
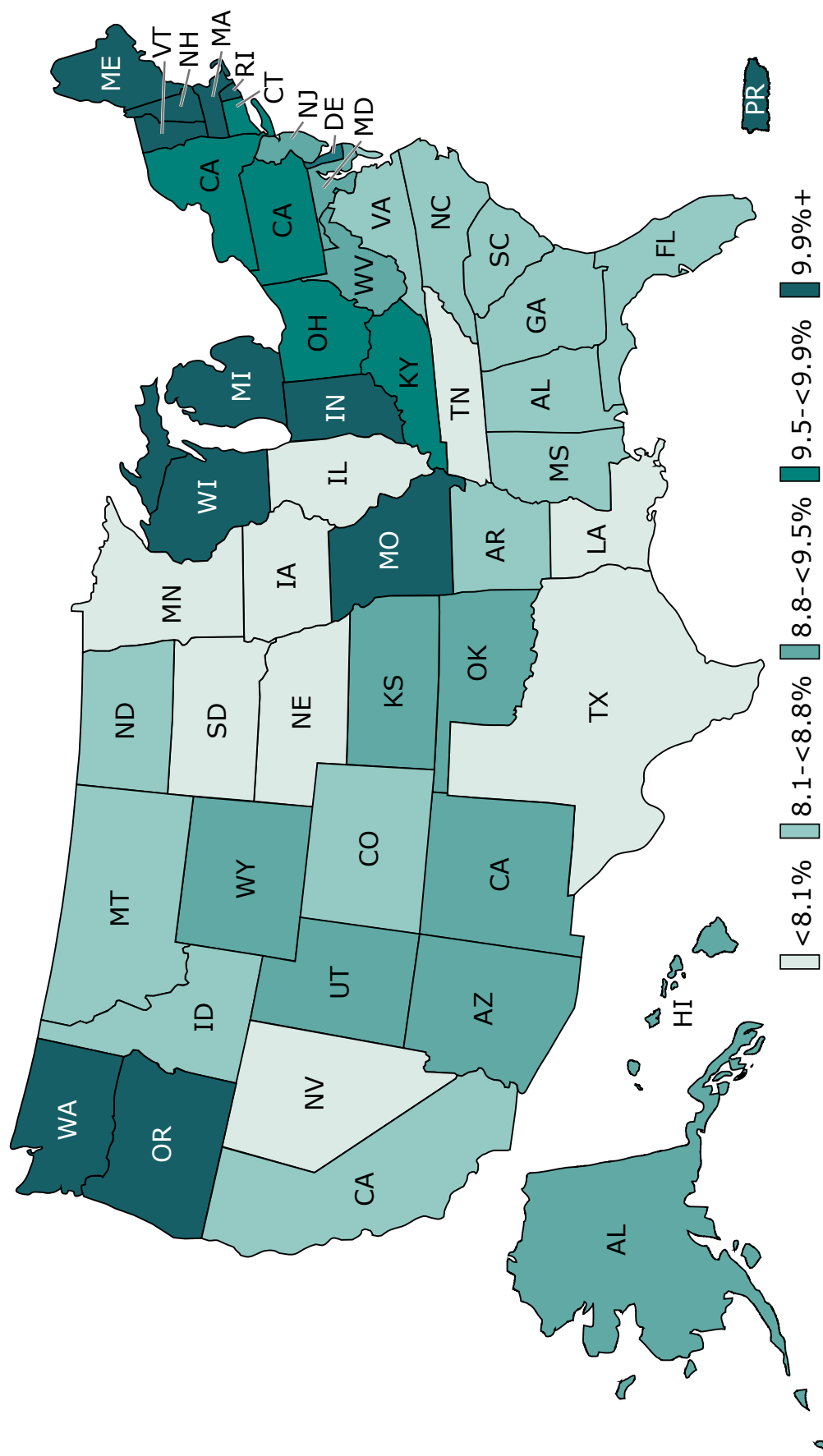


Figure 3. Asthma among adults

As stated previously, more than 484,000 adults in Arizona have asthma.

Figure 3 below indicates how Arizona fares in adult asthma prevalence when compared to other States.¹⁶

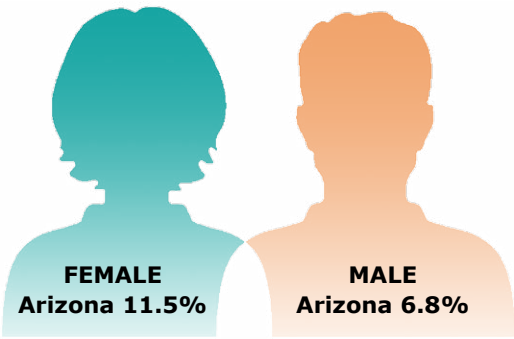


Asthma prevalence varies by race, gender and age. In Arizona, American Indians had the highest rates of adult asthma prevalence for the period 2011 to 2014. (Figure 4. below).¹⁷ Nationally, data from the National Health Interview Survey suggest that Black/African Americans have a current asthma prevalence rate of 9.9%, as compared to a rate of 7.6% among Whites and 6.7% among Hispanics.¹⁸



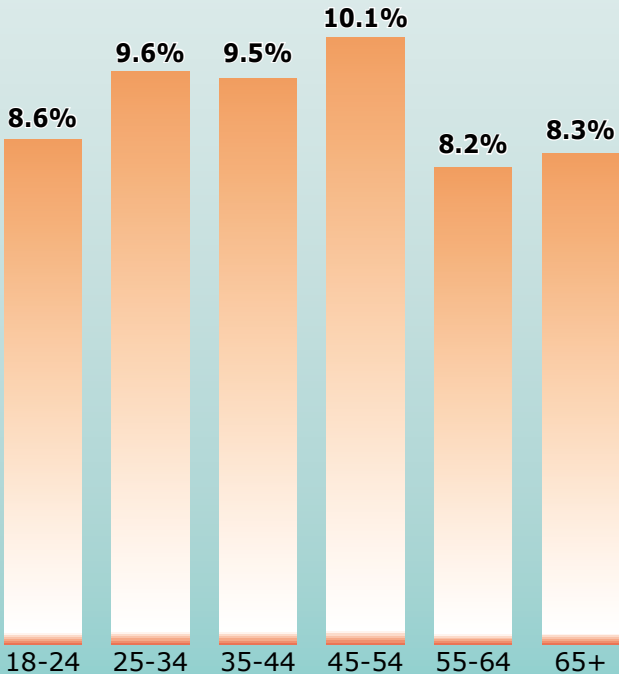
In Arizona, asthma is more prevalent among adult females. A total of 11.5% of female adults and 6.8% of male adults reported having asthma for the period 2011 to 2014.¹⁹ This is similar to national rates, in which females and males had asthma prevalence rates of 11.5% and 6.3%, respectively.²⁰

Figure 5. Asthma Prevalence by Gender in Arizona – BRFSS, 2011-2014
% CURRENTLY WITH ASTHMA



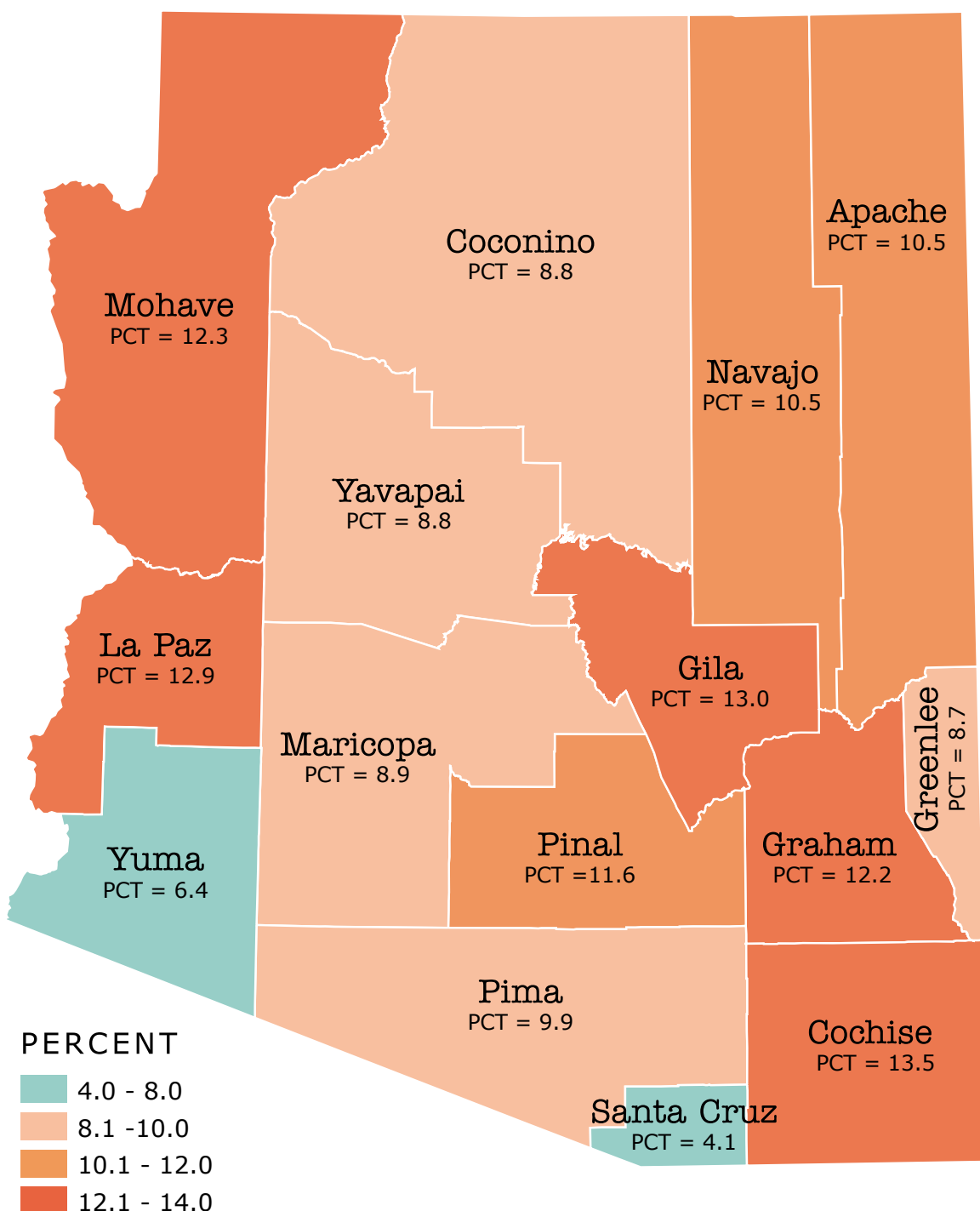
As indicated in Figure 6, asthma prevalence rates in Arizona vary by age, with the highest prevalence rates seen among 45-54 year olds.²¹

Figure 6. Asthma Prevalence in Arizona by Age Group – BRFSS, 2011-2014
% CURRENTLY WITH ASTHMA



Asthma prevalence varies by county across Arizona. Figure 7. below offers data regarding county-specific rates of adults currently with asthma.

Figure 7. County Rates of Adult Asthma in Arizona (BRFSS, 2011-2014)



10.9% of Arizona youth (17 years and younger) currently have asthma

Asthma among children

Data regarding asthma prevalence among children is gathered in multiple ways. The CDC Behavioral Risk Factor Surveillance System (BRFSS) utilizes random household phone surveying to generate population-based estimates. In this survey, parents answer on behalf of their children regarding a history of asthma diagnosis. According to 2013 data from the CDC Behavioral Risk Factor Surveillance System, 10.9% of Arizona youth (17 years and

younger) currently have asthma. This equates to 174,146 Arizona youth. The prevalence nationally among children is 9.2%.²²

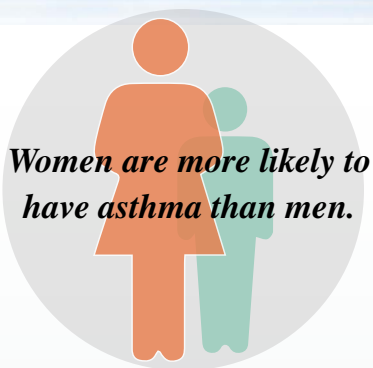
Data regarding asthma prevalence among children can also be determined through the CDC Youth Risk Behavioral Surveillance System (YRBSS), which utilizes school-based surveying among students to generate population-based estimates. Data from the 2013 YRBSS indicate that Arizona high school age youth have slightly higher rates

of lifetime asthma prevalence when compared to their national counterparts.²³ “Lifetime” asthma prevalence measures whether an individual has ever been told by a health care provider that he or she has asthma. Table 3. provides YRBSS data regarding Arizona high school-aged youth.

**Table 3. Lifetime asthma
prevalence among youth
(CDC, 2013)**

	Arizona	United States
Total	24.0%	21.0%
9th grade	25.6%	21.3%
10th grade	25.7%	21.4%
11th grade	24.1%	19.7%
12th grade	20.1%	21.3%





Women are more likely to have asthma than men.

ASTHMA DISPARITIES

The burden of asthma is
unequally distributed.



In children, boys are more likely to have asthma than girls.

Due to sample size and other data limitations, some of the information below cannot be confirmed through Arizona-specific data, however, national data confirm that:²⁴

Black children are
2 times
more likely to
have asthma than
white children.

Adults with an annual
household income of
\$75,000 or less are more
likely to have asthma
than adults with higher
incomes.

**2 to 3
TIMES**

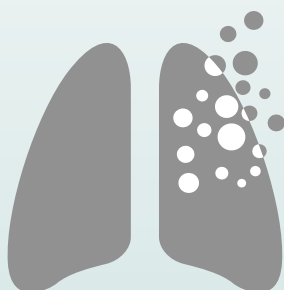
Black Americans
are 2 to 3 times
more likely to die
from asthma than
any other racial or
ethnic group.



Obese adults are most
likely to have asthma.

1 in 5

Hispanic adults
can't afford their
asthma medicines.



*Black and Hispanic children
visit emergency departments
for asthma care more often
than white children.*

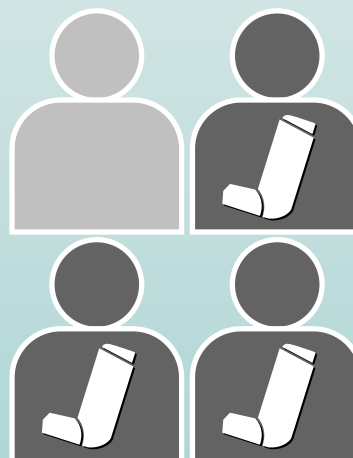


Adults who didn't
finish high school
are more likely
to have asthma
than adults who
graduate high
school or college.



Smokers are more
likely to have asthma
than non-smokers.

**Multi-race and black
adults are more likely
to have asthma than
white adults.**



More than 1 in 4 black adults can't
afford their asthma medicines.

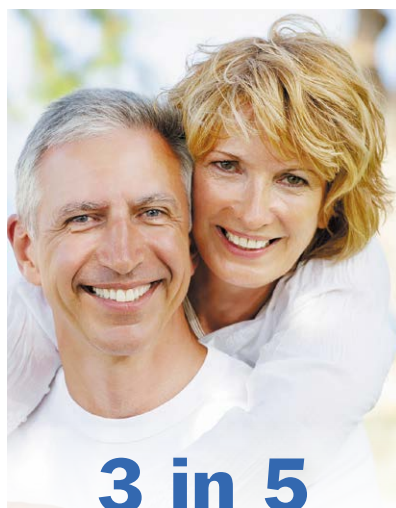


**Black adults
are hospitalized
for asthma
more often than
white adults.**

Impact of Asthma

National impact

Asthma exacts a significant toll in terms of health, life quality, preventable health care costs, missed school days, and lost work days. Data from the Centers for Disease Control and Prevention indicate that 3,630 individuals across the United States died from asthma in 2013.²⁵ While asthma is a life-threatening condition, quality of life for people with asthma is also a major issue and concern.

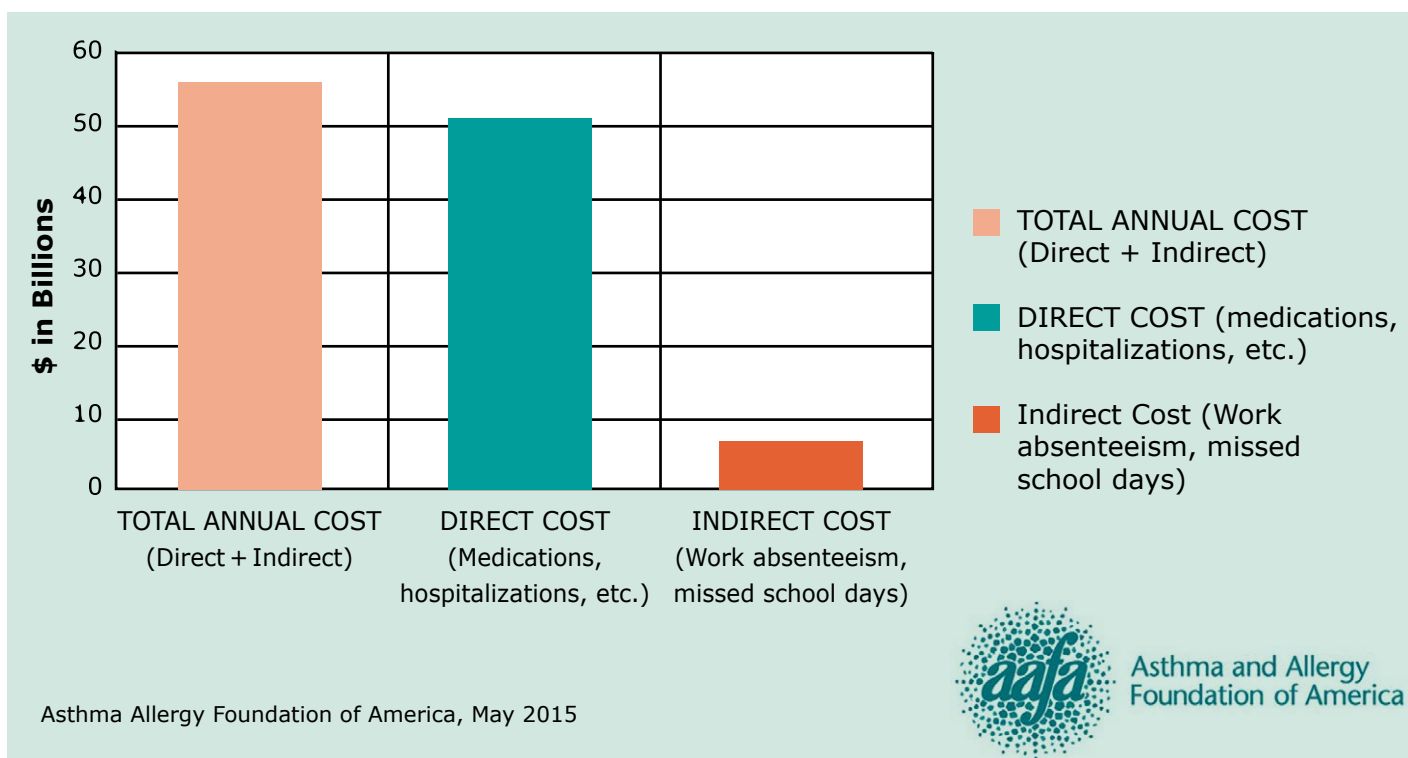


3 in 5
people with
asthma limit their
physical activity

The American Lung Association's National Asthma Survey revealed that people with asthma make a wide range of adjustments in their lifestyle to accommodate their disease.²⁶ Nearly three-quarters (73%) of parents of asthmatic children and 61% of adult asthma respondents reported that preparing for asthma attacks is always a consideration when planning family activities. The severity of the disease was found to be greater among African-American and Hispanic patients and families, with more parents reporting their children had problems in sports, exercise, and missing school. Adult African-Americans and Hispanics were more likely to miss time from work or school.

The cost of asthma in terms of direct health care and indirect costs (e.g., work absenteeism and missed school days) is approximately \$56 billion.²⁷ See Figure 8. below.

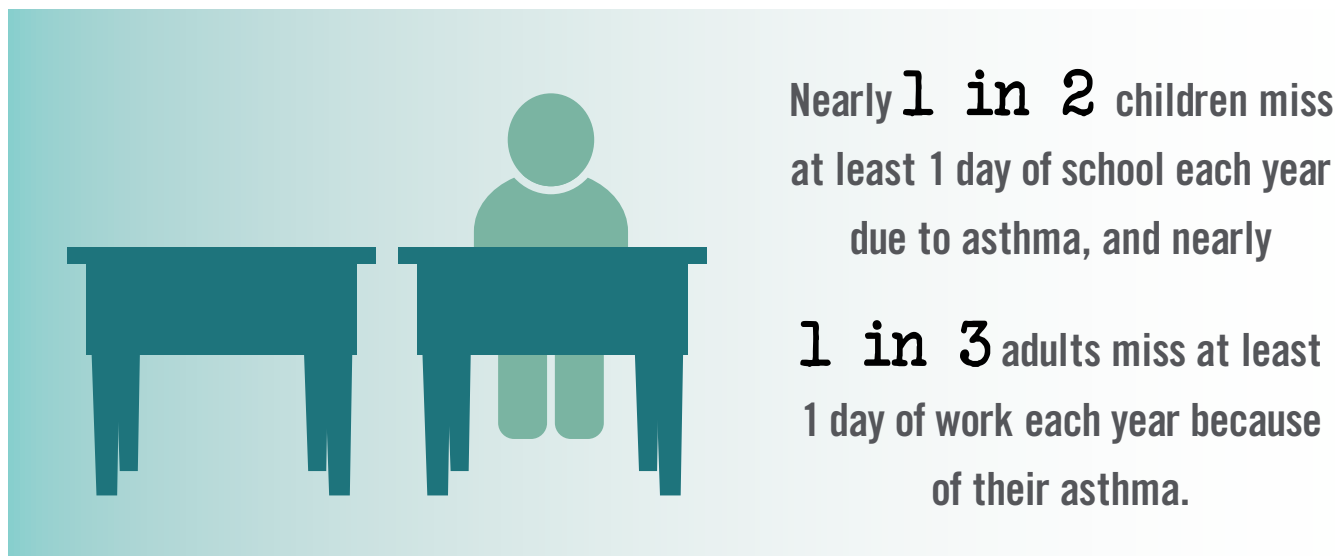
Figure 8. The cost of asthma in the United States



In 2014, Medicaid spent approximately \$67 per member per year on asthma medications, which is the third highest of any category.²⁸ In 2012, asthma was listed as the primary diagnosis for 14.2 million physician office visits and 1.8 million emergency department visits.²⁹ Finally, asthma was listed as primary diagnosis for approximately 439,000 hospital discharges, with an average of 3.6 days length of stay.³⁰

OTHER FACTS ABOUT THE IMPACT OF ASTHMA IN THIS COUNTRY:

- *The direct costs of asthma are about \$50.1 billion. Hospital stays are the largest part of that cost.*³¹
- *Indirect costs comprise \$5.9 billion. This includes lost pay from sickness or death and lost work output from missed school or work days.*³²
- *In 2009, researchers found that the direct cost of asthma is about \$3,259 per person with asthma each year.*
- *Individuals with asthma miss about 14 million work days each year, equaling about \$2 billion in asthma indirect costs.*
- *Children with asthma miss 2.48 **more** days of school each year than children without asthma.*





Impact in Arizona

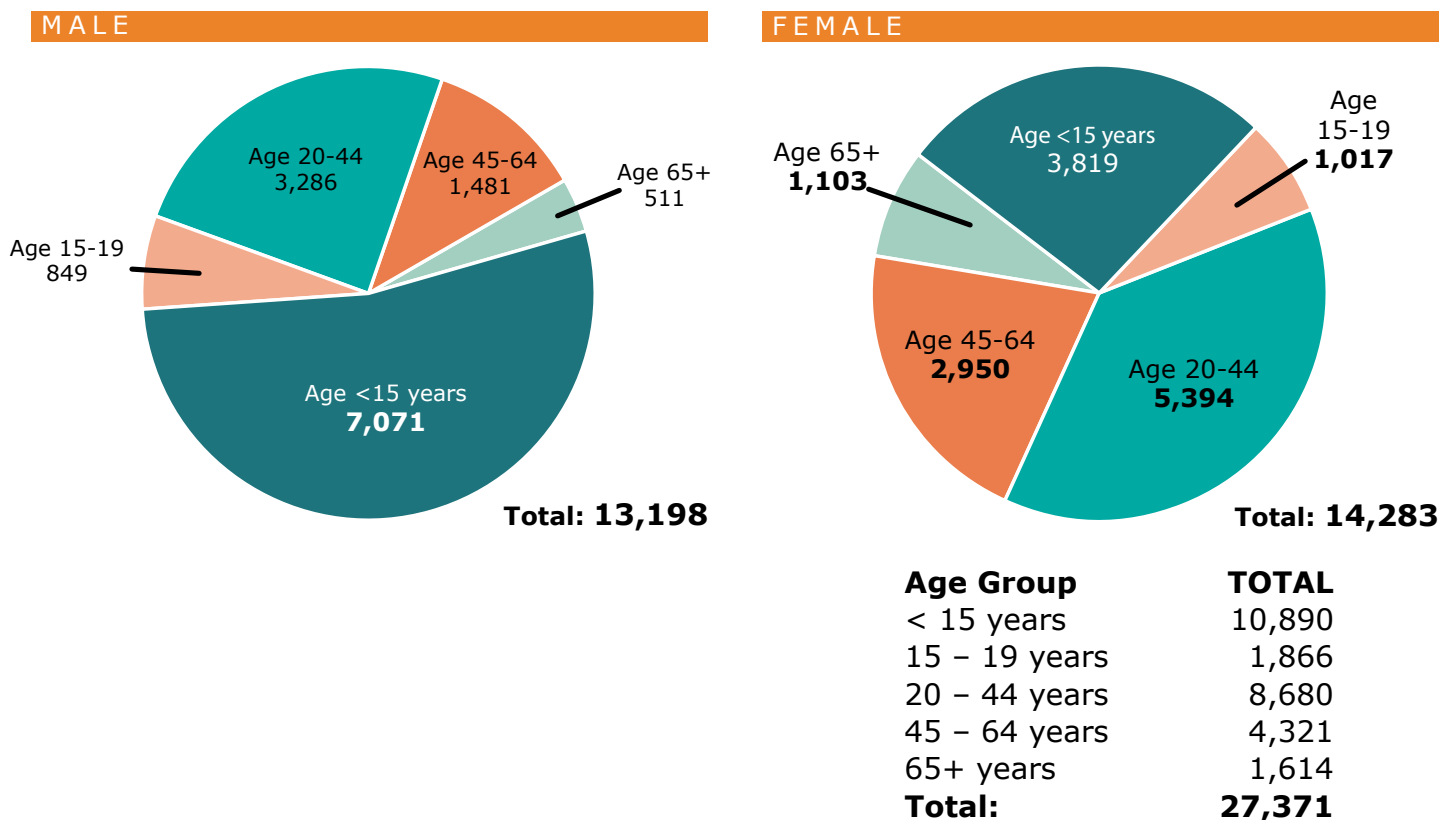
Asthma also takes a sizable toll on Arizona residents in terms of illness, disability and mortality. In 2013, 93 Arizonans died due to asthma.³³ In addition, asthma negatively impacts the quality of life for hundreds of thousands of Arizonans.

In 2014, there were a total of 5,720 Arizona hospital discharges in which asthma was the first-listed diagnosis. This is 0.8% of the total 637,060 discharges in 2014. That same year, there were 27,481 emergency department (ED) visits in Arizona hospitals in which asthma was the first-listed diagnosis (1.3% of all emergency department visits).

Figure 9. below provides additional information regarding Arizona asthma-related emergency department visits. ED visits by males and females were quite similar, with females accounting for 51.1% of all visits. However, males less than 15 years of age accounted for 65.3% of all ED visits for that age group, while females accounted for 63.3% of all visits among individuals 20 years and older. The predominance of ED visits by younger males is not surprising given that data indicate that

males experience higher asthma prevalence in the first decade of life, but by late adolescence the prevalence rate of asthma among females surpasses males – thus explaining the higher number of ED visits among women 20 years and older.³⁴

Figure 9. ED Visits by age and gender, Arizona, 2014

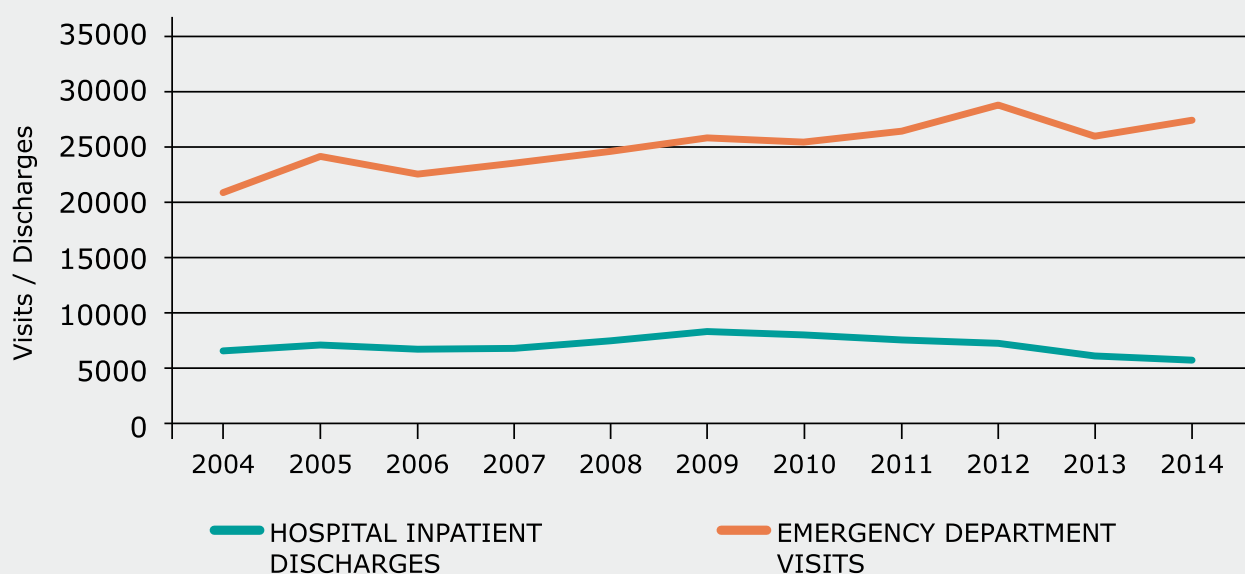




According to the Arizona Department of Health Services hospital charges for asthma-related hospitalizations and emergency department visits exceeded \$115 million in 2014.³⁵

As can be seen in Figure 10., the number of hospital inpatient discharges due to asthma (as the first-listed diagnosis) has been relatively level over the period 2004 – 2014.³⁶ Conversely, the number of asthma-related ED visits has increased steadily over the same period of time.

Figure 10. Asthma-related ED Visits and Hospital Discharges 2004-2014, Arizona





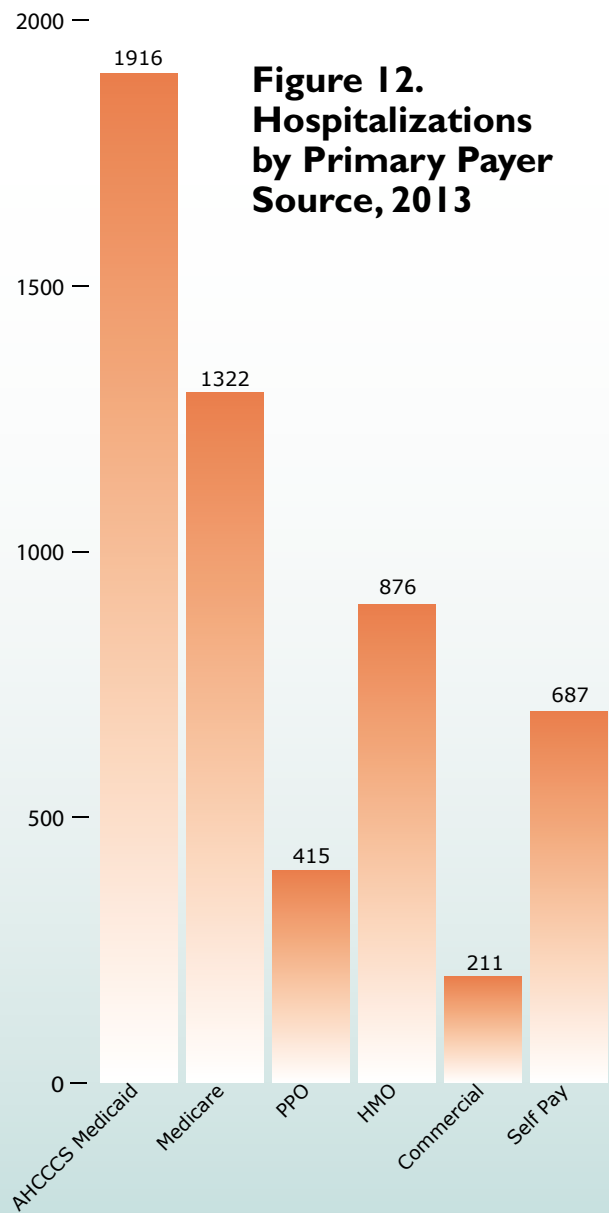
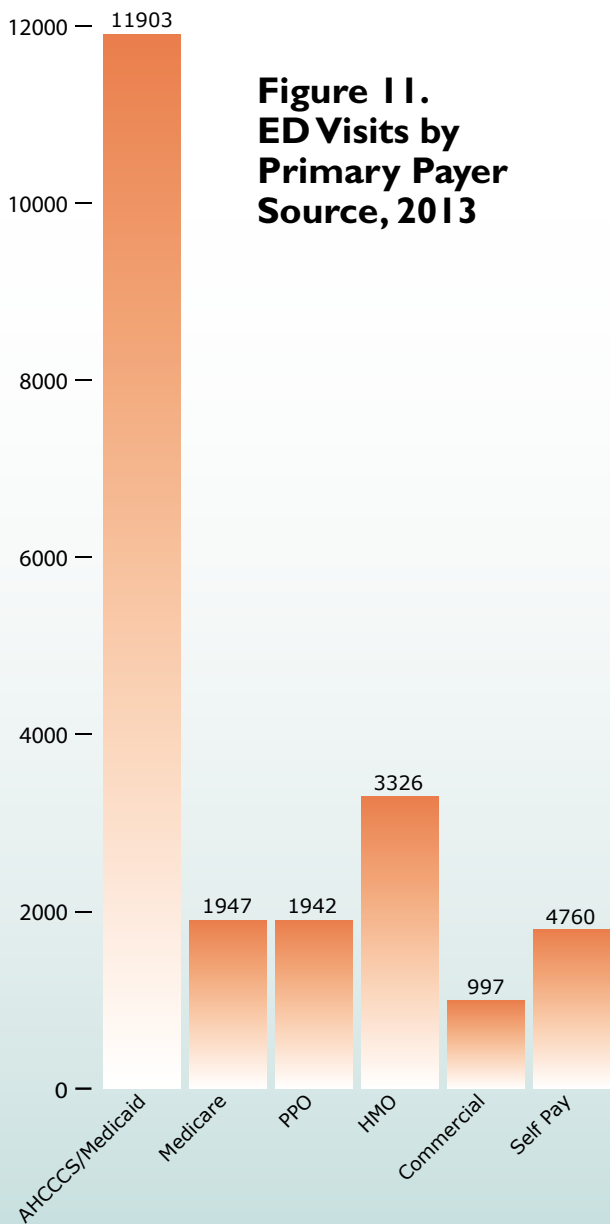
Data from Figure 4. below indicates the number of ED visits and discharges by county of residence. The visits and discharges listed are only for visits or discharges in which asthma was the first-listed (primary) diagnosis (Arizona Department of Health Services, Vital Statistics, 2014).

Figure 4. ED visits and discharges of inpatients with asthma (1st listed diagnosis) by county of residence, Arizona, 2014

County of residence	Hospital inpatient discharges	Emergency department	Total
Apache	17	269	286
Cochise	98	528	626
Coconino	74	290	364
Gila	36	225	261
Graham	21	240	261
Greenlee	0*	23	23
La Paz	10*	93	103
Maricopa	3,404	18,296	21,700
Mohave	244	860	1,104
Navajo	67	320	387
Pima	1,076	3,113	4,189
Pinal	385	1,442	1,827
Santa Cruz	17	169	186
Yavapai	143	813	956
Yuma	123	800	923
TOTALS	5,715	27,481	33,196

* Sum rounded to nearest tens unit due to addend less than 6.

Figure 11. and Figure 12. below offer information regarding the source of payment in Arizona for asthma-related care. As can be seen, publicly funded care sources such as Medicaid and Medicare paid for a significant proportion of asthma-related costs: approximately 56% for ED visits and 53% for hospitalizations.



Best Practices in Controlling Asthma

The Centers for Disease Control and Prevention has developed guidelines for state health agencies in the development of asthma programs.³⁷ The guidelines identify components of a comprehensive approach to controlling asthma. Provided below is a checklist indicating how Arizona fares related to asthma best practices.

FUNDING. Financial support for key public health program staff to conduct asthma-specific program activities such as program planning, education, communications, training, surveillance, policy analysis, and partnership development

YES NO

☒ ☐ Receipt of ongoing federal funding (e.g., CDC National Asthma Control Program) for asthma programming.

☐ ☒ Receipt of ongoing state funding for asthma programming.

DATA. Conduct surveillance and assessment activities to better understand the epidemiology of asthma in Arizona and to evaluate progress in meeting statewide goals and objectives

YES NO

☒ ☐ Implementation of the Asthma Call-Back Survey (ACBS), a follow up survey to the BRFSS used to measure state and local rates of asthma-related health care utilization, knowledge and skills in asthma self-management, number of lost days of work and school due to asthma, and other variables.

☒ ☐ Routine collection and analysis of asthma surveillance data from hospitals, Medicaid records, and other sources, including records of hospitalizations, emergency department visits, and mortality.

☒ ☐ Development of an annual summary of available asthma surveillance, cost and health care data.

PUBLIC-PRIVATE PARTNERSHIPS.

Development of diverse relationships necessary to address the complex issues and factors relating to asthma control.

YES NO

☒ ☐ State, regional and/or local asthma partnerships/coalitions that bring together a diverse base of partners to work collectively on asthma control through interventions, policies and other means.

INTERVENTIONS. Use of evidence-based approaches in addressing issues such as public education, provider training, risk reduction and access to health care services.

YES NO

☒ ☐ Adult-specific asthma education and prevention.

☒ ☐ School-based interventions.

☒ ☐ Child-care facility interventions.

☐ ☒ Workplace-related interventions.

☒ ☐ Home-based multi-trigger, multi-component environmental interventions.

☒ ☐ Health care provider education and training.

LEGISLATIVE POLICY AND POLICIES.

Population-based policies that improve life quality for individuals with asthma, improve access to medications and health care services, reduce tobacco use.

YES NO

☒ ☐ School policies that facilitate medication access for students with asthma.

☒ ☐ Statewide prohibition of tobacco use in public places.

☐ ☒ Enhanced reimbursement for asthma self-management education and environmental management.

STATE ASTHMA (OR CLRD) PLAN.

Comprehensive asthma control plan with accompanying vision, mission and goals that provides action steps for a diverse group of partners.

YES NO

☒ ☐ Current statewide plan of action to decrease the impact of asthma on the quantity and quality of life experienced by people with asthma in Arizona.

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Appendix A

Summary of GIP Priority Messages and the Underlying EPR-3 Recommendations*

<p>MESSAGE: Inhaled Corticosteroids Inhaled corticosteroids are the most effective medications for long-term management of persistent asthma, and should be utilized by patients and clinicians as is recommended in the guidelines for control of asthma.</p> <p>EPR-3 Recommendation: The Expert Panel recommends that long-term control medications be taken on a long-term basis to achieve and maintain control of persistent asthma, and that inhaled corticosteroids (ICSs) are the most patent and consistently effective long-term control medication for asthma. [Evidence A].</p>	<p>MESSAGE: Asthma Control At planned follow-up visits, asthma patients should review level of control with their health care provider based on multiple measures of current impairment and future risk in order to guide clinician decisions to either maintain or adjust therapy.</p> <p>EPR-3 Recommendation: The Expert Panel recommends that every patient who has asthma be taught to recognize symptom patterns and/or Peak Expiratory Flow (PEF) measures that indicate inadequate asthma control and the need for additional therapy [Evidence A], and that control be routinely monitored to assess whether the goals of therapy are being met – that is, whether impairment and risk are reduced [Evidence B].</p>
<p>MESSAGE: Asthma Action Plan All people who have asthma should receive a written asthma action plan to guide their self-management efforts.</p> <p>EPR-3 Recommendation: The Expert Panel recommends that all patients who have asthma be provided a written asthma action plan that includes instructions for: (1) daily treatment (including medication and environmental controls), and (2) how to recognize and handle worsening asthma [Evidence B].</p>	<p>MESSAGE: Follow-up Visits Patients who have asthma should be scheduled for planned follow-up visits at periodic intervals in order to assess their asthma control and modify treatment if needed.</p> <p>EPR-3 Recommendation: The Expert Panel recommends that monitoring and follow-up is essential [Evidence B], and that the stepwise approach to therapy — in which the dose and number of medications and frequency of administration are increased as necessary [Evidence A] and decreased when possible [Evidence C, D] be used to achieve and maintain asthma control.</p>
<p>MESSAGE: Asthma Severity All patients should have an initial severity assessment based on measures of current impairment and future risk in order to determine type and level of initial therapy needed.</p> <p>EPR-3 Recommendation: The Expert Panel recommends that once a diagnosis of asthma is made, clinicians classify asthma severity using the domains of current impairment [Evidence B] and future risk [Evidence C, and D*] for guiding decisions in selecting initial therapy.</p> <p><i>*Note: While there is not strong evidence from clinical trials for determining therapy based on the domain of future risk, the Expert Panel considers that this is an important domain for clinicians to consider due to the strong association between history of exacerbations and the risk for future exacerbations.</i></p>	<p>MESSAGE: Allergen and Irritant Exposure Control Clinicians should review each patient's exposure to allergens and irritants and provide a multi-pronged strategy to reduce exposure to those allergens and irritants to which a patient is sensitive and exposed i.e., that make the patient's asthma worse.</p> <p>EPR-3 Recommendation: The Expert Panel recommends that patients who have asthma at any level of severity be queried about exposure to inhalant allergens, particularly indoor inhalant allergens [Evidence A], tobacco smoke and other irritants [Evidence C], and be advised as to their potential effect on the patient's asthma. The Expert Panel recommends that allergen avoidance requires a multifaceted, comprehensive approach that focuses on the allergens and irritants to which the patient is sensitive and exposed – individual steps alone are generally ineffective [Evidence A].</p>

How To Get Involved

In November 2015, the American Lung Association in Arizona, with support from the Arizona Department of Health Services, published the document, *"Reducing the Impact of Respiratory Disease in Arizona: A Three-Year Plan"*. This plan describes priorities, objectives and strategies to reduce prevalence, disability and deaths attributable to chronic lower respiratory disease (CLRD), which includes asthma. Individuals interested in addressing asthma are encouraged to review this plan, and more importantly, to get involved with efforts to address lower respiratory conditions such as asthma. Interested individuals can contact the American Lung Association in Arizona at (602) 258-7505 and/or visit www.breatheeasyaz.org/

In addition, the Arizona Asthma Coalition (AAC) is actively working to reduce the impact of asthma in Arizona. The AAC is a non-profit partnership with a membership that includes state and local public health departments, the Indian Health Service, the American Lung Association in Arizona, health plans, faculty from colleges and universities, non-profit organizations, pharmaceutical companies, individual physicians, school nurses, pharmacists, asthma educators, and parents. Further information can be found at azasthma.org or by contacting Barbara Burkholder at barbburk5@msn.com.



ADDITIONAL RESOURCES

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American Lung Association HelpLine

800-586-4872
www.lung.org

Inspire.com

Online Support Groups and Communities



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