Asthma Burden Report

Missouri Asthma Prevention and Control Program
OVERVIEW

- Missouri
- Asthma Prevalence
- Emergency Department Visits
- Hospitalizations
- Geographic Areas
- School Health
- Reducing the Burden and Improving Outcomes
- Resources
Missouri
midwestern United States

Population > 6 million
~ 1 in 6 children and 1 in 9 adults live in poverty
Aging and racial / ethnic diversity

115 counties
Rural (~86%) / Urban (14%) counties
> 60% of population in urban areas

Many health professional shortage areas

Bordered by 8 states
Iowa, Illinois, Kentucky, Tennessee, Arkansas, Oklahoma, Kansas, Nebraska
Asthma Prevalence

- A chronic respiratory condition among children and adults
- Characterized by episodes of shortness of breath, coughing, wheezing, chest tightness, and mild to severe respiratory distress

United States, asthma impacts:
- 19.2 million adults
- 5.5 million children

Missouri, asthma impacts ½ million people
- > 440,000 adults, age ≥ 18 years
- > 108,000 children, age 0 to 17 years

U.S. Centers for Disease Control and Prevention (CDC), National Health Interview Survey [https://www.cdc.gov/asthma/nhis/default.htm](https://www.cdc.gov/asthma/nhis/default.htm) and Behavioral Risk Factor Surveillance System (BRFSS) [https://www.cdc.gov/asthma/brfss/default.htm](https://www.cdc.gov/asthma/brfss/default.htm)
Current asthma among adults 18 years and older, Missouri, 2019

Prevalence elevated in Missouri compared to US for most years

In 2018, prevalence in Missouri similar to US

Methodology change
Work-related Asthma

In Missouri

- Of the working adults ever told they had asthma, more than one-half reported a job at some point caused or made their asthma worse
- 2 out of 5 missed work or usual activity because of asthma
- 1 out of 6 reported current job caused or worsened asthma

Pediatric Asthma

- Children share a large care burden for asthma in Missouri

- Uncontrolled asthma results in urgent care, ER visits, and hospital stays
Currently, asthma among children age 0 to 17 years, Missouri, 2019

- Steep increase in prevalence 2007-2010
- Large fluctuations average 9.1% 2011-2015
- Declined 27.8% 2017 to 2019

Methodology change

Current asthma among children age 0 to 17 years, Missouri, 2019

CDC, Missouri Department of Health and Senior Services (DHSS). Behavioral Risk Factor Surveillance System
Prevalence of current asthma among children age 0 to 17 years, Missouri, 2019

Geographic Areas

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>St. Louis Metro</td>
<td>8.8</td>
</tr>
<tr>
<td>Kansas City Metro</td>
<td>7.6</td>
</tr>
<tr>
<td>Southwest</td>
<td>7.5</td>
</tr>
<tr>
<td>Northeast</td>
<td>5.9</td>
</tr>
<tr>
<td>Central</td>
<td>5.3</td>
</tr>
<tr>
<td>Southeast</td>
<td>3.3</td>
</tr>
<tr>
<td>Northwest</td>
<td>2.5</td>
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</tbody>
</table>

CDC, Missouri Department of Health and Senior Services (DHSS). Behavioral Risk Factor Surveillance System
• Provides health care coverage for > one-third of all Missouri children

• Substantial proportion have uncontrolled asthma

• Guidelines based clinical care and community interventions are improving outcomes and lowering cost
Risk Factors

Many factors place children at high risk for asthma episodes

• Preschool children age 0 to 4 years
• Young boys compared to girls
• Low socioeconomic status
• Being African-American or other minority
• Co-morbidity conditions
• Environmental triggers
Asthma Triggers

Environmental conditions that cause asthma symptoms are called triggers. Triggers irritate the lining of the airways, which can lead to an asthma attack. By identifying and reducing asthma triggers, you can help reduce the impact asthma has on your child’s life.

To identify and reduce exposure to asthma triggers visit: www.cdc.gov/asthma/triggers.html
When an asthma attack is happening, care is needed

- In Missouri:
  - 1 in 2 children with asthma were reported to have an asthma attack in the past year (2012 - 2014)
  - ~13% v 17.2% (25 states) reported an urgent care or emergency room visit in the past 12 months
- Children average ~10,000 ER visits annually for asthma
- High rates in urban, central medical hub, and southeast areas of Missouri
- Rates declining among MO HealthNet clients
Children average 1,600 hospital stays for asthma annually

Asthma hospitalization rates declined 2.5 percent annually (2004-2015)
Asthma inpatient hospital admission average rates for children aged 0 to 19 years by month, Missouri. 2004-2015

Source: Missouri Department of Health and Senior Services. Missouri Public Health Information Management System (MOPHIMS), Environmental Public Health Tracking
In Missouri:

- Inpatient hospital charges for asthma totaled $105 million with children accounting for $20.8 million (or 20%)

- Medicaid accounted for the largest pay source cited
  - > 50,000 children with asthma are enrolled in MO HealthNet
  - The average total cost per child with asthma through MO HealthNet was $4,098 (2014)

- On average, 71 people die annually from asthma, about 5 are children (2015-2019)

In the US:

- Based on a pooled sample the annual per-person incremental medical cost of asthma was $3,266
- Of that, $1,830 was for prescriptions, $640 for office visits, $529 for hospitalizations, $176 for hospital outpatient visits and $105 for emergency room care
- Average deaths were 3,168 at a estimated statistical cost per life lost $9.2 million
School Health

- Schools offer and provide important health care and self-care management services for children with asthma and their families
- An effective school health program improves a child’s ability to learn
- Linked with community resources, school health is a key approach to improving asthma control in pediatric populations
Children with asthma aged 5–17 years missed 13.8 million days of school per year (2.6 days per child) (US 2013)
School Care

- Missouri schools provide essential support care for many children

- 9% (or more than 70,000) Missouri school children take asthma medication at school or home

Followed by: 8% report ADD / ADHD, 3% life-threatening allergies, and many other conditions
The Missouri Asthma Prevention and Control Program (MAPCP) through statewide systems and interventions link community (schools, agencies), health care (hospitals, clinics) and many others to address asthma in Missouri.
Asthma Strategies

- Clinic, school and community asthma interventions continue…
- Programs such as Teaming Up for Asthma Control, Childhood Asthma Linkages in Missouri 2, Asthma Management Guidelines and Asthma Extension for Community Health Outcomes are having an impact
- Transforming primary care to asthma specialty care
Improving asthma control

- Reduces or eliminates symptoms
- Improves quality and mental health
- Lets kids enjoy life
Acknowledgment

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Thank you to our many partners
Resources


- Missouri Department of Health and Senior Services, Missouri Public Health Information Management System (MOPHIMS), Inpatient Hospitalizations / Emergency Room Visits / Deaths / Environmental Public Health Tracking Program, Missouri Information for Community Assessment (MICA) https://healthapps.dhss.mo.gov/MoPhims/MOPHIMSHome


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Missouri Asthma Prevention and Control Program

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