A (quick) 10,000 foot view of asthma in the United States
Trends in prevalence

Percent prevalence in the United States, 1980-2009

Current asthma prevalence 2001-2009

Asthma period prevalence 1980-1996

Asthma attack prevalence 1997-2009

Source: CDC/NCHS, National Health Interview Survey
### Percent current asthma prevalence, United States, 2009

<table>
<thead>
<tr>
<th>Group</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male 0-17 years</td>
<td>7.0</td>
</tr>
<tr>
<td>Female 0-17 years</td>
<td>9.3</td>
</tr>
<tr>
<td>Male 18+ years</td>
<td>7.7</td>
</tr>
<tr>
<td>Female 18+ years</td>
<td>9.6</td>
</tr>
</tbody>
</table>

**Source:** CDC/NCHS, National Health Interview Survey
Differences in prevalence

Percent current asthma prevalence, United States, 2009

- NH white: 8.2%
- NH black: 11.1%
- Total Hispanic: 6.3%
- Puerto Rican: 16.6%
- Mexican: 4.9%
- Below poverty: 11.6%
- 100%-<200% poverty: 8.5%
- 200%+ poverty: 7.3%

Source: CDC/NCHS, National Health Interview Survey
Differences in prevalence

Percent current asthma prevalence, United States, 2007-2009

- Below poverty: 13.5%
- 100%-%200% poverty: 10.1%
- 200%+ poverty: 8.6%

Non-Hispanic black (11.1% overall)

- Below poverty: 11.6%
- 100%-%200% poverty: 9.6%
- 200%+ poverty: 7.2%

Non-Hispanic white (8.2% overall)

Source: CDC/NCHS, National Health Interview Survey
Differences in prevalence

Percent current asthma prevalence, United States, 2009

Metropolitan: 8.1%
Nonmetropolitan: 8.7%
Northeast: 9.3%
Midwest: 8.8%
South: 7.5%
West: 7.7%

Source: CDC/NCHS, National Health Interview Survey
Relative risk of asthma ambulatory healthcare visits among persons with current asthma, United States, 2005-2007

- Female vs male: 0.8
- Black vs white: 1.0
- Child vs adult: 1.8

Source: CDC/NCHS, National Ambulatory Medical Care Survey, National Hospital Ambulatory Medical Care Survey
Differences in outcomes

Relative risk of asthma ED visits among persons with current asthma, United States, 2005-2007

- Female vs male: 1.0
- Black vs white: 3.3
- Child vs adult: 1.5

Source: CDC/NCHS, National Hospital Ambulatory Medical Care Survey
Differences in outcomes

Relative risk of asthma hospitalizations among persons with current asthma, United States, 2005-2007

- Female vs male: 1.1
- Black vs white: 2.2
- Child vs adult: 1.2

Source: CDC/NCHS, National Hospital Discharge Survey
Differences in outcomes

Relative risk of asthma deaths among persons with current asthma, United States, 2005-2007

- Female vs male: 1.3
- Black vs white: 1.9
- Child vs adult: 0.1

Source: CDC/NCHS, National Vital Statistics System
Differences in outcomes

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Total ambulatory visit</th>
<th>ED visit</th>
<th>Hospitalization</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female vs male</td>
<td>0.8</td>
<td>1.0</td>
<td>1.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Black vs white</td>
<td>1.0</td>
<td>1.0</td>
<td>2.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Child vs adult</td>
<td>0.1</td>
<td>1.5</td>
<td>1.2</td>
<td>1.8</td>
</tr>
</tbody>
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Summary

• Prevalence is increasing
  • Definitions matter
  • Consider choosing measures compatible with benchmark measures
• Trend breaks are sometimes necessary, but painful so choose wisely
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  • Differences may stem from multiple factors—consider “interactions”
• Prevalence is increasing
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• Prevalence varies widely among subgroups
  • Differences may stem from multiple factors—consider “interactions”

• Outcomes vary widely between subgroups, even after taking prevalence differences into account
  • Data can be “repurposed” from other systems, but know the limitations
  • Be careful to distinguish events (e.g., number of visits) from number of people