

# Asthma State Profiles

## Technical Notes

### U.S. Prevalence, 2008

Data Source: National Health Interview Survey, 2008

Data Tables: [www.cdc.gov/asthma/nhis/08/data.htm](http://www.cdc.gov/asthma/nhis/08/data.htm)

### Lifetime and Current Asthma Prevalence, 2008

#### Adult:

Data Source: Behavioral Risk Factor Surveillance System (BRFSS), 2008

Data Tables: Lifetime adult asthma: [www.cdc.gov/asthma/brfss/08/lifetime/tableL1.htm](http://www.cdc.gov/asthma/brfss/08/lifetime/tableL1.htm)

Current Adult Asthma: [www.cdc.gov/asthma/brfss/08/current/tableC1.htm](http://www.cdc.gov/asthma/brfss/08/current/tableC1.htm)

Lifetime asthma prevalence is defined as a “yes” response to the question “Have you ever been told by a doctor, nurse, or other health professional that you had asthma?” Current asthma prevalence is defined as a “yes” response to the follow-up question “Do you still have asthma?”

Lifetime asthma prevalence percentages and counts represent the proportion and number of adults in the state population who were ever told that they had asthma. Current asthma prevalence percentages and counts represent the proportion and number of adults in the state population who reported still having asthma.

Adult asthma prevalence data are from the BRFSS. More information on this survey can be found at: [www.cdc.gov/brfss](http://www.cdc.gov/brfss)

#### Child:

Data Source: BRFSS, 2008; National Survey for Children’s Health (NSCH), 2007

Data Tables: Lifetime child asthma: [www.cdc.gov/asthma/brfss/08/child/lifetime/tableL1.htm](http://www.cdc.gov/asthma/brfss/08/child/lifetime/tableL1.htm)

Current Child Asthma: [www.cdc.gov/asthma/brfss/08/child/current/tableC1.htm](http://www.cdc.gov/asthma/brfss/08/child/current/tableC1.htm)

Lifetime asthma prevalence is defined as a “yes” response to the question “Has a doctor, nurse, or other health professional ever said that the child has asthma?” Current asthma prevalence is defined as a “yes” response to the follow-up question “Does the child still have asthma?”

Lifetime asthma prevalence percentages and counts represent the proportion and number of children in the state population who were ever told that they had asthma. Current asthma prevalence percentages and counts represent the proportion and number of children in the state population who reported still having asthma.

Child asthma prevalence data are from the BRFSS. More information on this survey can be found at: [www.cdc.gov/brfss](http://www.cdc.gov/brfss). Child asthma prevalence data are produced from responses to questions on the BRFSS Random Child Selection and Childhood Asthma Prevalence modules. The randomly selected adult provided responses to the

child asthma questions. If the adult reported that one or more children aged 17 years or younger lived in the household, then one of the children was randomly selected.

If child prevalence data are unavailable from the BRFSS, the alternate data source is the NSCH, 2007. More information on this survey can be found at: [www.cdc.gov/nchs/slits.htm](http://www.cdc.gov/nchs/slits.htm)

#### Definitions:

**Adults** – Aged 18 years and older

**Child/Children** – Aged 17 years and younger

**Total** – Total prevalence percentages represent the asthma prevalence estimate for the state.

**U.S.** – “U.S.” represents an estimate for the 50 states and the District of Columbia combined (Puerto Rico is not included).

**NH** – Denotes non-Hispanic

**Multirace** – Represents persons who reported more than one race when asked “Which one or more of the following would you say is your race?”

**38 States** – Represents the 37 states and the District of Columbia that used the Childhood Asthma optional module. The 37 states include: AZ, CA, CT, GA, HI, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MS, MO, MT, NE, NV, NH, NJ, NM, NY, ND, OH, OK, OR, PA, RI, TX, UT, VT, VA, WV, WI, WY.

**Unstable/Unreliable Rate** – Represents prevalence rates that should be interpreted with caution because the estimates are calculated with a sample size fewer than 50.

All stated comparisons (e.g., higher, lower, similar) indicate that the group is statistically significantly different based on a non-directional 2-tailed z-test at the  $p < .05$  level. Differences between some groups appear higher than the reference group (e.g., adults aged 18-24 years, men, non-Hispanic whites, children aged 15-17 years, and boys) and although there is a statistically significant difference between the groups, the asterisk (\*) indicates that the estimate is unstable and should be interpreted with caution.

### Age-specific Hospitalizations, 2008 (or most recent year available)

Data Source: Individual State Datasets

Asthma hospitalization data are collected by individual states and provided to CDC after an annual request. The data vary by state based on inclusion criteria, data sharing, and the ability to collect population estimates; therefore, data collection differences exist in the data received from states. Acute care and U.S. Department of Veterans Affairs hospitals and psychiatric and rehabilitation facilities are excluded from most datasets. Hospitalization data are based on hospital discharges with a primary (first listed) International Classification of Diseases (ICD) 9 diagnosis code of 493. Hospital discharge data requested from each state



were limited to in-state residents and residents who were hospitalized in neighboring states if available. Non-residents who were hospitalized in-state were excluded. The graph points represent the state hospitalization rate per 100,000 persons in each age group for one year.

The "U.S." rate was generated from the National Hospital Discharge Survey (NHDS). More information on this survey can be found at: [www.cdc.gov/nchs/nhds/nhds\\_questionnaires.htm](http://www.cdc.gov/nchs/nhds/nhds_questionnaires.htm)

**Definitions:**

**Age-specific Rate** – Represents the ratio of the frequency of asthma hospitalizations in each age group to the respective state population.

**Age-adjusted (Age-standardized) Rate** – A mathematical method of altering the age structure in populations that are being compared to account for differences in the age distribution of the population.

**Unstable/Unreliable Rate** – Represents hospitalization rates that should be interpreted with caution because the estimates are calculated with a sample size of fewer than 60 hospitalizations in the numerator. These data are from the National Health Statistics Reports available at: [www.cdc.gov/nchs/data/nhsr/nhsr005.pdf](http://www.cdc.gov/nchs/data/nhsr/nhsr005.pdf)

## Age-adjusted Asthma Mortality Rate by Race, 2007

Data Source: National Vital Statistics System (NVSS), 2007

Mortality data are from the NVSS. More information on this system can be found at: [www.cdc.gov/nchs/nvss.htm](http://www.cdc.gov/nchs/nvss.htm)

Mortality rates were calculated using records for which asthma was coded as the underlying causes of death, using the ICD-10 codes J45 and J46.

Graph points represent the age-adjusted mortality rate per 1 million persons for each race category in one year.

**Definitions:**

**Unstable/Unreliable Rate** – Represents mortality rates that should be interpreted with caution because the estimates are calculated with fewer than 20 deaths in the numerator.

**Suppressed Rate** – Represents mortality rates that are not shown because the estimates are calculated with fewer than 10 deaths in the numerator.

**Age-adjusted (Age-standardized) Rate** (see above)

More detailed information on mortality data and how to calculate an age-adjusted (age-standardized) rate can be found at: [wonder.cdc.gov/wonder/help/cmfm.html#](http://wonder.cdc.gov/wonder/help/cmfm.html#) and [www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49\\_09.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_09.pdf)

## Adult Asthma Patient Education Measures

Data Source: Asthma Call-back Survey, 2007, 2008, 2009

Data on asthma patient education measures come from the BRFSS Asthma Call-back Survey. More information on this survey can be found at: [www.cdc.gov/asthma/survey/brfss.html](http://www.cdc.gov/asthma/survey/brfss.html)

The survey is administered by telephone as a follow-up set of questions to persons identified with affirmative responses to "Have you ever been told by a doctor, nurse, or other health professional that you had asthma?" in the core BRFSS survey. Participants were asked about asthma-related issues such as work-related asthma, underlying medical conditions, the cost of care, and their environments.

Data represent the percentage of adults with current asthma who indicated ever having asthma patient education.

**Definitions:**

**Asthma Attack/Episode** – Asthma attacks, sometimes called episodes, refer to periods of worsening asthma symptoms that limit activity more than usual or require medical care.

**Peak Flow Meter** – An instrument used to measure the amount of air flowing from a person's lungs. It is used to determine if a person's asthma is under control.

**Asthma Action Plan** – A written document that provides detailed instructions on daily asthma management and recognizing and handling worsening asthma signs and symptoms. The document includes a list of medications to be taken in case of an asthma attack/episode, contact information for a healthcare provider, and information on peak flow measurements. The asthma action plan is particularly recommended for persons with poorly controlled asthma, severe asthma attacks, or moderate to-severe persistent asthma. The asthma action plan should be shared with all persons involved in the management of someone's asthma, such as the caregiver, parent, or school nurse.

Detailed information on asthma action plans (pgs. 115-120) and peak flow meters (pgs. 120-123) can be found in the National Heart, Lung, and Blood Institute (NHLBI) Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma at: [www.nhlbi.nih.gov/guidelines/asthma/asthdln.pdf](http://www.nhlbi.nih.gov/guidelines/asthma/asthdln.pdf)

## Adult Asthma Medication Use

Data Source: Asthma Call-back Survey, 2007, 2008, 2009

Data on asthma medication come from the BRFSS Asthma Call-back Survey. More information on this survey can be found at: [www.cdc.gov/asthma/survey/brfss.html](http://www.cdc.gov/asthma/survey/brfss.html)

Data represent the percentage of adults with current asthma using asthma medication within the past 3 months.

**Definitions:**

**Asthma Medication Use** – Respondents were asked if they used four types of medications (including pills, syrups, inhalers, or nebulizers) in the past 3 months.

**CDC's National Asthma Control Program**  
For more information on asthma:  
[www.cdc.gov/asthma](http://www.cdc.gov/asthma)