

## Asthma Deaths in Ohio, 1990-2012

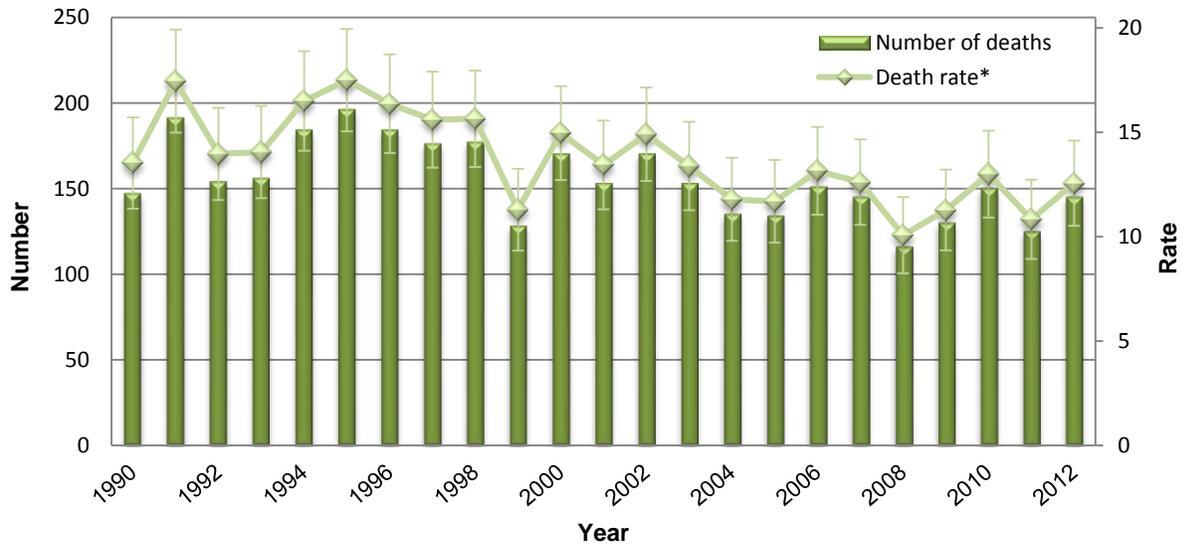
Asthma deaths are relatively rare, but preventable with proper asthma management. Failure to maintain good control of asthma symptoms may contribute to a higher risk of death. Asthma deaths can occur both in people with mild intermittent and severe persistent asthma. The majority of asthma-related deaths occur in persons aged 65 years and older, but individuals of any age are at risk. Proper asthma management not only reduces mortality risk, but also improves symptoms and quality of life.

Although asthma is not a leading cause of death, it is still the cause of more than 3,300 deaths per year nationally (11.0 per million population) and 155 asthma deaths per year in Ohio (13.7 per million Ohioans).

One Ohioan dies of asthma every two or three days.

Overall, asthma death rates in Ohio have changed little since 1990 (see Figure 1). During the first decade of this time period (1990-2000), the average annual asthma death rate was about 15.2 per 1 million Ohioans [95 percent Confidence Interval (CI), 12.9 to 17.5].<sup>i</sup> The annual average rate decreased slightly during the next decade (2001 to 2012) to 12.4 asthma deaths per 1 million Ohioans [95% CI, 10.4 to 14.4], although these decreases were not statistically significant. Asthma death rates in Ohio often fluctuate up and down from year to year. Because the numbers of asthma deaths are relatively few, each death can substantially influence the death rate in a given year.<sup>ii</sup>

**Figure 1. Annual Asthma-Related Deaths in Ohio, 1990-2012**



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Count</b>	147	191	154	156	184	196	184	176	177	128	170	153	170	153	135	134	151	145	116	130	150	125	145
<b>Rate *</b>	13.5	17.4	14.0	14.1	16.5	17.5	16.4	15.6	15.6	11.3	15.0	13.4	14.9	13.4	11.8	11.7	13.2	12.6	10.1	11.3	13.0	10.8	12.6

\*Crude rate per 1 million population.

Sources: Ohio Department of Health, Center for Vital and Health Statistics, Deaths 1990-2012; U.S. Census Bureau, Population Estimates Program and National Center for Health Statistics, Bridged-Race Population Estimates, 1990-2012.



If you have questions or require additional information, please contact the ODH Asthma Program at (614) 728-3620 or [Asthma@odh.ohio.gov](mailto:Asthma@odh.ohio.gov)

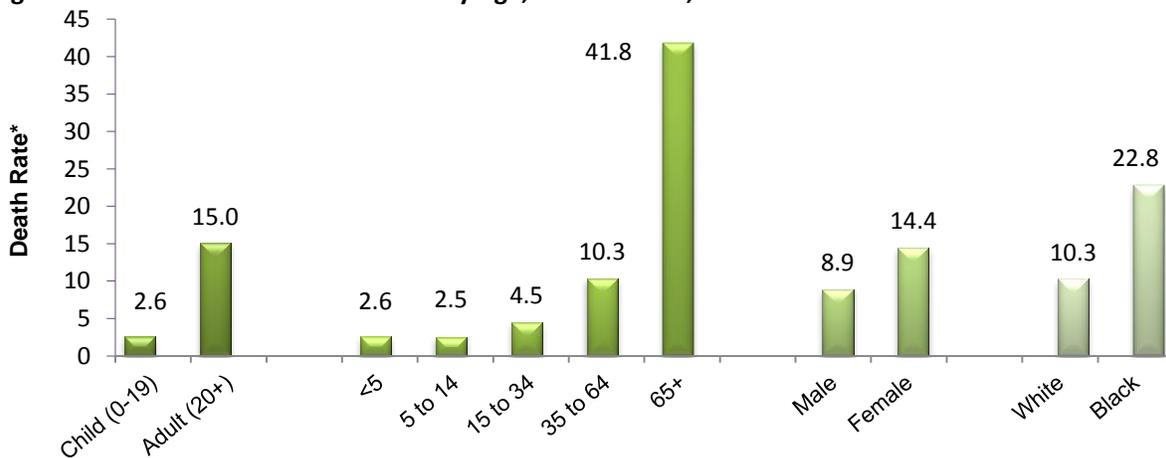
**Age:** The majority of asthma-related deaths occur in adults 65 years of age and older (see Figure 2), and asthma deaths among children are relatively rare. Among children under age 15, 111 deaths have occurred due to asthma during the past 22 years. In contrast, during the same time period, asthma-related deaths among adults 65 and older totaled 1,900. The 2007-2012 average annual asthma death rate was significantly higher among persons aged 65 years and older (41.8 per million) compared with persons aged 0 to 4 years (2.6 per million), 5 to 14 years (2.5 per million), 15 to 34 years (4.5 per million), and 35 to 64 years (10.3 per million). Ohio asthma death rates are above the recommended Healthy People 2020 respiratory health targets for reducing asthma deaths for both the 35 to 64 year old age group (4.9 deaths per million) and the 65 years and older age group (21.5 deaths per million). There is no Healthy People 2020 target for children or adults under the age of 35.

Ohio adults 20+ years old are nearly six times more likely, on average, than children 0-9 years to die of asthma.

**Sex:** Asthma deaths are higher in adult females than adult males, consistent with the sex differences seen in asthma prevalence and hospitalization. During 2007-2012, females had a higher average annual asthma death rate (14.4 per million) compared with males (8.9 per million).

**Race:** Blacks are more likely to die from asthma than whites. Across the 2007 to 2012 time period, black Ohioans were more than two times more likely to die due to asthma compared with white Ohioans (22.8 and 10.3 per million, respectively).

**Figure 2. Asthma Death Rates\* in Ohio by Age, Sex and Race, 2007-2012**



\*2007-2012 averaged annual rate (crude rate) per million Ohioans.

Sources: Ohio Department of Health, Center for Vital and Health Statistics, Deaths 1990-2012; U.S. Census Bureau, Population Estimates Program and National Center for Health Statistics, Bridged-Race Population Estimates, 1990-2012.

<sup>i</sup> A confidence interval (CI) is a range around a measurement that conveys how precise the measurement is. This CI means that there is a 5 percent chance that the death rate was lower than 12.9 or higher than 17.5 asthma deaths per 1 million Ohioans.

<sup>ii</sup> Asthma death counts and rates presented in this report are based on 1990-2012 mortality data from the ODH Center for Vital and Health Statistics. Asthma deaths were defined as those where asthma was the primary underlying cause of death, coded as 493 for deaths from 1990 to 1998 (ICD-9), or J45-J46 for deaths from 1999 through the present (ICD-10). Asthma mortality rates presented in this report are per 1 million population, calculated based on the resident population of Ohio for the data year (or range of years) involved (source: U.S. Census Bureau and the National Center for Health Statistics Bridged-Race Population, 1990-2012).



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