

Indicator 10: Pneumoconiosis Mortality

Significanceⁱ

Pneumoconioses are lung diseases caused by dust exposure and nearly all are attributable to occupational exposures. Common types include silicosis, asbestosis, coal workers' pneumoconiosis and pneumoconiosis due to exposure to a variety of other mineral dusts, including talc, aluminum, bauxite and graphite. Controlling and monitoring exposure to dust and maintaining ongoing medical surveillance for exposed workers are important steps to preventing pneumoconiosis.

Methods

The number of pneumoconiosis deaths was estimated based on mortality data from the Colorado Department of Public Health and Environment (CDPHE), Colorado Health Information Dataset (COHID) (<http://www.cdphe.state.co.us/cohid/index.html>). Colorado residents age 15 or older with an underlying cause of death as 'Pneumoconiosis and Chemical Effects' were included in this calculation. Denominator data were obtained from the United States Census Bureau.

Results

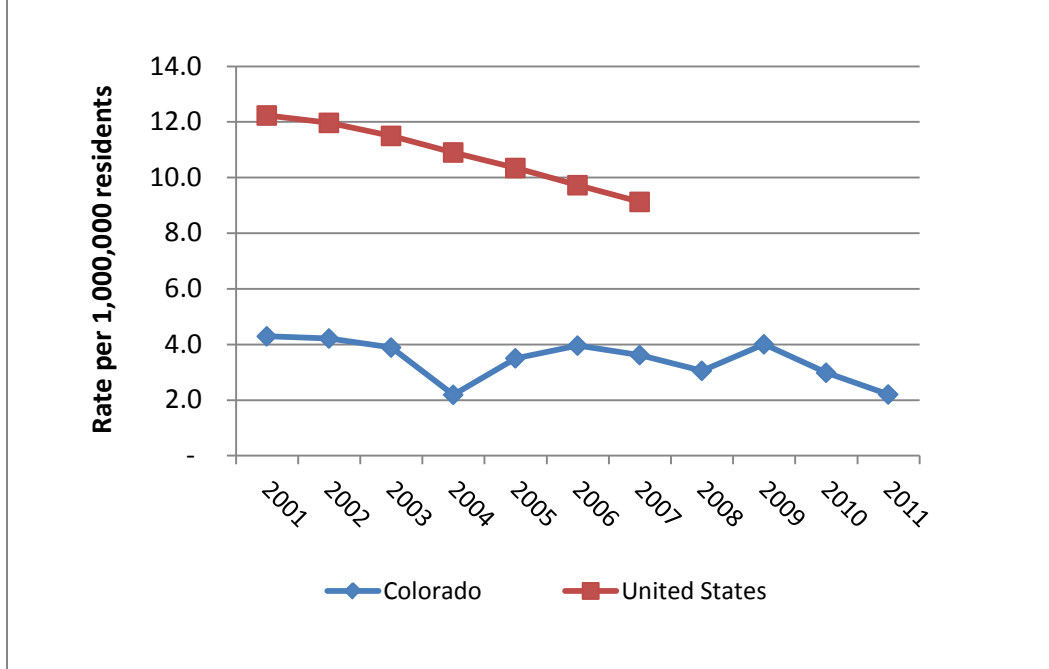
Table 10.1: Mortality from or with pneumoconiosis, Colorado residents age 15 and older, 2001-2011

	Number of deaths	Crude rate per 1,000,000 residents*
2001	15	4.3
2002	15	4.2
2003	14	3.9
2004	8	2.2
2005	13	3.5
2006	15	4.0
2007	14	3.6
2008	12	3.1
2009	16	4.0
2010	12	3.0
2011	9	2.2
Average	13.0	3.4

Source: Death certificate records from Colorado Department of Public Health and Environment Health Statistics Section (numerator); State population estimates from the US Census Bureau (denominator)

ⁱ Council of State and Territorial Epidemiologists. *Occupational Health Indicators: A Guide for Tracking Occupational Health Conditions and Their Determinants*. Last updated April 2012.

Figure 10.1: Mortality from or with pneumoconiosis, Age 15 and older, Colorado and the United States, 2001-2011*



Colorado Numerator: Death certificate records from Colorado Department of Public Health and Environment Health Statistics Section

U.S. Numerator: National Center for Health Statistics multiple cause of death file, provided by the Council of State and Territorial Epidemiologists

Denominator: State and national population estimates from the United States Census Bureau

**U.S. data not available through CSTE beyond 2007*

Limitations

- Except in some specific cases, the estimated incidence of mortality from pneumoconiosis does not represent current exposures due to the long latency between a person’s dust exposure and development of disease.
- Age standardized death rates were not calculated because the number of fatalities in specific age groups is too small to produce reliable estimates and data cannot be released due to confidentiality protections.
- Conducting geographic analysis of pneumoconiosis mortality may be problematic if the death and exposure do not occur in the same location.
- The causes of death listed on death certificates and coding of those causes may be inaccurate and may vary depending on who completes the certificate. The chronic nature of pneumoconiosis may lead to incomplete or inaccurate coding of the death certificate in cases where pneumoconiosis is not listed, despite its contribution to the death.
- In Colorado, death certificates are not coded for industry or occupation, so the possible work-related exposures leading to pneumoconiosis cannot be identified.

Recommendations and Next Steps

- Using death certificate data available to the CDPHE, report mortality by type of pneumoconiosis, age, gender and race/ethnicity.
- Identify ways to better characterize current trends in exposure and new diagnosis. (See also Indicator #9 Recommendations for improving surveillance of pneumoconiosis incidence and prevalence.)