

Indicator 12: Incidence of Malignant Mesothelioma

Significanceⁱ

Mesothelioma is a rare, fatal cancer of the lining that surrounds the chest and abdominal cavities. Primarily attributable to asbestos exposure, onset of the disease may not occur for 20 to 40 years after exposure. The number of deaths from malignant mesothelioma is still increasing in the United States, which is likely the result of exposures decades ago.ⁱⁱ Regulatory actions and a decline in use of asbestos in industrial and consumer products may lead to a decline in mesothelioma incidence in the future, but this may not be evident for several decades. Workers, however, continue to be exposed to asbestos during remediation and demolition of existing asbestos in buildings, highlighting the continued need to monitor and prevent work-related exposure to asbestos.

Methods

The Colorado Central Cancer Registry in the Colorado Department of Public Health and Environment (CDPHE) collects information on the incidence, treatment, survival and deaths due to cancer. Data are collected from physicians, clinics, pathology labs, hospitals and death certificates. Annual age-standardized incidence of mesothelioma was calculated using the registry (ICD-O histology codes 9050, 9051, 9052, 9053). State population estimates were obtained from the United States Census Bureau.

ⁱ Council of State and Territorial Epidemiologists. *Occupational Health Indicators: A Guide for Tracking Occupational Health Conditions and Their Determinants*. Last updated March 2014.

ⁱⁱ Centers for Disease Control and Prevention. *Malignant Mesothelioma Mortality – United States, 1999-2005*. MMWR 2009; 58(15):393-396

Results

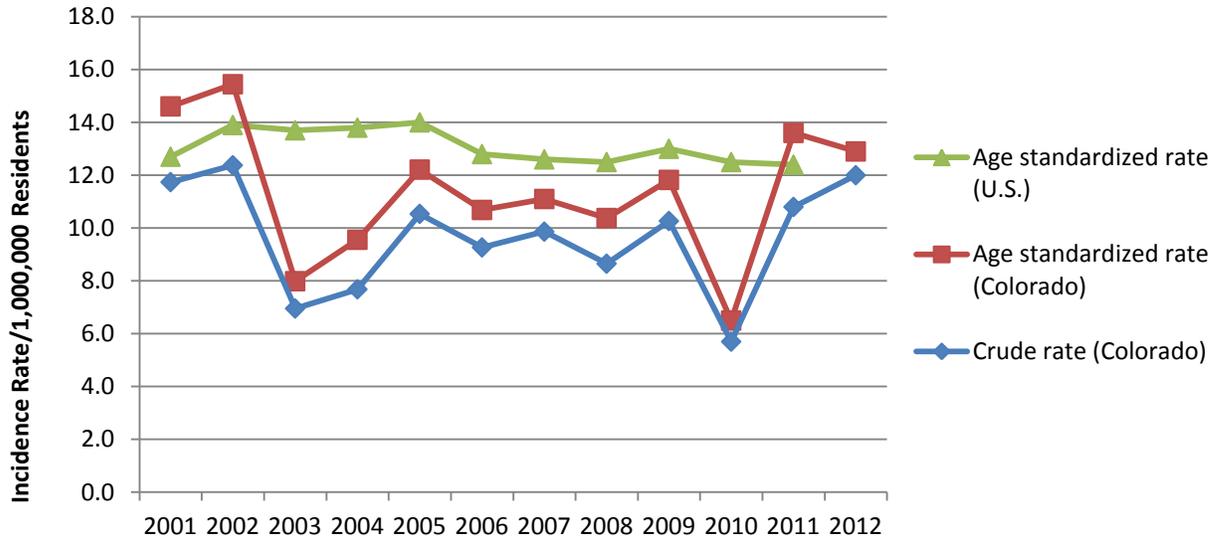
Table 12.1 Incident number and rates of malignant mesothelioma per 1,000,000 residents, Age 15 and older, Colorado, 2001-2012*

	Number of Cases	Crude Rate	Age Standardized Rate
2001	41	11.7	14.6
2002	44	12.4	15.4
2003	25	7.0	8.0
2004	28	7.7	9.6
2005	39	10.5	12.2
2006	35	9.3	10.7
2007	38	9.9	11.1
2008	34	8.7	10.4
2009	41	10.3	11.8
2010	23	5.7	6.5
2011	44	10.8	13.6
2012*	50	12.0	12.9
Average	37	9.7	11.4

Source: Colorado Department of Public Health and Environment Cancer Registry data (numerator); State population estimates from the United States Census Bureau (denominator); Year 2000 US Standard population (for age standardization)

**2012 data are preliminary*

Figure 12:1 Annual Incidence Rate of Malignant Mesothelioma per 1 Million Residents, Age 15 and older, Colorado and the United States, 2001-2012*



Source: Colorado Department of Public Health and Environment Cancer Registry data (numerator); State population estimates from the United States Census Bureau (denominator); Year 2000 US Standard population (for age standardization)
 United States Data: National Cancer Institute (NCI) Surveillance Epidemiology, and End Results, (SEER) program or the North American Association of Central Cancer Registries. Data provided by the Council of State and Territorial Epidemiologist (CSTE) Occupational Health Indicators Reports

*United States data beyond 2011 not yet available through CSTE; 2012 data is preliminary

Limitations

- The estimated incidence does not necessarily represent current exposures, primarily because of the long latency associated with the disease. Therefore, current rates reflect exposures that occurred decades ago.

Recommendations and Next Steps

- Analyze and report the incidence of mesothelioma by age, gender, race/ethnicity, occupation/industry and exposure history for prevention efforts. Data on these variables, including industry and occupation, are available in Colorado's cancer registry. However, the data for industry and occupation would need to be coded for analysis. The NIOSH Industry and Occupation Computerized Coding System (NIOCCS) software became available in the fall of 2012 to assist coding data such as these.