

Large increase in rate of death from chronic respiratory diseases

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Between 1980 and 2014, the rate of death from chronic respiratory diseases, such as COPD, increased by nearly 30 percent overall in the U.S., although this trend varied by county, sex, and chronic respiratory disease type, according to a study published by *JAMA*.

Chronic respiratory diseases, including chronic obstructive pulmonary disease (COPD) and asthma, are responsible for a substantial health and financial burden in the United States each year. In 2015, 6.7 percent of all deaths were due to chronic respiratory diseases, which were the fifth leading cause of death. Geographically precise annual estimates of chronic respiratory disease [mortality](#) by type would allow a more complete understanding of regional variation in chronic respiratory disease [mortality rates](#) and may be useful for clinicians and policy makers interested in reducing geographic disparities and the health and financial burdens of chronic respiratory diseases overall.

Christopher J. L. Murray, M.D., D.Phil., of the Institute for Health Metrics and Evaluation, University of Washington, Seattle, and colleagues used [death](#) records from the National Center for Health Statistics and population counts from the U.S. Census Bureau, National Center for Health Statistics, and Human Mortality Database to estimate county-level mortality rates from 1980 to 2014 for chronic respiratory diseases.

A total of 4,616,711 deaths due to chronic respiratory diseases were recorded in the United States from January 1980 through December

2014. Nationally, the mortality rate from chronic respiratory diseases increased from 40.8 deaths per 100,000 population in 1980 to a peak of 55.4 in 2002 and then declined to 52.9 deaths per 100,000 population in 2014. This overall 29.7 percent increase in chronic respiratory disease mortality from 1980 to 2014 reflected increases in the mortality rate from chronic obstructive pulmonary disease (by 30.8 percent), interstitial lung disease and pulmonary sarcoidosis (by 100.5 percent), and all other chronic respiratory diseases (by 42.3 percent).

There were substantial differences in mortality rates and changes in mortality rates over time among counties, and geographic patterns differed by cause. Counties with the highest mortality rates were found primarily in central Appalachia for chronic [obstructive pulmonary disease](#) and pneumoconiosis; widely dispersed throughout the Southwest, northern Great Plains, New England, and South Atlantic for [interstitial lung disease](#); along the southern half of the Mississippi River and in Georgia and South Carolina for asthma; and in southern states from Mississippi to South Carolina for other chronic respiratory diseases.

The study notes some limitations, including that the analysis made use of population, deaths, and data from a number of different sources, all of which are subject to error.

"This analysis expands the amount of information available on chronic respiratory diseases at local levels in several important ways and provides local health authorities and [health care professionals](#) with needed information to address the burden of [chronic respiratory diseases](#) in their communities," the authors write.

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