EASTERN WASHINGTON HEALTH PROFILE JANUARY 2019

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OVERVIEW

The Washington State University Elson S. Floyd College of Medicine and Washington State University Community Health and Spatial Epidemiology Lab in 2018 evaluated the community health status and health issues known to affect individuals and communities in eastern Washington. Researchers compared this region of the state and its distinctly different set of health and social issues to those in western Washington. The results are outlined in the following report.

KEY FINDINGS

Age-adjusted mortality rates for the 10 leading causes of deaths in Washington were higher in eastern Washington than western Washington.

Age-adjusted mortality rates for 6 out of the 10 leading causes of death (Alzheimer's disease, unintentional injuries, chronic lower respiratory diseases, diabetes, suicide, and chronic liver disease and cirrhosis) were higher in eastern Washington when compared to the United States average age-adjusted mortality rates.

Age-adjusted mortality rates for potentially preventable causes of deaths, such as unintentional injuries, chronic lower respiratory diseases, and diabetes, were higher in eastern Washington than western Washington, as well as when compared to the United States average age-adjusted mortality rates.

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DEFINING EASTERN WASHINGTON

There are 39 counties in Washington. Eastern Washington is comprised of 20 counties east of the Cascade Mountains and includes Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman, and Yakima Counties.

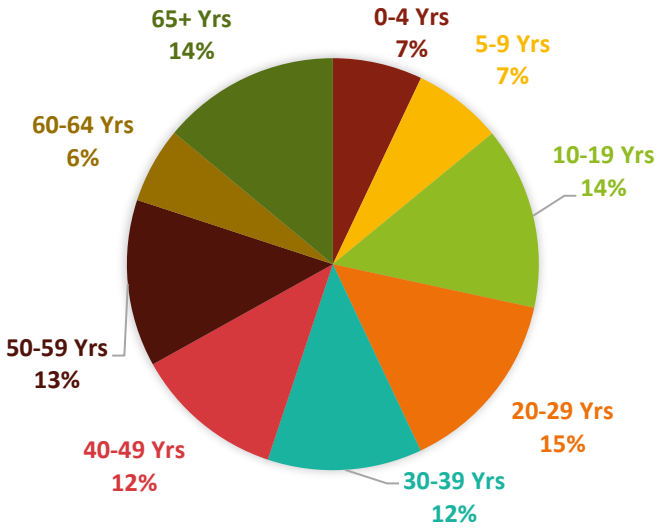
The total populations of eastern Washington and Washington overall were 1,538,239 and 6,985,464, respectively, in 2015 (U.S. Census).

Figure 1. Counties in eastern and western Washington.

EASTERN WASHINGTON AT A GLANCE

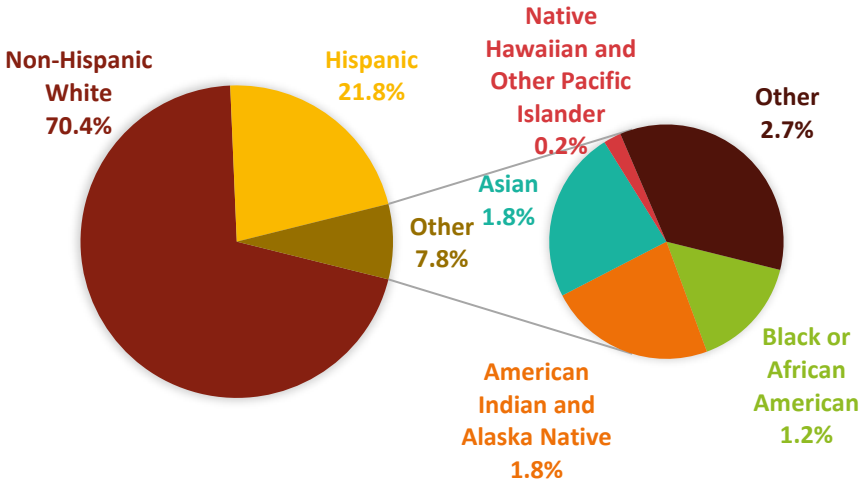
AGE

In 2017, approximately one-third (28%) of residents were under the age of 20. More than half (57%) were between 20 and 64 years of age, and 15% were 65 or older.



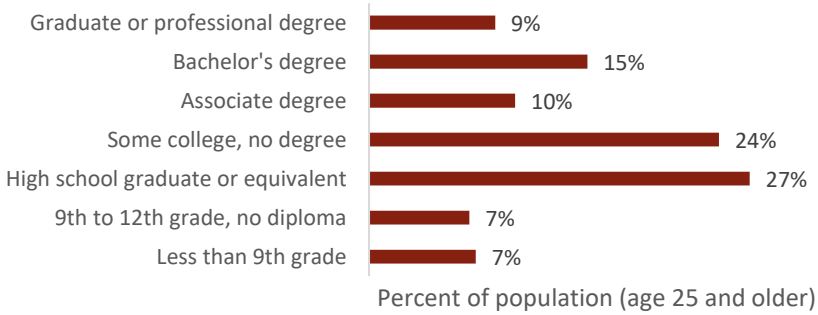
RACE

The majority of residents was Non-Hispanic White. The second largest ethnic group was Hispanics, comprising approximately 22% of the population. Eight percent of the population was of other races.



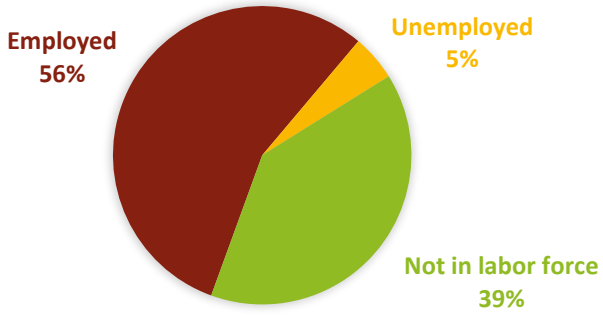
EDUCATION

Approximately 60% of residents, ages 25 and over, attained education beyond high school, with 34% earning a college degree. Twenty-seven percent (27%) of residents reported a high school diploma (or the equivalent) as their highest level of educational attainment. Fewer than 15% of residents reported they had not graduated from high school.



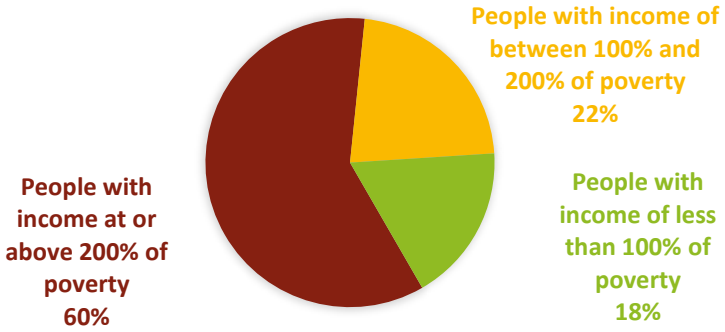
EMPLOYMENT

A large proportion (56%) of residents, ages 16 and over, were employed. Thirty-nine percent (39%) were not in the labor force. Five percent (5%) were unemployed.



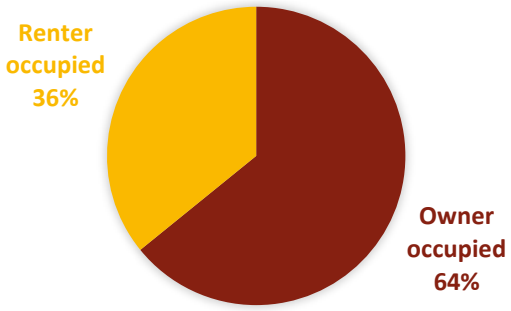
POVERTY

Nearly 18% of the population lived below the poverty level. Forty percent of residents (40%) had incomes less than twice the poverty level.



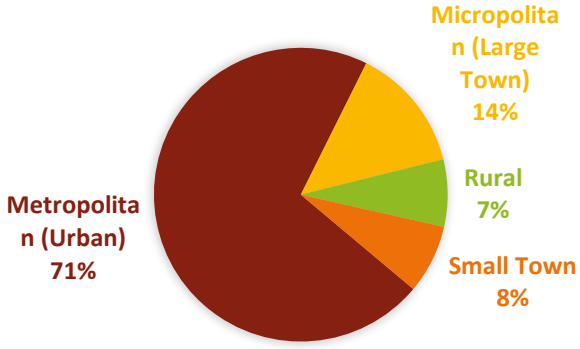
STABILITY

Sixty-four percent (64%) of households owned their property. Approximately 84% of owner-households moved into their property in 2010 or earlier, while 36% of renter-households lived at the same property since 2010 or earlier.



RURAL POPULATION

According to rural urban commuting area (RUCA) codes, 71% of residents lived in metropolitan areas. Fourteen percent of residents (14%) lived in micropolitan or large towns. Individuals living in small towns and rural areas constituted 15% of the population.



MAJOR CAUSES OF DEATH 2011-2015

The top 10 leading causes of death showed greater age-adjusted rates in eastern Washington residents than western Washington residents. The only exception was overdose mortality, which was higher in western Washington.

Table 1. Age-adjusted mortality rates, both sexes, 2011-2015.

Cause of death	Eastern Washington	Western Washington	Washington State	United States
All causes	716.17	659.79	672.17	733.1
Cancer	158.98*	155.96	156.58	158.50
Heart Disease	146.93	134.50	137.23	168.50
Alzheimer's disease	44.76*	43.45*	43.75	29.40
Unintentional Injuries	45.18*	35.58	37.71	43.20
Chronic Lower Respiratory Diseases	46.65*	37.85	39.82	41.60
Cerebrovascular diseases (Stroke)	37.57	33.40	34.36	37.60
Diabetes	24.53*	20.78	21.61	21.30
Suicide	15.27*	13.98*	14.24	13.30
Chronic liver disease and cirrhosis	13.44*	10.37	11.02	10.80
Flu and Pneumonia	10.97	9.60	9.91	17.80
Overdose	12.40	13.35	13.14	16.30

**Represents rates higher than the national average*

ALL CAUSES OF DEATH

Age-adjusted all-cause mortality rate was 672.2 per 100,000 individuals in Washington State in 2015, which was lower than the national average of 733.1 deaths per 100,000 individuals.

Age-adjusted all-cause mortality rate was higher in eastern Washington than western Washington (716.2 vs. 659.8 per 100k).

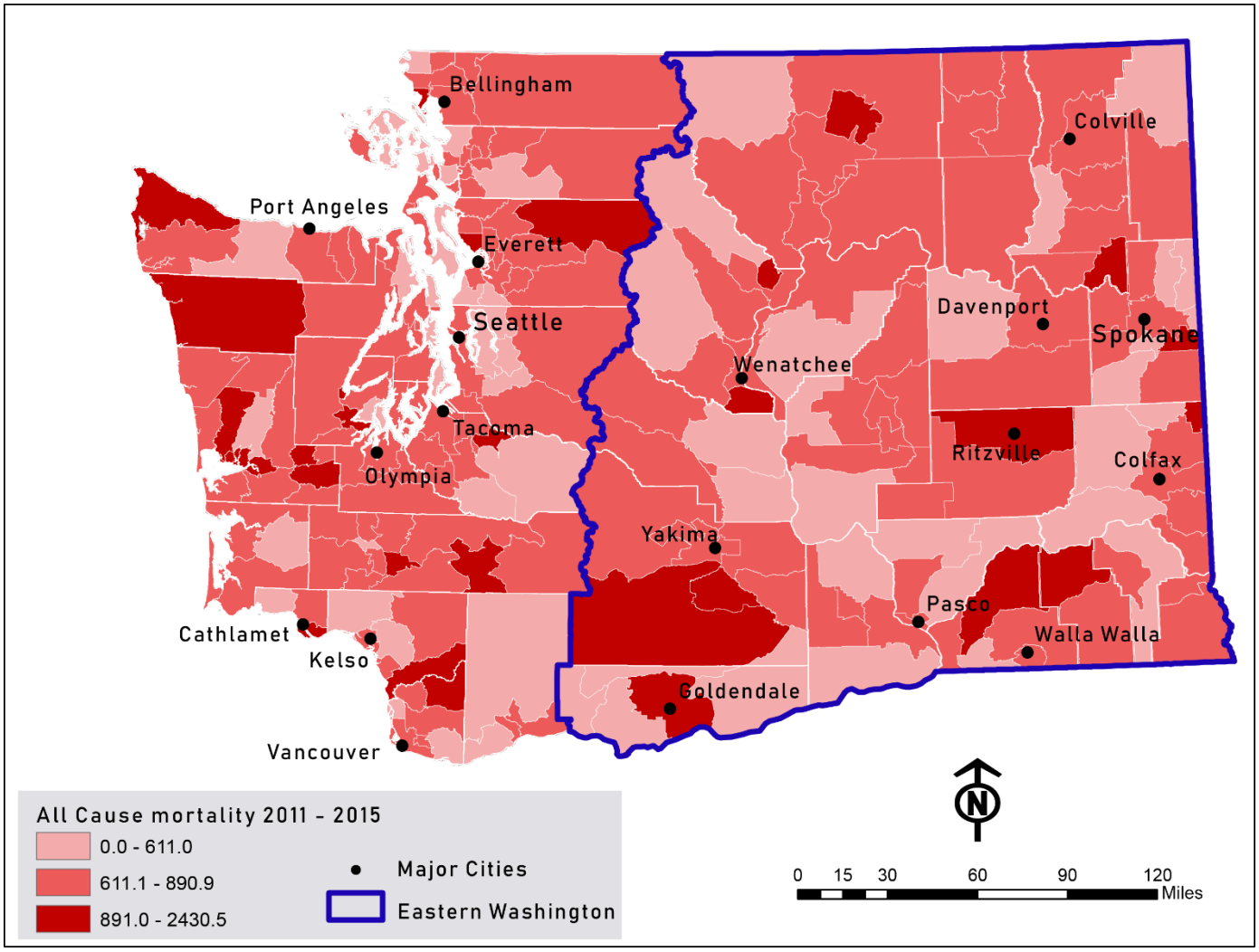


Figure 2. County subdivision age-adjusted mortality from all causes, both sexes, 2011-2015.

CANCER

Cancer, characterized by the presence of malignant neoplasms in the body, is the leading cause of death in Washington and the second leading cause of death in the U.S. In 2015, Washington had the 32nd highest rate of cancer mortality in the country with age-adjusted cancer mortality rates of 156.6 per 100,000 individuals compared to the national average age-adjusted rate of 158.5 per 100,000 individuals.

Age-adjusted mortality rate from cancer was higher in eastern Washington than western Washington (159 vs 156 per 100,000 individuals).

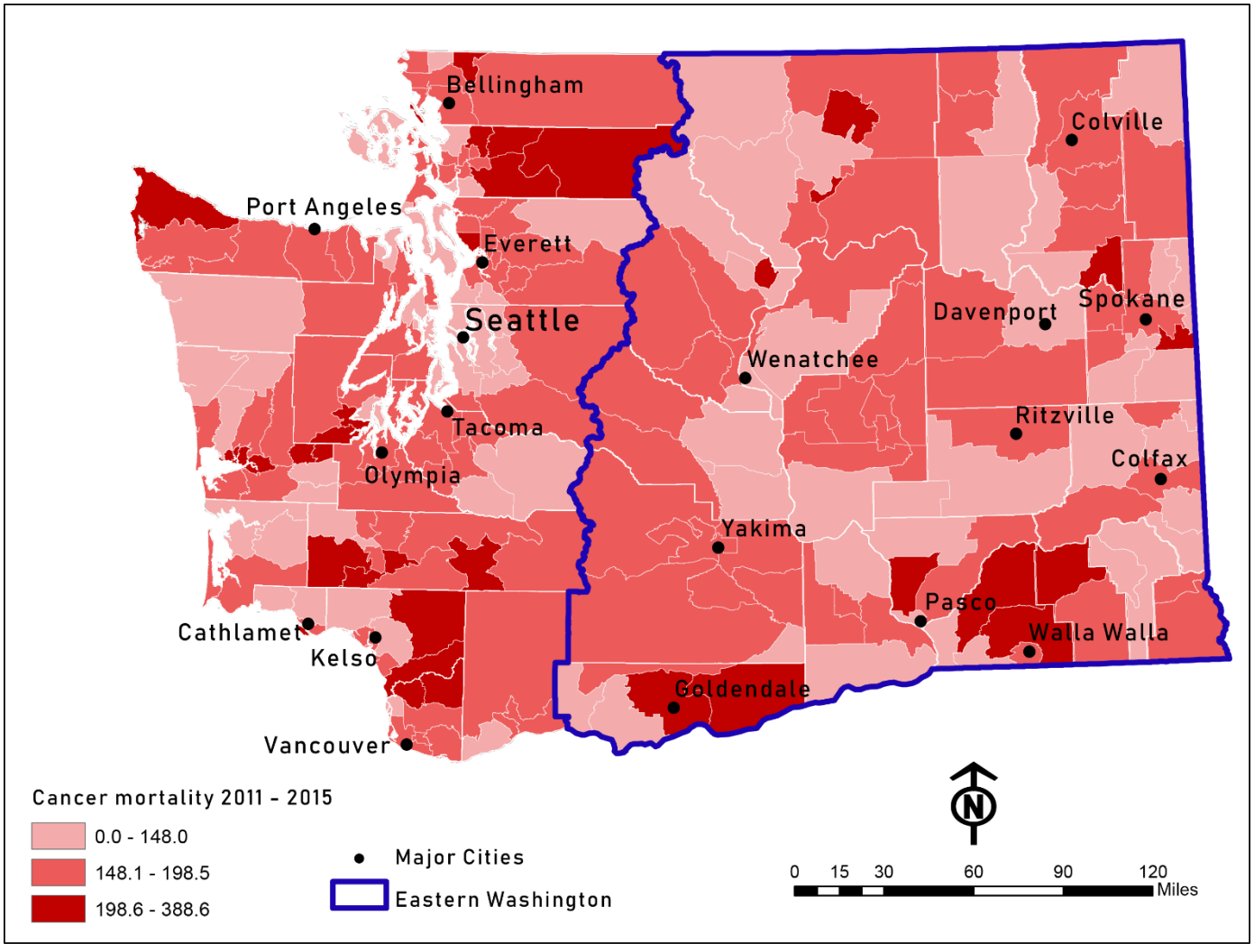


Figure 3. County subdivision age-adjusted mortality from cancer, both sexes, 2011-2015.

HEART DISEASE

Heart disease and cardiovascular disease generally refers to vascular conditions that can lead to heart attack, chest pain or stroke including blood vessel diseases, heart arrhythmias, and congenital heart disease, among others. Heart disease is the leading cause of death for both men and women in the U.S. Washington had the 46th highest rate of heart disease mortality rates (137.2 per 100,000 individuals) in 2015, which are lower than the national average rates of 168.5 per 100,000 individuals.

Age-adjusted mortality rate from heart disease was higher in eastern Washington than western Washington (146.9 vs 134.5 per 100,000 individuals).

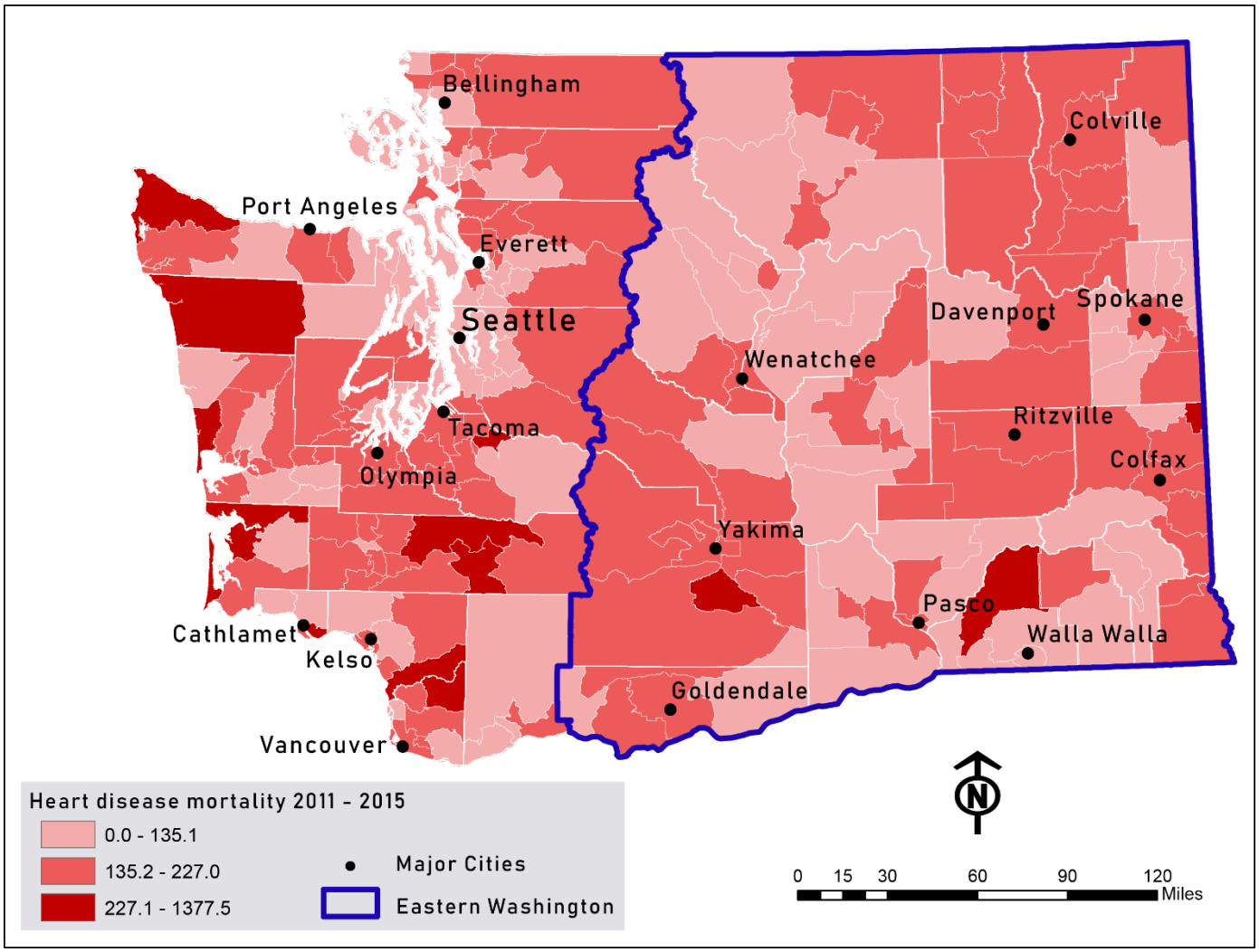


Figure 4. County subdivision age-adjusted mortality from heart disease, both sexes, 2011-2015.

ALZHEIMERS DISEASE

Alzheimer's was the sixth leading cause of death in the U.S. (29.4 per 100k,000 individuals) and the third-leading cause of death in Washington (43.8 per 100,000 individuals) in 2015. Washington had the second highest rates of Alzheimer's mortality in the U.S. in 2015.

Age-adjusted mortality rate from Alzheimer's disease was slightly higher in eastern Washington than western Washington (44.8 vs 43.5 per 100,000 individuals).

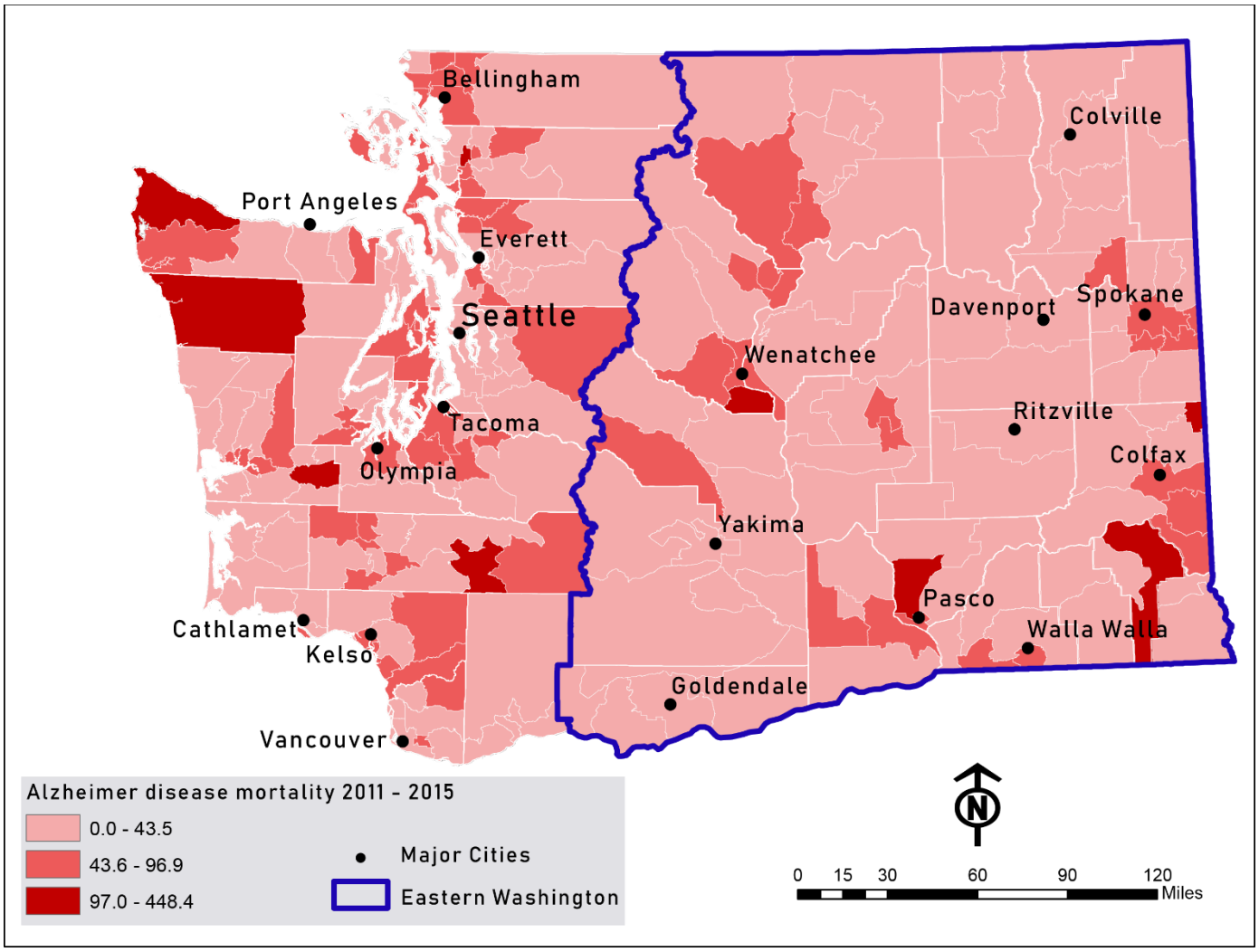


Figure 5. County subdivision age-adjusted mortality from Alzheimer's disease, both sexes, 2011-2015.

UNINTENTIONAL INJURIES

Unintentional injuries are the leading cause of death in the U.S. in individuals between 0 and 19 years of age. In 2015, unintentional Injuries were the fourth leading cause of death in both the U.S. (43.2 per 100,000 individuals) and Washington (37.7 per 100,000 individuals). Washington was ranked 41st in unintentional injuries-related mortalities.

Age-adjusted mortality rate from unintentional injuries disease was higher in eastern Washington than western Washington (45.2 vs 35.6 per 100,000 individuals).

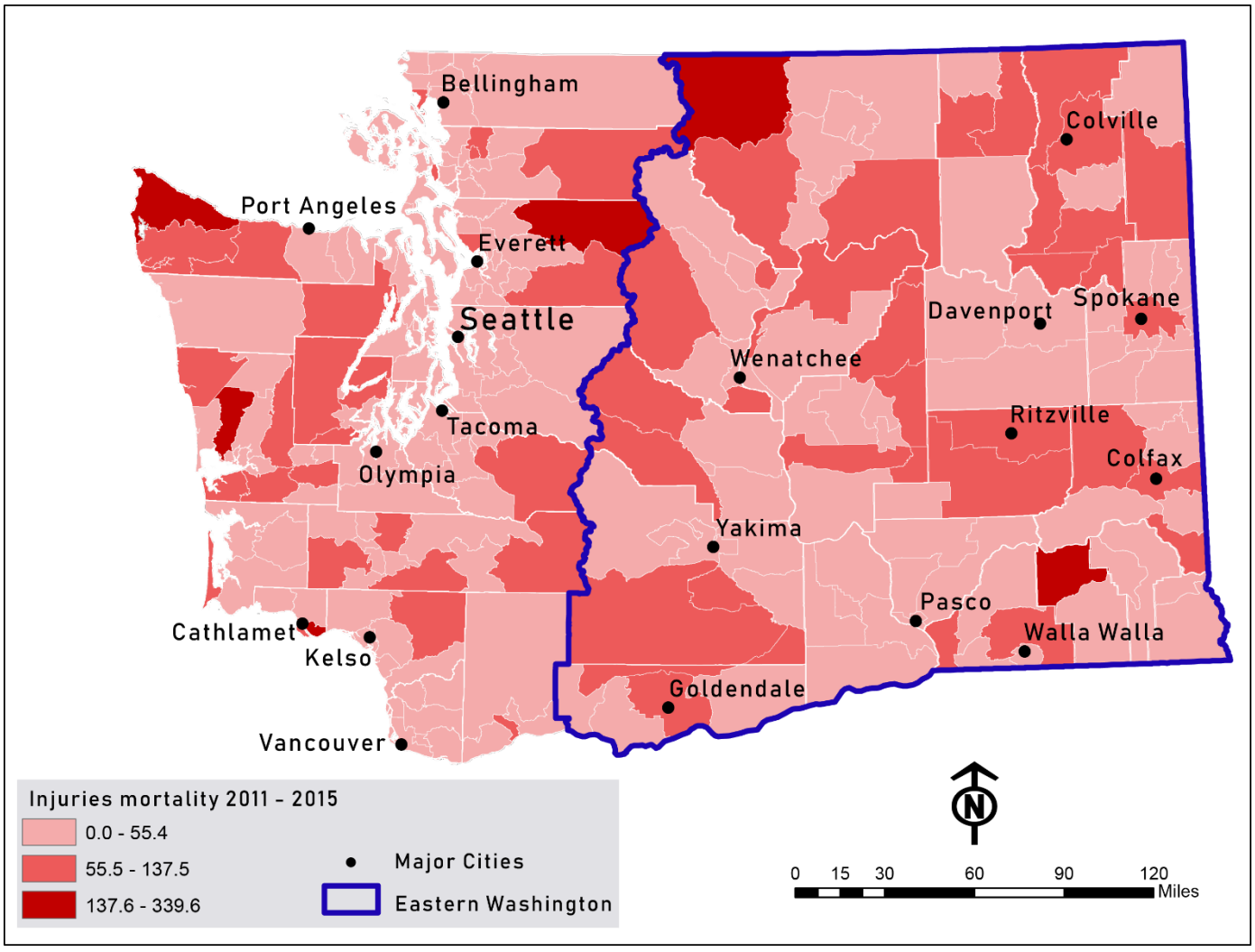


Figure 6. County subdivision age-adjusted mortality from unintentional injuries, both sexes, 2011-2015.

CHRONIC LOWER RESPIRATORY DISEASE

Chronic respiratory diseases reduce the functionality of airways and lungs. Chronic Lower Respiratory Disease (CLRD) is a deadly subset, encompassing chronic bronchitis, emphysema, asthma, and other chronic obstructive pulmonary disease. CLRD was the third leading cause of death in the U.S. (41.6 per 100,000 individuals) and the fifth leading causes of death in Washington (39.8 per 100,000 individuals) in 2015. Washington had the 34th highest rate of CLRD mortality in 2015.

Age-adjusted mortality rate from CLRD disease was higher in eastern Washington than western Washington (46.7 vs 37.9 per 100,000 individuals).

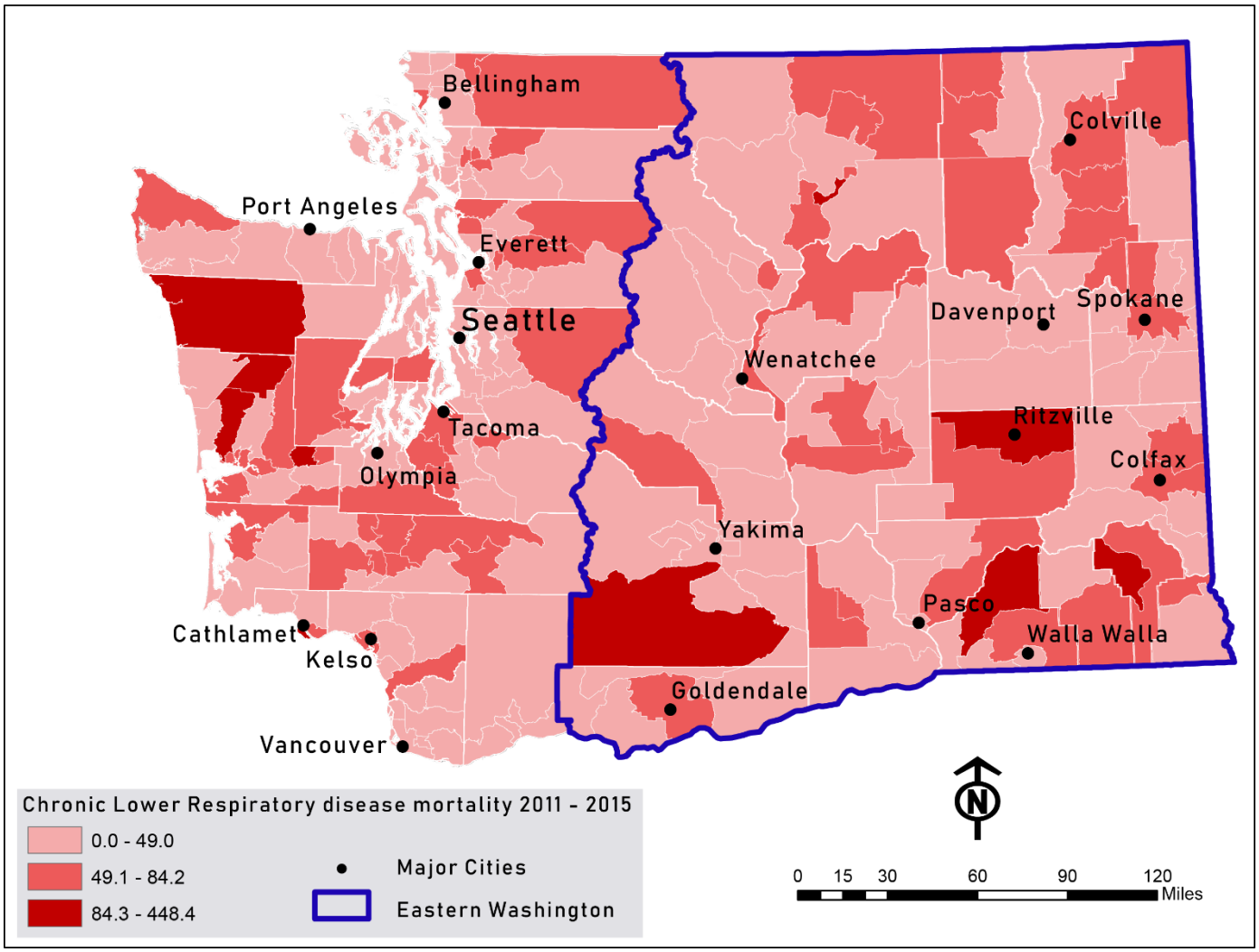


Figure 7. County subdivision age-adjusted mortality from chronic lower respiratory disease, both sexes, 2011-2015.

CEREBROVASCULAR DISEASE

Cerebrovascular disease includes conditions effecting the blood vessels of the brain that can lead to a cerebrovascular event, such as a stroke (ischemic or hemorrhagic). Cerebrovascular disease was the fifth leading cause of death in the U.S. (37.6 per 100,000 individuals), and stroke was the sixth leading cause of death in Washington (34.4 per 100,000 individuals) in 2015.

Age-adjusted mortality rate from cerebrovascular disease was higher in eastern Washington than western Washington (37.6 vs 33.4 per 100,000 individuals).

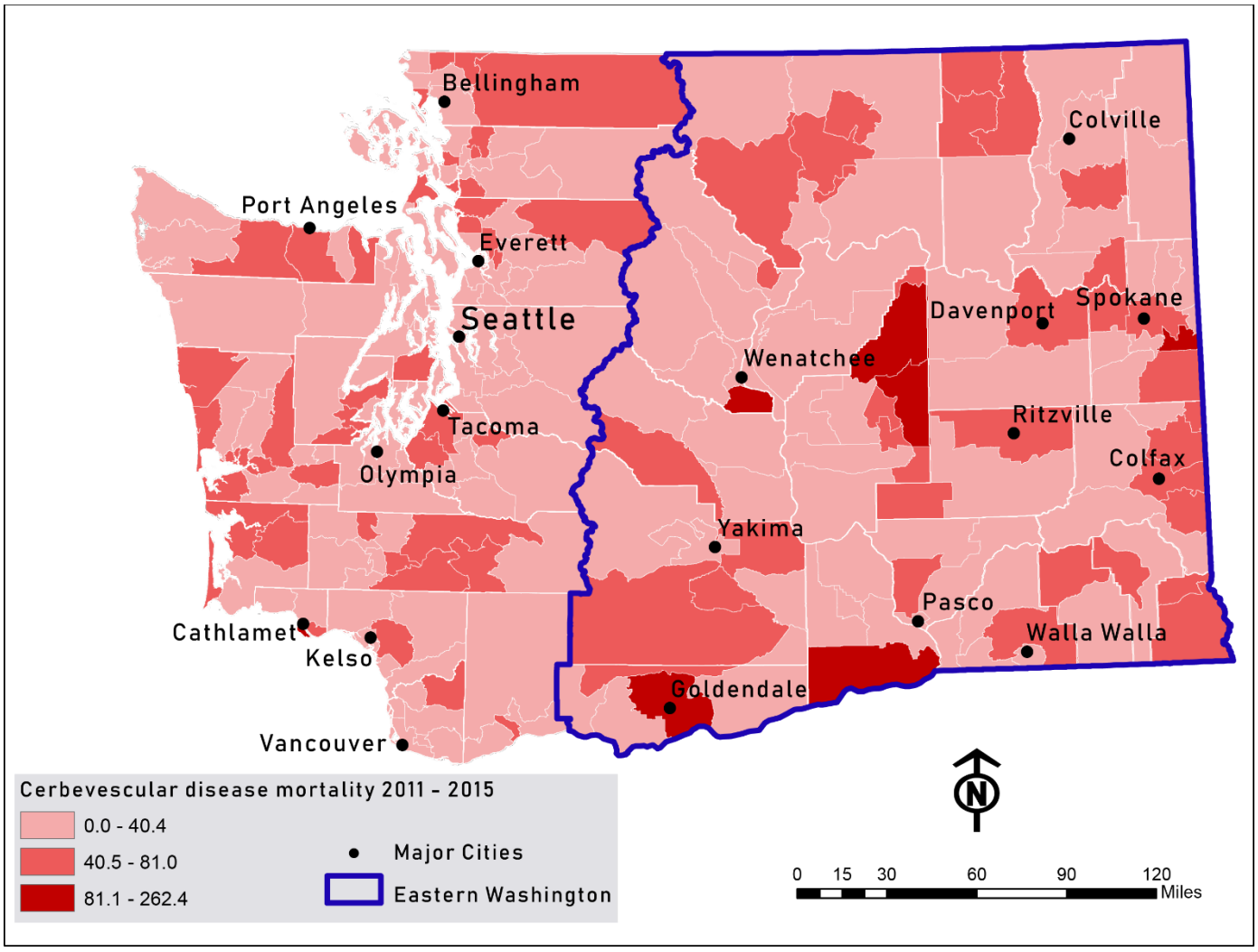


Figure 8. County subdivision age-adjusted mortality from cerebrovascular disease, both sexes, 2011-2015.

DIABETES

An estimated 30.3 million Americans, or 9.4% of the total population, were affected by diabetes in 2015. Diabetes was the seventh leading cause of death in the U.S. (21.3 per 100,000 individuals) and Washington (21.6 per 100,000 individuals) in 2015. Washington had the 23rd highest rate of diabetes mortality in the same year.

Age-adjusted mortality rate from diabetes was higher in eastern Washington than western Washington (24.5 vs 20.8 per 100,000 individuals).

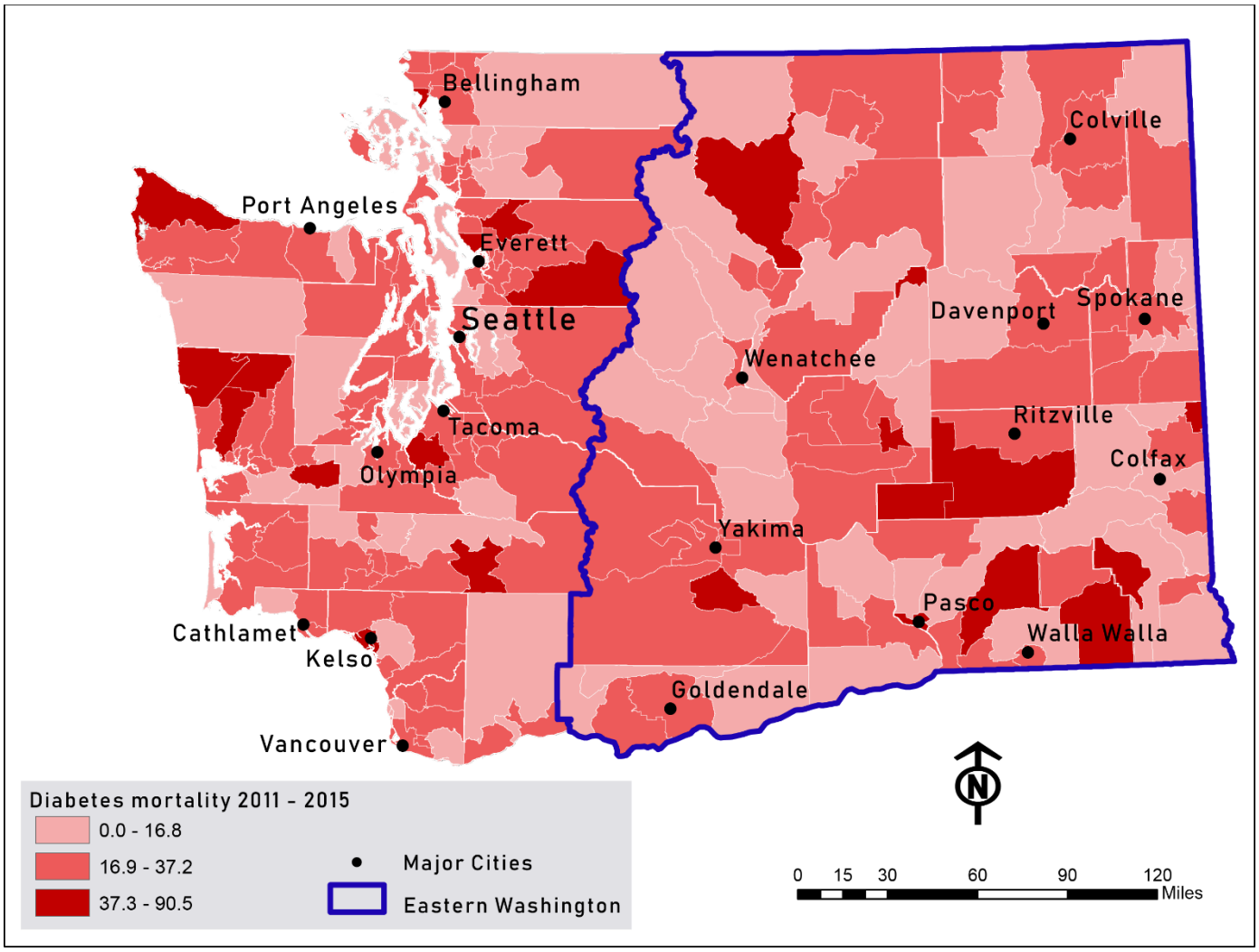


Figure 9. County subdivision age-adjusted mortality from diabetes, both sexes, 2011-2015.

SUICIDE

The 10th leading cause of death in the U.S., nearly 45,000 people die from suicide every year with a national mortality rate of 13.3 deaths per 100,000 individuals. This rate was higher in Washington (14.2 per 100,000 individuals).

Age-adjusted mortality rate from suicide was higher in eastern Washington than western Washington (15.3 vs 14 per 100,000 individuals).

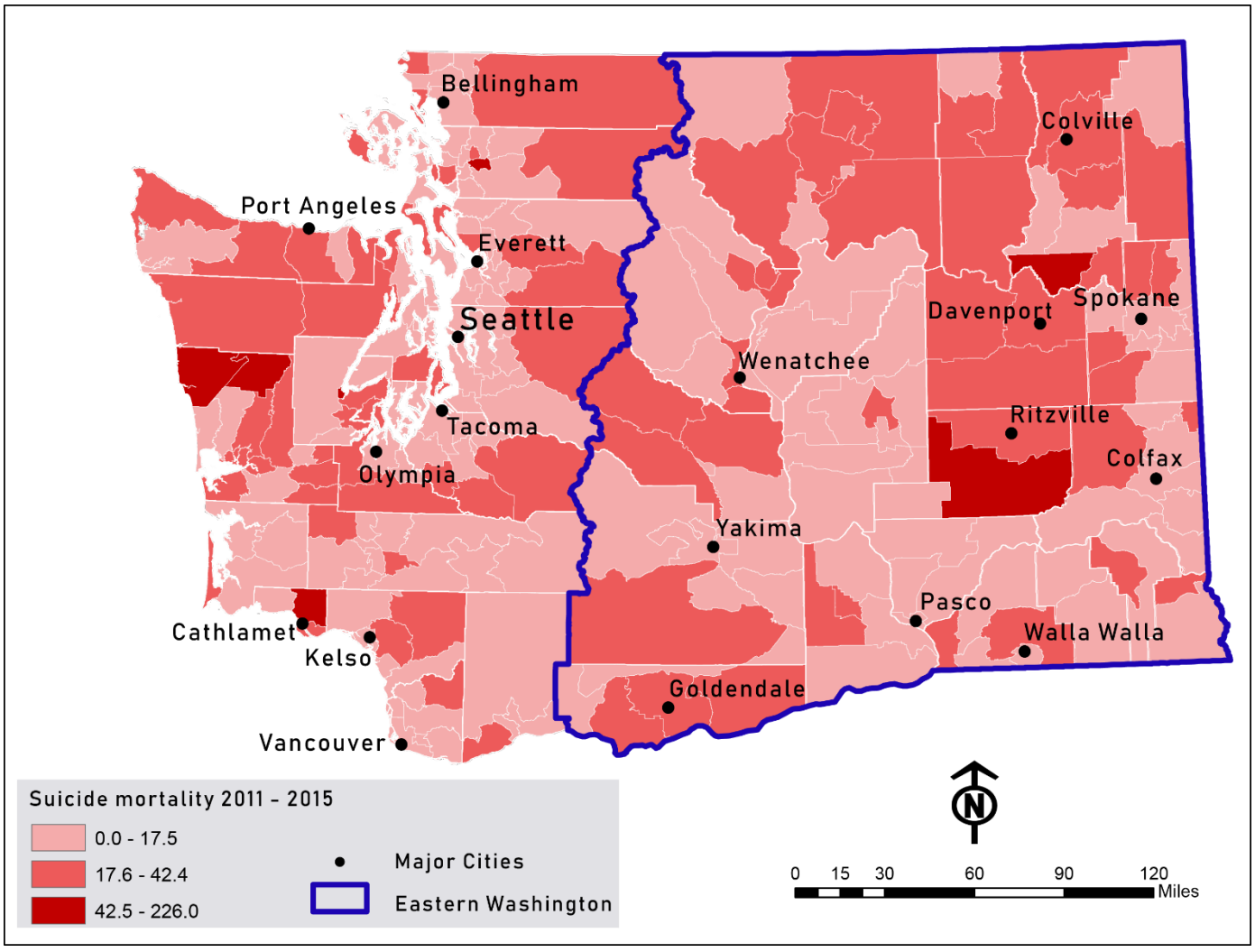


Figure 10. County subdivision age-adjusted mortality from suicide, both sexes, 2011-2015.

LIVER DISEASE

Chronic liver disease, including chronic hepatitis and cirrhosis, was the 12th leading cause of death in the U.S. (10.8 per 100,000 individuals) and the ninth leading cause of death in Washington (11 per 100,000 individuals).

Age-adjusted mortality rate from liver disease was higher in eastern Washington than western Washington (13.4 vs 10.4 per 100,000 individuals).

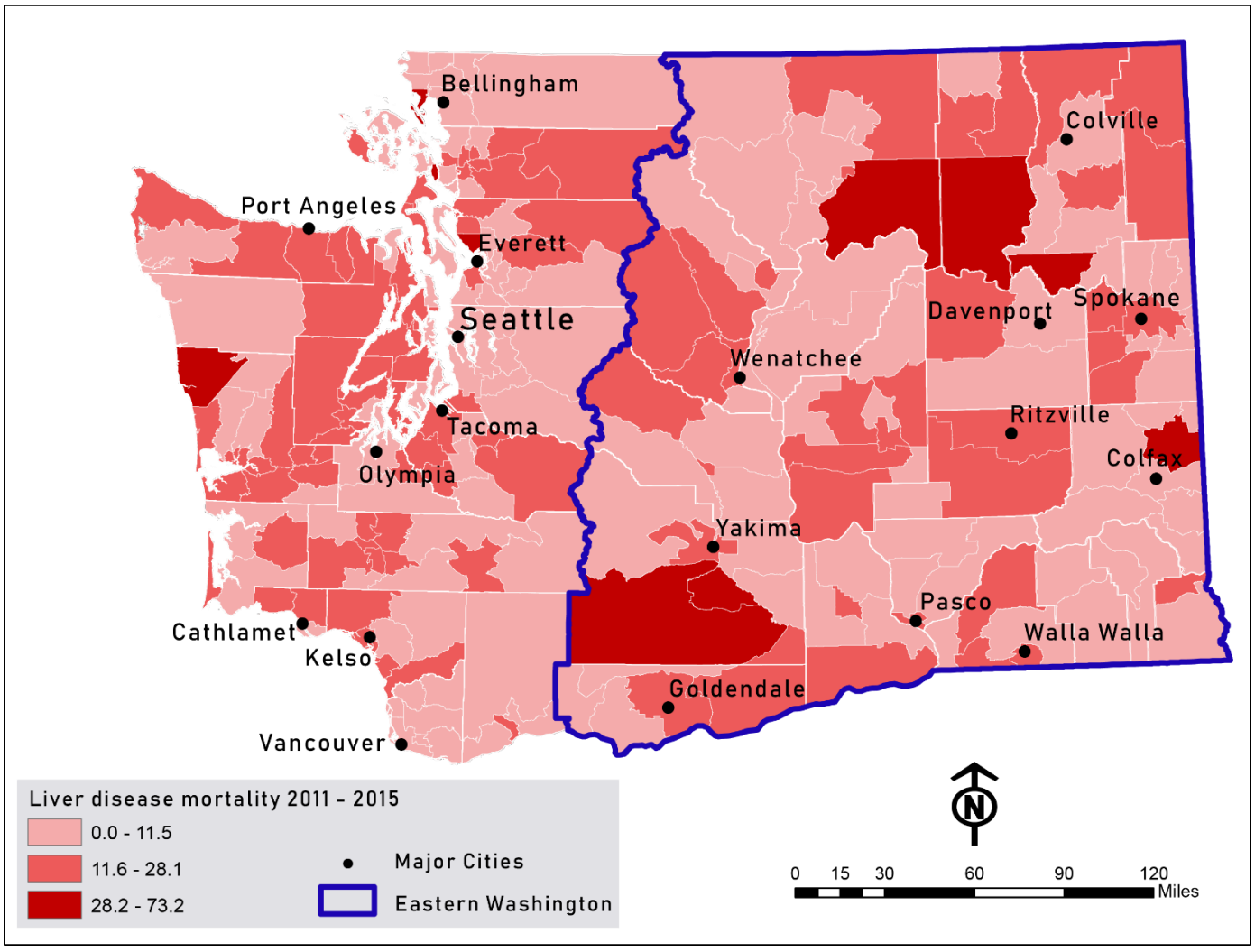


Figure 11. County subdivision age-adjusted mortality from liver disease, both sexes, 2011-2015.

FLU AND PNEUMONIA

Influenza and pneumonia were the eighth leading cause of death in the U.S. (15.2 per 100,000 individuals) and 10th leading cause of death in Washington (9.9 per 100,000 individuals) in 2015. Young children, the elderly, pregnant women, and people with chronic health conditions are susceptible to developing serious flu-related complications.

Age-adjusted mortality rate from influenza and pneumonia disease was higher in eastern Washington than western Washington (11 vs 9.6 per 100,000 individuals).

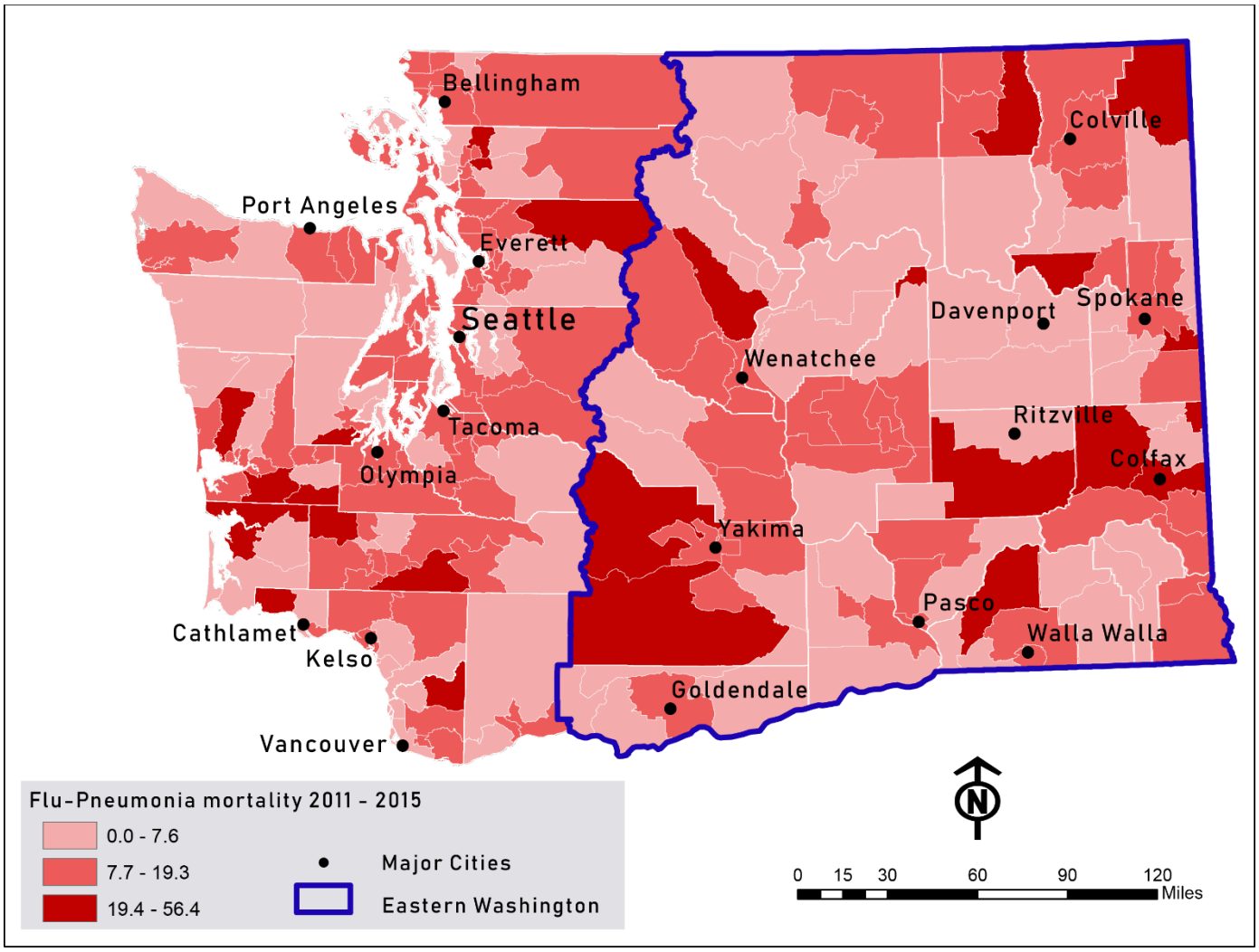


Figure 12. County subdivision age-adjusted mortality from influenza and pneumonia, both sexes, 2011-2015.

OVERDOSE

Drug overdose has become the leading cause of accidental death in the U.S. with opioids driving this crisis. Opioids - illicit, prescribed, or both - constituted almost two thirds (42,249 out of 63,632) of national drug overdose deaths in 2016, an increase of 47.5% and 27.7% over deaths in 2014 and 2015 respectively. Approximately 700 people die from an opioid overdose in Washington every year.

Age-adjusted mortality rate from overdose was slightly higher in western Washington than eastern Washington (13.4 vs 12.4 per 100,000 individuals).

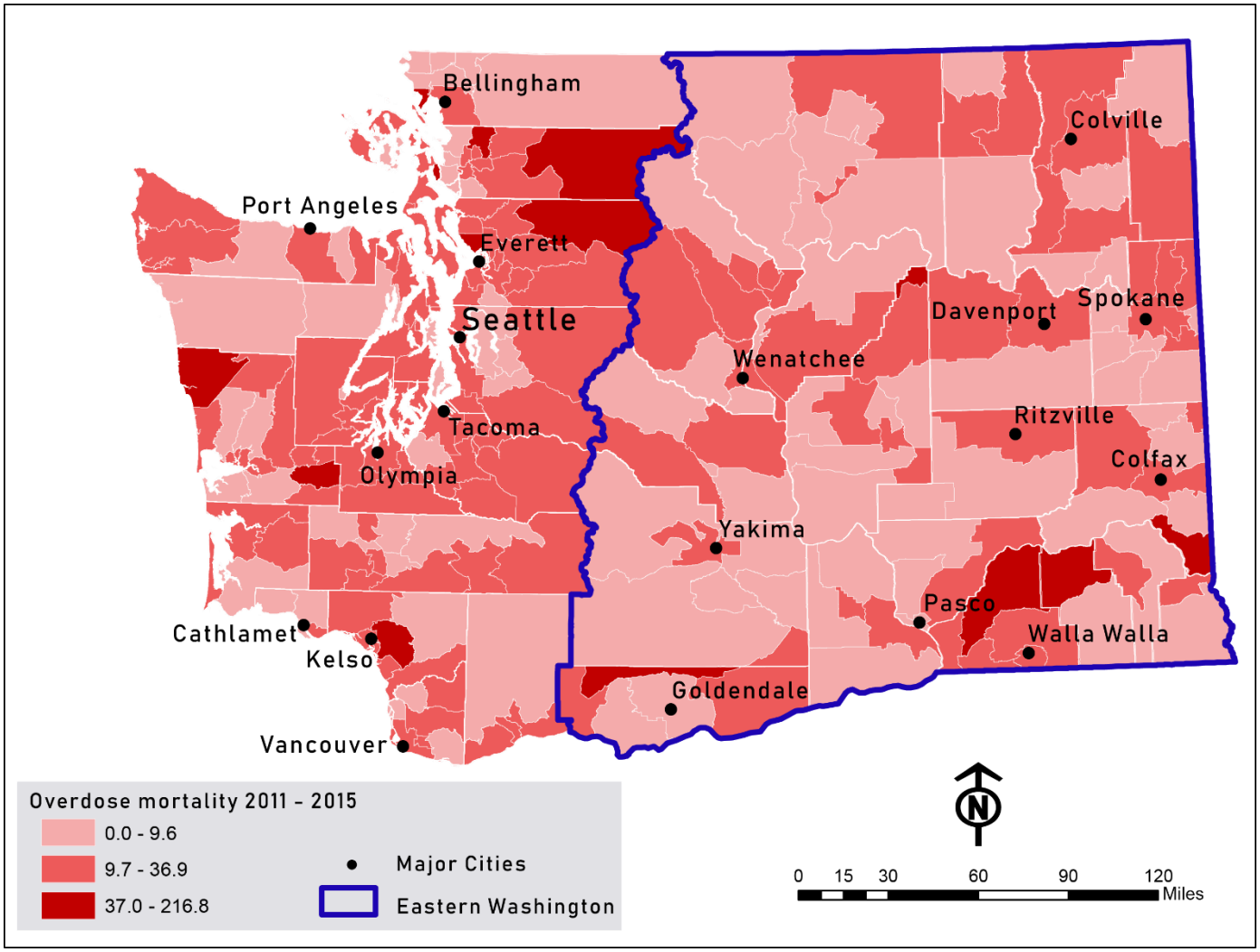


Figure 13. County subdivision age-adjusted mortality from overdose, both sexes, 2011-2015.

CONCLUSION

Eastern Washington had higher age-adjusted mortality rates for the 10 leading causes of deaths than western Washington. Age-adjusted mortality rates for 6 out of the 10 leading causes of death (Alzheimer's disease, unintentional injuries, chronic lower respiratory diseases, diabetes, suicide, and chronic liver disease and cirrhosis) were higher in eastern Washington when compared to the United States average rates. Considering that some deaths such as unintentional injuries, chronic lower respiratory diseases, and diabetes can be potentially prevented, efforts should address demographic, socio-economic, and environmental factors, to name a few, that can influence mortality rates.

In 2015, nearly 18% of the eastern Washington population lived below the poverty level, while 12% of western Washingtonians lived below the poverty level. Additionally, individuals living in small towns and rural areas constituted 15% of the population in eastern Washington, while only 2% of the population of western Washington lived in small towns and rural areas. Future studies can assess how poverty, rurality, and access to care impact higher rates of mortality in several of these diseases experienced by eastern and western Washingtonians.

To view the complete report and explanation of data, visit the website at http://www.chaselab.net/WAReport_Leaflet/index.html.

METHODOLOGY

- Age-adjusted adjusted mortality rates were computed using the standard population age distribution of the population of the United States for the year 2000
- Registered deaths for the state were obtained from the Washington State Department of Health, Center for Health Statistics for the years 2011-2015
- Deaths with residential address matching accuracy of 80% or above were included in the analyses