

June 1, 2016

Tami Thompson, Rules Coordinator  
Washington State Department of Health  
[Tami.Thompson@doh.wa.gov](mailto:Tami.Thompson@doh.wa.gov)

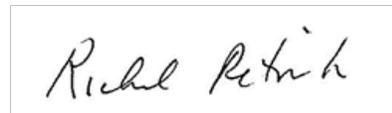
Dear Ms. Thompson:

Pursuant to RCW 34.05.330 and chapter 82-05 WAC, CHI Franciscan Health respectfully petitions the Washington State Department of Health to amend current certificate of need rules concerning elective percutaneous coronary interventions to allow for the consideration, absent numeric need, of the significant health inequities impacting access to care for some of the most vulnerable populations in our state.

We understand RCW 34.05.330 allows any person to petition a state agency to adopt, repeal, or amend any rule within its authority. We further understand that within one business day, the Department of Health will acknowledge receipt of this petition, upon which it then has 60 days to act.

We appreciate your consideration of this petition, and are available to answer any questions the Department may have.

Sincerely,



Richard Petrich  
Vice President, Strategic Planning

# **Petition to Amend Certificate of Need Rules: Elective Percutaneous Coronary Interventions**

## **1. Name and Address of Petitioners**

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1717 South J Street  
Tacoma, WA 98405

(253) 680-8872

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## **2. Name and Address of Agency Responsible for Administering the Rule**

Washington State Department of Health, Certificate of Need Program  
111 Israel Rd. S.E.  
Tumwater, WA 98501  
P. O. Box 47852  
Olympia, WA 98504-7852

The Department is the state agency authorized and directed to implement the Health Planning and Development Act, chapter 70.38 RCW (the “Act”) in the state of Washington. The Department has adopted the rules set forth in chapter 246-310 WAC to assist it in implementing the Act.

## **3. Rationale for Amendment of the Rule**

Legislation in 2007 directed the Department of Health (Department) to adopt rules establishing standards for the issuance of a certificate of need (CN) for the performance of elective percutaneous coronary interventions (PCIs) at hospitals that do not otherwise provide on-site cardiac surgery. The rules subsequently adopted in December 2008 (Chapter 246-310 WAC) authorized the Department to grant a CN exclusively to those hospitals where it is projected that a specified volume of PCI will be performed by each of the hospital’s physicians (75 annually) and at the hospital as a whole (300 annually).

Under the current rules, the Department does not have the latitude to consider approving an application absent numeric need. This strict adherence to a numeric methodology means that characteristics unique to the residents of particular community are being ignored. It also means that there are communities in Washington State where the need for adequate access to these services has been left unmet even in those cases where the hospital is both prepared and able to provide safe and ready access. This result is contrary to the underlying CN statute.

The rule as currently adopted is indifferent to socioeconomic issues and geographic isolation that materially affect people's ability to access care. As such, it risks worsening the already significant health disparities among residents statewide. Such disparities were highlighted most recently in a February 2016 report by the Office of Financial Management, which found among other things a 2.6-fold difference between the state legislative district with the highest coronary artery disease mortality rate and the district with the lowest (see Attachment 1).

Ideally, the Department would have recognized the potential for this result and preemptively addressed it when adopting the current PCI rules in 2008. Given the priority placed by the Secretary on addressing health disparities, and given that there is now evidence to suggest that a lack of access is impacting these disparities and outcomes, the Department should immediately remedy this oversight by adopting the proposed amendment. The amendment we are suggesting simply gives applicants the opportunity to request, and provides the agency with discretion to grant or deny, an elective PCI CN on a case-by-case basis based on provided data and documentation. It also brings the PCI rules in-line with most other CN methodologies that allow other factors to be considered in the absence of numeric need.

The bottom line is that unless there is an opportunity in the rules for the Department to consider the unique inequities facing some communities, underserved patients may continue to be left without important access to elective PCI.

The Department should update the elective PCI rules to reflect emerging evidence and concerns about health disparities by amending the current standards consistent with the draft language below.

#### **4. Proposed Draft Language**

Included below is draft amendatory language we believe would help address this issue.

##### **WAC 246-310-715**

General requirements.

The applicant hospital must:

(1) Submit a detailed analysis of the impact that their new adult elective PCI services will have on the Cardiovascular Disease and Interventional Cardiology Fellowship Training programs at the University of Washington, and allow the university an opportunity to respond. New programs may not reduce current volumes at the University of Washington fellowship training program.

(2) Submit a detailed analysis of the projected volume of adult elective PCIs that it anticipates it will perform in years one, two and three after it begins operations. Except for hospitals granted a certificate of need under WAC 246-310-720(2)(b), all new elective PCI programs must comply with the state of Washington annual PCI volume standards (three hundred) by the end of year three. The projected volumes must be sufficient to assure that all physicians working only at the applicant hospital will be able to meet volume standards of seventy-five PCIs per year. If an applicant hospital fails to meet annual volume standards, the department may conduct a review of certificate of need approval for the program under WAC 246-310-755.

(3) Submit a plan detailing how they will effectively recruit and staff the new program with qualified nurses, catheterization laboratory technicians, and interventional cardiologists without negatively affecting existing staffing at PCI programs in the same planning area.

(4) Maintain one catheterization lab used primarily for cardiology. The lab must be a fully equipped cardiac catheterization laboratory with all appropriate devices, optimal digital imaging systems, life sustaining apparatus, intra-aortic balloon pump assist device (IABP). The lab must be staffed by qualified, experienced nursing and technical staff with documented competencies in the treatment of acutely ill patients.

(5) Be prepared and staffed to perform emergent PCIs twenty-four hours per day, seven days per week in addition to the scheduled PCIs.

(6) If an existing CON approved heart surgery program relinquishes the CON for heart surgery, the facility must apply for an amended CON to continue elective PCI services. The applicant must demonstrate ability to meet the elective PCI standards in this chapter.

## **WAC 246-310-720**

### Hospital volume standards.

(1) Except for hospitals granted a certificate of need under (2)(b) of this section, hospitals with an elective PCI program must perform a minimum of three hundred adult PCIs per year by the end of the third year of operation and each year thereafter.

(2) The department shall only grant a certificate of need to new programs within the identified planning area if:

(a) (i) The state need forecasting methodology projects unmet volumes sufficient to establish one or more programs within a planning area; and

~~((b))~~ (ii) All existing PCI programs in that planning area are meeting or exceeding the minimum volume standard; or

(b) The applicant hospital demonstrates: (i) people living in its catchment area because of socioeconomic, geographic isolation, or other factors not considered in the state need forecasting methodology, do not have adequate access to existing elective PCI programs and that this lack of access is causing health disparities; and (ii) granting it a certificate of need will provide people living in its catchment area with such access. Catchment area must be defined by verifiable patient origin data.

## WAC 246-310-745

Need forecasting methodology.

For the purposes of the need forecasting method in this section, the following terms have the following specific meanings:

(1) "Base year" means the most recent calendar year for which December 31 data is available as of the first day of the application submission period from the department's CHARS reports or successor reports.

(2) "Current capacity" means the sum of all PCIs performed on people (aged fifteen years of age and older) by all CON approved adult elective PCI programs, or department grandfathered programs within the planning area. To determine the current capacity for those planning areas where a new program has operated less than three years, the department will measure the volume of that hospital as the greater of:

(a) The actual volume; or

(b) The minimum volume standard for an elective PCI program established in WAC 246-310-720.

(3) "Forecast year" means the fifth year after the base year.

(4) "Percutaneous coronary interventions" means cases as defined by diagnosis related groups (DRGs) as developed under the Centers for Medicare and Medicaid Services (CMS) contract that describe catheter-based interventions involving the coronary arteries and great arteries of the chest. The department will exclude all pediatric catheter-based therapeutic and diagnostic interventions performed on persons fourteen years of age and younger are excluded. The department will update the list of DRGs administratively to reflect future revisions made by CMS to the DRG to be considered in certificate of need definitions, analyses, and decisions. The DRGs for calendar year 2008 applications will be DRGs reported in 2007, which include DRGs 518, 555, 556, 557 and 558.

(5) "Use rate" or "PCI use rate," equals the number of PCIs performed on the residents of a planning area (aged fifteen years of age and older), per one thousand persons.

(6) "Grandfathered programs" means those hospitals operating a certificate of need approved interventional cardiac catheterization program or heart surgery program prior to the effective date of these rules, that continue to operate a heart surgery program. For hospitals with jointly operated programs, only the hospital where the program's procedures were approved to be performed may be grandfathered.

(7) The data sources for adult elective PCI case volumes include:

(a) The CHARS data from the department, office of hospital and patient data;

(b) The department's office of certificate of need survey data as compiled, by planning area, from hospital providers of PCIs to state residents (including patient origin information, i.e., patients' zip codes and a delineation of whether the PCI was performed on an inpatient or outpatient basis); and

(c) Clinical outcomes assessment program (COAP) data from the foundation for health care quality, as provided by the department.

(8) The data source for population estimates and forecasts is the office of financial management medium growth series population trend reports or if not available for the planning area, other population data published by well-recognized demographic firms.

(9) The data used for evaluating applications submitted during the concurrent review cycle must be the most recent year end data as reported by CHARS or the most recent survey data available through the department or COAP data for the appropriate application year. The forecasts for demand and supply will be for five years following the base year. The base year is the latest year that full calendar year data is available from CHARS. In recognition that CHARS does not currently provide outpatient volume statistics but is patient origin-specific and COAP does provide outpatient PCI case volumes by hospitals but is not currently patient origin-specific, the department will make available PCI statistics from its hospital survey data, as necessary, to bridge the current outpatient patient origin-specific data shortfall with CHARS and COAP.

(10) Numeric methodology:

Step 1. Compute each planning area's PCI use rate calculated for persons fifteen years of age and older, including inpatient and outpatient PCI case counts.

(a) Take the total planning area's base year population residents fifteen years of age and older and divide by one thousand.

(b) Divide the total number of PCIs performed on the planning area residents over fifteen years of age by the result of Step 1 (a). This number represents the base year PCI use rate per thousand.

Step 2. Forecasting the demand for PCIs to be performed on the residents of the planning area.

(a) Take the planning area's use rate calculated in Step 1 (b) and multiply by the planning area's corresponding forecast year population of residents over fifteen years of age.

Step 3. Compute the planning area's current capacity.

(a) Identify all inpatient procedures at CON approved hospitals within the planning area using CHARS data;

(b) Identify all outpatient procedures at CON approved hospitals within the planning area using department survey data; or

(c) Calculate the difference between total PCI procedures by CON approved hospitals within the planning area reported to COAP and CHARS. The difference represents outpatient procedures.

(d) Sum the results of (a) and (b) or sum the results of (a) and (c). This total is the planning area's current capacity which is assumed to remain constant over the forecast period.

Step 4. Calculate the net need for additional adult elective PCI procedures by subtracting the calculated capacity in Step 3 from the forecasted demand in Step 2. If the net need for procedures is less than three hundred, the department will not approve a new program, except for programs which may be approved under WAC 246-310-720(2)(b).

Step 5. If Step 4 is greater than three hundred, calculate the need for additional programs.

(a) Divide the number of projected procedures from Step 4 by three hundred.

(b) Round the results down to identify the number of needed programs. (For example:  $575/300 = 1.916$  or 1 program)

**Attachment 1  
Referenced Report**

*State of Washington*

# **Variations in Life Expectancy and Mortality Rates by State Legislative Districts, 2012–14**

Office of Financial Management  
February 2016



Joe Campo, MPH  
Health Care Research Center  
Forecasting and Research Division  
Office of Financial Management

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## **Background and purpose**

Variations in health by geographic region are commonly reported, with such reports commonly using counties as the geographic unit of analysis. However, within Washington state, counties vary widely by population size, and this can hamper comparative assessments: In the more populous counties, such as King, Pierce and Snohomish, the various communities contained within each county (e.g., rich, poor, healthy and not) become muddled together, and the differences among these subcounty communities are subsequently masked. For less populous counties, such as Columbia, Garfield and Wahkiakum, the number of people is so small that the rates become highly unstable, often with wide confidence intervals, making them difficult to use for comparative purposes. Moreover, while county boundaries were not initially drawn in a random fashion, the rationales for those boundaries are often arcane and idiosyncratic, and are not necessarily reflective of the communities today.

Legislative districts, in contrast, are all similar in population size and yet large enough to generate relatively stable rates. Since 1991, these district boundaries have been updated every 10 years by a nonpartisan commission with the goal of making sure that “to the extent possible, boundaries of cities, counties, neighborhoods and communities that have common interests are respected, and their division minimized<sup>1</sup>.” Each district also has three elected officials, one in the state Senate and two in the state House of Representatives, who have an interest in the health and well-being of the constituents represented. For these reasons, we have chosen state legislative districts as our unit of analysis in this report on assessing geographic variations in health.

## **Health measures assessed**

In this assessment, we report the 10 leading causes of death in Washington state, using age-adjusted rates for deaths from 2012 to 2014 combined. Ninety-five percent confidence intervals were also generated for these rates, and districts whose confidence intervals do not overlap with the state’s confidence intervals rates were considered to have rates either significantly higher than or lower than the state’s rates.

In rank order, from highest to lowest, the 10 leading causes of death between 2012 and 2014 were cancer, heart disease, Alzheimer’s disease, chronic obstructive pulmonary disease (COPD), unintentional injury, stroke, diabetes, suicide, chronic liver disease, and influenza and pneumonia combined. For some of these leading causes, we assessed subcategories of the disease or cause. Hence for cancer, we included separate assessments of lung cancer, breast cancer, prostate cancer and colorectal cancer. Similarly with heart disease, we assessed the subset, coronary heart disease (CAD). For unintentional injuries, we included an assessment of unintentional poisoning and motor vehicle crashes. And finally, for suicide, we separately assessed firearm suicides. In all these instances, the subcategories assessed were a major component of the broader disease category or condition in which they were contained.

<sup>1</sup> Washington State Redistricting Commission <http://www.redistricting.wa.gov/faq.asp>

In this assessment, we have also included life expectancy by legislative district. This summary measure takes into account the age-specific death rates in each district and uses those rates in determining the average life expectancy within each district if those age-specific rates remained constant. This measure is not intended to be predictive of any one individual's actual life expectancy.

Age-adjusted rates for all causes of death were also assessed by district. As with life expectancy, this measure provides the broadest indicator of potential disparity by legislative district.

Finally, we included two derived measures: one on smoking-attributable causes of deaths and another on deaths that potentially could have been preventable had there been access to appropriate health care services. This latter category is commonly referred to as health care amenable deaths. The rates for these, too, are age-adjusted, and the specific definitions and proportions of ICD-10 causes of death used in these two measures — as well as the ICD-10 codes used in all the other measures — can be found in the Appendix.

A one-page summary and a matrix of each measure assessed by legislative district precede this report's main body, showing their ranking (higher, no different or lower) relative to the state.

### **Summary of Findings**

Four districts — the 3<sup>rd</sup>, 19<sup>th</sup>, 29<sup>th</sup> and 30<sup>th</sup> — had 11 or more of the 22 measures that were significantly higher or, in the case of life expectancy, shorter than the statewide measures. For all four districts, these included the two major summary measures — life expectancy and all deaths; the two derived measures — smoking attributable deaths and health care amenable deaths; plus all cancers and lung cancer, all heart disease, chronic obstructive pulmonary disease (COPD) and diabetes. The 19<sup>th</sup> district had the most measures that were higher or shorter than the state, 19. The 3<sup>rd</sup> was second with 14 poor measures. The 29<sup>th</sup> had 13. Lastly, the 30<sup>th</sup> had 11.

In addition to those measures listed above, the 19<sup>th</sup> also had higher rates for CAD; all unintentional injuries as well as unintentional poisonings and motor vehicle crashes (MVC); stroke; all suicides and firearm suicides; chronic liver disease; and influenza and pneumonia. The 3<sup>rd</sup>, too, also had higher rates for all unintentional injuries plus unintentional poisonings; stroke; all suicides; and chronic liver disease. The 29<sup>th</sup> had higher rates for CAD; Alzheimer's; stroke; and all suicides. And the 30<sup>th</sup> also had a higher rate for CAD.

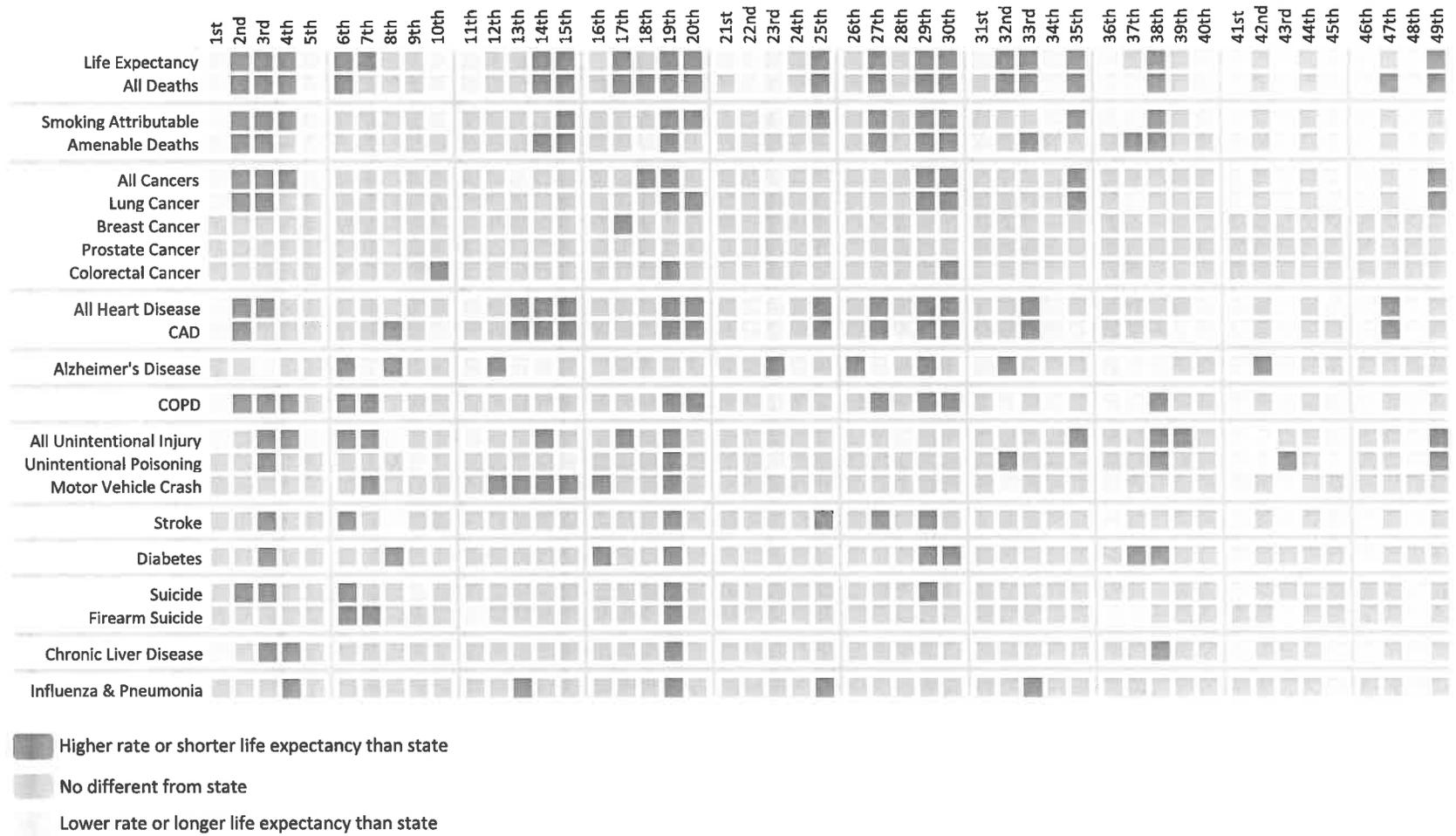
In contrast, the 41<sup>st</sup> district had 17 measures that were better than the state's. The 48<sup>th</sup> had 16. The 43<sup>rd</sup> and the 45<sup>th</sup> each had 13, and the 46<sup>th</sup> had 12. Measures for these five districts were better than the state's for life expectancy; all deaths; smoking-attributable deaths; health care amenable deaths; all cancers; lung cancer; heart disease; COPD; and stroke.

The 41<sup>st</sup> district also had significantly lower rates than the state's for CAD; Alzheimer's; all unintentional injuries plus unintentional poisonings and MVC; diabetes; all suicides; and chronic liver disease. Rates in the 48<sup>th</sup> were lower than the state's for CAD; all unintentional injuries and unintentional poisonings; all suicides and firearm suicide; chronic liver disease; and influenza and pneumonia.

Variations in Life Expectancy and Mortality Rates by State Legislative Districts

The 43<sup>rd</sup> also had lower rates for CAD; Alzheimer's; MVC; and firearm suicide. The 45<sup>th</sup> also had lower rates for all unintentional injuries and unintentional poisonings; chronic liver disease; and influenza and pneumonia. Lastly, the 46<sup>th</sup> had lower rates for CAD; all unintentional injuries and unintentional poisonings; all suicides and firearm suicides; chronic liver disease; and influenza and pneumonia.

Summary of measures



# **Variations in Life Expectancy and Mortality Rates by State Legislative Districts, 2012–14**

### Life Expectancy by State Legislative Districts

2012–14 combined

While life expectancy is not an actual predictor of how long a person will live, it is a useful summary measure of a population’s overall longevity based upon its age-specific death rates. In that context, the average life expectancy (LE) for Washingtonians born between 2012 and 2014 is 80.4 years.

Among the 49 legislative districts, 19 have a LE that is significantly shorter than the state’s and 16 have a LE that is significantly longer. There is an 8.4 year difference in LE between the district with the shortest LE and the one with the longest.

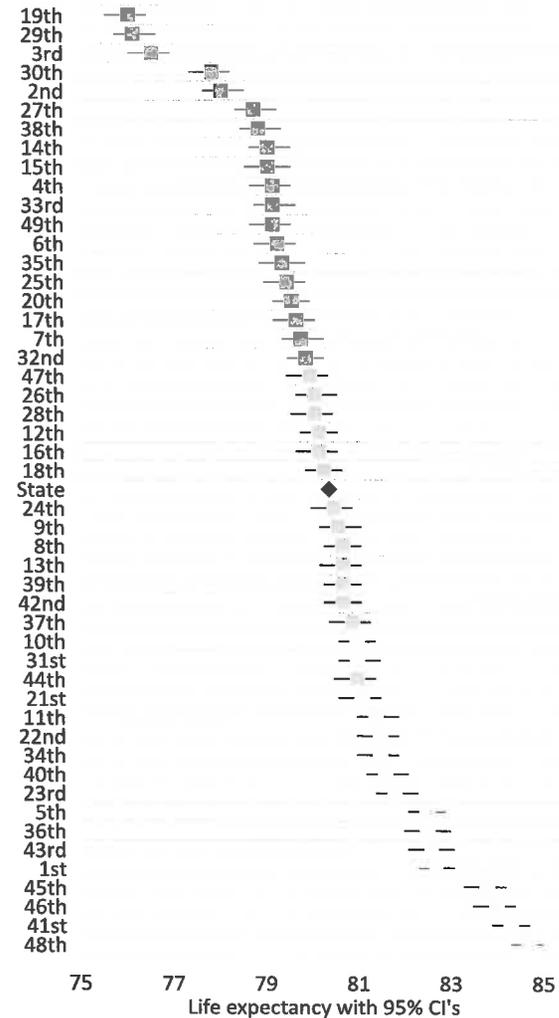
Shortest are the 19<sup>th</sup>, 29<sup>th</sup> and 3<sup>rd</sup> districts with LEs of 76.1, 76.2 and 76.6, respectively. These three districts’ LEs are significantly shorter than the state’s and all other legislative districts’ LEs.

Longest are the 48<sup>th</sup>, 41<sup>st</sup>, 46<sup>th</sup> and 45<sup>th</sup> districts with LEs of 84.7, 84.3, 84.0 and 83.8, respectively. These districts’ LEs are significantly longer than the state’s and all other legislative districts’ LEs.

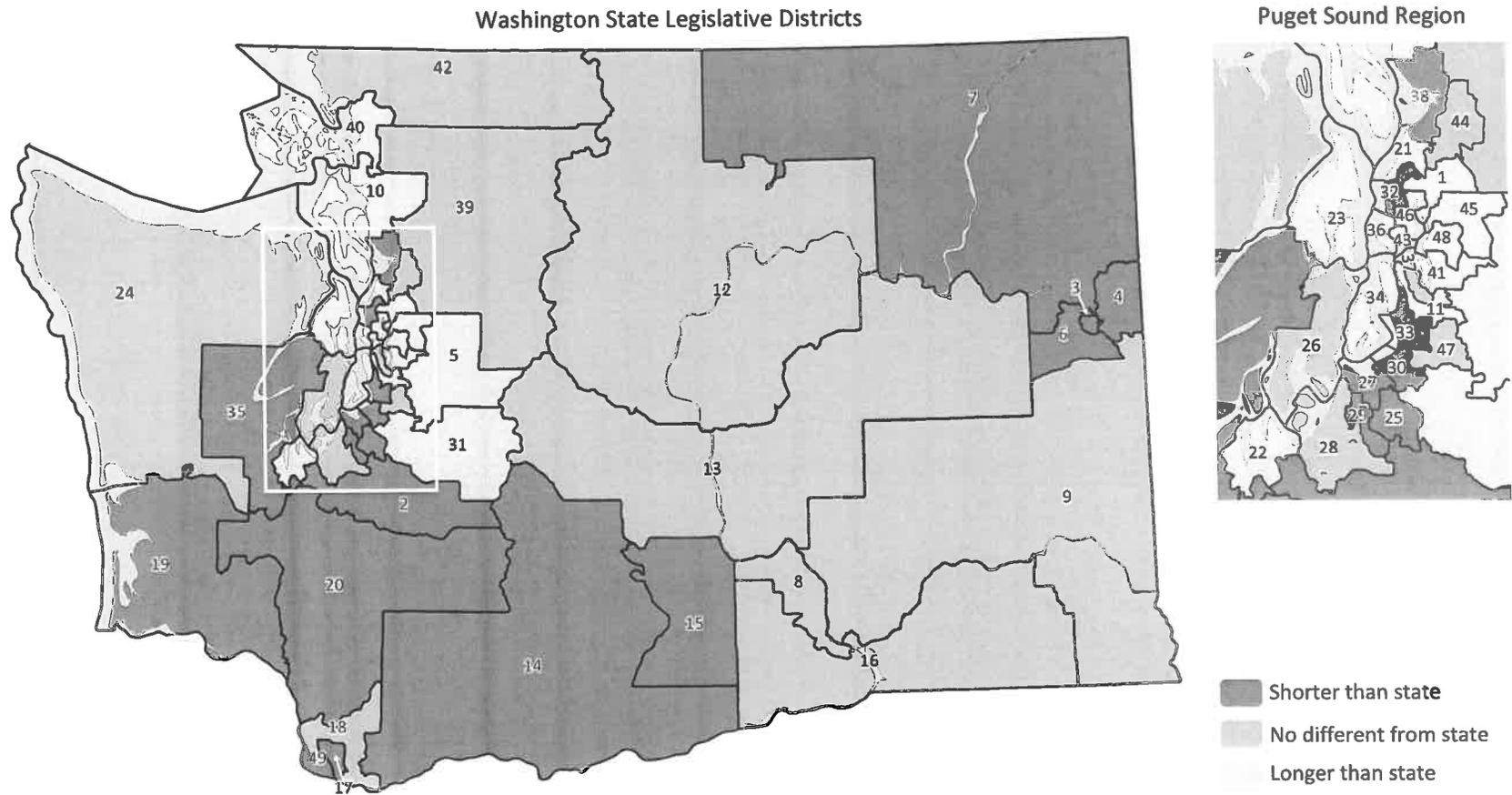
Shorter LEs are seen in the Spokane, Tacoma and Everett environs, as well as in the southern coastal, south central and northeastern regions of the state.

Longer LEs are seen in the Lake Washington environs, and within and around Island and San Juan counties.

Life expectancy ranked shortest to longest by district



**Life Expectancy by State Legislative Districts**  
2012–14 combined



**All Causes Mortality Rates by State Legislative Districts**

Age-adjusted per 100,000 persons, 2012–14 combined

Among Washington residents, there were 153,130 deaths from all causes between 2012 and 2014, averaging 51,043 per year. Of that total, there is enough information from 150,306 (98 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 670.9 per 100,000.

Among the 49 districts, 20 have a rate significantly higher than the state’s and 15 have a rate that is lower. There is nearly a two-fold difference between the district with the highest rate and the district with the lowest.

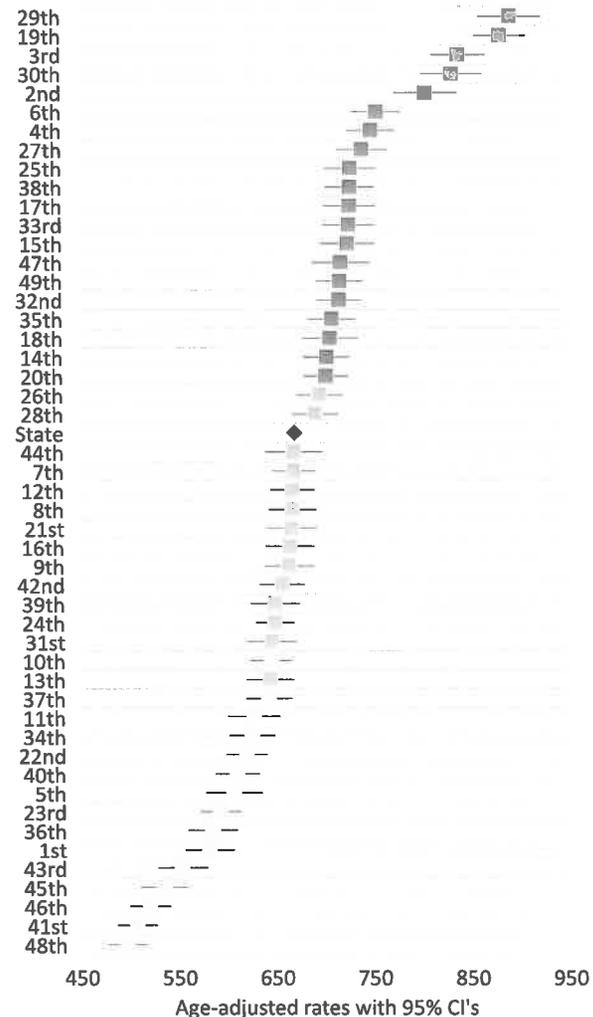
The highest rates are seen in the 29<sup>th</sup> and the 19<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 894.0 and 883.7, respectively. These two districts’ rates are significantly higher than all other districts except the 3<sup>rd</sup> and the 30<sup>th</sup> districts, whose rates are 841.1 and 834.4, respectively.

The lowest rates are seen the 48<sup>th</sup>, 41<sup>st</sup> and 46<sup>th</sup> districts with rates of 495.3, 505.5 and 518.9, respectively. These three districts’ rates are significantly lower than all other districts except the 43<sup>rd</sup> and the 1<sup>st</sup>, whose rates are 552.1 and 580.4, respectively.

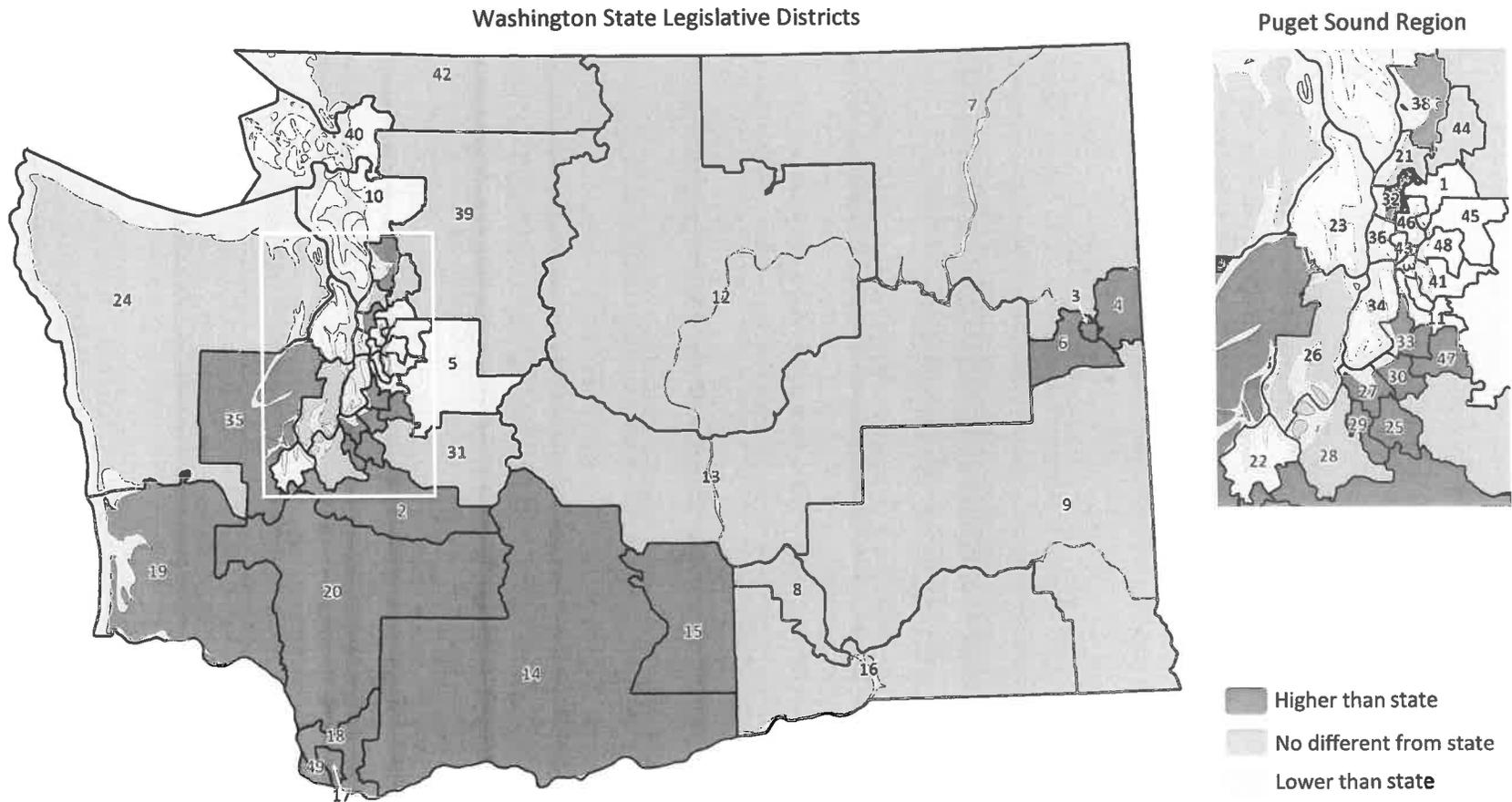
Higher rates are generally seen in the southwest and south central sectors of the state as well as in the Tacoma, Everett and Spokane city environs.

Lower rates are generally seen in the Lake Washington, eastern King county and Olympia environs, as well as the central and northern Puget Sound regions.

All Causes mortality rate ranked highest to lowest by district



**All Causes Mortality Rates by State Legislative Districts**  
 Age-adjusted per 100,000 persons, 2012–14 combined



**Smoking Attributable Mortality Rates by State Legislative Districts**

Age-adjusted per 100,000 persons, 2012–14 combined

Using the Centers for Disease Control and Prevention smoking-attributable fractions (SAF) of deaths for 19 diseases by age and gender,\* there were 21,882 deaths among Washington residents between 2012 and 2014 that are attributable to smoking. Based upon those SAFs, the statewide age-adjusted rate for smoking-attributable mortality is 96.9 per 100,000 persons.

Among the 49 districts, 12 have a rate significantly higher than the state’s and 13 have a rate that is lower. There is a two-and-a-half-fold difference between the district with the highest rate and the district with the lowest.

Since by definition these deaths are attributable to cigarette smoking, they are all potentially preventable.

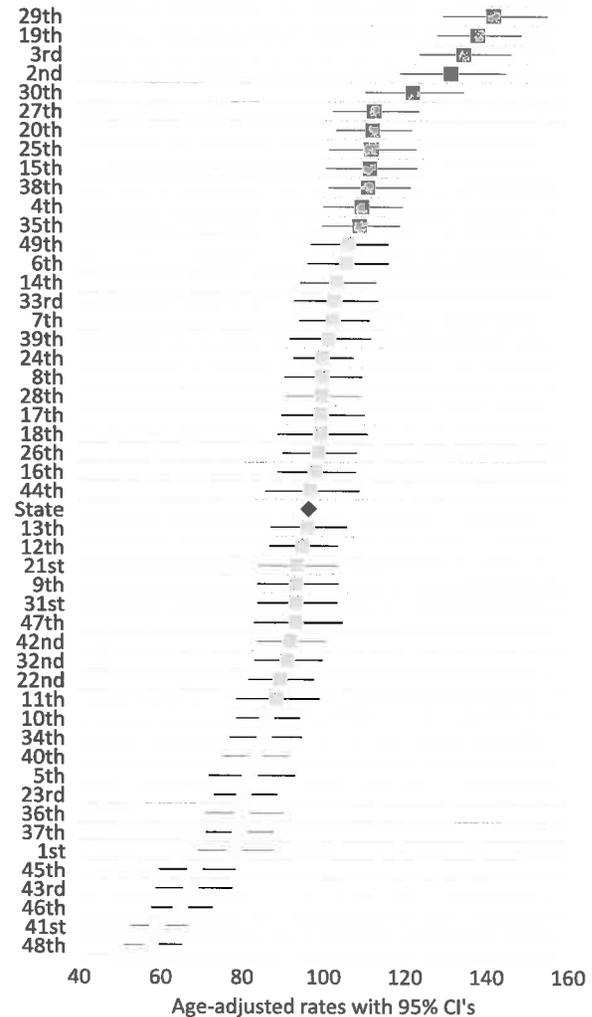
The highest rates are seen in the 29<sup>th</sup>, 19<sup>th</sup> and 3<sup>rd</sup> districts with age-adjusted rates per 100,000 persons of 142.7, 138.8 and 135.3, respectively. These three districts’ rates are significantly higher than all other districts except the 2<sup>nd</sup> and the 30<sup>th</sup>, whose rates are 135.3 and 132.2, respectively.

The lowest rates are seen in the 48<sup>th</sup> and 41<sup>st</sup> districts with rates of 57.5 and 59.2, respectively. These two districts’ rates are significantly lower than all other districts except the 43<sup>rd</sup> and the 45<sup>th</sup>, whose rates are 67.3 and 68.3, respectively.

Higher rates are generally seen in the Hood Canal and southwest sectors of the state as well as in the Tacoma, Everett and Spokane city environs.

Lower rates are generally seen in the Lake Washington and eastern King county environs, as well as the central and northern Puget Sound regions.

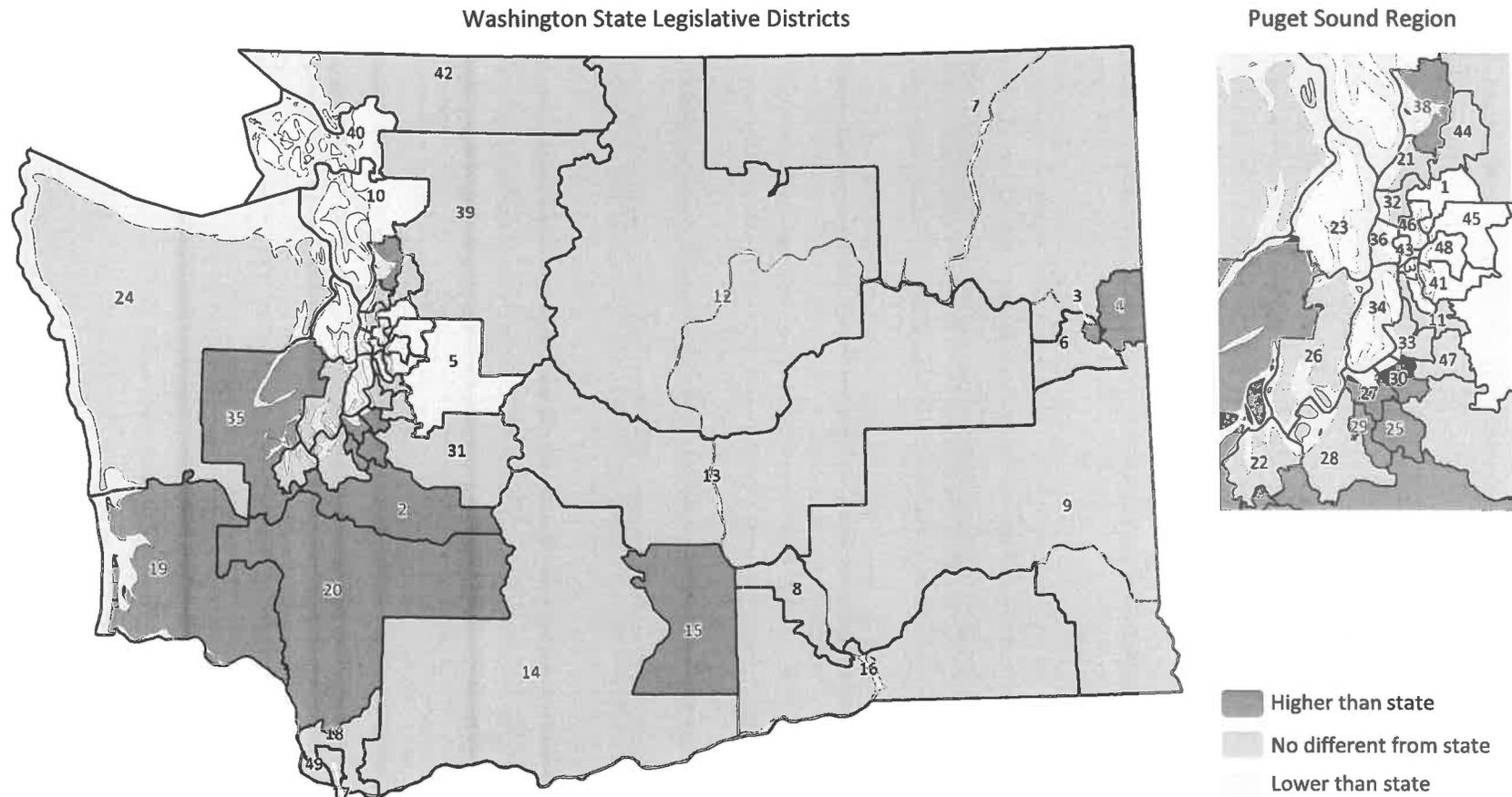
Smoking Attributable mortality rate ranked highest to lowest by district



<https://chronicdata.cdc.gov/Health-Consequences-and-Costs/Smoking-Attributable-Mortality-Morbidity-and-Econo/w47j-r23n>

### Smoking Attributable Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012-14 combined



### Health Care Amenable Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Among Washington residents, there were 12,875 deaths between 2012 and 2014 that were potentially preventable, given appropriate access to health care services. Such deaths are generally referred to as health care amenable deaths.\* The statewide age-adjusted rate for these deaths is 53.2 per 100,000 persons.

Among the 49 districts, 11 have a rate significantly higher than the state’s and nine have a rate that is lower. There is a 3.4-fold difference between the district with the highest rate and the district with the lowest.

The highest rates are seen in the 29<sup>th</sup> and 19<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 97.0 and 81.8, respectively. The 29<sup>th</sup> district’s rate is significantly higher than all other districts except the 19<sup>th</sup>.

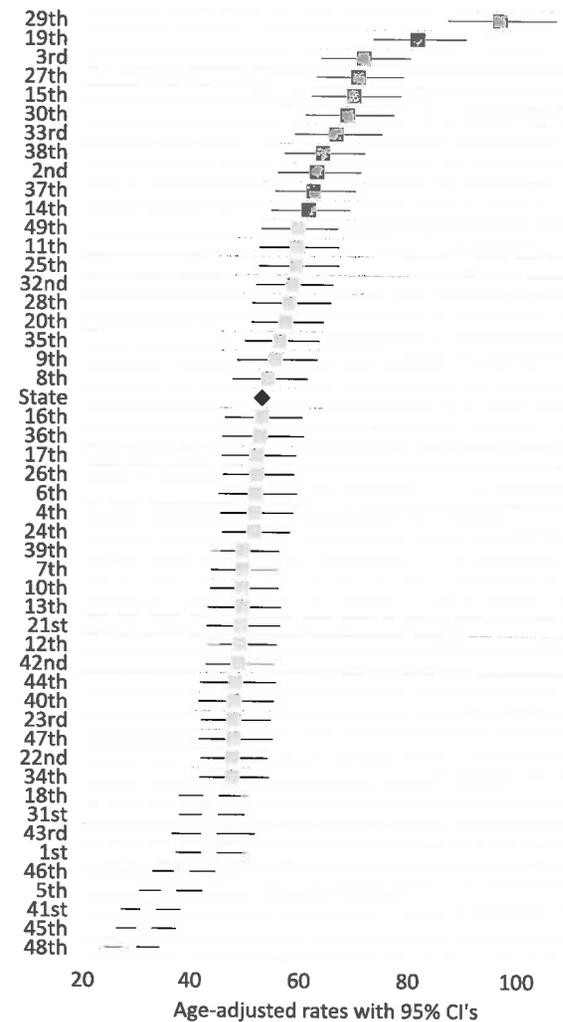
The lowest rates are seen in the 48<sup>th</sup>, 45<sup>th</sup> and 41<sup>st</sup> districts with rates of 28.8, 31.5 and 32.3, respectively. These districts’ rates are significantly lower than all other districts except the 5<sup>th</sup>, 46<sup>th</sup> and 1<sup>st</sup>, whose rates are 36.0, 38.5 and 43.3, respectively.

Higher rates are generally seen along the Interstate-5 corridor from Lakewood to south Seattle; in rural Pierce, Pacific and Wahkiakum counties; in Everett and the city of Spokane; and in the south central region surrounding Yakima.

Lower rates are generally seen in the Lake Washington region and in the eastern King county and northern Pierce environs.

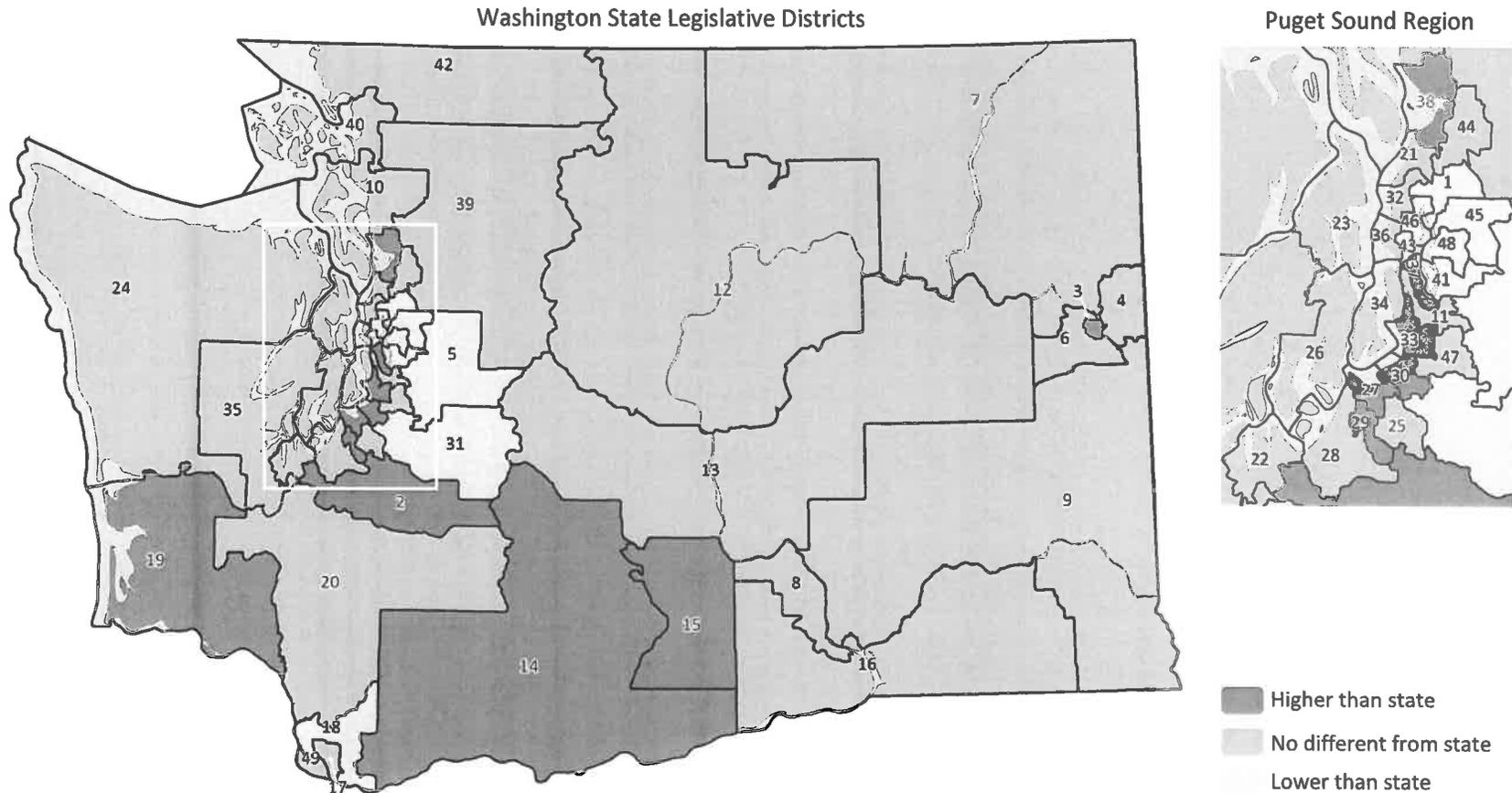
\* <http://content.healthaffairs.org/content/31/9/2114.full>

Health Care Amenable mortality rate ranked highest to lowest by district



### Health Care Amenable Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Cancer Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Cancer includes a diverse set of diseases which, when taken as a whole, makes it the leading cause of death among Washington residents, totaling 35,937 deaths from 2012 to 2014 and averaging 11,979 per year. Among those deaths, there is enough information from 35,476 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 156.9 per 100,000 persons.

Among the 49 districts, nine have a rate significantly higher than the state’s and nine have a rate that is significantly lower. There is a 1.6-fold difference between the district with the highest rate and the district with the lowest.

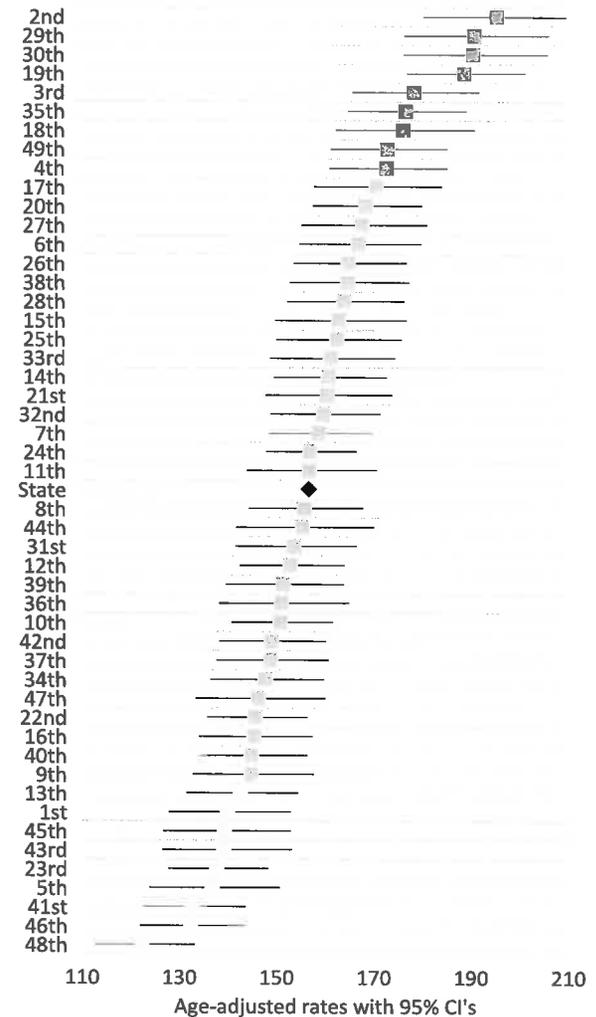
The highest rates are seen in the 2<sup>nd</sup>, 29<sup>th</sup>, 30<sup>th</sup> and 19<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 195.8, 191.2, 191.0 and 189.1, respectively.

The lowest rates are seen in the 48<sup>th</sup>, 46<sup>th</sup> and 41<sup>st</sup> districts with rates of 122.4, 132.4 and 132.6, respectively.

Higher rates are generally seen along the Hood Canal and south coastal and rural Pierce regions, as well as the south Tacoma, Federal Way, Vancouver and Spokane city environs.

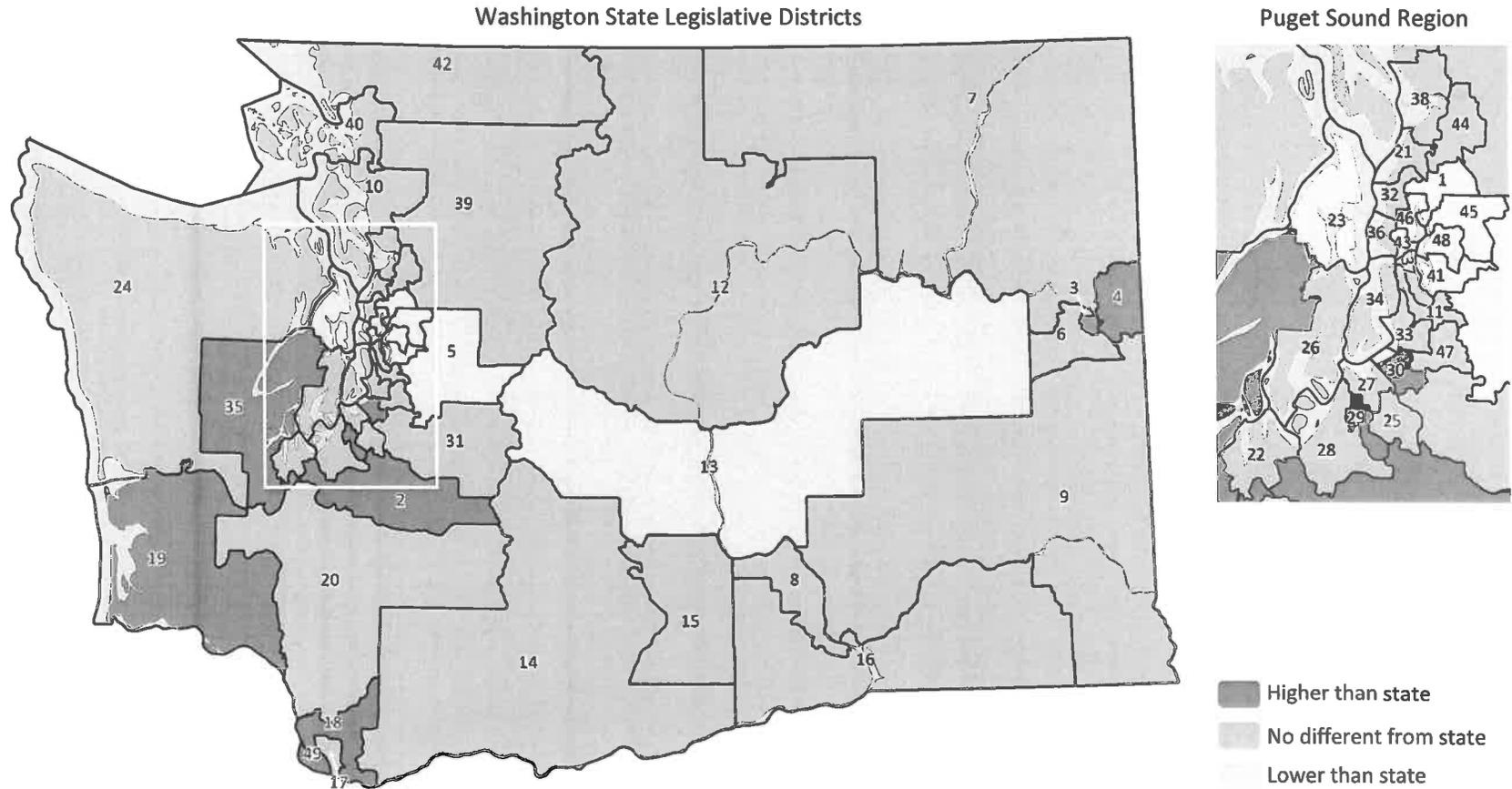
Lower rates are generally seen on the Kitsap peninsula and in the Lake Washington region, and eastward through most of Kittitas, Grant and Lincoln counties.

Cancer mortality rate ranked highest to lowest by district



### Cancer Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Lung Cancer Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Lung cancer is the leading cause of cancer deaths. From 2012 to 2014, there were 9,149 Washington residents who died from lung cancer, for an average of 3,050 per year. Among those years' deaths, there is enough information from 9,034 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 40.2 per 100,000 persons.

Among the 49 districts, nine have a rate significantly higher than the state's and seven have a rate that is lower. There is a two-and-a-half-fold difference between the district with the highest rate and the district with the lowest.

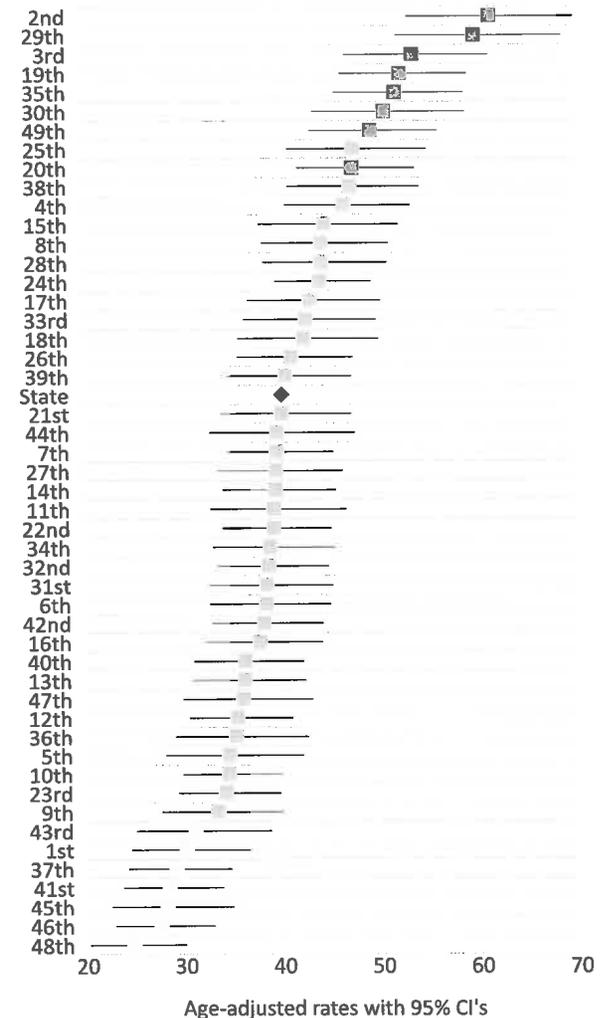
Because lung cancer is largely caused by cigarette smoking, these deaths are preventable.

The highest rates are seen in the 2<sup>nd</sup> and 29<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 61.6 and 60.0, respectively. Besides having the highest rate in the state, the 2<sup>nd</sup> district's rate is also significantly higher than the rates in 38 other districts.

The lowest rates are seen in the 48<sup>th</sup>, 46<sup>th</sup> and 45<sup>th</sup> districts with rates of 24.7, 27.5 and 28.1, respectively.

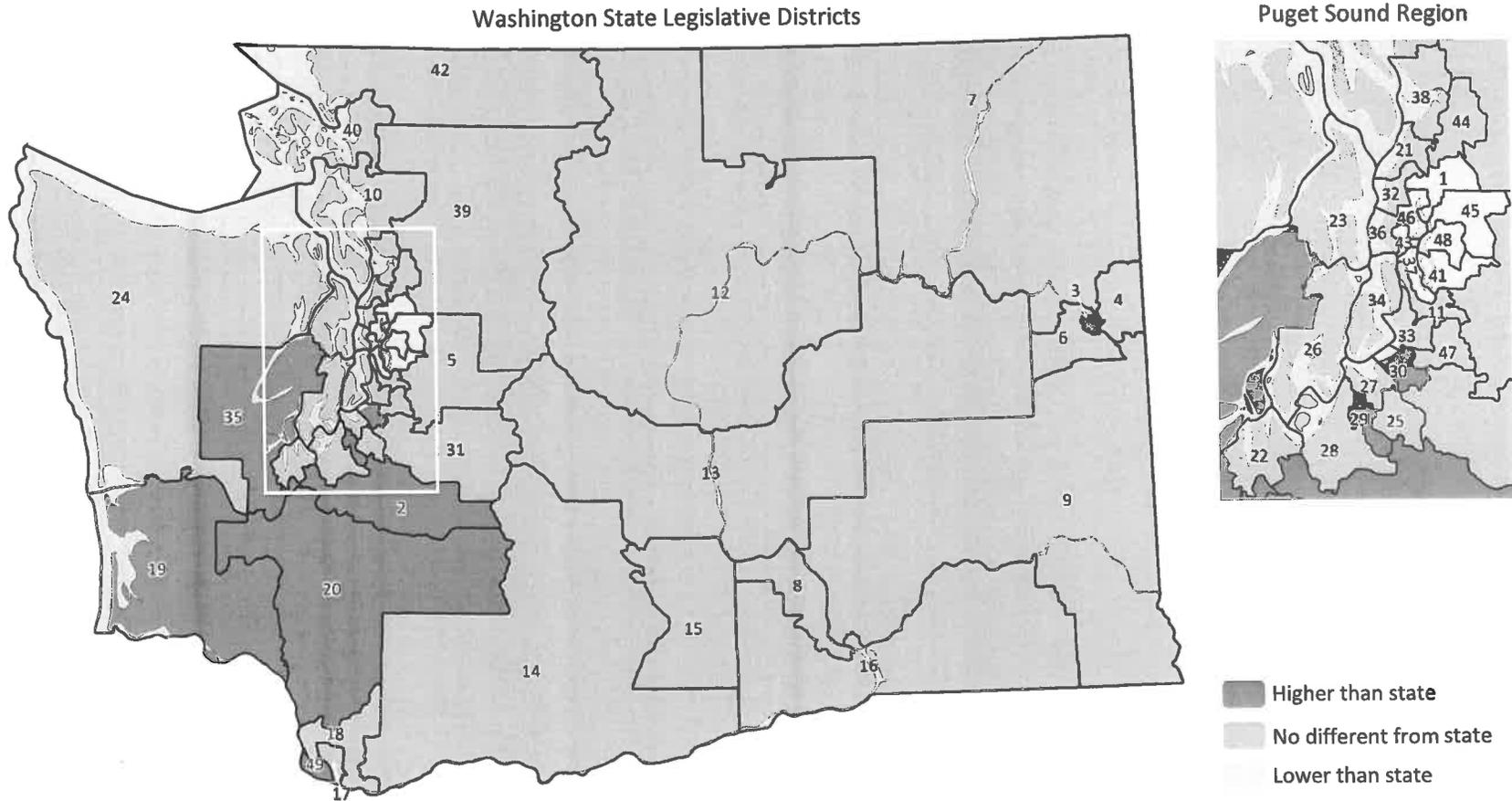
Higher rates are generally seen in the Hood Canal, south coastal and rural Pierce county regions, as well as the south Tacoma, Federal Way, Vancouver and Spokane city environs.

Lung cancer mortality rate ranked highest to lowest by district



### Lung Cancer Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Female Breast Cancer Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

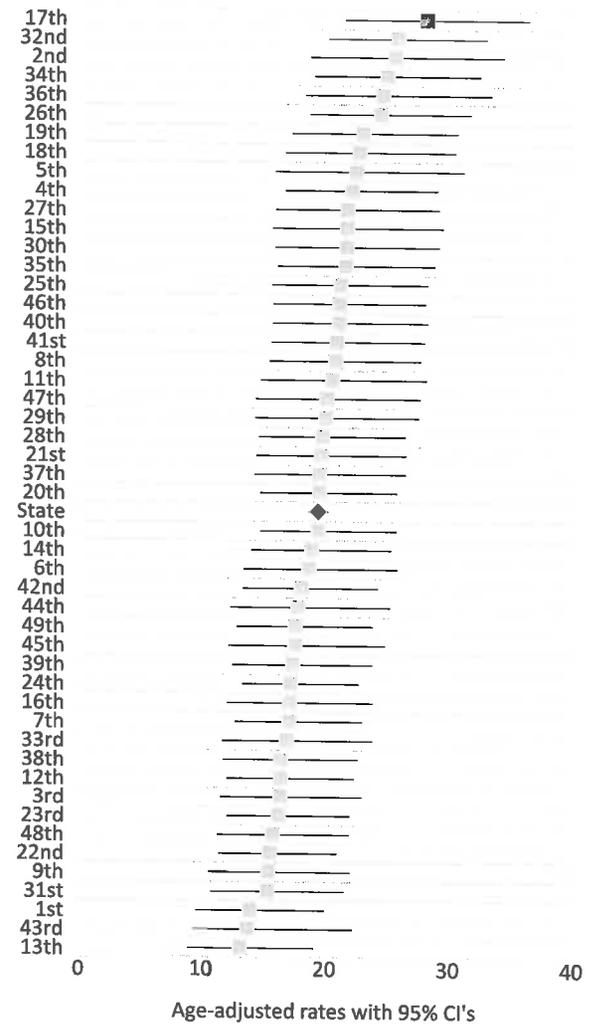
The second-leading cause of cancer deaths for women is breast cancer. From 2012 to 2014, there were 2,434 Washington women who died from breast cancer, for an average of 811 per year. Among those years' deaths, there is enough information from 2,409 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 19.4 per 100,000 persons.

Among the 49 districts, one has a rate significantly higher than the state's and none has a rate that is significantly lower. There is a two-fold difference between the district with the highest rate and the district with the lowest.

Although generally not preventable, improvements in treatment and therapies, as well as early detection through screening, have reduced female breast cancer mortalities.

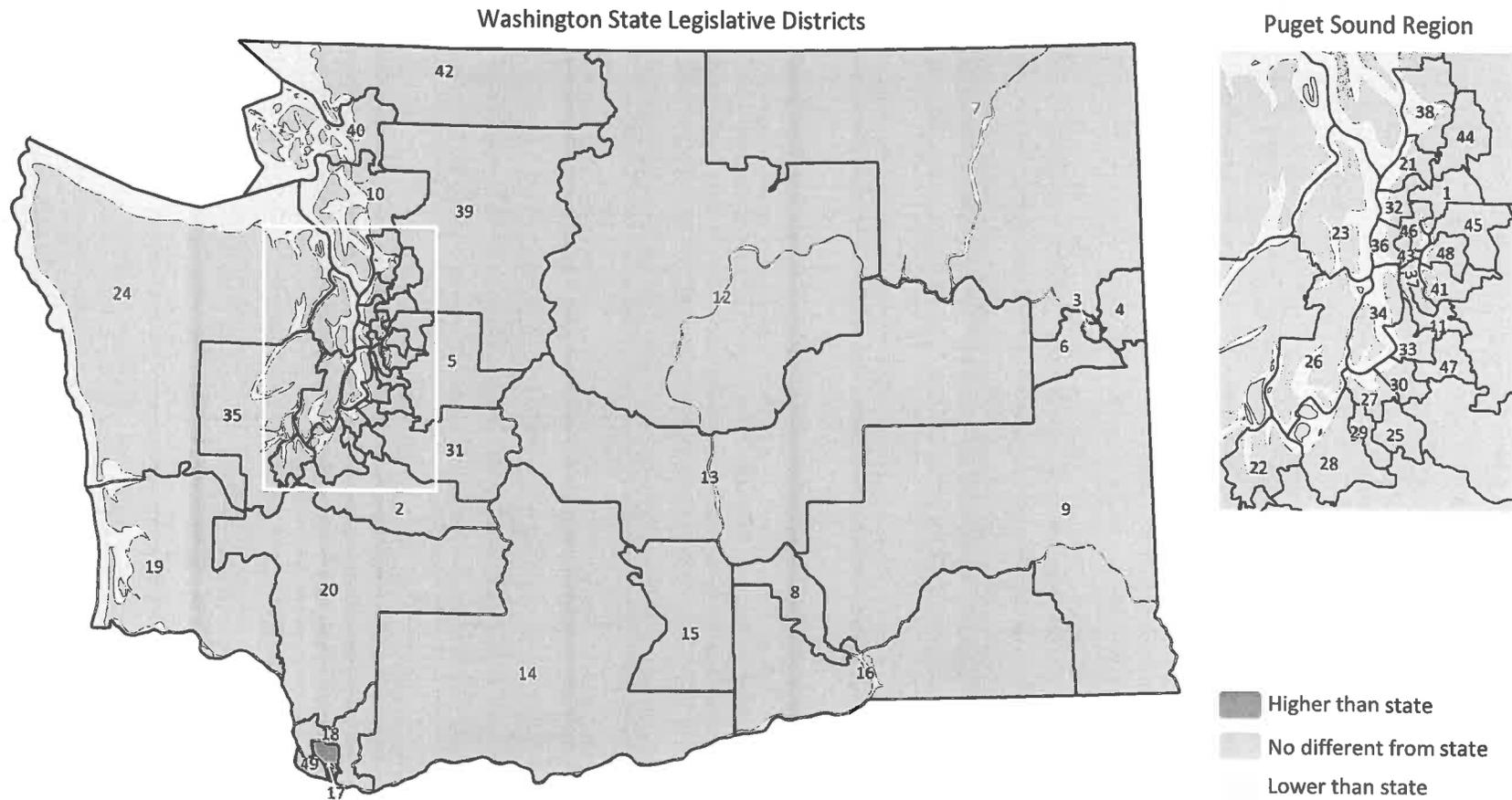
The one district with a rate significantly higher than the state's is the 17<sup>th</sup>, at 28.0 per 100,000 women.

Female breast cancer mortality rate ranked highest to lowest by district



**Female Breast Cancer Mortality Rates by State Legislative Districts**

Age-adjusted per 100,000 persons, 2012-14 combined



### Prostate Cancer Mortality Rates by State Legislative Districts

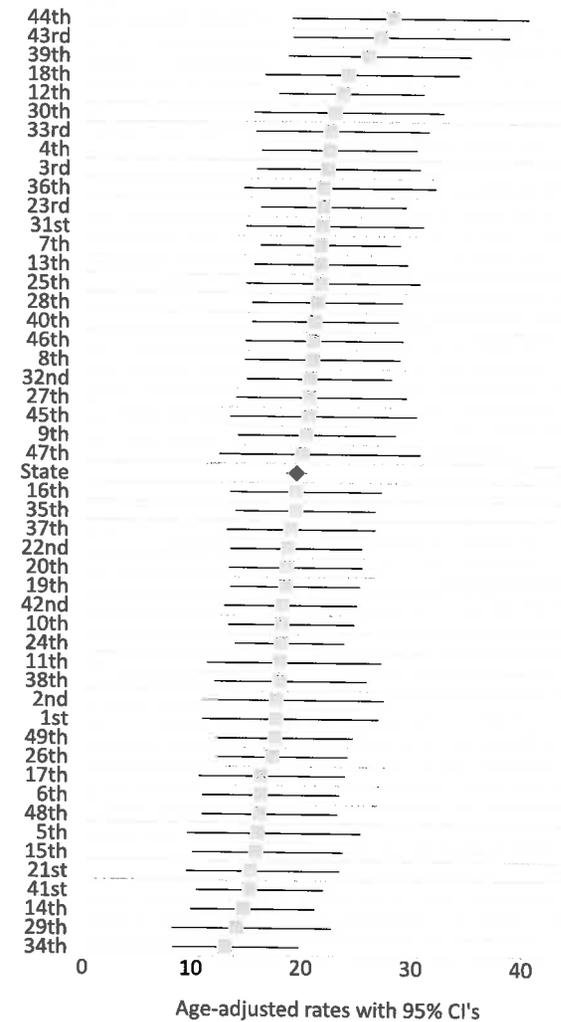
Age-adjusted per 100,000 persons, 2012–14 combined

The second-leading cause of cancer deaths for men is prostate cancer. From 2012 to 2014, there were 1,790 Washington men who died from prostate cancer, for an average of 597 per year. Among those years' deaths, there was enough information from 1,776 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 19.5 per 100,000 men.

Among the 49 districts, no districts have a rate that is significantly higher or lower than the state's rate. However, there is a two-fold difference between the district with the highest rate and the district with the lowest.

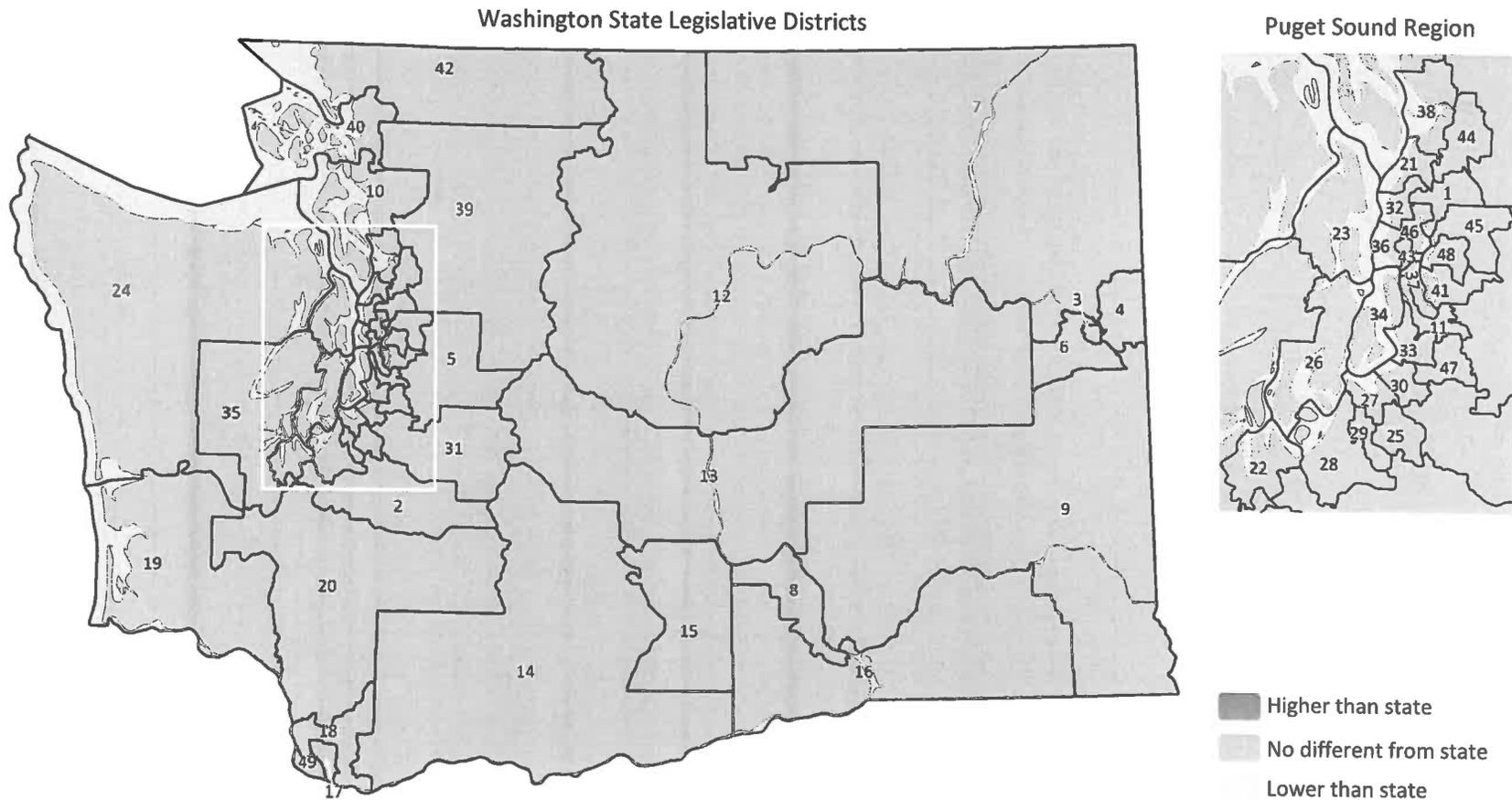
Although generally not preventable, and with screening tests of limited efficacy, prostate cancer deaths appear to be declining, perhaps due to improved medical treatments and therapies.

Prostate cancer mortality rate ranked highest to lowest by district



### Prostate Cancer Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



**Colorectal Cancer Mortality Rates by State Legislative Districts**

Age-adjusted per 100,000 persons, 2012–14 combined

Colorectal cancer is the third-leading cause of cancer deaths for both men and women. From 2012 to 2014, there were 2,899 Washington residents who died from colorectal cancer, for an average of 966 per year. Among those years’ deaths, there is enough information from 2,851 (98 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 12.5 per 100,000 persons.

Among the 49 districts, three have a rate significantly higher than the state’s rate and none has a rate that is lower. There is a two-fold difference between the district with the highest rate and the district with the lowest.

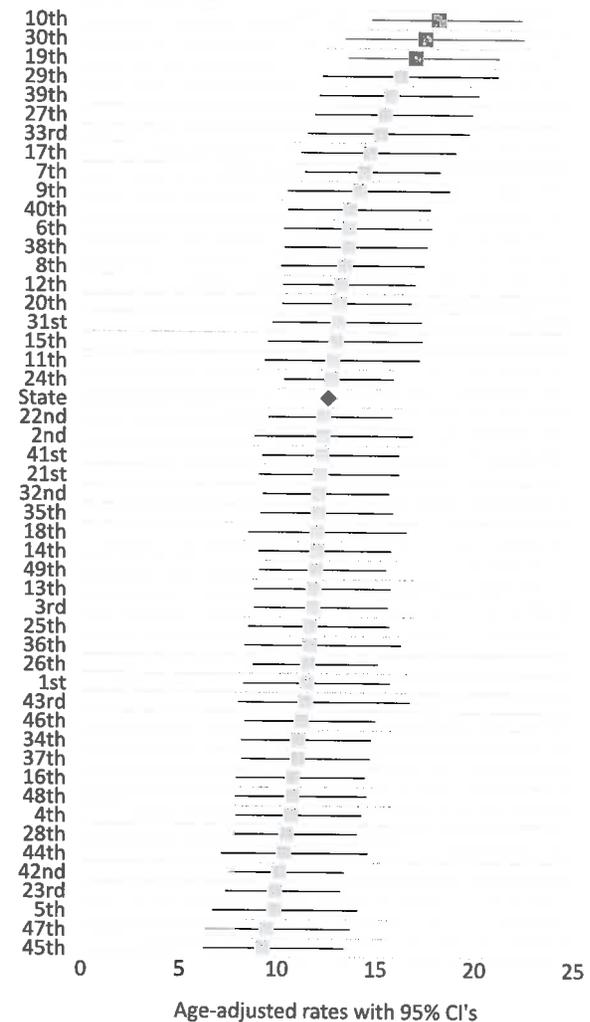
Screening for colorectal cancer can not only detect the disease at earlier stages where it can be treated more effectively, but can also be preventive through the removal of precancerous polyps.

The highest rates are seen in the 10<sup>th</sup>, 30<sup>th</sup> and 19<sup>th</sup> districts with age-adjusted rates per 100,000 of 18.1, 17.4 and 16.9, respectively.

No district had a rate that was significantly lower than the state’s rate.

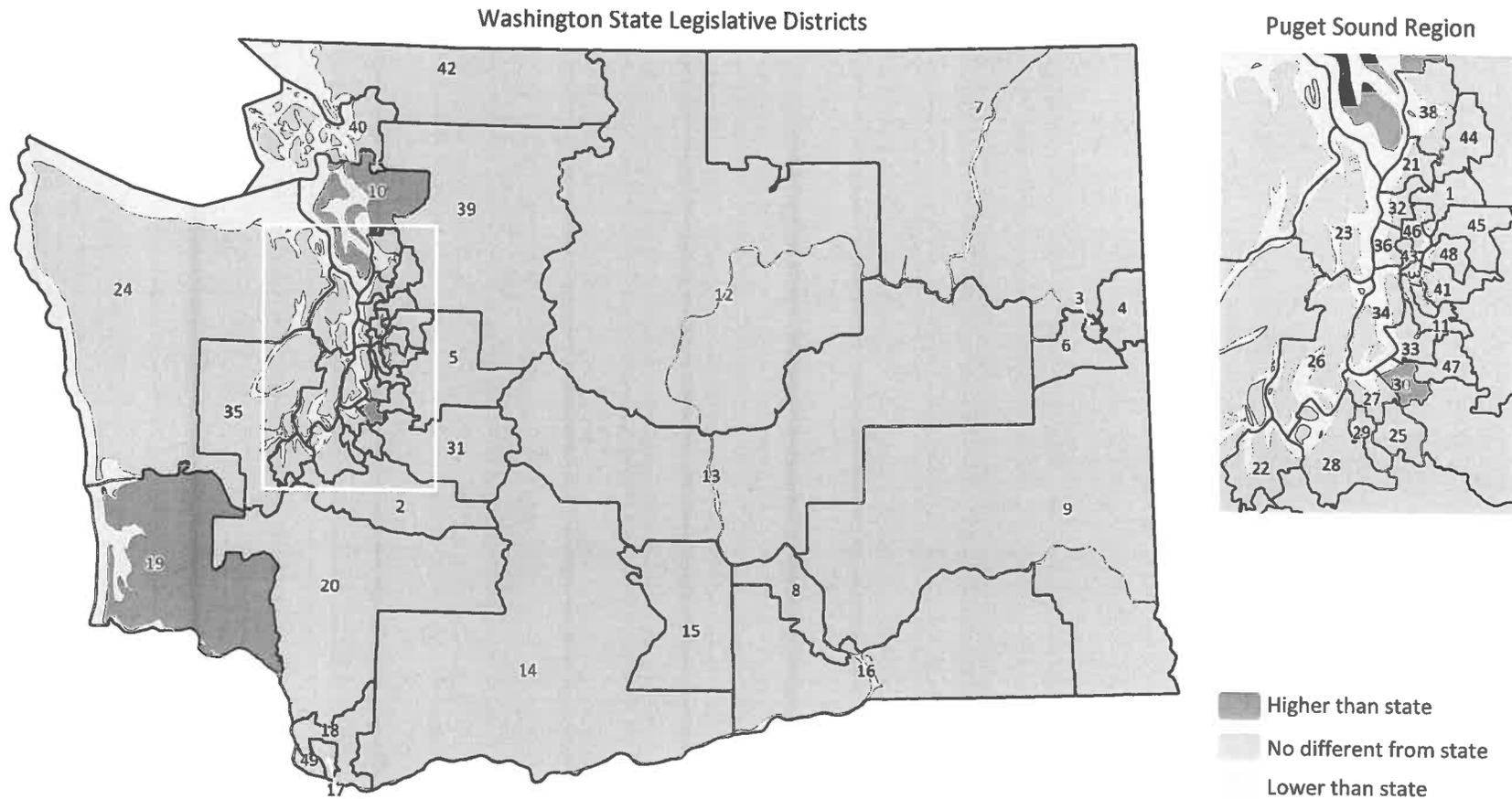
The three areas with high rates are Island County and the coastal sectors of Skagit and Snohomish counties; Pacific and Wahkiakum counties; and the environs in and around Federal Way.

Colorectal cancer mortality rate ranked highest to lowest by district



### Colorectal Cancer Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012-14 combined



### Heart Disease Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Heart disease is the second-leading cause of death among Washington residents, totaling 31,358 deaths from 2012 to 2014, for an average of 10,453 per year. Among those deaths, there is enough information from 30,938 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 136.7 per 100,000 persons.

Among the 49 districts, 13 have a rate significantly higher than the state’s and 11 have a rate that is lower. There is a two-fold difference between the district with the highest rate and the district with the lowest.

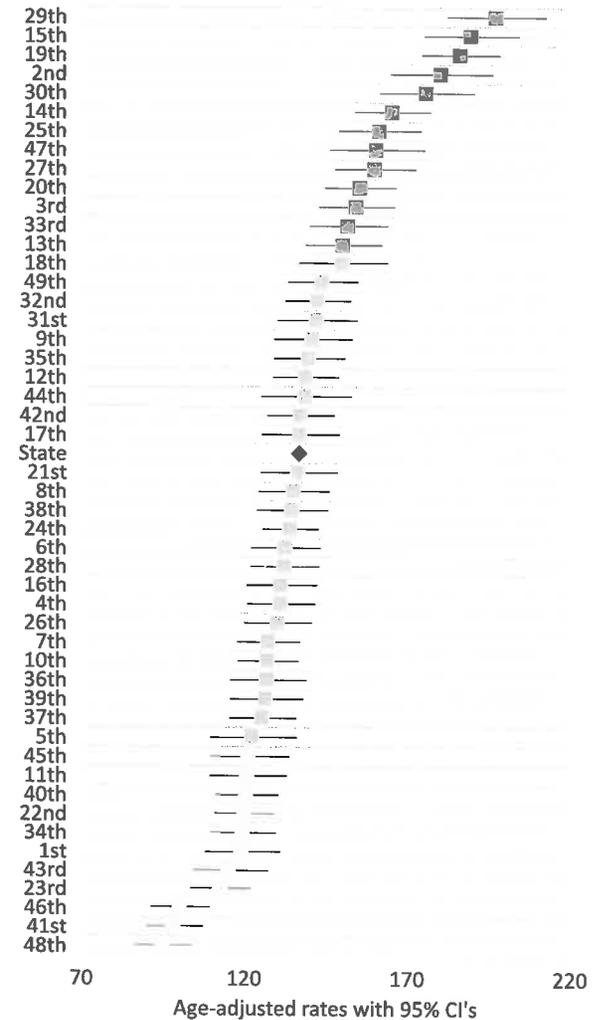
The highest rates are seen in the 29<sup>th</sup>, 15<sup>th</sup>, 19<sup>th</sup>, 2<sup>nd</sup> and 30<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 197.1, 189.4, 186.1, 180.1 and 175.7, respectively. Excluding the other four districts, the rate in the 29<sup>th</sup> is significantly higher than all the other districts.

The lowest rates are seen in the 48<sup>th</sup>, 41<sup>st</sup> and 46<sup>th</sup> districts with rates of 94.5, 98.1 and 99.8, respectively. These three districts’ rates are significantly lower than all the other districts except for the 23<sup>rd</sup>, 43<sup>rd</sup> and 1<sup>st</sup>, whose rates are 112.2, 114.9 and 118.9, respectively.

Higher rates are generally seen in a large swath of the southwest and south central region of the state from Pacific to Lincoln counties, and in those districts along the I-5 corridor from Lakewood to SeaTac.

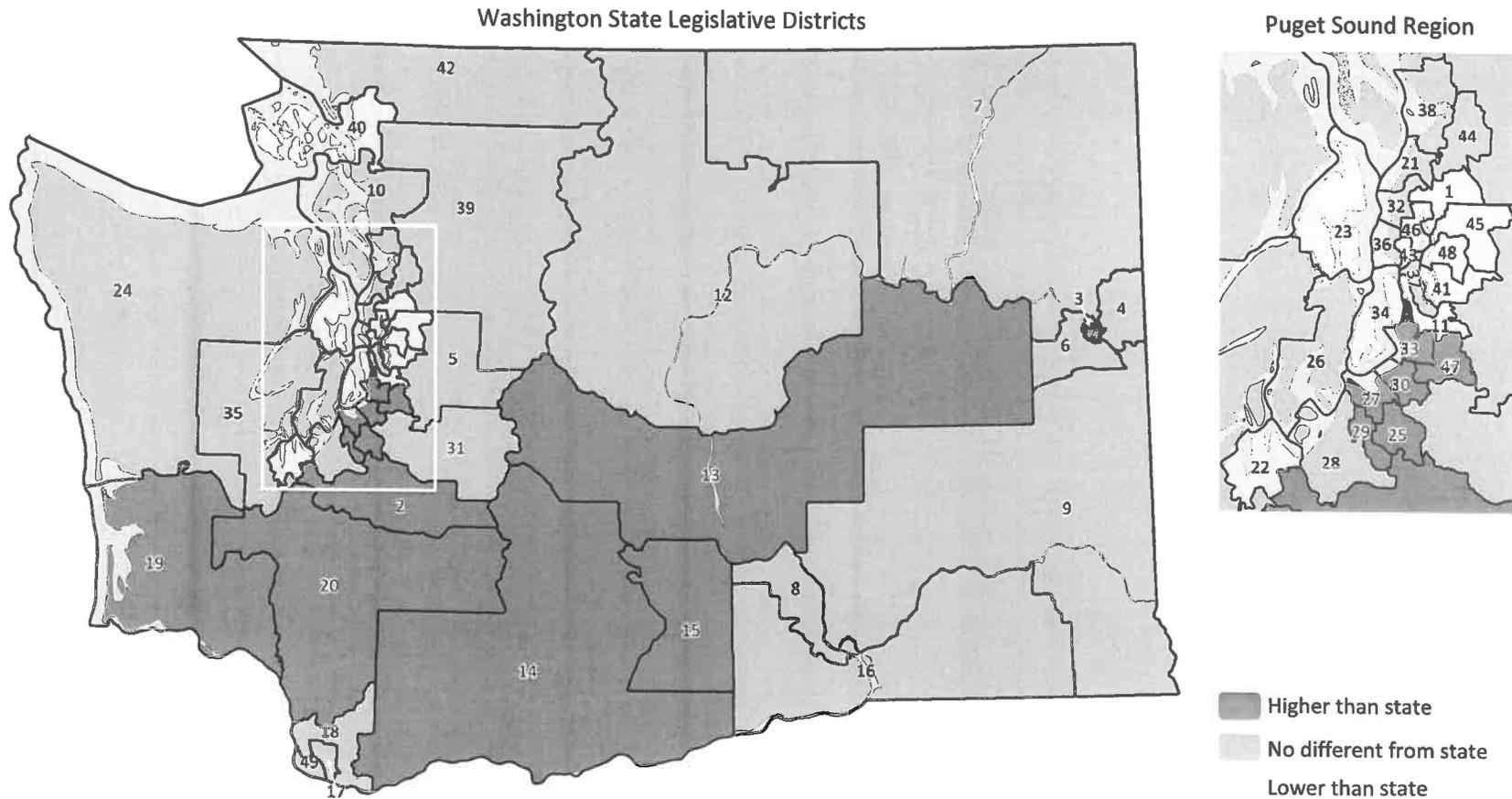
Lower rates are generally seen in the Lake Washington region, the Kitsap peninsula, Vashon Island, the Olympia environs and the San Juan Islands.

Heart disease mortality rate ranked highest to lowest by district



### Heart Disease Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Coronary Artery Disease Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Coronary artery disease (CAD) is the leading cause of heart disease deaths among Washington residents, totaling 19,458 deaths from 2012 to 2014, for an average of 6,486 per year. Among those deaths, there is enough information from 19,183 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 84.7 per 100,000 persons.

Among the 49 districts, 13 have a rate significantly higher than the state's and 13 have a rate that is lower. There is a 2.6-fold difference between the district with the highest rate and the district with the lowest.

CAD may be preventable through lifestyle choices and access to appropriate preventive care services.

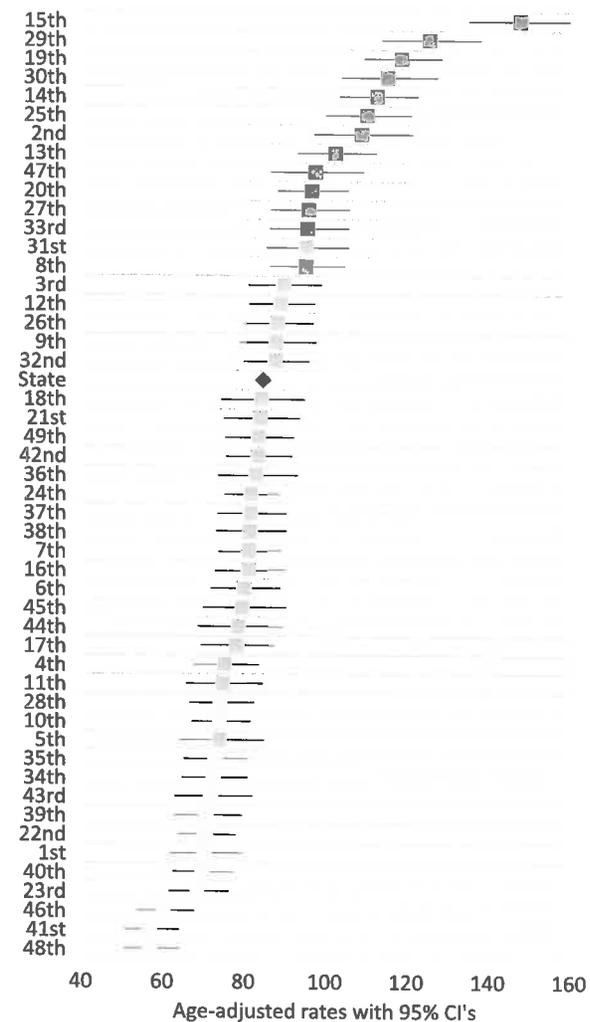
The highest rates are seen in the 15<sup>th</sup>, 29<sup>th</sup> and 19<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 148.0, 125.7 and 118.8, respectively. Except for the 29<sup>th</sup> district, the rate in the 15<sup>th</sup> is significantly higher than all the other districts'.

The lowest rates are seen in the 48<sup>th</sup>, 41<sup>st</sup> and 46<sup>th</sup> districts with rates of 56.8, 56.9 and 60.3, respectively.

Higher CAD rates are generally seen in a large swath of the southwest and south central region of the state from Pacific to Lincoln counties, and in those districts along the I-5 corridor from Lakewood to SeaTac.

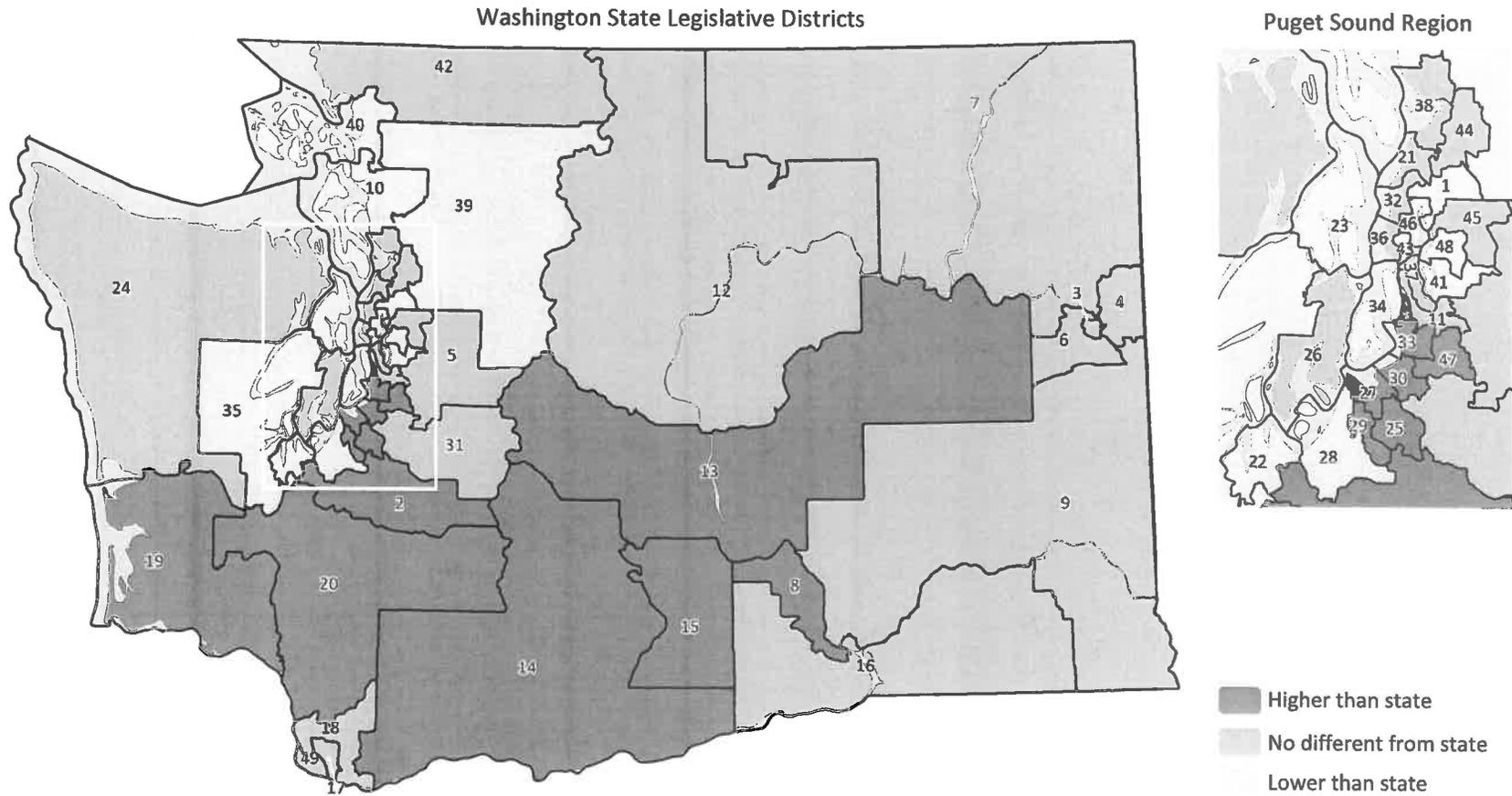
Lower rates are seen in the Lake Washington region, throughout the Puget Sound coastal region, the Hood Canal environs and most of Skagit and Snohomish counties.

Coronary artery disease mortality rate ranked highest to lowest by district



### Coronary Artery Disease Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Alzheimer’s Disease Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Alzheimer’s disease (AD) is the third-leading cause of deaths among Washington residents, totaling 9,828 deaths from 2012 to 2014, for an average of 3,276 per year. Among those deaths, there is enough information from 9,736 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 43.5 per 100,000 persons.

Among the 49 districts, eight have a rate significantly higher than the state’s and 13 have a rate that is lower. There is a 2.3-fold difference between the district with the highest rate and the district with the lowest.

AD is not preventable, and therapies are of limited efficacy.

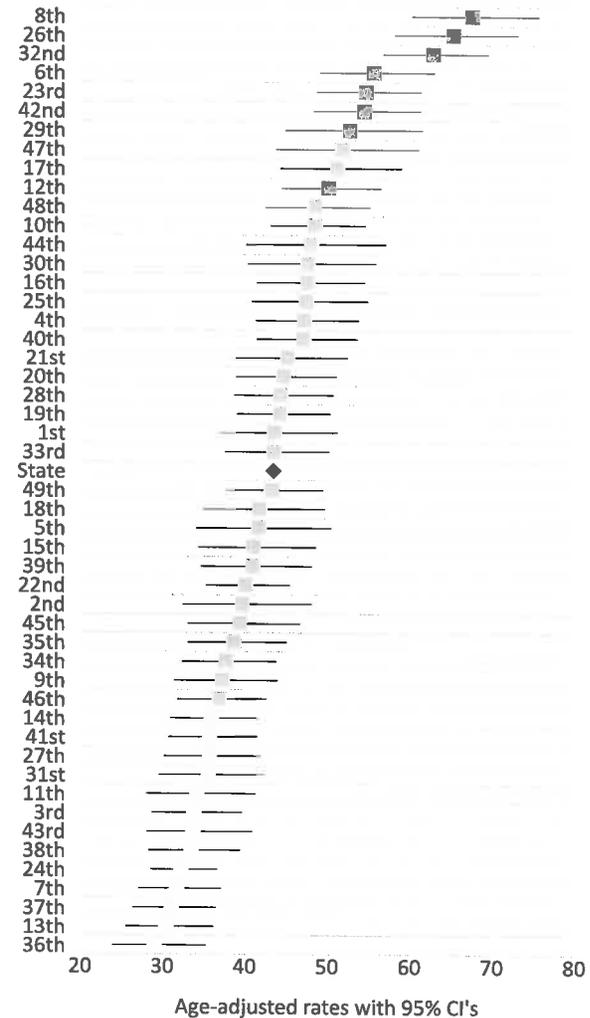
The highest rates are seen in the 8<sup>th</sup>, 26<sup>th</sup> and 32<sup>nd</sup> districts with age-adjusted rates per 100,000 persons of 67.7, 65.4 and 62.9, respectively.

The lowest rates are seen in the 36<sup>th</sup>, 13<sup>th</sup> and 37<sup>th</sup> districts with rates of 28.9, 30.4 and 31.0, respectively.

**Caution is advised in assessing geographic variations in AD.** Because the major risk factors for this disease — age and family history — are not modifiable and therapies for it are of limited efficacy, geographic variations may simply reflect variations in judgment when differentiating the immediate cause of death (e.g., heart disease, pneumonia, etc.) from the true underlying cause.\*

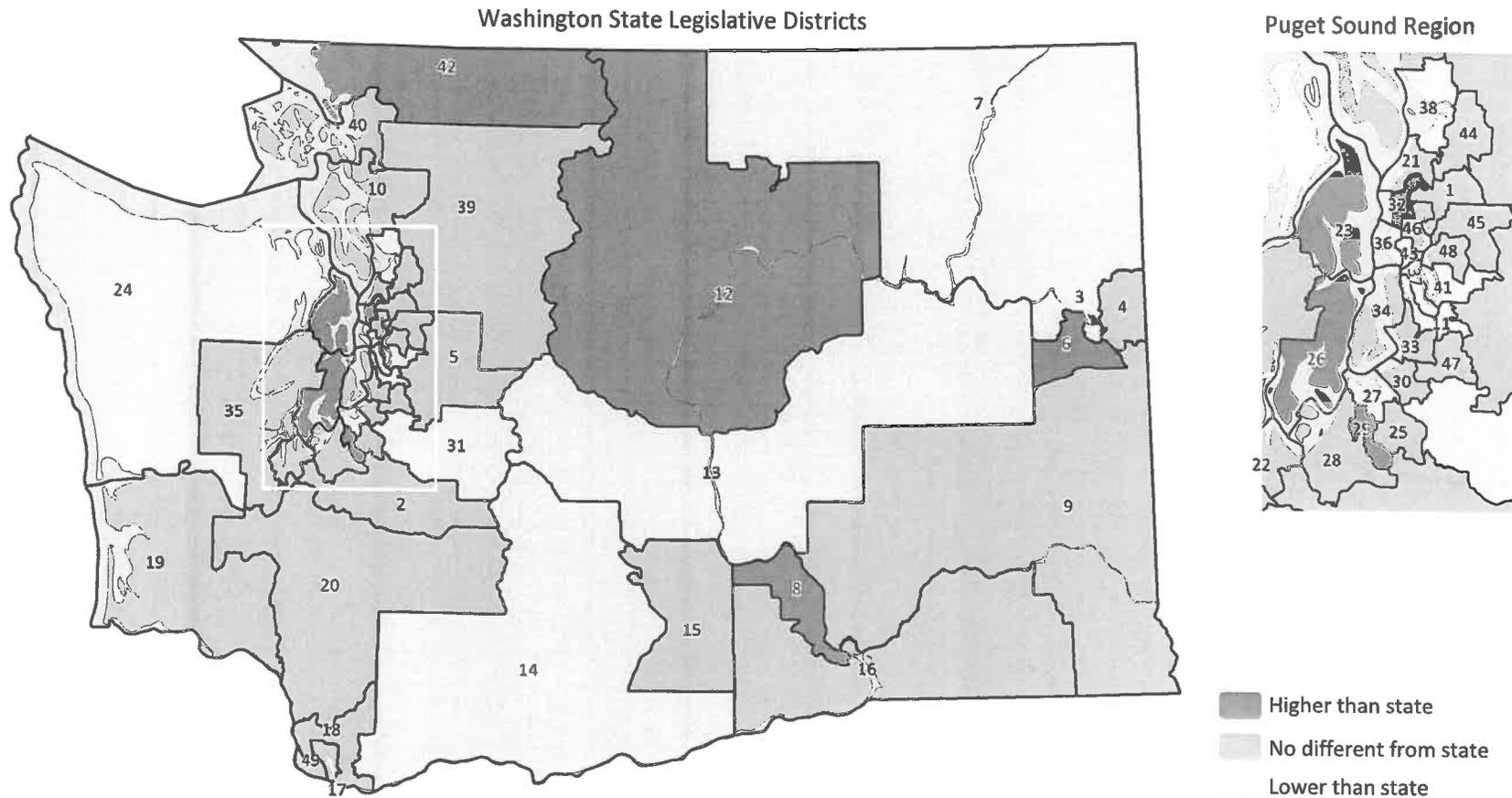
\* <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3049957/>

Alzheimer’s disease mortality rate ranked highest to lowest by district



### Alzheimer's Disease Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### COPD Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Chronic obstructive pulmonary disease (COPD) is the fourth-leading cause of death among Washington residents, totaling 8,767 deaths from 2012 to 2014, for an average of 2,922 per year. Among those deaths, there is information from 8,663 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 39.4 per 100,000 persons.

Among the 49 districts, 11 have a rate significantly higher than the state's and 11 have a rate that is lower. There is more than a four-fold difference between the district with the highest rate and the district with the lowest.

COPD is largely preventable, and the major risk factor is cigarette smoking.

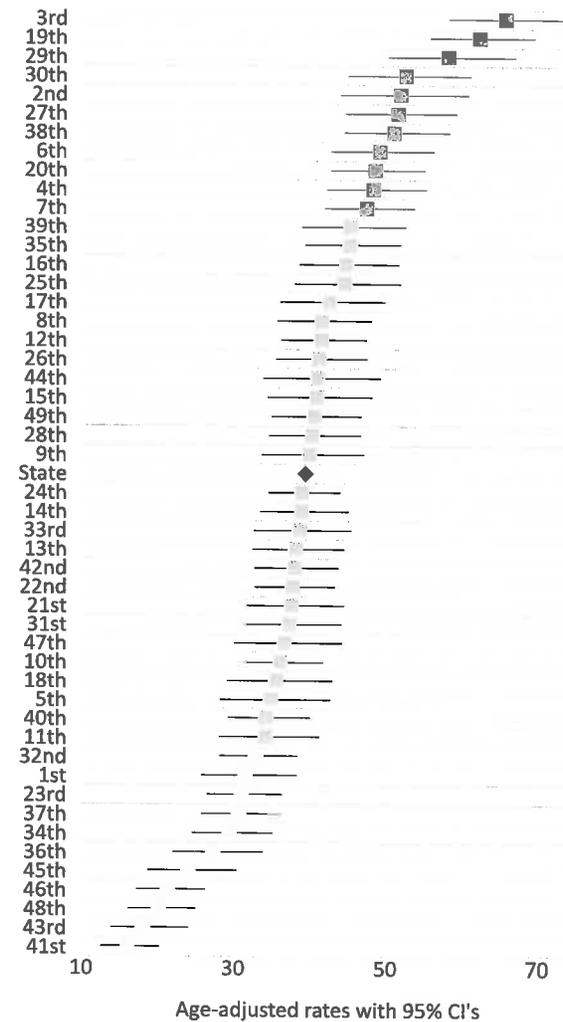
The highest rates are seen in the 3<sup>rd</sup>, 19<sup>th</sup> and 29<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 65.8, 62.3 and 58.2, respectively.

The lowest rates are seen in the 41<sup>st</sup>, 43<sup>rd</sup> and 48<sup>th</sup> with rates of 16.0, 18.1 and 20.1, respectively.

Higher rates are generally seen in the northeast and southwest corners of the state as well as in the environs in and around the cities of Tacoma and Everett.

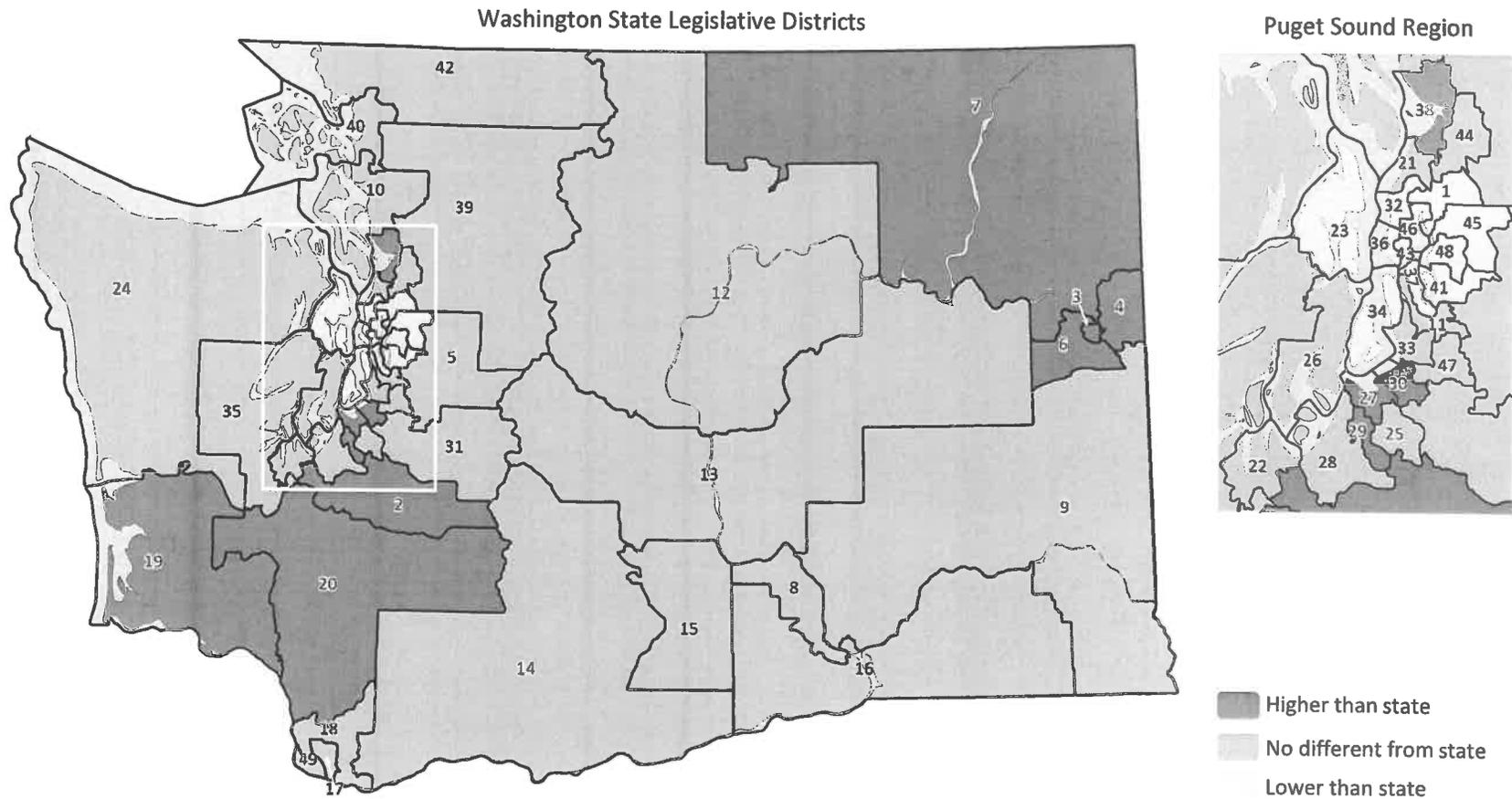
Lower rates are generally seen in the central Puget Sound region from the Kitsap peninsula to the Lake Washington environs.

COPD mortality rate ranked highest to lowest by district



### COPD Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Unintentional Injury Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Unintentional injuries are the fifth-leading cause of death among Washington residents, totaling 8,448 deaths from 2012 to 2014, for an average of 2,816 per year. Among those deaths, there is enough information from 8,176 (97 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 37.5 per 100,000 persons.

Among the 49 districts, 11 have a rate significantly higher than the state’s and nine have a rate that is lower. There is a three-fold difference between the district with the highest rate and the district with the lowest.

All unintentional injuries are potentially preventable.

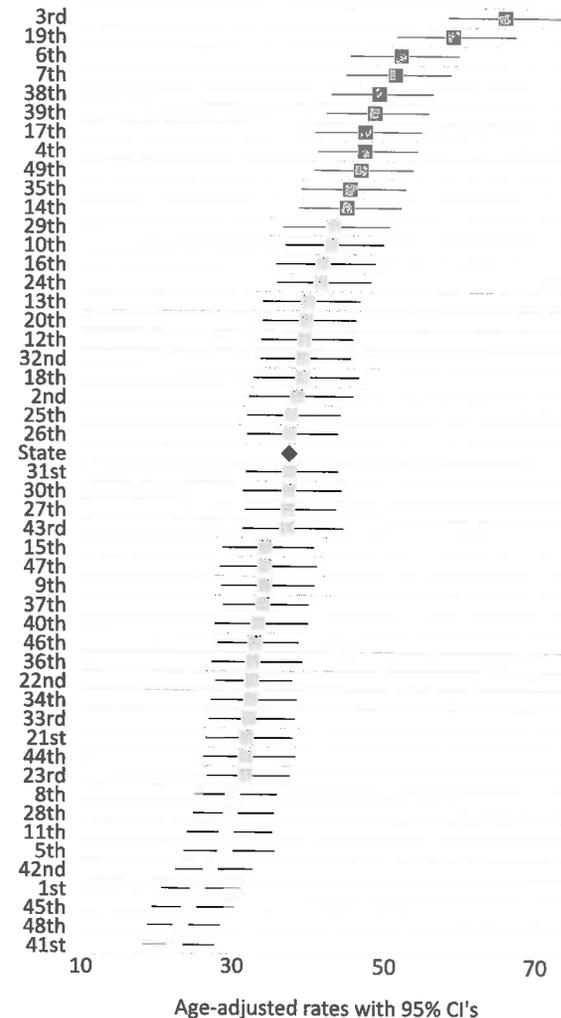
The highest rates are seen in the 3<sup>rd</sup>, 19<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 66.0, 59.1, 52.3 and 51.5, respectively. Excluding the other three districts, the rate in the 3<sup>rd</sup> is significantly higher than the rates in all the districts.

The lowest rates are seen in are the 41<sup>st</sup>, 48<sup>th</sup> and 45<sup>th</sup> districts with rates of 22.4, 23.1 and 24.3, respectively.

Higher rates are generally seen in the northeast and southwest corners of the state, around Hood Canal, the south central region and rural sectors of Snohomish, Skagit and King counties as well as in the Spokane, Everett and Vancouver environs.

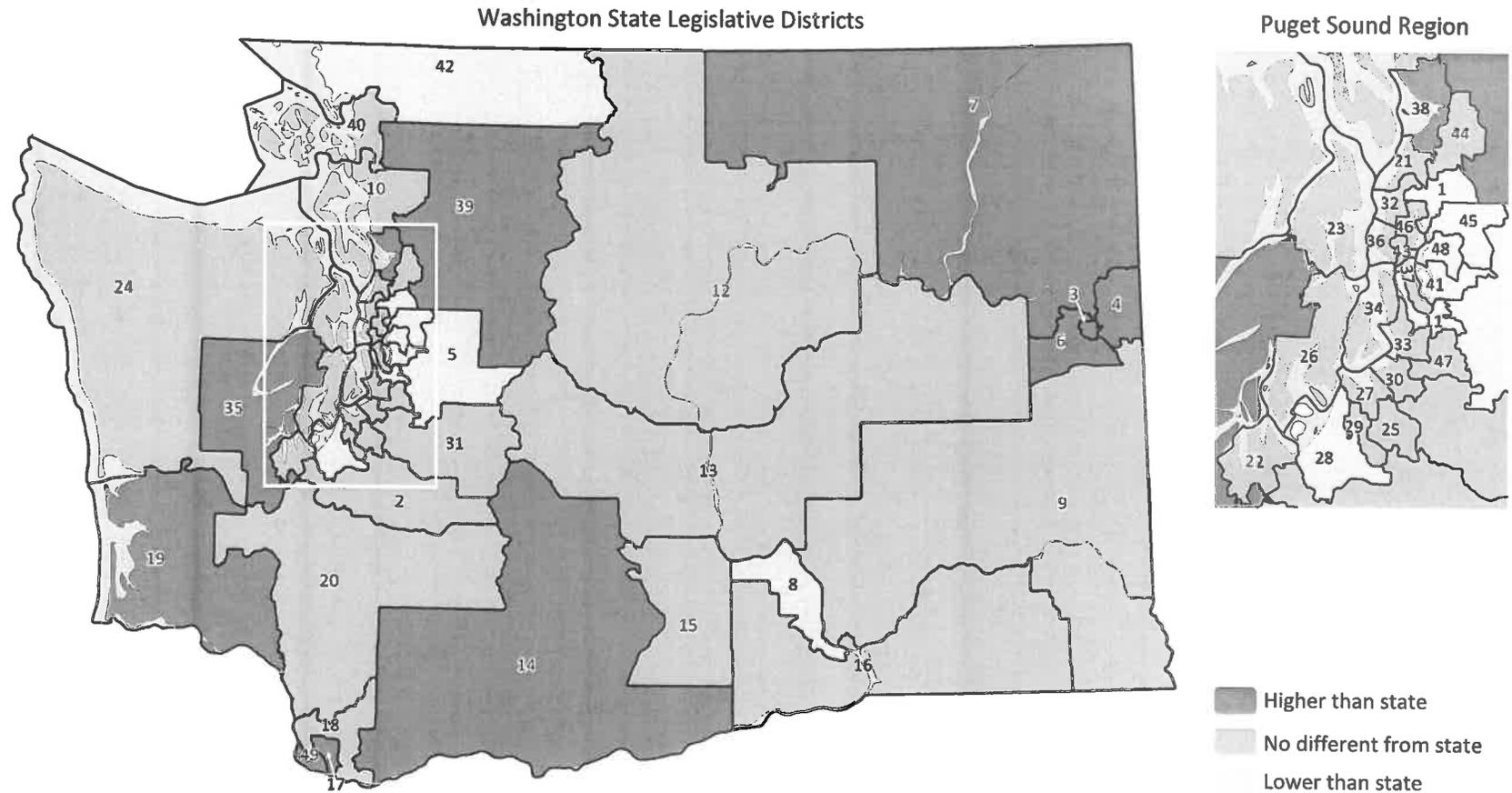
Lower rates are generally seen in the eastern Lake Washington environs and the Puget Sound coastal region of Pierce County.

Unintentional injury mortality rate ranked highest to lowest by district



### Unintentional Injury Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Unintentional Poisoning Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Unintentional poisonings are the leading cause of unintentional injury deaths among Washington residents, totaling 2,560 deaths from 2012 to 2014, for an average of 853 per year. Among those deaths, there is enough information from 2,541 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 10.4 per 100,000 persons.

Among the 49 districts, six have a rate significantly higher than the state’s and seven have a rate that is lower. There is a 4.5-fold difference between the district with the highest rate and the district with the lowest.

As with unintentional injuries in general, all unintentional poisonings are potentially preventable.

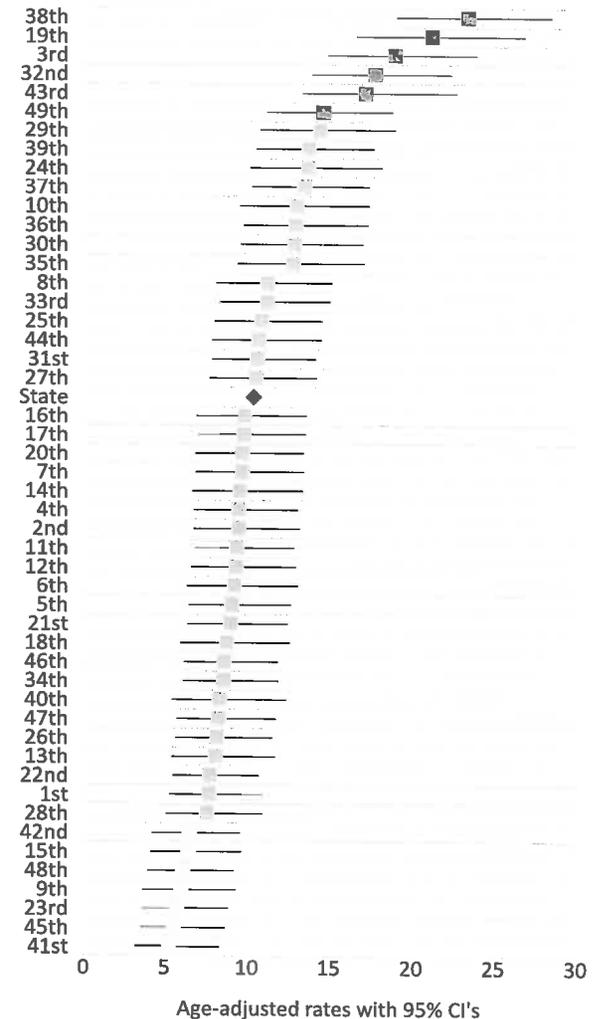
The highest rates are seen in the 38<sup>th</sup>, 19<sup>th</sup> and 3<sup>rd</sup> districts with age-adjusted rates per 100,000 persons of 23.5, 21.3 and 19.0, respectively. Excluding the other two districts, as well as the 32<sup>nd</sup> and 43<sup>rd</sup> districts, whose rates are 17.2 and 14.7, respectively, the rate in the 38<sup>th</sup> district is significantly higher than the rates in any of the remaining 44 districts.

The lowest rates are seen in the 41<sup>st</sup>, 45<sup>th</sup> and 23<sup>rd</sup> districts with rates of 5.3, 5.5 and 5.7, respectively.

Higher rates are generally seen in the Everett and Spokane city environs, downtown Seattle and in the rural southwest coastal region.

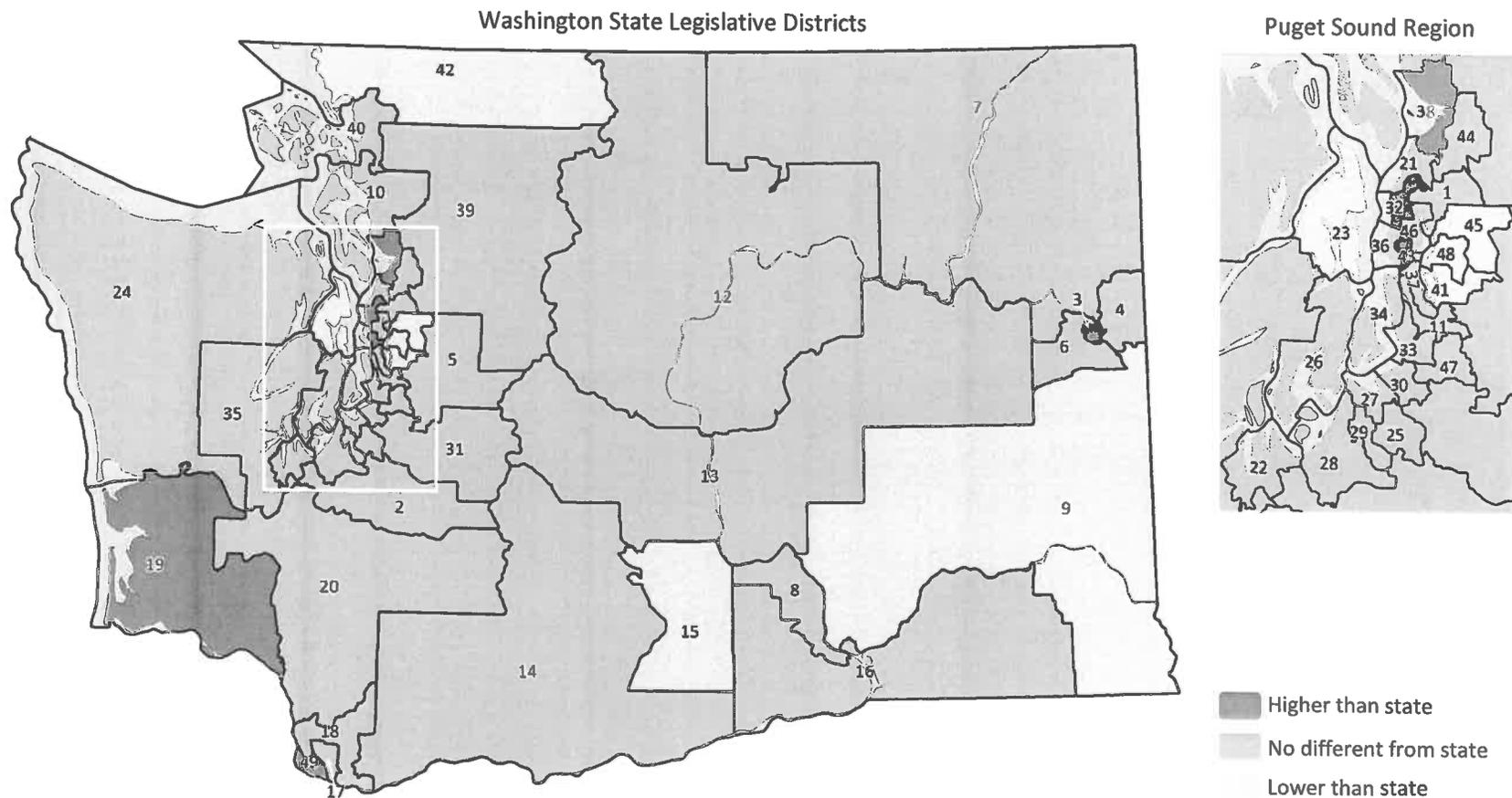
Lower rates are generally seen in the eastern Lake Washington environs and the Kitsap peninsula, as well as rural Whatcom, eastern Yakima County and the southeast corner of the state.

Unintentional poisoning mortality rate ranked highest to lowest by district



### Unintentional Poisoning Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Motor Vehicle Crash Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Motor vehicle crashes (MVC) are the second-leading cause of unintentional injury deaths among Washington residents, totaling 1,490 deaths from 2012 to 2014, for an average of 497 per year. Among those deaths, there is enough information from 1,439 (97 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 13.8 per 100,000 persons.

Among the 49 districts, seven have a rate significantly higher than the state’s and four have a rate that is lower. There is a six-fold difference between the district with the highest rate and the district with the lowest.

As with unintentional injuries in general, all MVC deaths are potentially preventable.

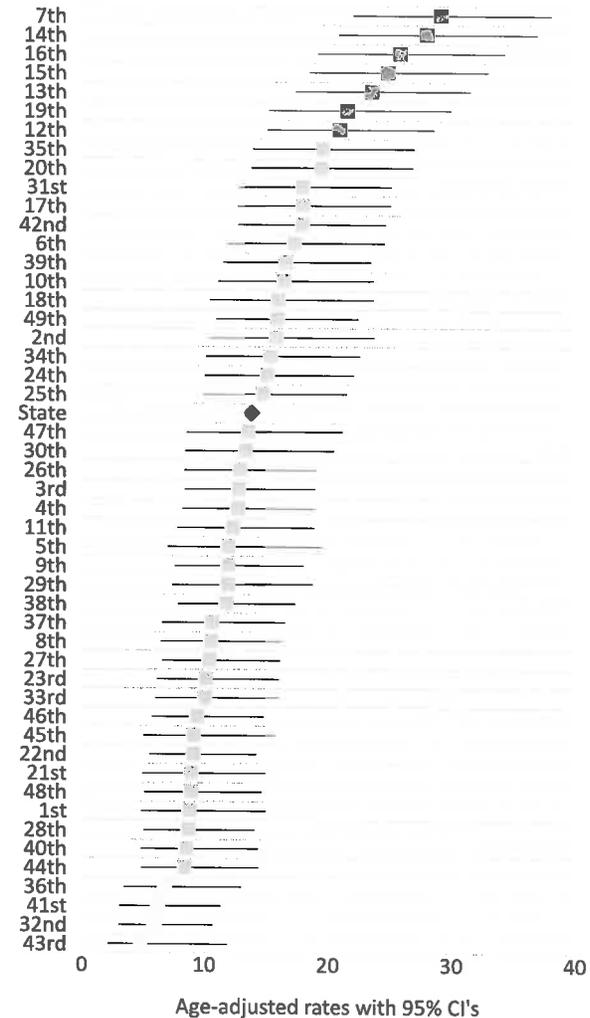
The highest rates are seen in the 7<sup>th</sup>, 14<sup>th</sup> and 16<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 29.2, 28.0 and 25.9, respectively.

The lowest rates are seen in the 43<sup>rd</sup>, 32<sup>nd</sup> and 41<sup>st</sup> districts with rates of 4.8, 6.0 and 6.2, respectively.

Higher rates are generally seen across the central rural sector of the state from the far northeast corner to the south central region, as well as in the southwest coastal area.

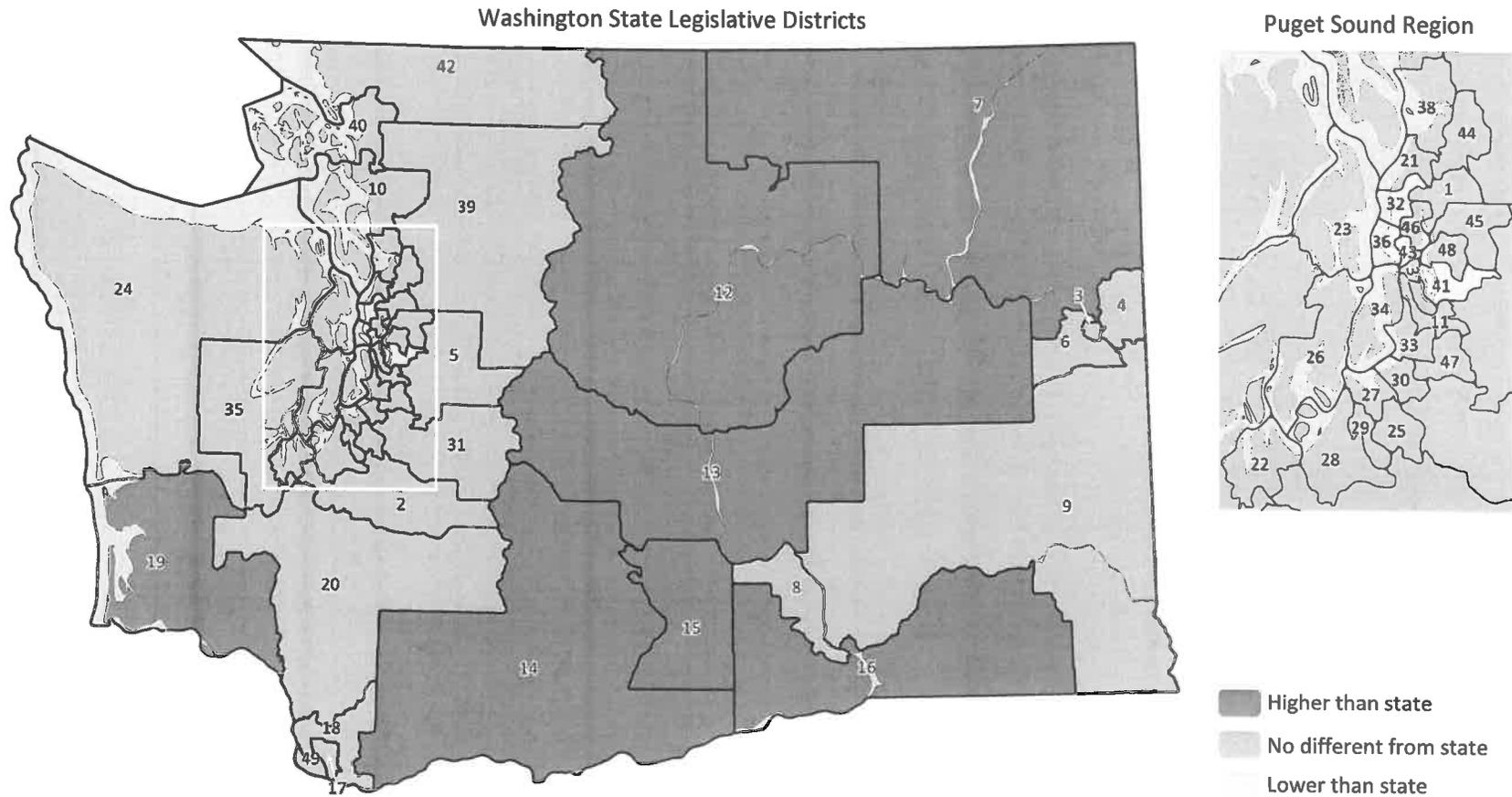
Lower rates are generally seen in and around the Lake Washington environs.

Motor vehicle crash mortality rate ranked highest to lowest by district



### Motor Vehicle Crash Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Stroke Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Cerebrovascular diseases, commonly known as strokes, are the sixth-leading cause of deaths among Washington residents, totaling 7,767 deaths from 2012 to 2014, for an average of 2,589 per year. Among those deaths, there is enough information from 7,652 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 34.4 per 100,000 persons.

Among the 49 districts, six have a rate significantly higher than the state’s and seven have a rate that is lower. There is a 2.4-fold difference between the district with the highest rate and the district with the lowest.

Strokes can be affected by lifestyle (e.g., smoking, exercise and diet choices) and therapies (e.g., blood pressure and cholesterol-lowering drugs), and the effects of the disease can be mitigated through rapid access to definitive hospital care.

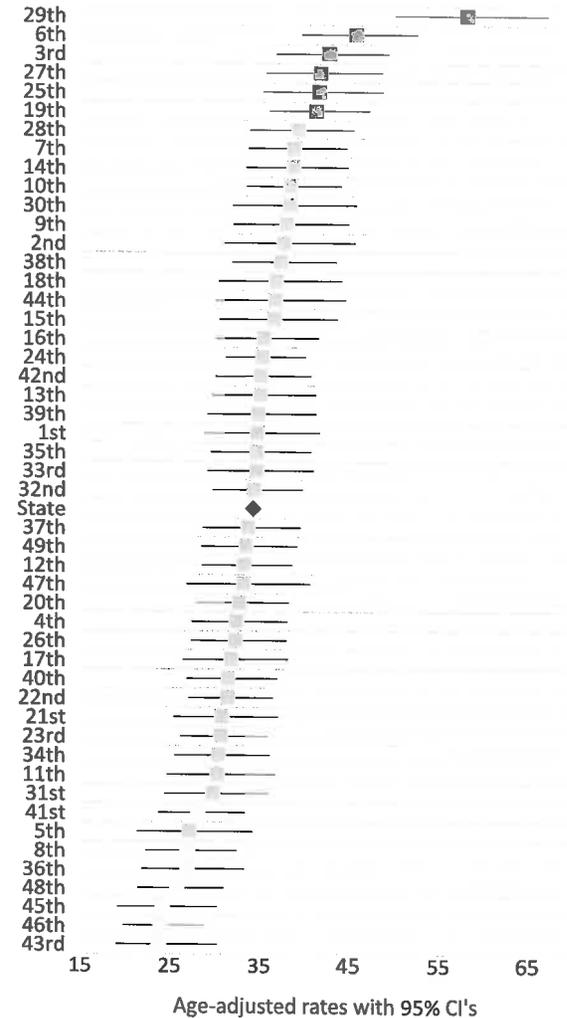
The highest rates are seen in the 29<sup>th</sup>, 6<sup>th</sup> and 3<sup>rd</sup> districts with age-adjusted rates per 100,000 persons of 58.2, 45.8 and 42.8, respectively. The rate for the 29<sup>th</sup> district is significantly higher than the rates in all other districts except the 6<sup>th</sup>.

The lowest rates are in the 43<sup>rd</sup>, 46<sup>th</sup> and 45<sup>th</sup> districts with rates of 23.8, 24.0 and 24.2, respectively.

Higher rates are seen in the Lakewood, Tacoma and Puyallup region, Spokane city and its environs, and in the southwest coastal area.

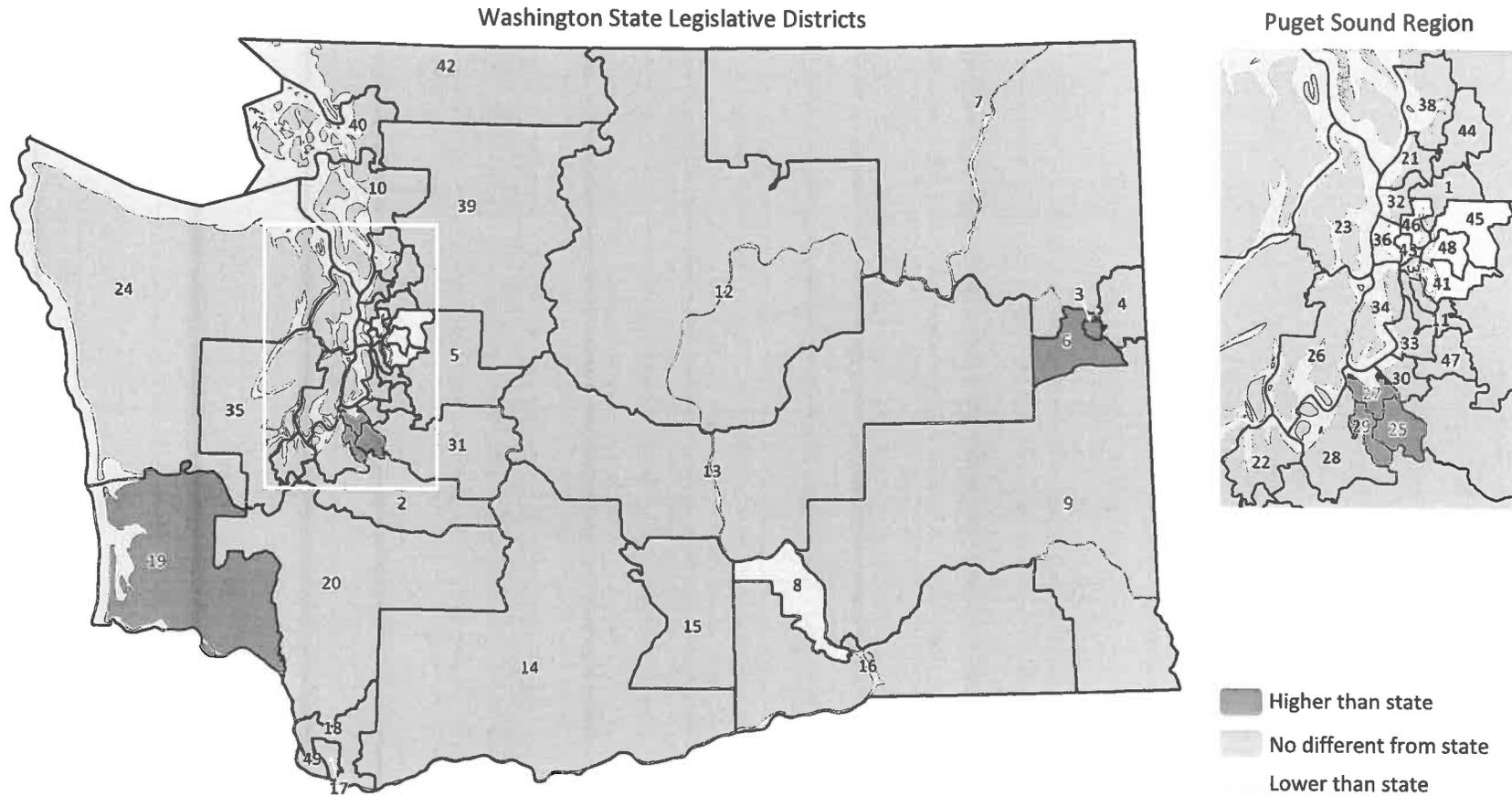
Lower rates are generally seen in the Lake Washington region and Tri-City environs.

Stroke mortality rate ranked highest to lowest by district



### Stroke Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



**Diabetes Mortality Rates by State Legislative Districts**

Age-adjusted per 100,000 persons, 2012–14 combined

Diabetes is the seventh-leading cause of deaths among Washington residents, totaling 4,918 deaths from 2012 to 2014, for an average of 1,639 per year. Among those deaths, there is enough information from 4,852 (99 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 21.5 per 100,000 persons.

Among the 49 districts, eight have a rate significantly higher than the state’s and two have a rate that is lower. There is a four-fold difference between the district with the highest rate and the district with the lowest.

Type 2 diabetes, the most prevalent form of the disease, is potentially preventable, largely through diet and exercise.

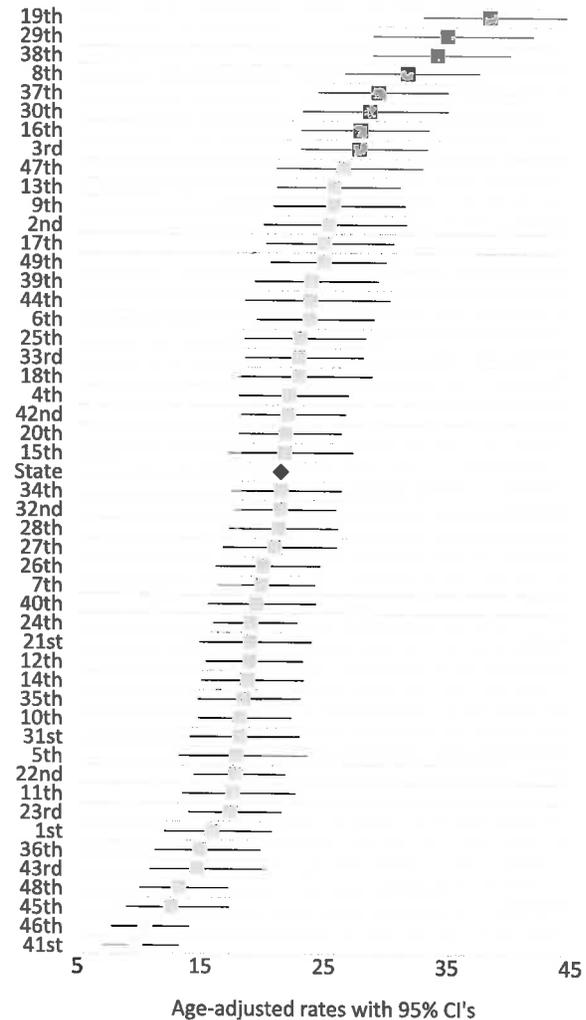
The highest rates are seen in the 19<sup>th</sup>, 29<sup>th</sup> and 38<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 38.5, 35.1 and 34.2, respectively. The rate for the 19<sup>th</sup> district is significantly higher than the rates in 41 other districts.

The lowest rates are seen in the 41<sup>st</sup> and 46<sup>th</sup> districts with rates of 9.7 and 10.5, respectively. The rate for the 41<sup>st</sup> district is significantly lower than the rates in 41 other districts.

Higher rates are seen in the southwest coastal region, Lakewood, south Tacoma, Rainier Valley and Everett environs, Spokane city and Benton and Walla Walla counties.

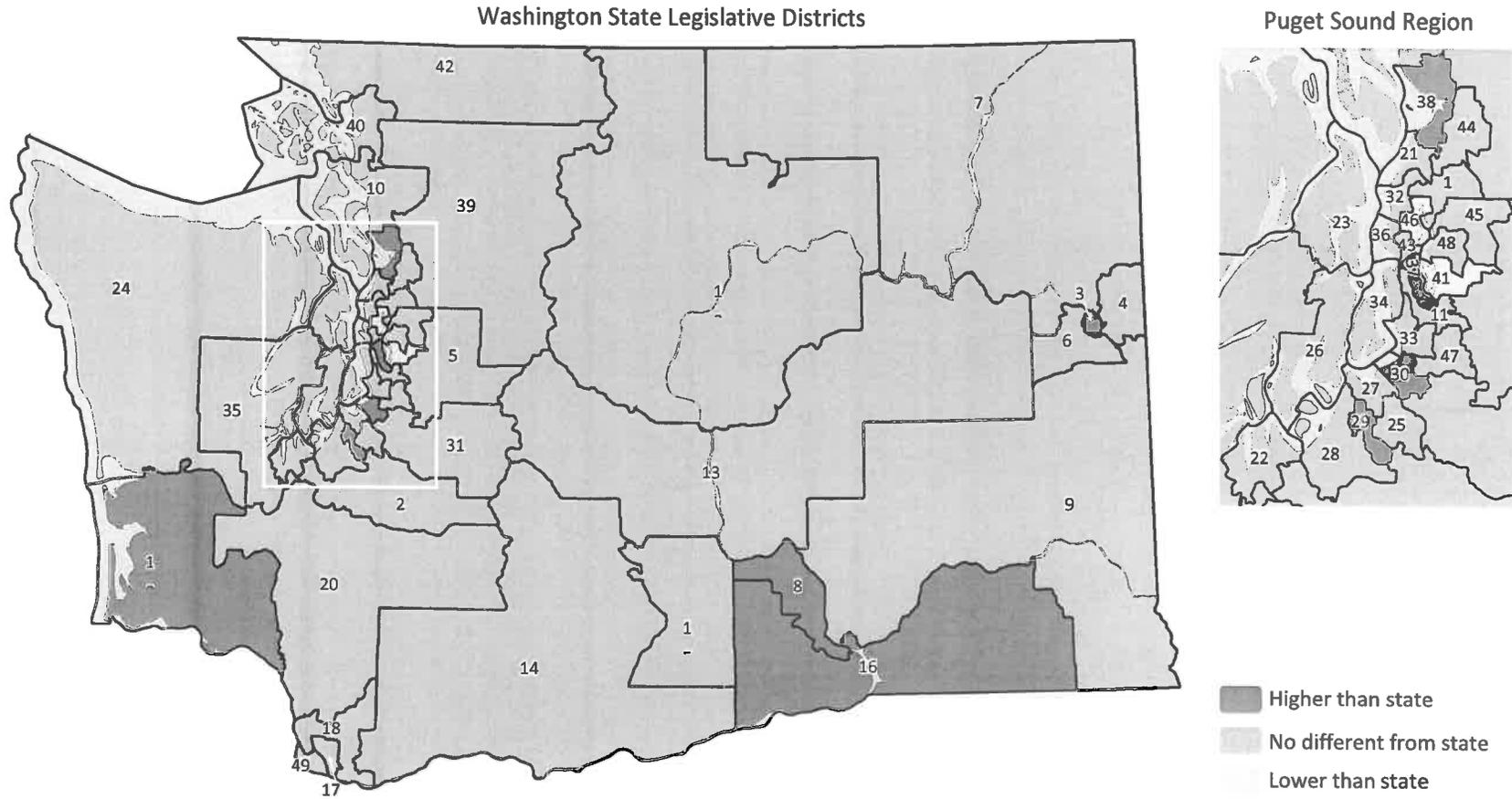
Lower rates are seen around Lake Washington.

Diabetes mortality rate ranked highest to lowest by district



### Diabetes Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



**Suicide Mortality Rates by State Legislative Districts**

Age-adjusted per 100,000 persons, 2012–14 combined

Suicide is the eighth-leading cause of deaths among Washington residents, totaling 3,154 deaths from 2012 to 2014, for an average of 1,051 per year. Among those deaths, there is enough information from 3,090 (98 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 14.3 per 100,000 persons.

Among the 49 districts, five have a rate significantly higher than the state’s and three have a rate that is lower. There is more than a two-fold difference between the district with the highest rate and the district with the lowest.

All suicides are preventable.

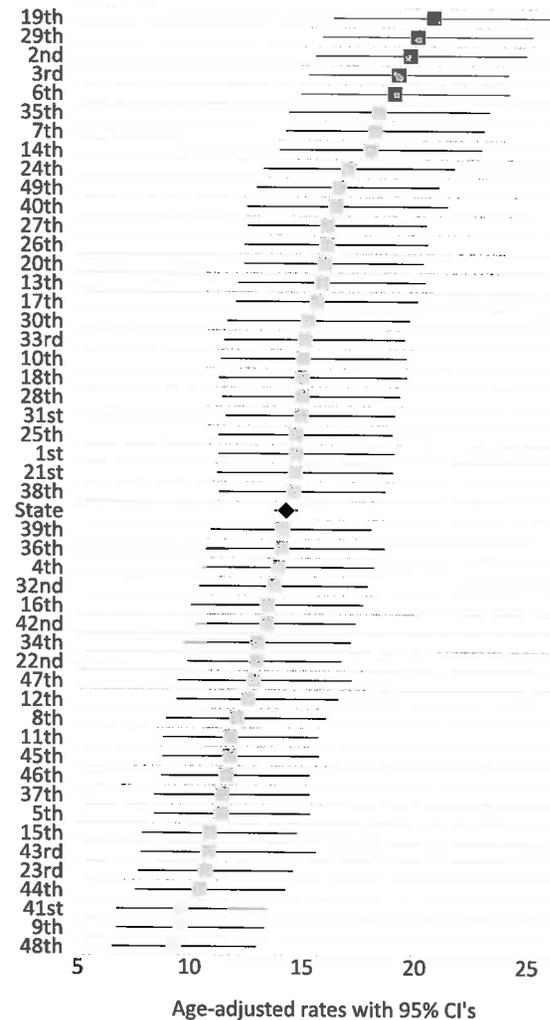
The highest rates are seen in the 19<sup>th</sup>, 29<sup>th</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 6<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 20.9, 20.2, 19.9, 19.3 and 19.2, respectively.

The lowest rates are seen the 48<sup>th</sup>, 9<sup>th</sup> and 41<sup>st</sup> districts with rates of 9.3, 9.6 and 9.6, respectively.

Higher rates are seen in the southwest coastal region, Lakewood, south Tacoma, Rainier Valley and Everett environs, Spokane city area and in Benton and Walla Walla counties.

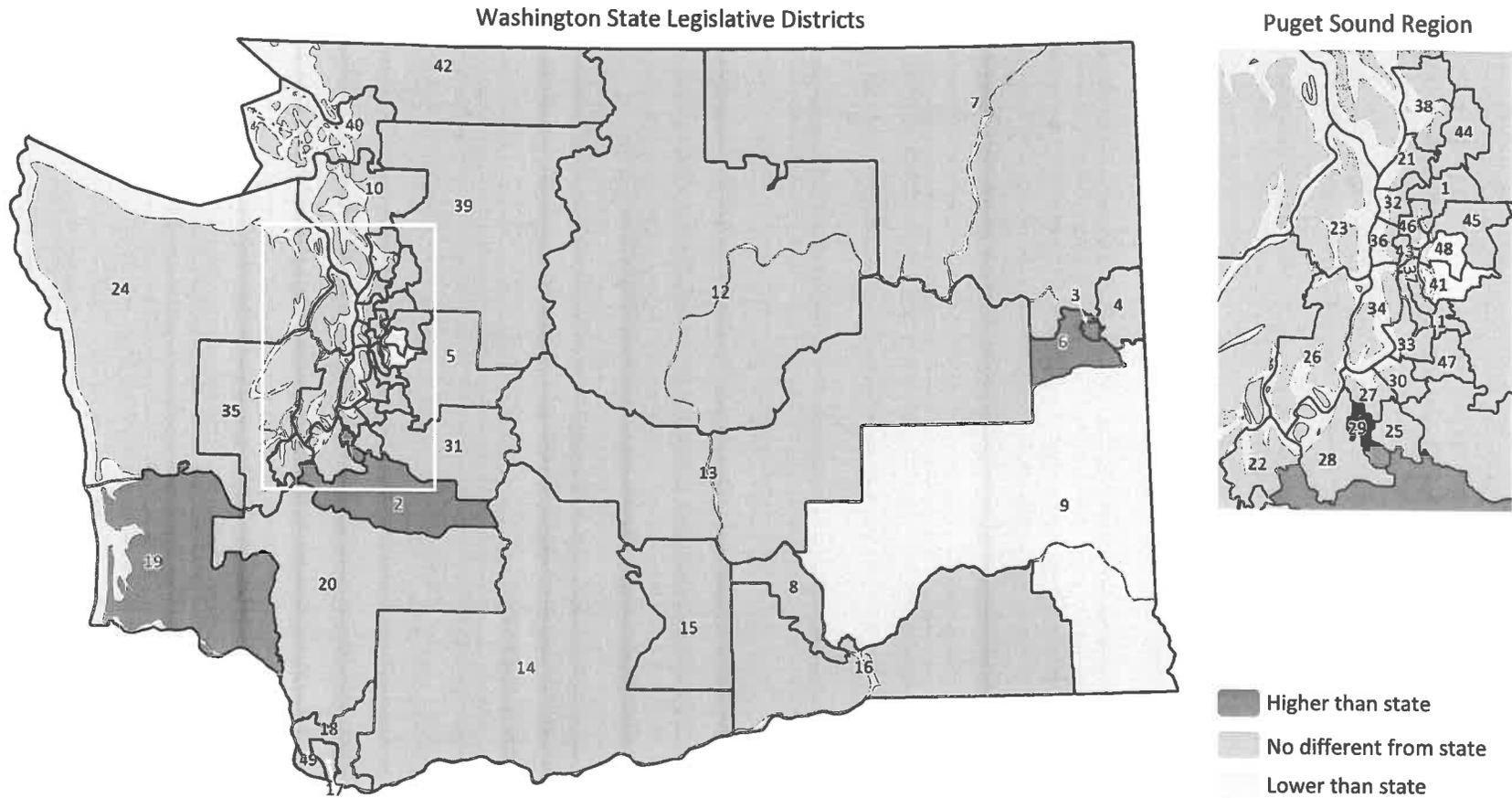
Lower rates are seen around Lake Washington.

Suicide mortality rate ranked highest to lowest by district



### Suicide Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Firearm Suicide Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Firearms, which are used in almost half\* of all suicide deaths among Washington residents, accounted for 1,549 suicide deaths from 2012 to 2014, for an average of 516 per year. Among those deaths, there is enough information from 1,520 (98 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 7.0 per 100,000 persons.

Among the 49 districts, three have a rate significantly higher than the state’s and five have a rate that is lower. There is more than a five-fold difference between the district with the highest rate and the district with the lowest.

As with suicides in general, all firearm suicides are potentially preventable.

The highest rates are seen in the 7<sup>th</sup>, 19<sup>th</sup> and 6<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 12.0, 11.0 and 10.5, respectively.

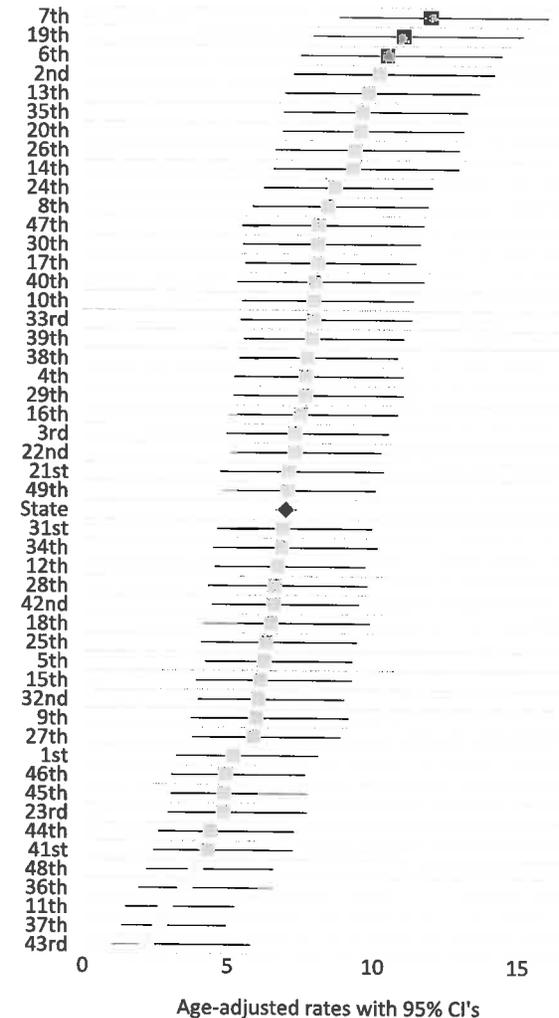
The lowest rates are seen in the 43<sup>rd</sup>, 37<sup>th</sup>, 11<sup>th</sup>, 36<sup>th</sup> and 48<sup>th</sup> districts with rates of 2.2, 2.7, 2.9, 3.6 and 3.9, respectively.

Higher rates are seen in the southwest coastal region and the northeast corner of the state.

Lower rates are seen around Lake Washington.

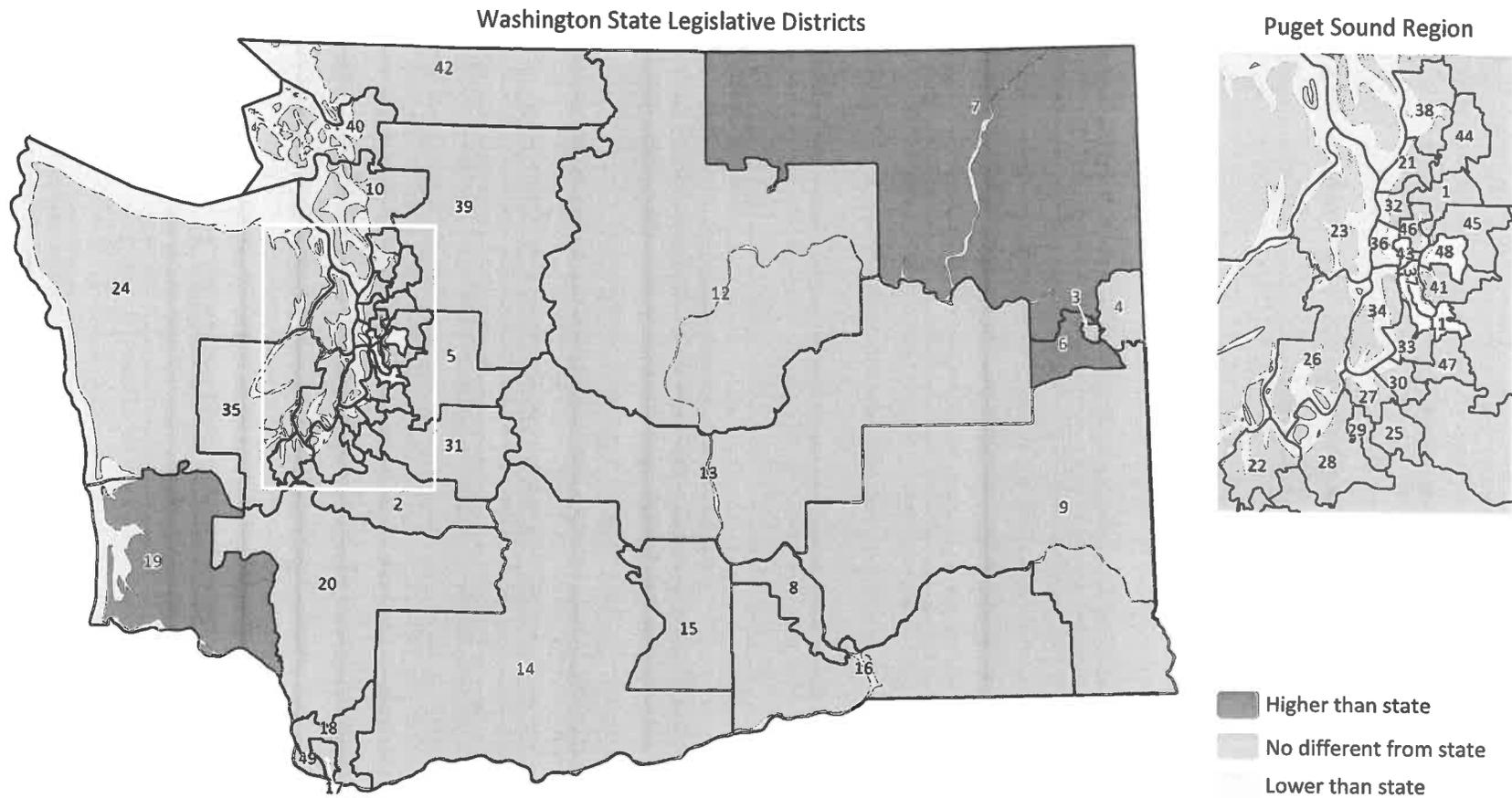
\*While firearms are used in 49 percent of all suicides, firearm suicides account for 78 percent of all firearm deaths; the remaining 22 percent of firearm deaths are homicides or unintentional.

Firearm suicide mortality rate ranked highest to lowest by district



### Firearm Suicide Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Chronic Liver Disease Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Chronic liver disease is the ninth-leading cause of deaths among Washington residents, totaling 2,719 deaths from 2012 to 2014, for an average of 906 per year. Among those deaths, there is enough information from 2,646 (97 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 11.1 per 100,000 persons.

Among the 49 districts, four have a rate significantly higher than the state’s and five have a rate that is lower. There is a four-fold difference between the district with the highest rate and the district with the lowest.

Major risk factors for chronic liver disease include alcoholism and IV drug use.

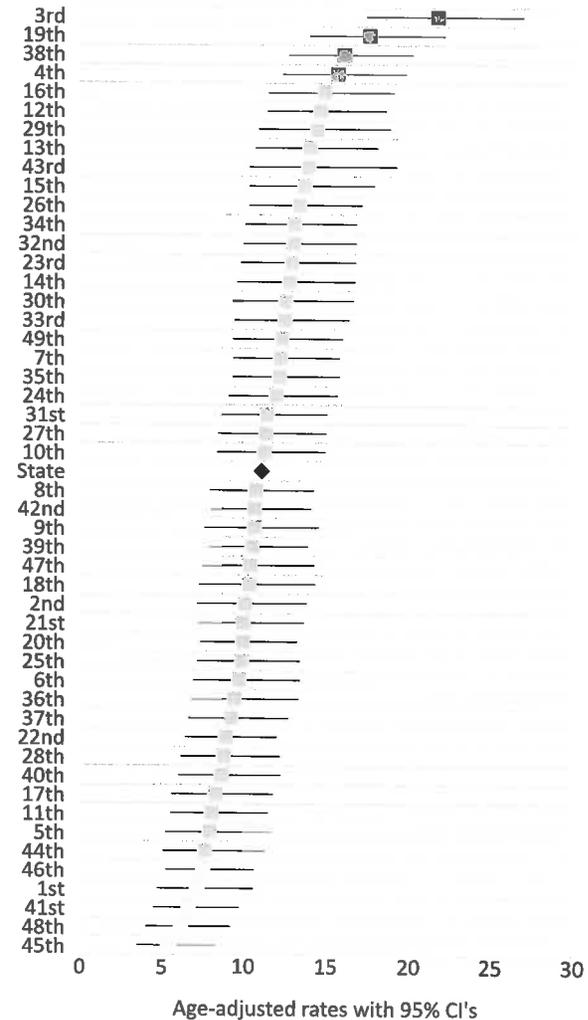
The highest rates are seen in the 3<sup>rd</sup>, 19<sup>th</sup>, 38<sup>th</sup> and 4<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 21.8, 17.7, 16.1 and 15.7, respectively.

The lowest rates are seen in the 45<sup>th</sup>, 48<sup>th</sup>, 41<sup>st</sup>, 1<sup>st</sup> and 46<sup>th</sup> districts with rates of 5.4, 6.2, 6.7, 7.2 and 7.6, respectively.

Higher rates are seen in the southwest coastal region, Everett environs and greater Spokane city area.

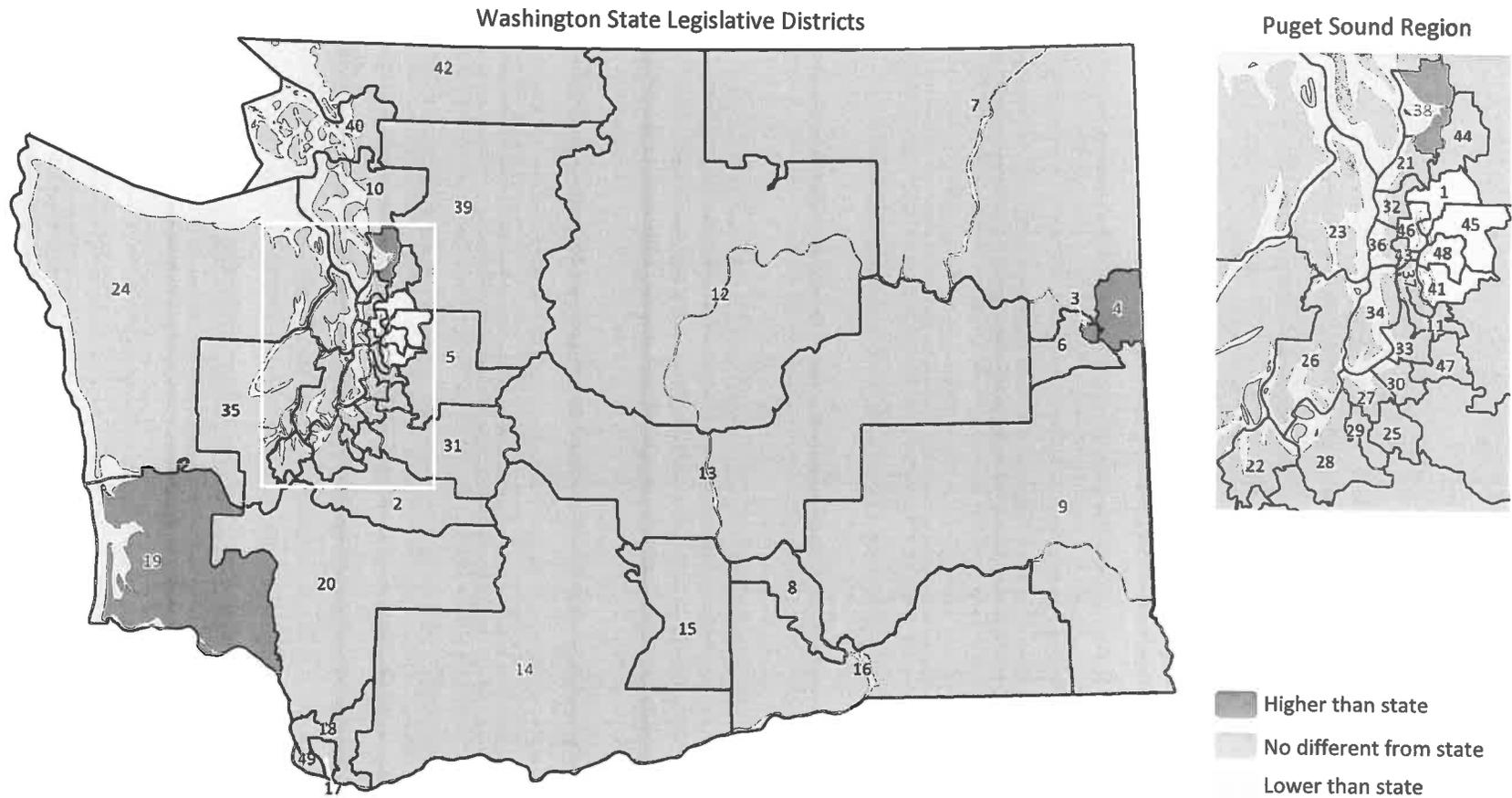
Lower rates are seen around Lake Washington.

Chronic liver disease mortality rate ranked highest to lowest by district



### Chronic Liver Disease Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



### Influenza and Pneumonia Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined

Influenza and pneumonia are the 10<sup>th</sup>-leading cause of deaths among Washington residents, totaling 2,198 deaths from 2012 to 2014, for an average of 733 per year. Among those deaths, there is enough information from 2,159 (98 percent) to be geocoded to legislative districts. Using those data, the statewide age-adjusted rate is 9.6 per 100,000 persons.

Among the 49 districts, five have a rate significantly higher than the state’s and two have a rate that is lower. There is a 3.4-fold difference between the district with the highest rate and the district with the lowest.

Both influenza and pneumonia deaths are potentially preventable through vaccinations or primary care services.

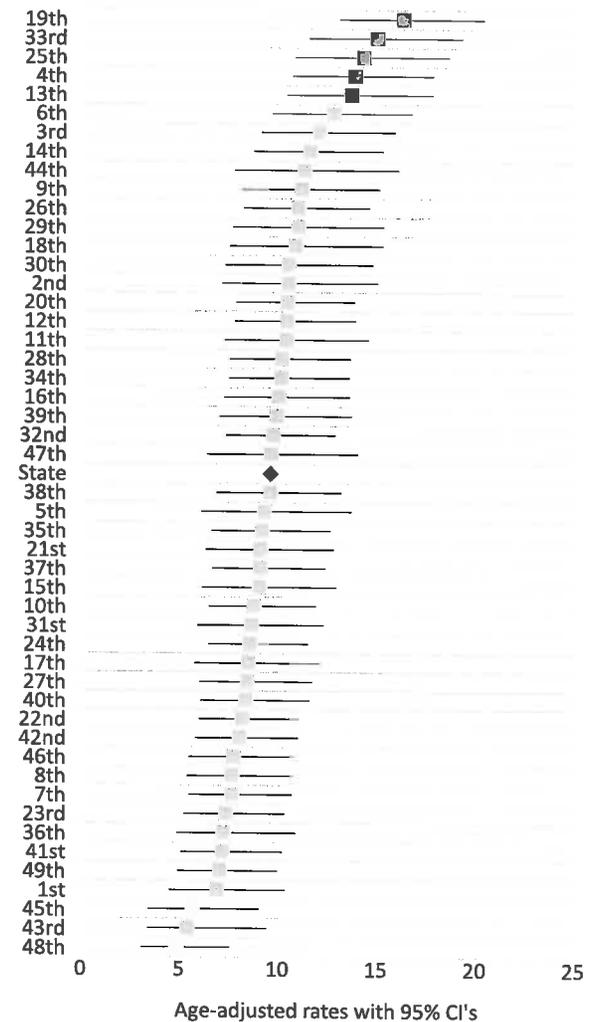
The highest rates are seen in the 19<sup>th</sup>, 33<sup>rd</sup>, 25<sup>th</sup>, 4<sup>th</sup> and 13<sup>th</sup> districts with age-adjusted rates per 100,000 persons of 16.3, 15.0, 14.3, 13.9 and 13.7, respectively.

The lowest rates are seen in the 48<sup>th</sup>, 43<sup>rd</sup> and 45<sup>th</sup> districts with rates of 4.9, 5.4 and 5.7, respectively. However, using confidence intervals as a test of significance, the rate for the 43<sup>rd</sup> does not appear to be significantly lower than the state’s rate.

Higher rates are seen in the southwest coastal region, SeaTac and Puyallup environs, across the eastern central region and greater eastern Spokane area.

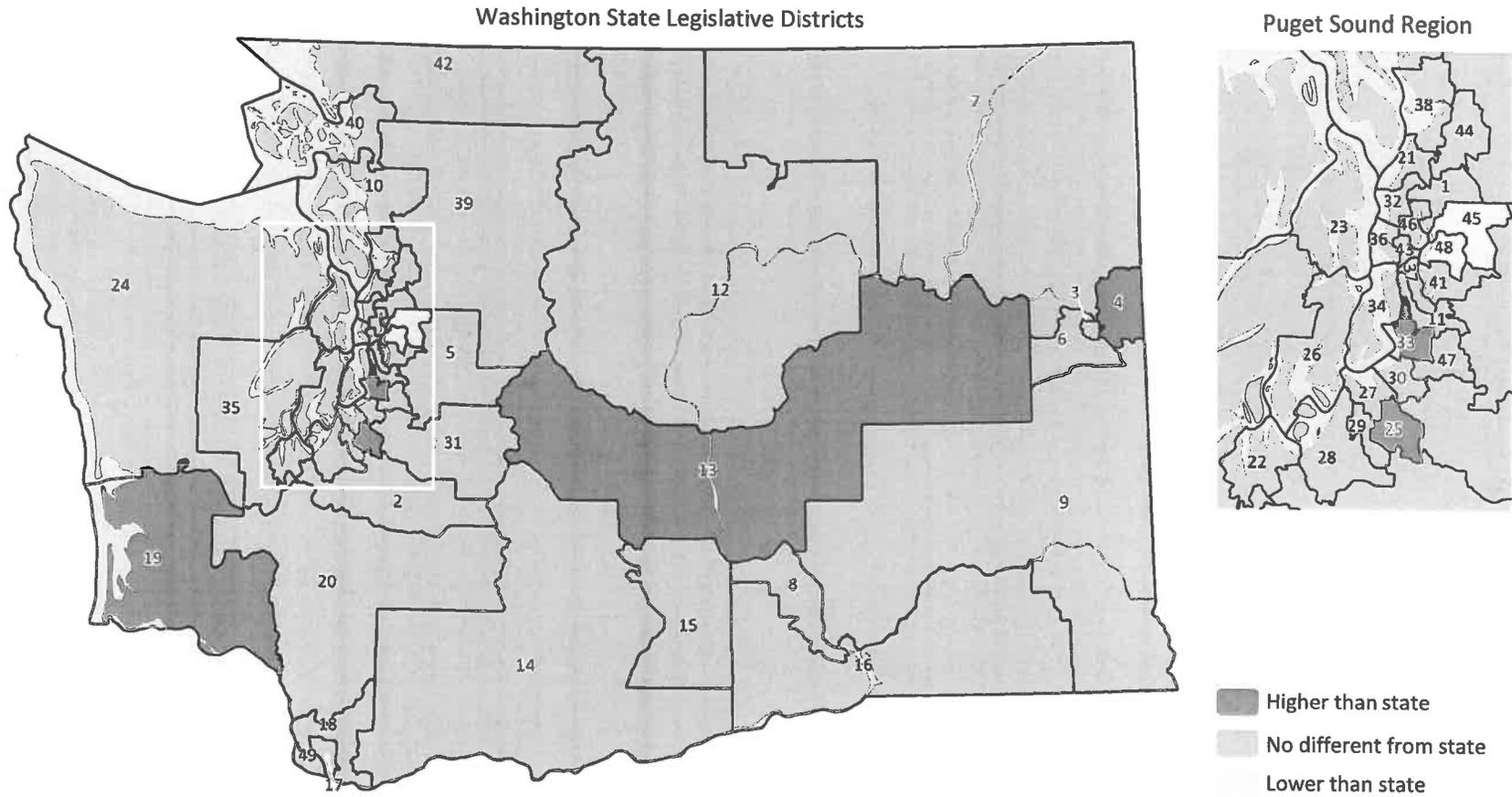
Lower rates are seen east of Lake Washington.

Influenza and pneumonia mortality rate ranked highest to lowest by district



### Influenza and Pneumonia Mortality Rates by State Legislative Districts

Age-adjusted per 100,000 persons, 2012–14 combined



Variations in Life Expectancy and Mortality Rates by State Legislative Districts

**Appendix A – Causes of Death Codes**

**Leading Causes of Death**

Condition	ICD-10 Code(s)
All cancers	C00-C97
Lung cancer	C33-C34
Female breast cancer	C50
Prostate cancer	C61
Colorectal cancer	C18-C21
All heart disease	I00-I09, I11, I13, I20-I51
Coronary artery disease	I20-I25
Alzheimer’s disease	G30
Chronic obstructive pulmonary disease	J40-J47
Unintentional injury	V01-X59, Y85-Y86
Unintentional poisoning	X40-X44
Motor vehicle crash	V40-V59
Stroke	I60-I69
Diabetes	E10-E14
Suicide	X60-X84, Y87.0
Firearm suicide	X72-X74
Chronic liver disease	K70, K73-K74
Influenza and pneumonia	J10-J18

Source: National Center for Health Statistics

**Smoking-Attributable Fractions by Sex and Age\***

	ICD-10	Males		Females	
		35-64	65+	35-64	65+
<b>Malignant neoplasms</b>					
Lip, oral cavity, pharynx	C00-C14	73%	68%	52%	43%
Esophagus	C15	69%	70%	63%	53%
Stomach	C16	25%	25%	13%	12%
Pancreas	C25	23%	16%	27%	22%
Larynx	C32	81%	80%	77%	70%
Lung & bronchus	C33, C34	87%	86%	76%	68%
Cervix uteri	C53	--	--	13%	9%
Kidney & renal pelvis	C64, C65	36%	35%	6%	4%
Urinary bladder	C67	44%	44%	31%	28%
Acute myeloid leukemia	C920	21%	20%	10%	11%
<b>Cardiovascular diseases</b>					
Ischemic heart disease	I20-I25	35%	14%	32%	10%
Other heart disease	I00-I09, I26-I51	18%	16%	11%	8%
Cerebrovascular disease	I60-I69	31%	7%	39%	5%
Atherosclerosis	I70	28%	23%	14%	7%
Aortic aneurysm	I71	62%	61%	59%	46%
Other arterial diseases	I72-I74, I77-I78	17%	9%	20%	12%
<b>Respiratory diseases</b>					
Pneumonia & influenza	J10-J18	21%	21%	20%	12%
Bronchitis & emphysema	J40-J43	89%	90%	82%	81%
Chronic airway obstruction	J44	79%	80%	79%	74%

\* Among adults ages 35 and older

Source: CDC Smoking Attributable Mortality, Morbidity and Economic Costs (SAMMEC)

**Health Care Amenable Deaths**

<u>Cause of death considered amenable to health care</u>	<u>Age</u>	<u>ICD-10</u>
<b>Infectious disease</b>		
Intestinal infections	0-14	A00-9
Tuberculosis	0-74	A15-9, B90
Other infections (diphtheria, tetanus, septicemia, poliomyelitis)	0-74	A36, A35, A80
Whooping cough	0-14	A37
Measles	1-14	B05
<b>Cancers</b>		
Malignant neoplasm of colon and rectum	0-74	C18-21
Malignant neoplasm of skin	0-74	C44
Malignant neoplasm of breast	0-74	C50
Malignant neoplasm of cervix uteri	0-74	C53
Malignant neoplasm of cervix uteri and body of uterus	0-44	C54, C55
Malignant neoplasm of testis	0-74	C62
Hodgkin's disease	0-74	C81
Leukemia	0-44	C91-5
Diabetes	0-49	E10-4
Ischemic heart disease: 50% of deaths	0-74	I20-5
<b>Other circulatory disease</b>		
Chronic rheumatic heart disease	0-74	I05-9
Hypertensive disease	0-74	I10-3, I15
Cerebrovascular disease	0-74	I60-9

**Health Care Amenable Deaths (continued)**

<u>Cause of death considered amenable to health care</u>	<u>Age</u>	<u>ICD-10</u>
Respiratory disease		
All respiratory diseases (excl. pneumonia, influenza)	1-14	J00-9, J20-99
Influenza	0-74	J10-1
Pneumonia	0-74	J12-8
Surgical conditions		
Peptic ulcer	0-74	K25-7
Appendicitis	0-74	K35-8
Abdominal hernia	0-74	K40-6
Cholelithiasis and cholecystitis	0-74	K80-1
Nephritis and nephrosis	0-74	N00-7, N17-9, N25-7
Benign prostatic hyperplasia	0-74	N40
Misadventures to patients	0-74	E870-6, E878-9, Y60-9, Y83-4
Maternal, congenital and perinatal conditions		
Maternal death	0-74	O00-99
Congenital cardiovascular anomalies	0-74	Q20-8
Perinatal deaths, all causes, excluding stillbirths	0-74	P00-96, A33
Other conditions		
Diseases of the thyroid	0-74	E00-7
Epilepsy	0-74	G40-1

Source: Nolte E, McKee CM. In amenable mortality — deaths avoidable through health care — progress in the US lags that of three European countries. *Health Aff (Millwood)*. 2012;31(9).  
 Published online Aug. 29, 2012

Variations in Life Expectancy and Mortality Rates by State Legislative Districts

**Appendix B – Data Tables**

Variations in Life Expectancy and Mortality Rates by State Legislative Districts

District	Life Expectancy				All Causes				Smoking Attributable				Health Care Amenable			
	Life Exp	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths
1st	82.7	82.3	83.1	2196	580.4	555.6	606.2	2196	78.1	69.1	88.0	298	43.3	37.3	50.2	201
2nd	78.1	77.7	78.6	2691	807.6	776.0	840.3	2691	132.2	119.8	145.7	457	63.3	56.0	71.4	290
3rd	76.6	76.1	77	3819	841.1	814.0	869.0	3819	135.3	124.5	147.0	604	71.9	64.1	80.5	321
4th	79.2	78.7	79.6	3638	750.8	726.1	776.2	3638	110.3	101.0	120.3	541	51.8	45.5	58.8	260
5th	82.5	82.1	82.9	1925	605.6	577.4	634.9	1925	82.1	71.9	93.3	267	36.0	30.7	42.3	175
6th	79.3	78.8	79.7	3509	756.5	731.0	782.7	3509	106.2	96.8	116.5	487	51.9	45.2	59.6	226
7th	79.8	79.4	80.3	3749	669.3	647.2	692.0	3749	102.9	94.6	111.8	614	49.6	43.9	56.1	318
8th	80.7	80.3	81.1	3076	668.0	644.2	692.5	3076	100.2	91.1	110.0	465	54.3	47.7	61.6	259
9th	80.6	80.2	81.1	2601	663.9	638.2	690.5	2601	93.7	84.1	104.1	363	55.6	48.7	63.4	241
10th	81	80.6	81.4	3723	644.9	623.8	666.8	3723	86.2	78.8	94.4	511	49.5	43.7	56.1	290
11th	81.4	81	81.9	2299	626.3	600.2	653.4	2299	88.6	78.9	99.3	323	59.6	52.7	67.3	279
12th	80.2	79.8	80.6	3642	668.2	646.2	690.9	3642	95.2	87.1	103.9	530	49.1	43.2	55.8	267
13th	80.7	80.2	81.1	2864	643.9	620.2	668.5	2864	96.5	87.5	106.2	436	49.5	43.3	56.6	235
14th	79.1	78.7	79.6	3469	704.1	680.3	728.7	3469	103.9	95.0	113.5	526	61.7	54.9	69.4	312
15th	79.1	78.6	79.6	2672	726.2	698.5	754.7	2672	112.3	101.6	123.9	415	70.1	62.3	78.8	300
16th	80.2	79.7	80.6	3000	665.2	641.1	690.0	3000	98.4	89.3	108.3	444	53.1	46.5	60.6	237
17th	79.7	79.2	80.1	2933	728.3	701.6	755.9	2933	99.9	90.2	110.5	407	52.2	45.7	59.5	243
18th	80.3	79.9	80.7	2486	707.9	679.4	737.3	2486	99.8	89.3	111.2	359	43.8	37.9	50.6	207
19th	76.1	75.6	76.5	4661	883.7	857.7	910.6	4661	138.8	128.9	149.6	762	81.8	73.6	90.9	409
20th	79.6	79.2	80	3740	703.2	680.4	726.8	3740	113.0	104.2	122.6	626	57.5	51.3	64.5	341
21st	81.1	80.6	81.5	2681	667.1	641.5	693.5	2681	93.8	84.2	104.2	371	49.3	43.0	56.4	229
22nd	81.5	81	81.9	3632	618.8	598.3	640.1	3632	89.5	81.8	98.0	517	47.7	41.9	54.2	256
23rd	81.8	81.4	82.3	3242	591.9	571.2	613.4	3242	80.6	73.2	88.8	452	48.0	42.0	54.7	260
24th	80.5	80	80.9	4993	649.2	630.1	669.0	4993	100.2	93.2	107.9	809	51.7	45.8	58.3	364
25th	79.5	79	79.9	2983	729.3	702.9	756.5	2983	112.7	102.4	123.8	463	59.6	52.6	67.3	274
26th	80.1	79.7	80.6	3436	696.4	672.8	720.8	3436	99.1	90.5	108.5	509	52.2	46.1	59.1	290
27th	78.8	78.4	79.3	3210	741.5	715.3	768.4	3210	113.5	103.3	124.5	486	70.9	63.3	79.3	331
28th	80.1	79.6	80.5	3304	691.7	667.9	716.2	3304	100.1	91.2	109.8	475	58.2	51.4	65.8	272
29th	76.2	75.8	76.7	3147	894.0	862.4	926.5	3147	142.7	130.3	155.9	513	97.0	87.5	107.4	393
30th	77.9	77.4	78.3	2954	834.4	803.9	865.9	2954	122.9	111.4	135.4	442	68.9	61.2	77.4	300
31st	81	80.6	81.5	2644	645.8	620.6	671.8	2644	93.5	84.1	103.8	388	43.6	38.0	50.0	229
32nd	79.9	79.5	80.3	4153	717.3	694.7	740.5	4153	91.4	83.3	100.1	508	58.8	52.1	66.3	299
33rd	79.2	78.8	79.7	3095	727.4	701.4	754.2	3095	103.2	93.4	113.9	427	66.8	59.2	75.3	286
34th	81.5	81	81.9	2995	624.6	601.6	648.3	2995	85.6	77.2	94.9	403	47.7	41.7	54.4	242
35th	79.4	78.9	79.9	3439	709.8	685.6	734.8	3439	109.7	100.6	119.7	562	56.5	50.0	63.7	313
36th	82.5	82	83	2309	583.4	558.8	609.1	2309	80.0	70.9	90.3	307	52.8	45.9	60.8	228
37th	80.9	80.4	81.3	3076	642.4	619.4	666.2	3076	79.2	71.3	88.0	380	62.6	55.6	70.4	297
38th	78.9	78.5	79.4	3358	728.8	703.8	754.5	3358	111.9	102.2	122.3	516	64.3	57.3	72.1	319
39th	80.7	80.3	81.1	2782	649.5	624.8	675.0	2782	101.8	92.2	112.1	451	49.7	43.8	56.2	273
40th	81.6	81.2	82.1	3078	609.2	587.1	632.0	3078	83.2	75.4	91.9	435	48.0	41.6	55.4	232
41st	84.3	83.9	84.7	2507	505.5	485.5	526.2	2507	59.2	52.5	66.7	293	32.3	27.3	38.3	155
42nd	80.7	80.3	81.1	3414	657.1	634.8	680.1	3414	92.2	84.0	101.0	484	48.8	43.0	55.4	266
43rd	82.6	82.1	83.1	2132	552.1	527.6	578.0	2132	67.3	58.7	77.5	246	43.4	36.6	51.9	164
44th	81	80.5	81.4	2154	669.5	640.4	699.7	2154	97.1	86.2	109.1	318	48.3	41.8	55.7	211
45th	83.8	83.3	84.2	1964	533.2	508.7	558.8	1964	68.3	59.5	78.2	243	31.5	26.4	37.5	149
46th	84	83.5	84.4	2620	518.9	498.6	539.9	2620	64.7	57.6	72.6	320	38.5	33.1	44.6	194
47th	80	79.5	80.4	2375	719.1	689.5	749.8	2375	93.5	83.2	104.8	326	47.9	41.5	55.1	213
48th	84.7	84.3	85	2382	495.3	475.2	516.2	2382	57.5	50.8	65.2	270	28.8	24.1	34.4	135
49th	79.2	78.7	79.6	3554	717.9	694.1	742.4	3554	106.6	97.6	116.4	531	59.8	53.1	67.2	302
State	80.4	80.4	80.5	150306	670.9	667.5	674.4	150306	96.9	95.6	98.2	21882	53.2	52.3	54.2	12875

Variations in Life Expectancy and Mortality Rates by State Legislative Districts

District	All Cancers				Lung Cancer				Female Breast Cancer				Prostate Cancer			
	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths
1st	140.0	128.0	153.0	552	30.1	24.6	36.7	113	13.9	9.6	20.0	35	17.7	11.0	27.0	22
2nd	195.8	180.9	211.8	698	61.6	53.2	70.9	217	25.5	18.6	34.3	49	17.7	10.8	27.5	22
3rd	178.8	166.2	192.2	782	53.7	46.9	61.5	229	16.3	11.5	22.9	40	22.2	15.8	30.6	40
4th	173.1	161.4	185.6	850	46.6	40.7	53.4	231	22.0	16.6	28.9	59	22.4	16.2	30.4	45
5th	136.8	124.0	150.7	480	34.5	28.1	42.1	115	22.3	15.8	31.1	42	16.0	9.6	25.4	22
6th	167.3	155.2	180.2	750	38.4	32.7	45.0	169	18.6	13.3	25.8	44	16.2	11.0	23.5	31
7th	159.1	148.8	170.1	959	39.6	34.6	45.4	240	17.1	12.7	23.0	54	21.6	16.1	28.9	56
8th	155.9	144.6	168.1	723	44.3	38.3	51.1	203	20.7	15.4	27.6	53	20.9	14.7	28.9	38
9th	144.9	133.0	157.7	568	33.4	27.7	40.0	125	15.4	10.6	22.0	34	20.3	14.1	28.5	36
10th	151.0	140.9	161.7	886	34.5	29.8	39.9	205	19.4	14.7	25.7	63	18.2	13.3	24.7	47
11th	157.0	144.2	170.8	594	39.3	32.9	46.7	143	20.5	14.7	28.1	43	18.0	11.4	27.2	24
12th	153.0	142.6	164.1	840	35.4	30.5	41.0	196	16.4	12.0	22.3	48	23.6	17.8	31.0	57
13th	142.7	131.7	154.5	647	36.2	30.8	42.4	166	13.1	8.9	19.1	32	21.6	15.5	29.6	42
14th	161.1	149.9	173.0	805	39.5	34.2	45.6	203	18.8	13.9	25.3	53	14.7	9.9	21.3	31
15th	163.2	150.3	177.1	605	44.6	38.0	52.1	166	21.6	15.6	29.4	43	15.9	10.1	23.8	24
16th	145.5	134.2	157.5	642	37.7	32.2	44.1	170	17.1	12.0	23.8	39	19.4	13.4	27.2	35
17th	171.0	158.3	184.5	714	43.1	36.8	50.3	178	28.0	21.4	36.3	63	16.3	10.7	24.0	28
18th	176.6	162.8	191.2	669	42.4	35.8	50.1	159	22.6	16.6	30.4	50	24.1	16.5	34.1	35
19th	189.1	177.4	201.7	1021	52.4	46.4	59.3	287	22.9	17.1	30.5	61	18.5	13.5	25.2	46
20th	168.8	158.0	180.4	949	47.5	41.9	53.8	269	19.4	14.7	25.7	59	18.6	13.3	25.5	43
21st	160.7	148.1	174.0	646	40.1	33.9	47.2	157	19.6	14.3	26.5	48	15.3	9.5	23.5	22
22nd	145.7	135.7	156.4	828	39.3	34.1	45.1	217	15.5	11.4	20.9	51	18.7	13.5	25.5	43
23rd	137.7	127.9	148.3	769	34.2	29.4	39.7	190	16.2	12.0	22.0	53	21.8	16.1	29.4	51
24th	157.1	148.2	166.7	1260	44.1	39.6	49.3	366	17.2	13.2	22.7	72	18.1	13.9	23.9	64
25th	162.8	150.5	176.0	671	47.6	41.0	55.0	196	21.1	15.5	28.2	50	21.6	14.8	30.7	33
26th	165.2	154.0	177.2	855	41.2	35.7	47.4	218	24.3	18.6	31.6	65	17.3	12.2	24.2	39
27th	168.1	155.7	181.4	721	39.5	33.5	46.3	166	21.6	15.8	29.0	49	20.6	13.9	29.5	32
28th	164.3	152.7	176.6	771	44.3	38.4	51.0	208	19.7	14.5	26.4	50	21.3	15.4	29.1	43
29th	191.2	176.9	206.5	687	60.0	52.1	68.8	215	19.9	14.2	27.5	40	14.1	8.2	22.8	18
30th	191.0	176.7	206.2	701	50.8	43.5	59.0	186	21.6	15.8	29.1	48	22.8	15.5	32.8	33
31st	153.8	141.8	166.6	669	38.5	32.6	45.2	165	15.4	10.8	21.5	39	21.8	14.8	31.0	34
32nd	159.9	149.1	171.5	865	38.7	33.4	44.8	202	25.7	20.1	32.9	79	20.6	14.9	28.1	44
33rd	161.5	149.1	174.8	658	42.7	36.4	49.8	172	16.8	11.6	23.8	35	22.5	15.7	31.4	37
34th	147.8	136.7	159.8	698	38.9	33.1	45.5	173	24.8	18.9	32.4	64	13.0	8.3	19.8	25
35th	177.0	165.3	189.5	908	51.9	45.8	58.9	270	21.5	16.0	28.7	56	19.4	13.9	26.6	43
36th	151.1	138.4	165.1	572	35.2	29.2	42.6	131	24.5	18.2	33.3	55	21.9	14.6	32.1	31
37th	149.0	137.9	160.8	696	29.0	24.2	34.7	134	19.5	14.2	26.4	48	18.9	13.1	26.6	36
38th	165.1	153.3	177.7	759	47.2	40.9	54.3	213	16.4	11.7	22.7	42	18.0	12.1	25.9	30
39th	151.5	139.9	164.0	682	40.6	34.7	47.2	186	17.3	12.4	23.8	44	25.9	18.6	35.2	47
40th	144.9	134.4	156.4	738	36.2	31.1	42.2	187	21.0	15.6	28.2	56	21.1	15.4	28.7	46
41st	132.6	122.4	143.7	642	28.3	23.7	33.8	136	20.8	15.5	27.9	54	15.3	10.4	22.0	32
42nd	149.1	138.6	160.3	776	38.2	32.9	44.2	195	18.0	13.3	24.2	51	18.2	12.9	25.0	41
43rd	139.1	126.6	153.2	506	31.0	25.1	38.7	103	13.7	9.2	22.3	32	27.0	19.0	38.7	40
44th	155.5	142.0	170.2	539	39.7	32.9	47.6	134	17.7	12.3	25.2	37	28.2	18.9	40.5	31
45th	139.3	126.8	152.9	520	28.1	22.5	34.8	100	17.5	12.1	24.8	39	20.5	13.4	30.4	29
46th	132.4	122.1	143.5	645	27.5	22.9	32.9	134	21.0	15.7	28.0	55	21.0	14.7	29.1	39
47th	146.4	133.7	160.2	527	36.0	29.9	43.0	136	20.0	14.3	27.6	42	20.0	12.4	30.7	23
48th	122.4	112.4	133.3	571	24.7	20.3	30.0	114	15.7	11.3	21.9	43	16.2	10.9	23.3	31
49th	173.3	161.7	185.7	862	49.4	43.3	56.2	246	17.5	12.8	23.8	48	17.6	12.1	24.7	35
State	156.9	155.2	158.6	35476	40.2	39.3	41.0	9034	19.4	18.6	20.2	2409	19.5	18.6	20.4	1776

Variations in Life Expectancy and Mortality Rates by State Legislative Districts

District	Colorectal Cancer				All Heart Disease				Coronary Artery Disease				Alzheimer's Disease			
	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths
1st	11.5	8.3	15.7	46	118.9	107.8	131.0	442	70.1	61.7	79.5	265	43.5	36.8	51.2	152
2nd	12.3	8.8	16.8	45	180.1	165.1	196.3	572	109.0	97.4	121.7	352	39.7	32.4	48.2	106
3rd	11.8	8.8	15.6	55	154.3	143.0	166.3	724	89.8	81.2	99.2	416	33.8	28.7	39.6	164
4th	10.7	7.9	14.2	52	130.8	120.7	141.6	643	75.2	67.6	83.6	369	47.2	41.3	53.8	236
5th	9.8	6.7	14.1	38	122.2	109.5	136.0	372	74.0	64.2	84.9	225	41.7	34.1	50.5	107
6th	13.6	10.3	17.8	61	132.2	121.9	143.3	641	80.0	71.9	88.8	380	55.8	49.2	63.1	273
7th	14.4	11.3	18.2	84	127.0	117.7	137.0	726	81.2	73.9	89.3	472	31.7	27.0	37.1	166
8th	13.4	10.1	17.4	60	134.8	124.3	146.0	629	95.2	86.4	104.7	442	67.7	60.4	75.7	320
9th	14.1	10.5	18.7	53	140.5	129.0	152.9	560	87.9	78.8	97.9	351	37.2	31.4	44.0	145
10th	18.1	14.7	22.3	105	126.8	117.9	136.5	757	74.0	67.2	81.5	446	48.5	43.1	54.6	298
11th	12.8	9.3	17.2	49	120.6	109.2	133.0	433	74.7	65.8	84.6	271	34.1	28.0	41.3	109
12th	13.2	10.2	16.9	71	138.4	128.7	148.9	771	89.1	81.4	97.6	500	50.3	44.6	56.7	286
13th	11.8	8.8	15.7	52	150.2	138.9	162.3	674	102.6	93.4	112.6	465	30.4	25.5	36.2	136
14th	12.0	9.1	15.7	59	165.3	154.0	177.2	839	112.9	103.6	122.9	571	35.9	30.9	41.7	188
15th	12.9	9.5	17.3	48	189.4	175.3	204.4	686	148.0	135.6	161.3	540	41.0	34.4	48.6	137
16th	10.8	7.9	14.4	49	131.0	120.6	142.2	608	81.2	73.0	90.1	375	47.6	41.5	54.6	223
17th	14.6	11.2	19.0	63	136.7	125.2	149.0	545	78.1	69.5	87.6	313	51.2	44.3	59.0	199
18th	12.0	8.5	16.5	43	149.8	136.7	163.9	508	84.3	74.6	95.0	290	41.8	34.9	49.7	131
19th	16.9	13.6	21.2	91	186.1	174.6	198.4	1014	118.8	109.6	128.7	649	44.3	39.0	50.3	258
20th	13.1	10.2	16.7	75	155.4	144.8	166.7	829	96.8	88.5	105.8	520	44.7	39.0	51.1	224
21st	12.1	9.0	16.1	54	136.2	124.8	148.4	551	84.0	75.1	93.7	342	45.2	38.7	52.5	180
22nd	12.3	9.5	15.8	71	119.7	110.9	129.2	722	70.5	63.8	77.8	428	40.0	35.2	45.5	263
23rd	9.9	7.4	13.2	56	112.2	103.4	121.9	622	68.6	61.7	76.3	376	54.8	48.8	61.5	314
24th	12.7	10.3	15.9	104	133.7	125.5	142.6	1075	81.8	75.4	88.9	656	32.2	28.5	36.6	277
25th	11.6	8.5	15.6	48	161.3	149.1	174.4	667	110.3	100.3	121.2	456	47.4	40.9	54.9	188
26th	11.5	8.8	15.1	62	129.9	119.8	140.6	645	88.2	80.0	97.2	443	65.4	58.3	73.3	312
27th	15.4	11.9	19.8	68	159.9	147.9	172.7	695	96.0	86.7	106.1	415	35.6	30.2	41.9	157
28th	10.5	7.7	14.0	50	132.0	121.8	142.8	646	74.2	66.7	82.4	365	44.3	38.7	50.7	225
29th	16.2	12.2	21.1	58	197.1	182.4	212.7	690	125.7	114.1	138.3	441	52.8	45.0	61.6	163
30th	17.4	13.4	22.4	67	175.7	161.6	190.7	603	115.4	104.0	127.7	396	47.7	40.4	56.0	154
31st	13.1	9.7	17.2	56	141.8	130.1	154.5	563	95.4	85.7	105.9	377	35.5	29.5	42.4	125
32nd	12.0	9.2	15.6	67	142.2	132.5	152.6	861	87.7	80.1	96.1	521	62.9	56.9	69.7	420
33rd	15.1	11.5	19.7	60	151.7	140.1	164.2	658	95.8	86.5	105.9	409	43.5	37.5	50.3	200
34th	11.0	8.2	14.7	52	119.2	109.4	129.7	590	72.4	64.8	80.8	354	37.7	32.4	43.8	189
35th	12.0	9.1	15.8	61	139.4	129.0	150.7	685	72.8	65.3	81.1	358	38.6	33.1	45.0	172
36th	11.6	8.3	16.2	44	126.7	115.4	139.1	503	83.0	73.9	93.3	325	28.9	23.8	35.2	118
37th	11.0	8.2	14.7	53	125.2	115.4	135.9	619	81.7	73.7	90.5	396	31.0	26.4	36.5	163
38th	13.5	10.3	17.5	63	134.3	123.8	145.6	629	81.4	73.3	90.3	381	33.4	28.3	39.4	152
39th	15.7	12.1	20.1	69	126.4	115.5	138.0	533	70.7	62.7	79.5	307	41.0	34.6	48.1	150
40th	13.6	10.5	17.7	68	120.2	110.9	130.4	634	69.6	62.6	77.5	367	47.1	41.4	53.6	252
41st	12.2	9.2	16.1	57	98.1	89.6	107.3	510	56.9	50.5	64.1	297	35.7	30.6	41.5	184
42nd	10.1	7.5	13.4	55	136.9	126.9	147.5	727	83.5	75.8	91.9	442	54.6	48.4	61.5	289
43rd	11.4	8.0	16.7	41	114.9	104.1	127.3	457	71.8	63.2	82.0	278	33.7	28.1	40.9	140
44th	10.3	7.2	14.6	39	138.3	125.1	152.7	426	78.6	68.8	89.6	248	48.1	40.2	57.1	133
45th	9.3	6.3	13.4	35	121.0	109.3	133.8	429	79.6	70.0	90.2	276	39.4	33.1	46.7	143
46th	11.2	8.3	14.9	54	99.8	91.2	109.2	520	60.3	53.5	67.8	310	36.8	31.8	42.6	199
47th	9.5	6.3	13.7	31	160.4	146.3	175.5	504	97.7	86.8	109.6	308	52.0	43.9	61.2	147
48th	10.7	7.9	14.5	48	94.5	86.0	103.8	470	56.8	50.3	64.2	281	48.5	42.6	55.3	248
49th	11.9	9.1	15.5	61	143.7	133.2	154.9	721	83.6	75.7	92.3	418	43.3	37.7	49.5	221
State	12.5	12.1	13.0	2851	136.7	135.1	138.2	30938	84.7	83.5	85.9	19183	43.5	42.6	44.4	9736

Variations in Life Expectancy and Mortality Rates by State Legislative Districts

District	Chronic Obstructive Pulmonary Disease				All Unintentional Injuries				Unintentional Poisoning				Motor Vehicle Crash			
	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths
1st	31.6	25.9	38.4	111	25.4	20.7	31.1	107	7.7	5.3	11.0	35	8.8	4.9	15.0	17
2nd	52.0	44.1	60.9	167	38.6	32.2	45.9	140	9.5	6.8	13.2	40	15.8	10.4	23.8	29
3rd	65.8	58.3	74.0	296	66.0	58.5	74.3	297	19.0	15.0	24.0	78	12.8	8.5	19.0	29
4th	48.4	42.2	55.3	230	47.5	41.4	54.5	222	9.5	6.8	13.1	42	12.7	8.2	19.0	26
5th	35.0	28.3	42.8	104	29.1	23.6	35.5	114	9.1	6.5	12.7	43	11.9	7.1	19.6	22
6th	49.2	42.9	56.4	226	52.3	45.6	59.9	230	9.2	6.4	13.1	35	17.3	11.9	24.6	35
7th	47.5	42.0	53.8	278	51.5	45.0	58.9	256	9.7	6.9	13.5	44	29.2	22.1	38.1	66
8th	41.6	35.8	48.2	190	30.1	25.0	35.9	131	11.3	8.2	15.2	46	10.5	6.5	16.3	22
9th	40.0	33.8	47.2	149	34.2	28.6	40.8	135	6.0	3.7	9.3	21	11.9	7.6	18.1	27
10th	36.2	31.4	41.8	210	43.0	37.0	49.9	205	13.1	9.6	17.5	52	16.5	11.2	23.7	33
11th	34.3	28.2	41.3	117	29.2	24.0	35.3	118	9.4	6.8	12.9	44	12.3	7.8	18.9	25
12th	41.5	36.3	47.5	230	39.5	33.8	45.9	188	9.4	6.6	13.0	40	21.0	15.1	28.6	44
13th	38.2	32.6	44.7	168	40.0	34.0	46.8	168	8.1	5.4	11.7	31	23.6	17.4	31.5	51
14th	39.0	33.6	45.1	194	45.1	38.8	52.3	195	9.6	6.7	13.4	37	28.0	20.9	37.0	54
15th	41.0	34.5	48.3	148	34.3	28.7	40.7	138	6.4	4.1	9.7	25	24.9	18.5	33.0	53
16th	44.8	38.7	51.7	199	41.9	35.8	48.9	174	9.9	7.0	13.7	39	25.9	19.2	34.4	52
17th	42.6	36.2	49.9	164	47.5	41.0	55.0	192	9.8	7.0	13.5	40	18.0	12.7	25.2	38
18th	35.6	29.3	43.1	116	39.2	32.8	46.7	139	8.8	6.0	12.6	33	16.0	10.5	23.7	29
19th	62.3	55.8	69.6	346	59.1	51.7	67.4	258	21.3	16.7	26.9	79	21.6	15.2	30.0	40
20th	48.6	42.8	55.2	263	39.8	34.0	46.3	182	9.7	6.9	13.5	41	19.5	13.9	26.9	41
21st	37.7	31.6	44.6	143	31.8	26.6	38.0	133	9.0	6.4	12.5	40	8.9	5.0	15.1	16
22nd	37.8	32.9	43.4	222	32.5	27.8	37.9	180	7.7	5.5	10.7	41	9.1	5.6	14.2	21
23rd	31.2	26.6	36.5	174	31.7	26.7	37.6	154	5.7	3.6	8.8	24	10.1	6.2	16.0	22
24th	39.0	34.7	44.1	310	41.6	35.9	48.3	239	13.7	10.2	18.3	60	15.1	10.1	22.1	34
25th	44.6	38.1	51.9	175	37.7	32.0	44.3	158	10.9	8.0	14.6	49	14.8	9.9	21.6	30
26th	41.2	35.6	47.6	202	37.5	32.0	43.9	173	8.2	5.7	11.6	37	12.9	8.4	19.2	28
27th	51.6	44.7	59.4	212	37.3	31.7	43.7	165	10.6	7.7	14.3	47	10.4	6.6	16.2	24
28th	40.4	34.8	46.8	189	29.8	24.9	35.5	136	7.6	5.1	11.0	31	8.7	5.2	14.1	19
29th	58.2	50.3	67.1	201	43.3	36.8	50.8	162	14.5	10.8	19.0	55	11.9	7.4	18.7	23
30th	52.6	45.0	61.2	179	37.5	31.4	44.4	142	12.9	9.6	17.1	53	13.4	8.5	20.5	25
31st	37.4	31.3	44.3	143	37.5	31.8	43.9	165	10.6	7.9	14.2	51	18.0	12.8	25.2	40
32nd	33.0	28.2	38.5	186	39.3	33.7	45.6	195	17.8	14.0	22.5	78	6.0	3.1	10.7	13
33rd	38.7	32.7	45.5	157	32.2	26.9	38.2	137	11.3	8.3	15.1	48	10.0	6.1	16.1	20
34th	29.5	24.6	35.2	139	32.4	27.2	38.5	146	8.6	6.1	11.9	41	15.4	10.2	22.6	29
35th	45.3	39.4	52.0	224	45.6	39.1	52.9	195	12.8	9.4	17.2	53	19.6	14.0	27.0	43
36th	27.3	22.0	33.8	101	32.7	27.3	39.2	142	13.0	9.8	17.4	61	6.8	3.5	13.0	14
37th	30.8	25.9	36.5	146	34.0	28.8	40.0	156	13.5	10.3	17.5	63	10.6	6.6	16.5	22
38th	51.1	44.5	58.4	229	49.4	43.1	56.5	227	23.5	19.2	28.6	107	11.8	7.9	17.4	30
39th	45.4	39.0	52.7	187	48.8	42.4	55.9	223	13.8	10.6	17.7	66	16.6	11.6	23.5	37
40th	34.3	29.4	40.1	178	33.4	27.7	40.0	139	8.3	5.4	12.4	28	8.5	4.9	14.4	18
41st	16.0	12.6	20.3	78	22.4	18.1	27.6	102	5.3	3.2	8.3	21	6.2	3.2	11.4	12
42nd	38.0	32.8	43.9	201	27.2	22.5	32.6	125	6.5	4.3	9.6	27	18.0	12.8	24.7	41
43rd	18.1	13.9	24.0	70	37.2	31.3	44.6	160	17.2	13.4	22.8	75	4.8	2.2	11.9	11
44th	41.1	34.0	49.4	125	31.7	26.1	38.3	123	10.7	7.9	14.6	48	8.4	4.9	14.4	18
45th	24.0	18.8	30.4	78	24.3	19.4	30.2	94	5.5	3.5	8.7	24	9.1	5.1	15.7	17
46th	21.3	17.2	26.3	100	33.0	28.1	38.7	165	8.6	6.2	11.9	42	9.4	5.8	14.8	22
47th	36.7	30.2	44.3	117	34.2	28.4	41.1	126	8.3	5.7	11.8	35	13.5	8.6	21.2	25
48th	20.1	16.1	25.0	91	23.1	18.9	28.3	106	6.1	4.0	9.2	26	8.9	5.2	14.7	17
49th	40.6	35.1	46.9	200	47.0	40.9	53.9	219	14.7	11.3	18.9	65	15.9	11.0	22.5	35
State	39.4	38.6	40.3	8663	37.5	36.7	38.3	8176	10.4	10.0	10.9	2241	13.8	13.1	14.6	1439

Variations in Life Expectancy and Mortality Rates by State Legislative Districts

District	Stroke				Diabetes				All Suicides				Firearm Suicide			
	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths
1st	34.8	28.8	41.7	125	15.9	12.1	20.7	61	14.8	11.3	19.1	65	5.2	3.2	8.1	23
2nd	37.7	30.9	45.7	114	25.4	20.1	31.7	88	19.9	15.6	25.0	79	10.2	7.3	14.2	41
3rd	42.8	36.9	49.5	199	27.9	23.2	33.4	129	19.3	15.3	24.2	85	7.3	5.0	10.5	33
4th	32.4	27.5	38.2	157	22.2	18.1	27.0	108	14.0	10.5	18.2	59	7.7	5.2	11.1	32
5th	27.2	21.3	34.3	78	17.9	13.3	23.7	54	11.4	8.4	15.4	53	6.3	4.2	9.3	32
6th	45.8	39.7	52.7	216	23.9	19.5	29.1	111	19.2	15.0	24.3	77	10.5	7.5	14.4	43
7th	38.9	33.8	44.7	215	19.9	16.4	24.3	114	18.3	14.3	23.1	83	12.0	8.8	16.0	55
8th	27.0	22.4	32.4	124	31.8	26.8	37.6	147	12.1	9.0	16.1	51	8.4	5.8	11.9	35
9th	38.1	32.1	44.9	146	25.8	20.9	31.6	100	9.6	6.8	13.4	40	6.0	3.8	9.2	24
10th	38.5	33.6	44.1	230	18.2	14.8	22.4	106	15.1	11.4	19.7	63	8.0	5.5	11.4	36
11th	30.3	24.7	36.9	106	17.6	13.5	22.7	67	11.8	8.8	15.7	53	2.9	1.5	5.3	13
12th	33.3	28.6	38.7	186	19.0	15.5	23.3	105	12.6	9.4	16.6	57	6.7	4.6	9.7	33
13th	35.1	29.7	41.3	153	25.8	21.2	31.2	115	15.9	12.2	20.5	65	9.8	6.9	13.6	40
14th	38.8	33.5	44.9	197	18.8	15.1	23.4	91	18.1	14.0	23.0	72	9.3	6.6	12.9	40
15th	36.7	30.5	43.7	128	21.8	17.2	27.4	78	10.9	7.9	14.8	44	6.1	3.9	9.3	24
16th	35.5	30.2	41.6	164	28.0	23.2	33.5	127	13.5	10.1	17.7	54	7.5	5.0	10.9	30
17th	31.9	26.5	38.2	126	25.0	20.3	30.7	102	15.7	12.1	20.2	66	8.1	5.6	11.5	35
18th	36.8	30.5	44.2	122	23.0	18.0	28.9	78	15.0	11.3	19.7	59	6.5	4.1	9.9	25
19th	41.3	36.2	47.3	235	38.5	33.1	44.7	199	20.9	16.5	26.4	84	11.0	7.9	15.2	46
20th	32.8	28.0	38.3	169	21.9	18.1	26.4	124	16.0	12.4	20.4	74	9.6	6.9	13.1	45
21st	30.8	25.4	37.1	119	19.0	14.9	24.0	78	14.7	11.2	19.1	63	7.1	4.7	10.4	30
22nd	31.5	27.1	36.5	195	17.8	14.5	21.9	103	13.0	9.9	16.8	65	7.3	5.1	10.3	37
23rd	30.7	26.2	36.0	172	17.4	14.0	21.5	98	10.7	7.7	14.6	46	4.9	3.0	7.7	22
24th	35.3	31.3	40.1	290	19.1	16.0	22.8	150	17.1	13.3	21.8	89	8.7	6.2	12.0	52
25th	41.7	35.4	48.8	163	23.1	18.5	28.4	94	14.8	11.3	19.1	64	6.3	4.1	9.4	26
26th	32.3	27.4	38.1	156	20.1	16.2	24.7	100	16.1	12.5	20.6	71	9.4	6.6	13.0	41
27th	41.8	35.7	48.7	178	21.0	16.8	26.0	92	16.2	12.6	20.6	73	5.9	3.8	8.9	26
28th	39.4	34.0	45.5	194	21.3	17.3	26.1	100	15.0	11.5	19.4	65	6.6	4.3	9.8	28
29th	58.2	50.3	67.1	197	35.1	29.0	42.0	124	20.2	16.0	25.3	81	7.7	5.2	11.0	32
30th	38.4	32.0	45.9	131	28.8	23.4	35.1	105	15.3	11.7	19.8	63	8.1	5.5	11.6	33
31st	29.8	24.5	36.1	111	18.1	14.1	23.0	76	15.0	11.6	19.1	71	6.9	4.7	10.0	32
32nd	34.4	29.7	39.8	209	21.4	17.7	26.0	121	13.8	10.4	17.9	62	6.1	4.0	9.0	29
33rd	34.7	29.2	41.0	149	23.0	18.6	28.2	100	15.1	11.6	19.6	62	7.9	5.4	11.3	33
34th	30.5	25.6	36.2	147	21.5	17.4	26.4	103	13.0	9.7	17.2	56	6.9	4.5	10.2	28
35th	34.7	29.5	40.8	164	18.5	14.8	23.0	92	18.5	14.4	23.4	81	9.6	6.9	13.2	46
36th	27.0	21.9	33.3	105	14.9	11.3	19.8	61	14.1	10.7	18.7	64	3.6	2.0	6.6	16
37th	33.7	28.7	39.6	165	29.4	24.6	35.1	137	11.4	8.4	15.3	50	2.7	1.4	5.0	12
38th	37.4	31.9	43.5	175	34.2	29.0	40.2	161	14.6	11.3	18.7	69	7.7	5.4	10.9	37
39th	34.8	29.2	41.3	140	24.0	19.4	29.4	102	14.1	11.0	18.1	70	7.9	5.5	11.1	38
40th	31.5	26.9	37.0	168	19.5	15.6	24.3	94	16.5	12.6	21.5	67	8.0	5.3	11.8	32
41st	28.2	23.7	33.5	145	9.7	7.1	13.2	46	9.6	6.8	13.4	40	4.3	2.5	7.2	17
42nd	35.1	30.2	40.8	185	22.1	18.1	26.8	111	13.4	10.3	17.4	64	6.6	4.5	9.5	32
43rd	23.8	19.0	30.3	95	14.7	10.9	20.3	54	10.8	7.8	15.7	48	2.2	1.0	5.8	9
44th	36.8	30.1	44.6	110	23.9	18.6	30.4	76	10.4	7.6	14.3	46	4.4	2.6	7.3	19
45th	24.2	19.2	30.3	86	12.6	9.0	17.3	45	11.8	8.8	15.8	55	4.9	3.1	7.8	23
46th	24.0	19.8	29.0	122	10.5	7.7	14.1	51	11.6	8.7	15.4	57	4.9	3.1	7.7	23
47th	33.2	26.9	40.7	100	26.6	21.2	33.1	91	12.9	9.5	17.2	51	8.1	5.5	11.7	32
48th	25.8	21.4	31.0	126	13.2	10.1	17.2	61	9.3	6.5	13.0	40	3.9	2.2	6.6	17
49th	33.5	28.5	39.2	165	25.0	20.7	30.0	122	16.7	13.0	21.1	74	7.1	4.8	10.1	33
State	34.4	33.6	35.2	7652	21.5	20.9	22.2	4852	14.3	13.8	14.8	3090	7.0	6.6	7.4	1520

Variations in Life Expectancy and Mortality Rates by State Legislative Districts

District	Chronic Liver Disease				Influenza and Pneumonia			
	Age-Adj Rate	Lower CI	Upper CI	Deaths	Age-Adj Rate	Lower CI	Upper CI	Deaths
1st	7.2	4.8	10.6	31	6.9297	4.4955	10.3803	26
2nd	10.0	7.2	13.8	44	10.4827	7.1049	14.991	34
3rd	21.8	17.5	27.0	91	12.0599	9.0766	15.8682	57
4th	15.7	12.3	19.9	79	13.8695	10.7049	17.8295	67
5th	7.9	5.3	11.7	33	9.2842	6.0694	13.6956	29
6th	9.7	7.0	13.4	44	12.7684	9.6659	16.764	60
7th	12.2	9.4	15.8	71	7.6749	5.4809	10.7046	42
8th	10.7	8.0	14.2	53	7.6773	5.3755	10.7748	37
9th	10.6	7.6	14.6	43	11.1445	8.0885	15.1125	45
10th	11.2	8.4	15.0	59	8.7623	6.4716	11.9012	51
11th	8.1	5.6	11.5	36	10.3885	7.2486	14.5439	37
12th	14.7	11.5	18.6	78	10.4262	7.7634	13.889	54
13th	14.0	10.7	18.2	65	13.6872	10.4094	17.8232	60
14th	12.8	9.6	16.8	59	11.5688	8.6988	15.2502	57
15th	13.7	10.3	17.9	57	9.0449	6.1287	12.9303	31
16th	14.9	11.5	19.1	68	10.0021	7.237	13.5961	45
17th	8.3	5.6	11.8	34	8.4871	5.7616	12.1507	32
18th	10.3	7.3	14.4	41	10.8543	7.5185	15.2656	36
19th	17.7	14.0	22.2	88	16.3284	13.0925	20.4116	92
20th	9.9	7.4	13.3	56	10.4488	7.8251	13.8524	54
21st	10.0	7.2	13.6	44	9.1025	6.3227	12.7954	36
22nd	8.9	6.5	12.0	48	8.1854	5.9944	11.0665	49
23rd	12.9	9.9	16.8	67	7.3625	5.2443	10.3284	41
24th	12.0	9.1	15.7	72	8.5644	6.4509	11.5019	65
25th	9.9	7.2	13.4	46	14.2957	10.8275	18.624	59
26th	13.4	10.4	17.2	73	10.9879	8.1953	14.589	53
27th	11.3	8.5	15.0	55	8.4456	6.0259	11.7061	41
28th	8.8	6.2	12.2	40	10.1698	7.5182	13.6291	50
29th	14.5	10.9	18.9	58	10.9761	7.6575	15.2995	36
30th	12.5	9.3	16.7	54	10.5057	7.2897	14.7517	36
31st	11.4	8.6	15.1	59	8.6378	5.8969	12.2951	33
32nd	13.0	10.0	16.8	67	9.7178	7.3342	12.8638	60
33rd	12.5	9.4	16.4	57	14.9884	11.5112	19.3037	66
34th	13.1	10.1	16.8	68	10.1306	7.4992	13.5718	52
35th	12.2	9.3	15.8	67	9.1796	6.6007	12.6428	43
36th	9.4	6.8	13.4	44	7.2338	4.8835	10.9018	31
37th	9.2	6.6	12.7	43	9.0872	6.6349	12.3672	47
38th	16.1	12.7	20.3	80	9.5987	6.846	13.1669	41
39th	10.5	7.9	13.9	58	9.9171	7.0209	13.6857	40
40th	8.7	6.1	12.3	41	8.3697	6.0607	11.6075	44
41st	6.7	4.5	9.7	32	7.194	5.0699	10.2025	38
42nd	10.7	8.0	14.1	55	8.0361	5.8102	11.0001	44
43rd	13.9	10.4	19.3	55	5.4116	3.3972	9.4433	24
44th	7.7	5.1	11.3	33	11.2921	7.7374	16.0435	34
45th	5.4	3.5	8.3	27	5.6744	3.4447	9.0442	21
46th	7.6	5.3	10.7	38	7.7474	5.4805	10.8453	40
47th	10.4	7.5	14.3	45	9.6171	6.3707	14.0042	29
48th	6.2	4.1	9.2	28	4.8643	3.0888	7.5476	24
49th	12.3	9.4	16.0	62	7.0604	4.9132	9.9737	36
State	11.1	10.7	11.6	2646	9.6072	9.2002	10.029	2159