2018

Washington State Health Assessment

DOH Pub 78945
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Washington State Department of Health

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Published

March 2018

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Contents

Executive Summary

This *State Health Assessment* provides an overall picture of the health and well-being of Washingtonians as we begin work on our next *State Health Improvement Plan*. We view this document as a key resource for public health to function as a *Chief Health Strategist*[1]—that is, to provide data and identify key health issues, to convene leaders across multiple sectors, and to strategize with leaders on prevention efforts, policy development, and communication to promote the health of Washingtonians.

Like other states, Washington's population is changing in dynamic ways:

- Our population is increasing overall, with most of the projected increase due to migration into the state. This population increase, currently centered along the I-5 corridor, will present new challenges for transportation and housing, both of which impact health and well-being.
- Our state is becoming more racially and ethnically diverse, highlighting the need to focus on health equity, and increasing the demand for linguistically and culturally appropriate health services.
- A greater proportion of our population is older. By 2030, more than 1 in 5 Washingtonians will be 65 or older, with even higher proportions in rural areas of the state. This demographic shift and the greater complexity of health conditions among older people will present increased demands on the workforce and economy as well as health and social services.

We need to consider these changes and their impacts as we work to align our prevention and improvement strategies with partners across the state—those working in Accountable Communities of Health[2], tribes, local health jurisdictions, our healthcare delivery system, state, local and community organization staff and policy makers.

When we consider the overall health of Washington State residents, we look to summary measures like life expectancy and the leading causes and preventability of deaths and illnesses. While life expectancy in Washington is quite good (at 80 years), we see large differences by race and ethnicity. The life expectancy of an American Indian or Alaska Native (AIAN) baby or a Native Hawaiian or Pacific Islander (NHOPI) baby born in Washington in 2015 was 73 years, a full 12 years less than the 85-year life expectancy of an Asian baby born in the same year.

Currently 30% of Washington's population identify as people of color

1 in 5

Washingtonians will be 65 or older by 2030

The 10 leading causes of death in Washington—conditions which impact life expectancy and health disparities—are overrepresented by chronic conditions:

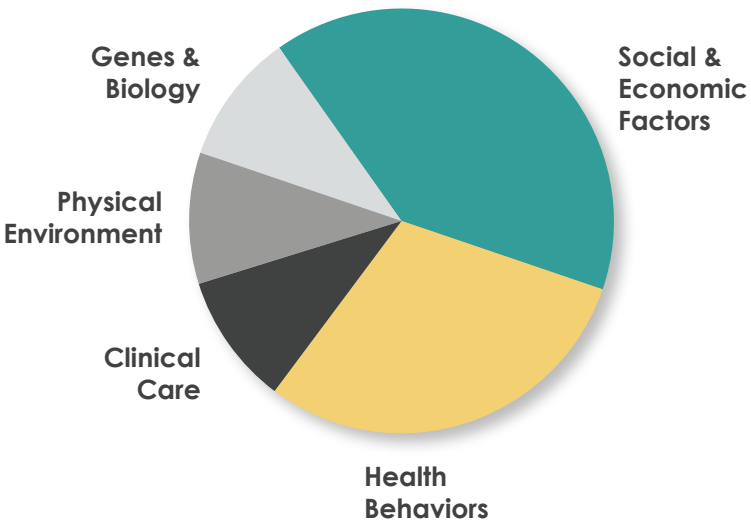
- Cancer
- Heart disease
- Alzheimer's Disease
- Unintentional Injury
- Chronic Lower Respiratory Disease
- Stroke
- Diabetes Mellitus
- Suicide
- Liver Disease
- Influenza and Pneumonia

In addition to chronic conditions, other preventable leading causes like unintentional injury and suicide are associated with high years of potential life lost. Because of this, many preventable chronic conditions, injuries and suicides contribute to disproportionate premature mortality among AIAN, NHOPI and blacks.

We used the determinants of health to frame the *State Health Assessment*, and highlight important trends with impacts across health issues and conditions. Climate change is a critical environmental influence on health. Predicted increased temperatures, decreased snowpack and intensified severe weather events may impact morbidity and infrastructure, and exacerbate existing health disparities. The built environment—our transportation systems, land use and community design—presents opportunities to modify our environment to make physical activity more accessible, reduce pollutants, foster well-being and reduce injuries.

Social and economic conditions, referred to as the social determinants of health, include poverty, education, affordable housing, and other factors like public safety, jobs, policies, and institutions that impact social engagement. Many adverse social determinants disproportionately impact communities of color and in some instances rural communities, thereby impacting quality of life, health behaviors and health outcomes. Poverty can lead to poorer access to healthcare services, poorer quality housing and toxic stress, while less education is associated with lower life expectancy and less access to higher paying jobs. Unaffordable housing limits income available for other necessities, and creates stress. By impacting the conditions in which we live, work, play and worship, social determinants of health operate as risk and protective factors across the life span, leading us on poorer or healthier life trajectories. In this way, they influence both the development of and the persistence of health disparities, and need to be kept in mind and addressed as we work collaboratively to align prevention strategies.

Determinants of Health



Source: Association of State and Territorial Health Officials *Determinants of Health* model based on frameworks developed by: Tarlov AR. Ann NY Acad Sci 1999; 896:281-93; and Kindig D, Asada Y, Booske B. JAMA 2008; 299(17): 2081-2083.

To identify specific health issues for focus, we reviewed a wide variety of state and national sources and solicited feedback from stakeholders with whom we partner. We met with six partner/stakeholder groups to identify key issues the state should address to promote health and well-being. From an extensive list, we asked participants to select what they saw as their top 10 health issues, and invited them to add any issues we had missed. We ranked the issues within each stakeholder group, as well as across all six groups. For this report, we developed a data section on each of the top 10 issues identified by one or more stakeholder groups, along with three sections on additional key issues for the Department of Health.

In total, we developed sections on each of 27 key issues, organized into health outcomes, health behaviors, healthcare access and preventive care, physical and built environment, and social determinants of health. Each section has background information; data trends; variation by county; disparities by gender; age; race and ethnicity; income and education; and a summary of efforts across the state addressing the health issue.

The data show that, with few exceptions, Washington has similar or better health outcomes, similar or lower risk factor prevalence, and similar or higher protective factor prevalence compared to the United States. We observe some encouraging trends—decreases in heart disease deaths, HIV incidence, and infant mortality, as well as in binge use. Health insurance coverage has increased as have child immunizations. We also note some areas of concern. Our suicide rate is higher than the U.S. and has increased over the last several years. Homelessness has also been increasing. And obesity among youth is slowly increasing. The data also uncover important health disparities. Across the majority of indicators, American Indians and Alaska Natives are reported to experience worse health than other racial and ethnic groups. This disparity exists across the lifespan from conditions impacting infants to those affecting young adults and older populations. Blacks and Hispanics also experience poorer health compared to whites across several indicators. We also observe a gradient across education and income, where those with the lowest education or lowest income experience worse health than those with more education or income.

We combined the top 10 issues across the stakeholder groups into a more focused list of eight priority health issues for the state, laying the foundation for our next *State Health Improvement Plan*. These priority health issues are:

- Child Immunization
- Diabetes
- Drug and Alcohol Abuse
- Healthcare Access
- Healthy Weight with a focus on Healthy Eating and Active Living
- Housing and Homelessness
- Mental Health
- Tobacco Use

Our assessment raised a number of issues to consider as we work on the *State Health Improvement Plan* and aligning efforts. To be effective, we need additional data, including emergency room, outpatient and health behavior data, data on children, and on specific health issues. We also need more granular data geographically and on population subgroups—Asian subpopulations; tribes; Lesbian, Gay, Bisexual, Transgender or Queer people; and people with disabilities. We also need a state health assessment that is continuous, and can systematically leverage the important work conducted for community needs assessments, community health needs assessments, tribal health assessments and issue-specific assessments to more readily identify gaps across the state and better align our interventions.

It will take committed leadership to address our priority health issues and the longstanding disparities in health. Our state values collaboration; partnerships are numerous, and marshalling our efforts and resources to truly make a difference will require us to develop a shared vision and framework to move forward together.

Population Trends: Who Are We & How Are We Changing?

Recent trends in our Washington population, including the growing size, diversity and aging of our population, are important for understanding the context for health in Washington. These population trends have implications far beyond our population's health, but will also have important health impacts.

Washington's population is growing

What's happening?

- Between the 2000 and 2010 censuses, Washington State's population increased by 14%, and as of April 2017, an estimated 7.3 million residents call Washington State home. The State Office of Financial Management (OFM) projects that this growth will continue with a 28% increase that will bring the state's population to 9.1 million by 2040.[3, 4]
- OFM predicts some of this growth (38%) will come from natural increase, when there are more births than deaths. However, they predict that the majority (62%) will result from migration into the state.[4]
- Finally, while this projected population growth will have implications for the entire state, population growth will not impact all parts of the state equally. Currently, 75% of the population lives west of the Cascade Mountains, and 77% of growth from 2016 to 2017 was in the five largest metropolitan counties: Clark, King, Pierce, Snohomish and Spokane counties.[3, 5]

What are the health implications of population growth?

Greater demand for health and social services	Larger population will likely lead to a greater demand for healthcare and preventive services. Furthermore, without a corresponding increase in capacity, this population increase will place additional burdens on accessing healthcare. And, as the eligible population grows, we expect to see greater costs associated with health programs like Medicaid and Medicare.
New challenges for transportation	Larger population, particularly in the I-5 urban corridor, will lead to higher population density. Increased density can lead to increased traffic and longer commute times, which can increase stress and the amount of time individuals spend inactive.[6] Increased traffic can also result in more particulate matter in the air contributing to respiratory and cardiovascular symptoms.[7, 8, 9]
New challenges for housing	Larger population can increase the demand for safe, quality and affordable housing. Without an increase in affordable housing, we expect housing costs to continue to rise. This increase may have greater impact on lower income Washingtonians, and may result in people moving further from urban centers (with longer commutes), or to lower quality housing with greater risk for injury, respiratory and cardiovascular disease.[10]
More economic growth	Larger population from migration is due to a thriving economy and an increase in available jobs for Washingtonians. Economic security may decrease stress and promotes healthy behaviors, improving health in our communities. Our challenge is to help all communities benefit from this economic growth.

Our population is becoming more racially and ethnically diverse

What's happening?

- Over the past two decades, the percentage of Washington residents who identify as Hispanic, American Indian or Alaska Native (AIAN), Asian, black or African American, or Native Hawaiian and other Pacific Islander (NHOPI) has been increasing. Specifically, in 2000 only 18% of Washington's residents identified as belonging to any of these racial or ethnic groups whereas in 2015 30% identified as falling into one or more of these groups.[11, 12, 13]
- As of 2016, among individuals who identify with one of these racial or ethnic communities, 13% identified as Hispanic, 8% as Asian, 4% as two or more races, 4% as black or African American, 1.3% as AIAN, and 0.7% as NHOPI. These estimates are based on mutually exclusive groups following DOH guidelines.[14] The proportions may differ if groups overlap. For example, a recent report from the Northwest Portland Area Indian Health Board found 3% of Washington's population was AIAN compared to the estimate of 1.3% above.[15, 16]
- While Washington is becoming more diverse, this diversity is not spread evenly throughout the state, nor is it projected to do so in the future. Currently, over 80% of individuals who identify as Asian, over 80% of individuals who identify as black or African American, and 70% of individuals who identify as NHOPI reside in Pierce, Snohomish, and King counties.[17]
- This population concentration does not hold for Washington residents who identify as AIAN, or Hispanic. Only 35% of individuals who identify as AIAN and only 40% of individuals who identify as Hispanic live in Pierce, Snohomish, or King counties.[17]

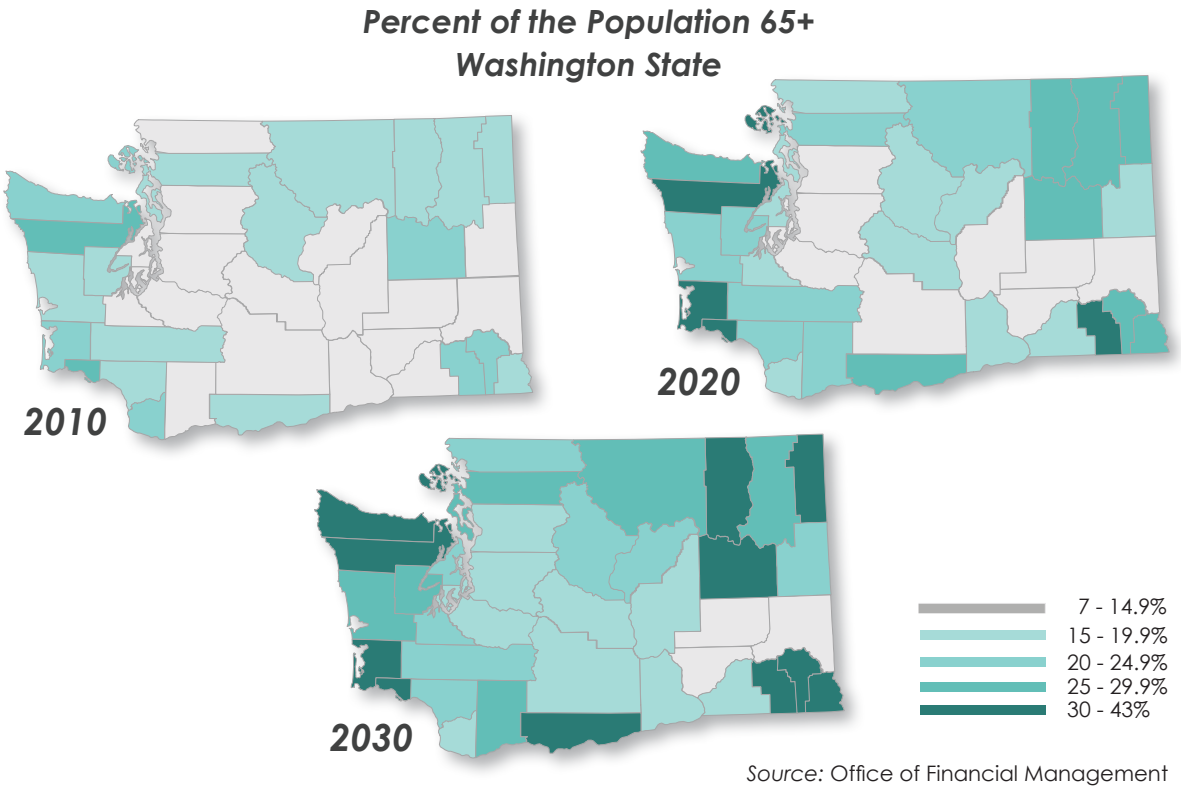
What are the health implications of becoming more racially and ethnically diverse?

Increased demand for linguistically and culturally appropriate health services	As our communities diversify, our social, health and preventive services need to adapt with them. To be effective, service providers and organizations need to be reflective of the communities they serve. They also need to partner with communities to develop interventions, materials and services that are accessible and culturally appropriate.
Greater need for focus on health equity	As we discuss later in this chapter, historic policies and practices have contributed to racial and ethnic disparities in health behaviors and outcomes. In improving health in Washington, we need to examine where the greatest disparities exist and consider how they could be better addressed. The need to focus on achieving racial health equity will only become more pressing as our state becomes more diverse.
Greater diversity leads to more innovation	Researchers have shown that socially diverse groups are more innovative than homogeneous groups.[18] This trend has important implications for health. Greater innovation leads to economic growth, but also may lead to important developments in public health interventions, clinical care models, and scientific discoveries.

A greater proportion of our population is older

What's happening?

- As seen nationally, Washington's population is becoming proportionately older. In 2016, more than 1 in 7 (15%) Washington residents were age 65 or older, by 2030 we expect that this number will be greater than 1 in 5 (22%).[4]
- The rate and degree of this trend will not be consistent across the state. Projections suggest the proportionate increase in older adults will happen first, and to a greater degree in rural communities. Twelve rural counties are projected to have over 30% of their population older than 65 years by 2030.[19]



Source: Office of Financial Management

What are the health implications of our aging population?

More complex health conditions	Older adults often have more complex medical needs and a greater number of chronic conditions, and are more likely to experience dementia, leading to greater demands on healthcare, care coordination, and social services. This trend will have implications for the number and distribution of services needed as well as the cost to the state for Medicaid dual eligible (residents who qualify for both Medicaid and Medicare services) and for Aging and Long Term Support services.
Proportionately fewer working people	The aging of the population will lead to more people out of the workforce supported by fewer working individuals.[20] This trend has both workforce and community implications. A greater percentage of the workforce will likely be needed for caregiving; transportation and commerce needs may shift, and stress may increase if services cannot meet the growing demand, or are not affordable to those in need.

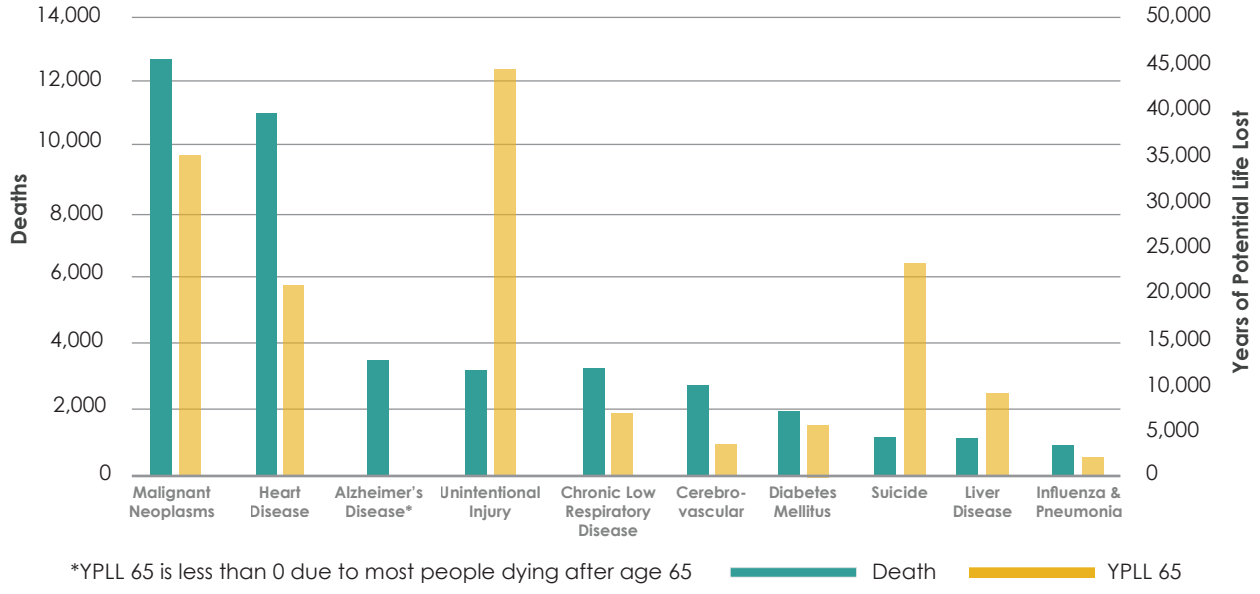
Life Expectancy & Leading Causes of Death

Life expectancy serves as a summary metric of overall health and reflects the average mortality of the population. The life expectancy of a baby born in Washington in 2015 was just over 80 years. That means, if that baby were to experience the same age-specific death rates as Washingtonians in 2015, on average, the baby would be expected to live to 80 years of age. However, the life expectancy of all Washingtonians is not the same. In Washington's counties, we see a range from 76 to 86 years—a full 10 years' difference. Racial and ethnic groups show similar dramatic differences. The life expectancy of an American Indian baby or a Pacific Islander baby born in Washington in 2015 was 73 years, a full 12 years less than the 85-year life expectancy of an Asian baby born the same year in Washington.

To take a slightly more detailed look at the overall health of Washingtonians, we can look at the leading causes of death and the years of potential life lost (YPLL). YPLL 65[21] is a measure of premature mortality before age 65, much of which is considered preventable. To calculate it, the age at death for each death prior to 65 years is subtracted from 65 and the resulting numbers are summed. We can calculate YPLL 65 for all deaths, as well as for each specific cause of death to see which conditions result in more premature mortality. The chart below shows the 10 leading causes of death in 2015 in Washington and the YPLL before age 65 for each specific cause. The leading causes of death skew toward chronic conditions—cancer, heart disease, Alzheimer's disease, chronic respiratory disease, stroke, diabetes and liver disease. The remaining leading causes include unintentional injuries, suicide, and influenza and pneumonia. Poisonings (largely drug overdoses), falls and transport injuries accounted for 81% of unintentional injury deaths. Of the contributions to premature mortality, unintentional injuries account for the most YPLL, followed by cancer and suicide. As noted above, many of these deaths are considered preventable. It is important to note also that some causes of death, like Alzheimer's disease, primarily affect people older than 65 years, so we do not show YPLL 65.

We calculated rates of YPLL 65 per 100,000 population to explore premature mortality by county, and for racial and ethnic groups. The rate of YPLL 65 is 3,536 years per 100,000 population for the entire state. County-specific rates ranged from 1,931/100,000 to 5,958/100,000 considering only counties with 5,000 or greater population. Counties with the highest (worst) YPLL 65 included Asotin, Mason, Grays Harbor, Ferry, Lewis, Pacific and Clallam. Exploring racial and ethnic-specific rates of YPLL 65 shows that AIAN, NHOPI and blacks in Washington disproportionately experience premature mortality.[22]

Top 10 Leading Causes of Death with Years of Potential Life Lost (YPLL) Before Age 65
Washington State Death Certificates, 2015



The experience of morbidity can be challenging to describe. While we have records and discharge diagnoses for all non-federal acute care hospitalizations in Washington as well as for residents hospitalized in Oregon, we do not have access to records for residents hospitalized in military facilities. Furthermore, hospitalization records do not represent some prevalent conditions like Alzheimer's disease and dementia which do not require hospitalization, nor many cancers for which outpatient treatment is provided. Another challenge is the fact that primary diagnoses may undercount the impact of a disease. For example, in 2016, there were 10,008 hospitalizations with a primary diagnosis of diabetes, the 14th most common diagnosis not including childbirth. When considering all 25 diagnostic fields, however, the number of hospitalizations increases to over 380,000.[23] Recent coding changes have resulted in much more specific diagnoses, helping planning, research and identification of cost drivers. However, it is now more challenging to summarize broad conditions that result in hospitalizations. Despite these challenges, the table below shows the 10 most common reasons for inpatient hospitalization based on the primary diagnosis. This list further demonstrates the skewed impact of chronic conditions on our healthcare system. Many of these chronic conditions are potentially preventable. The leading causes of death, YPLL 65, and most frequent inpatient diagnoses are critical for understanding the human and societal costs of disease and health conditions, as well as the burden on healthcare delivery services and related costs. This understanding is particularly critical as we work to align the work of public health and primary care in order to prevent disease and address the triple aim for health: better health, better care and lower costs, and ultimately, help people live longer, healthier lives.

Most Common Reasons for Hospitalization Based on Primary Discharge Diagnosis Washington State CHARS, 2016*

- Septicemia (blood infection)
- Osteoarthritis (degenerative arthritis)
- Chest pain
- Congestive heart failure
- Stroke
- Spondylosis (spinal degenerative disease)
- Cardiac dysrhythmias (irregular heartbeat)
- Heart attack
- Complication of device, implant or graft
- Respiratory failure

*Comprehensive Hospital Abstract Reporting System, not including childbirth

Determinants of Health

There is broad agreement on the factors that influence health and disease as genetics, health behaviors, healthcare, the physical environment, and the social determinants or conditions in which people are born, grow, live, work and age.[24, 25, 26, 27, 28] These factors operate alone and together to influence individual health, the health of selected communities, and the health of the Washington population at large. With the exception of genetics, we can adapt and impact these factors to prevent disease and improve the well-being of Washingtonians throughout their lives. Some people consider the built environment—our man-made surroundings such as roads, housing, city planning and parks—to be a social determinant. For this report, we include the built environment with the physical environment because of the strong interplay between these factors. Because of our desire to use this report to inform prevention and the development of strategies to address priority health issues in Washington, we have used the four factors of health behaviors, healthcare (which we have titled Healthcare *Access* and Preventive Care), physical and built environments, and social determinants to organize this report.

While people generally understand that genetics, health behaviors and healthcare impact health status and disease, there is less understanding of how the physical and built environment and the social determinants impact health. The following sections explore important trends in the physical and built environment, and in the social determinants of health and how they impact health in Washington.

Physical & Built Environment

Every day, Washingtonians depend on their surroundings for health and well-being. We depend on our geologic and geographic heritage to provide the abundant natural resources supporting our economy, providing places for recreation and relaxation, and providing clean air and water to protect from disease. We also depend on the infrastructure supporting and transporting these resources, and the development of our roads, homes, schools, workplaces and communities to provide the infrastructure where we live our lives. This infrastructure is a key influence on our overall favorable health status compared to the U.S. overall, and some key trends will impact our health over the coming decades.[29]

Climate change will increasingly impact our population

What's happening?

- Washington has seen increased temperatures, overall declines in glaciers and snowpack, earlier peak stream flow in snowmelt-fed rivers, and sea level rise along some coastlines.[30]
- Excessive levels of carbon dioxide and other greenhouse gases will continue to cause the climate system to warm and shift from historical climate normals in Washington and around the globe.[30] Climate scientists predict further decline in Washington's snowpack, more frequent water shortages in some basins, ocean acidification, sea level rise, increasing flood risk, more acres burned from wildfires, and changes in the range of plants and wildlife living in Washington.[30]
- These shifts will change the landscape of resources and risks society is accustomed to managing, with direct and indirect impacts on the well-being of people and communities.

What are the health implications of climate change?

Increased morbidity	Climate change will increase risk of heat-related illness and death, alter risks for infectious conditions including some vector, food and waterborne diseases, amplify pollen-driven allergies, heighten risk of respiratory and cardiovascular illness from exposure to poor air quality, increase risk of injuries and deaths associated with severe weather events, and worsen mental health.[30]
Impacts to health and safety protections	Potential risks to health and safety will increase in areas where weather-related natural disasters (e.g., storms, floods, drought, wildfire, and landslides) disrupt infrastructure including transportation, power, water, and communication systems, jeopardizing services like safe drinking water, wastewater treatment, access to healthcare, and other services that safeguard human health.[31]
Exacerbated health disparities	Risks to health will vary greatly by climate-sensitive hazards specific to location, as well as individual and community adaptation steps taken to prevent risk. Risks will likely have a greater impact on populations already carrying a disproportionate burden of disease.[30]

Increasingly, we are understanding the built environment's role as a key determinant of health

What's happening?

- The built environment (e.g., transportation systems, land use, and community design) is an important modifiable component to promote health. Active transportation options for walking and biking promote physical activity. Land use and community design elements such as parks, streets, trees, and recreation facilities, and mixed land use environments create destinations that foster social cohesion and promote physical activity. These types of features are more common in wealthier, whiter communities.[32, 33, 34, 35, 36]
- Suburban-style community design reduces opportunities for people to come together naturally, encourages dependence on automobiles, and forces individuals to commute to work. This results in decreased community cohesion, increased pollution, and increased sedentary behavior. [37, 38]
- An individual's risk of chronic disease is highly influenced by the environment one lives in. Research shows a community's infrastructure can impact one's overall health, ability to engage in physical activity, and ability to make healthful food choices.[39]
- We're learning more about how our history of segregation highly influenced the built environment of communities and greatly contributes to racial health disparities, which are further impacted by unequal distribution of resources and opportunities.[37, 40]

What are the health implications of this trend?

Increased opportunities for physical activity	Built environment changes can make it easier for individuals to be more physically active, which can reduce one's risk of cardiovascular and chronic diseases.[33]
Reduced exposure to pollutants	Communities near highly trafficked roads and urban areas have increased exposure to air and noise pollution, putting people at increased risk for cardiovascular and respiratory disease.[7, 39, 41] Increasing active transportation opportunities provides an opportunity to decrease dependence on automobiles. This may result in reduced motorized traffic, traffic congestion, and overall outdoor pollutants.[41] Poor indoor air quality, dampness, and fungal contamination in a home can increase a person's risk of asthma or make symptoms worse.[42]
Improved well-being	The availability of green spaces in a community is associated with many different physical and mental health benefits, including better pregnancy outcomes.[37]
Decreased risk of child injury	The presence of sidewalks, location of playgrounds, and increased lighting and visibility of intersections are examples of changes that can help decrease crashes involving child pedestrians.[43]

Social Determinants of Health

Social and economic conditions are often referred to as the social determinants of health. Across the life span they impact people's access to food, resources, medical care and preventive services, and they operate on individual, community and societal levels. Consequently, they impact health behaviors, future social and economic conditions, participation in government and decision making, and access to community and societal resources. As evidenced by just a few of the many important social determinants measures below, they are not distributed evenly across Washington's population.

Washington's communities of color and rural communities are disproportionately impacted by poverty

What's happening?

- The proportion of people who live at or below the Federal Poverty Level (FPL) is often used as a measure of economic well-being. In 2016, 11% (±<1%) of people lived below the FPL which was not appreciably different from 2005 (12% ±<1%), although poverty increased during the recession and has recently declined. The FPL for a family of four was $24,250 in 2016.[44, 45]
- While overall rates of poverty have not increased, levels of poverty remain disproportionately high among Washington's communities of color. Specifically, from 2011 – 2015, about one-quarter of Washington's African American (24% ±2%), AIAN (26% ±2%), and Hispanic (25% ±<1%) populations had household incomes below the FPL—more than double the rate for whites (11% ±<1%) and Asians (12% ±<1%).[44]
- Wealth is distributed more unequally. From 2011-2015 17% (±<1%) of whites and 13% (±<1%) of Asians reported any rent, dividend or interest income compared to 4% (±<1%) of African Americans, 9% (±<1%) of AIAN, and 4% (±<1%) of Hispanics.[44]
- Poverty also disproportionately affects Washington's towns and rural communities. From 2011-2015, 13% (±<1%) of the population in urban core areas in Washington, 11% (±<1%) in suburban areas, 19% (±1%) in large towns, and 15% (±<1%) in small rural towns were living below the FPL.[44, 46]

What are the health implications of this trend?

Access to services	Individuals experiencing economic hardship face barriers to accessing health services including preventive services, which can have negative implications for their health.
Home and work environments	Individuals who lack economic stability are more likely to experience living situations that negatively impact their health, including unsafe housing or homelessness, dangerous working conditions, lack of access to spaces like parks or sidewalks for physical activity, and limited access to affordable healthy foods which can lead to chronic diseases, like diabetes and heart disease.[10]
Toxic stress	Lack of financial stability can increase toxic stress that can negatively impact an individual's mental and physical well-being.[47] Additionally, intergenerational cycles of poverty and racism can impact long term health and limit access to resources such as education, housing stability, and future ability to secure economic stability, all of which are social determinants of health.[48, 49]

Overall more Washingtonians are completing high school but disparities remain particularly for the Hispanic community

What's happening?

- Trend data show the proportion of residents without a high school degree significantly decreased from 11% (±<1%) in 2005 to 9% (±<1%) in 2016.[44]
- Significant disparities exist between communities, however, in rates of graduation. From 2011-2015, while 6% (±<1%) of individuals who identified as white had not completed high school, almost twice as many individuals who identified as African American and more than twice as many who identified as AIAN, Hispanic, or Asian had not completed a high school degree by age 25. Among Hispanics, 37% (±1%) had not completed high school.[44]

What are the health implications of more education?

Increased life expectancy and decreased morbidity	More education is associated with longer life expectancy, lower mortality, and lower morbidity due to a variety of causes.[50, 51, 52]
Better jobs and higher income	For many jobs, high school completion if not a higher education degree is a requirement. Lack of a high school degree often limits access to jobs beyond unskilled labor, in turn limiting one's earning potential and ability to improve future social and economic conditions.[53]
Increased skills	Education is associated with skill development which can impact an individual's or community's ability to access resources including medical care, support services, or prevention programs, as well as the opportunity to exert influence over the conditions which promote health.[53]

Many Washingtonians struggle to afford housing

What's happening?

- In 2016, almost one-third of Washingtonians lived in households with unaffordable housing - where more than 30% of income was spent on housing.[44]
- Individuals who rent continue to experience higher than average cost burden for housing. In 2016, 46% (±1%) of Washington renters spent more than 30% of their income on housing.[44]
- Communities of color experience disproportionate difficulty with affordable housing. In 2016, 46% (±3%) of Africans Americans and 36% (±2%) of Hispanics spent more than 30% of their income on housing compared with whites (27% ±<1%) and Asians (28% ±2%).[44]
- Homelessness in Washington has increased since 2013, largely due to increasing rents. In 2017, half of the homeless people in Washington were in King County. This is in contrast to the economic boom and a down side to the migration into the Puget Sound region.[54]

What are the health implications of less affordable housing?

Less available income for other needs	When households spend more than 30% of their income on housing, it limits the ability to afford other necessities such as food, transportation, and medical care. This dynamic can have acute health impacts by preventing individuals from seeking medical care in a timely manner. It can also contribute to long-term or chronic illness by limiting access to healthy foods or health behaviors.
Poorer quality housing and crowding	Lack of affordable housing may lead individuals to purchase or rent poorer quality housing. From 2010-2014, 18% (±<1%) of Washington residents had severe housing problems such as an incomplete kitchen, incomplete plumbing, more than one person per room, or a cost burden greater than 50%.[55] Poor quality housing can result in poor ventilation and mold or lead exposures.[56]
Stress	For individuals who lack stable housing, the threat of homelessness can contribute to stress that can negatively impact mental and physical health.[56]

Many other social determinants impact health

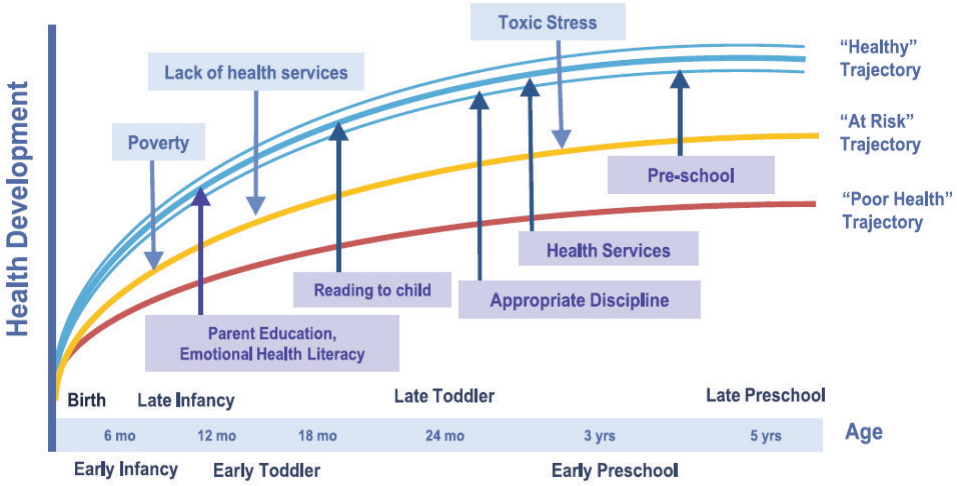
- Other social determinants that impact health include public safety and criminal justice, infrastructure like utilities and technology, jobs, community goods and services, and institutions that impact social engagement like religious, cultural, and educational institutions.
- Current and historical policies and practices also impact health. These include urban planning, immigration and settlement. Policies and practices rooted in prejudice, such as residential segregation and systematic removal of AIAN children from tribes and sending them to boarding schools, have caused intergenerational trauma.[57]
- Social determinants provide the environments in which Washingtonians grow, live, work, play, and worship, thereby impacting quality of life, health behaviors, and health outcomes. Improving health requires us to work together with impacted communities to look at these environments to identify the shared root causes of many health issues. Together, we can highlight opportunities for impact and identify culturally appropriate and acceptable solutions.

Understanding Health Disparities

When we look at measures from all Washington residents averaged together, on many health measures we rank higher than the national average. However, the statewide measures can hide important stories. Where you live and what community you belong to impacts health. When we look at subgroups it becomes clear that while some of Washington's communities experience some of the best health in the nation, others have health outcomes that are quite poor. A recent paper showed that life expectancy in King County in 2014 varied by 18 years for men and 14 years for women between census tracts with the lowest and highest life expectancies. In some instances, census tracts with very divergent life expectancies were located in close proximity.[58] This makes sense because social determinants deeply influence our health. Not all social determinants are distributed equally and, therefore, not all Washington residents start from an equal playing field. As a result of generations of inequality, some communities have a history of poorer health outcomes. Continued disparities today mean that some groups have more resources or resilience when confronting new challenges. The diagram below demonstrates the impact of risk and protective factors, and how health disparities can play out throughout the life course. The timing of exposures and experiences can impact an individual's health leading them on a specific health trajectory across their life span.[59]

This report breaks out health data to reflect different Washington subpopulations to the extent that we are able. In many instances, we shed light on the disparities that exist between the state average and the lived realities for specific communities in our state. While the individuals or communities most at risk vary, readers will notice that certain communities—such as communities of color, individuals of lower socio-economic status, and specific counties—often experience disproportionately poor health outcomes across several health measures. This finding is often a reflection of inequalities in the built environment and social determinants of health—both those currently experienced, like housing and income, as well as intergenerational factors, like trauma, found across communities.

We present a simplified overview of disparities in this report to aid understanding. Our intention is to identify disparities so we are better positioned to address them together, and to help leverage the strengths within communities to address their needs. Increasingly, we appreciate the role communities and cultures have in identifying solutions that work and seek to collaborate on prevention alignment. We recognize that individuals may belong to several communities or subpopulations experiencing increased health risks. While we highlight disparities separately, exploration of the intersections between groups is also necessary to better inform prevention and health interventions. We know that subpopulations and communities with the greatest disparities are the ones with the greatest potential for health improvement. So identifying disparities becomes an important first step for gaining clarity on where we should focus our work.



Used by permission:
Figure 2a from Halfon N, Larson K, Lu M, Tullis E, Russ S. Life-course health development: Past, present and future. *Maternal Child Health Journal.* 2014;18:344-365

Process and Stakeholder Engagement

We began our *State Health Assessment* process by compiling a list of indicators across five domains including health outcomes and the four determinants of health highlighted previously:

- Health behaviors
- Healthcare access and preventive care
- Physical environment
- Social determinants

We reviewed state and national materials to compile the list, and assessed indicators based on these criteria:

- High burden (morbidity/mortality or risk factors associated with multiple outcomes)
- High cost
- Actionable at multiple levels (population, community, interpersonal, individual)
- Indicator shows variability
- Indicator is easy to communicate
- Indicator aligns with other national and statewide initiatives

We selected indicators from valid and reliable sources, and wherever possible had county-level data for more than 80 percent of counties. Our goal was to limit the list to about 50 indicators.

The Washington State materials we reviewed included the *Health of Washington State*, the *Common Measure Set*, the *Public Health Improvement Plan*, *Local Public Health Indicators*, the *Washington Prevention Framework*, the Governor's *Results Washington* measures, and program-level performance measures from the Washington State Department of Health.

The national materials we reviewed included *America's Health Rankings*, *County Health Rankings*, *Healthy People 2020*, *CDC's Community Health Status Indicators*, the Institute of Medicine's *Vital Signs: Core Metrics for Health and Healthcare Progress*, and CDC's *6|18 Initiative*.

From these resources, we compiled an initial list along with some core background indicators and reviewed it to ensure it included measures across the life span and measures that could show health disparities. We shared the list with state, local and tribal public health staff, and the state Health Care Authority and other partners, and revised the list based on their feedback.

As we began our stakeholder engagement process, Washington was in the midst of health system transformation. This included establishment of nine regional Accountable Communities of Health (ACHs) as part of Washington's State Innovation Model (SIM) Grant from the Centers for Medicare and Medicaid Services. ACHs were established to bring together leaders from across sectors to improve the health of their regional population. ACHs were developing robust partnerships with business communities, social service agencies, nonprofit organizations, advocacy groups, local public health, hospitals and healthcare systems. Many of the stakeholders we wanted to engage were also intensely involved in establishing ACHs. Because of this, we conducted our stakeholder engagement with several existing stakeholder groups. These groups included:

Department of Health Community Health Advisory Committee (CHAC)

The CHAC works to align the strategic direction of chronic disease prevention work and supports the development of healthy communities in Washington State. The committee includes state agency partners, local health jurisdiction partners, stakeholders such as the American Academy of Pediatrics, Foundation for a Healthier Generation, Washington State American Indian Health Commission, and consumer representatives.

State Innovation Model Grant Plan for Improving Population Health External Advisory Group

The *Plan for Improving Population Health* guides state and local communities in implementing population health improvement strategies and ensuring Healthier Washington addresses prevention, health equity and the social determinants of health. Group members came from across the state representing Accountable Communities of Health, local health jurisdictions, healthcare providers, and community-based and cross-cultural organizations.

State Prevention Enhancement (SPE) Policy Consortium

The SPE Policy Consortium brings together key prevention partners including representatives from 26 state and tribal agencies and organizations. The SPE Policy Consortium's goal is to enhance an integrated statewide system and infrastructure to better support high-need communities to address substance abuse prevention, mental health promotion and related issues.

Washington State Association of Local Public Health Officials (WSALPHO)

WSALPHO brings together the leadership of local public health jurisdictions (LHJs) to provide a more effective, efficient and consistent local public health infrastructure throughout the state. The Assessment Committee and Health Reform Workgroup specifically provided input into the report process.

Washington State Environmental Health Directors (WSEHD)

WSEHD provides a unified voice and influence regarding environmental health policy in Washington State. The committee is comprised of Washington State Department of Health (Environmental Public Health Division) leadership, Environmental Health Directors representing every county in Washington State, the Washington State Board of Health and other federal and state agencies engaged in environmental health.

Medical Quality Assurance Commission (MQAC)

MQAC establishes, monitors and enforces qualifications for physician and physician assistant licensure, consistent standards of practice, and continuing competency to promote quality healthcare. Members are appointed by the governor.

We met with each group and gave a 20-minute background presentation explaining our goals for the *State Health Assessment* and the process we were using, and providing information on Washington's population and high-level health status. After each presentation, we provided the indicator lists, organized by domain, showing the most recent Washington State data, the most recent U.S. data, and whether Washington State was doing the same, better or worse than the U.S. We asked each participant to select what they saw as the top 10 health issues. We also invited them to add indicators we might have missed, and to tell us if they were particularly interested in a population subgroup. We encouraged them to focus on the health issue rather than the indicator. After the first presentation, we added about 20 indicators identified by stakeholders to our list, and the remaining groups could also select those issues in their top 10 issues. Appendix A shows the final list of seventy issues and indicators.

During the stakeholder engagement process, we also reviewed local documents including community health assessments, community health needs assessments, and community health improvement plans recently completed by local health jurisdictions and hospitals. This review showed where our list was missing important indicators, and whether communities were focused on similar priority issues identified at our stakeholder workshops. Thirty of the 35 LHJs had completed a county or regional health assessment, all but three within the past five years. An additional four LHJs had not completed a community health assessment, so we reviewed the community health needs assessment of the main hospital in their jurisdiction. Appendix B contains a description of the overall findings of the review and a table maintained on the DOH website with links to the local assessment reports. As new reports are completed, we make them available to state and local public health, ACHs, healthcare organizations, nonprofit agencies, and community members to promote collaboration on the priority health issues facing Washingtonians.

To prepare this report, we assembled background information on the population of Washington, pertinent trends, life expectancy, and leading causes of death and hospitalization, as well as information on the physical and built environment and social determinants of health. Using feedback from all stakeholder groups, we finalized the list of priority stakeholder issues. We summed the issues prioritized by each stakeholder group and ranked them. We also summed and ranked the issues across the groups. The chart on the next page shows the top 10 issues from each stakeholder group, and across all six stakeholder groups. In many instances, there are more than 10 issues due to a tie in the rankings. The column on the left includes the top 10 issues (12 issues due to ties) across all six stakeholder groups. For each issue identified in the top 10 issues of one or more groups, we compiled trend information, county-specific data, and data stratified by gender, age, race and ethnicity, income and education, to the extent data were available. Each of the issues identified by one or more stakeholder groups is included as a section in the following key issues. Some issues we combined into one section. For example, we grouped Homelessness and Inadequate Housing together. We also included sections (*Breast Cancer*, *HIV*, and *Prenatal Care*) that were key issues for the Department of Health, but had not been prioritized by the stakeholder groups. In total, the following sections highlight 27 key issues.

We reviewed the top issues across all stakeholder groups and combined some of these issues to identify a more focused list of eight priority health issues for the state. Before finalizing the *State Health Assessment*, we shared the results of the prioritization and the draft report with the stakeholder groups and posted the draft report on our website in January 2018. We sent out emails to partners and stakeholders notifying them that the *State Health Assessment* was available for public comment, mentioned it on social media, wrote a blog post about it, and sent out reminder emails. As part of the public comment period, we invited stakeholders to complete a survey that asked whether the issues in the *State Health Assessment* were important to them, whether we missed any issues, whether they would like to be included in updates of the *State Health Assessment* or the *State Health Improvement Plan* process, and whether they had any other comments. We received completed survey data from 176 stakeholders who included community members, healthcare providers, and representatives from local health departments, state agencies, professional organizations, and community-based organizations. We received valuable information from the survey and were able to address several comments in the report. In addition, we have a list of issues and concerns raised by stakeholders that we plan to review and address as part of our updates and future work.

Top 10 Ranked Health Issues from Stakeholder Workgroups

All Stakeholder Groups	CHAC	P4IPH	WSALPHO	SPE	EHD	MQAC
Obesity	Homelessness	Tobacco Use	Obesity	Tobacco Use	Physical Activity	Obesity
Nutrition	Childhood Immunizations	Oral Health	Suicide	Excessive Alcohol Use	Outdoor Air Quality	Nutrition
Physical Activity	Physical Activity	Suicide	Childhood Immunizations	E-Cigarette Use	Obesity	Childhood Immunizations
Tobacco Use	Access to Provider	Diabetes	Severe Housing Problems	Suicide	Asthma	Diabetes
Childhood Immunizations	Safe Firearms Storage	Fluoridated Water	Nutrition	Drug Overdose Deaths	Diabetes	Excessive Alcohol Use
Suicide	Obesity	Mental Health	Tobacco Use	Marijuana Use	Nutrition	Physical Activity
Diabetes	Mental Health	Obesity	Physical Activity	Non-Medical Use of Pain Relievers	Health Insurance	Domestic Violence
Severe Housing Problems	Asthma	Nutrition	Adverse Childhood Experiences (ACEs)	Prediabetes	Indoor Air Quality	Drug Overdose Deaths
Drug Overdose Deaths	E-Cigarette Use	Childhood Immuniza-tions	Prenatal Care	Coronary Heart Disease	Coronary Heart Disease	Severe Housing Problems
Mental Health	Nutrition	Physical Activity	Excessive Alcohol Use	Education	Drug Overdose Deaths	Children in Poverty
Excessive Alcohol Use	Severe Housing Problems	Severe Housing Problems			Tobacco Use	
Access to Provider	Indequate Social Support	Access to Mental Health Providers			Shellfish	
Homelessness					Limited Access to Healthy Foods	

Note that there were several ties in ranking the issues which led to more than 10 issues listed for all the stakeholder groups combined, and for several of the individual stakeholder groups. The stakeholder groups include: Community Health Advisory Committee (CHAC), Plan for Improving Population Health (P4IPH) External Advisory Committee, Washington State Association for Local Public Health Officials (WSALPHO), State Prevention Enhancement Policy Consortium (SPE), Local Environmental Health Directors (EHD), and the Medical Quality Assurance Commission (MQAC).

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Key Issues

The following section summarizes key issues identified by our stakeholder groups. These issues are organized into five sections aligned with the four determinants of health:

- Health outcomes
- Health behaviors
- Healthcare access and preventive care
- Physical and built environments
- Social determinants

For each issue, we have highlighted its importance and pulled together available trend data and variation by geography, gender, age, race and ethnicity, education and income to emphasize and highlight disparities where present. We also provide a summary of statewide efforts across Washington addressing these issues.

Health Outcomes

Asthma

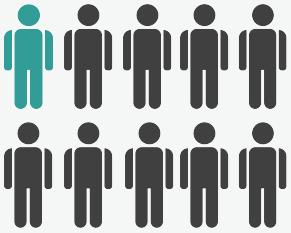
Asthma is a lung disease that inflames and narrows the airways. It causes recurring periods of wheezing, chest tightness, shortness of breath, and coughing. Indoor and outdoor air pollutants, stress, changes in temperature, colds and other infections, and exercise can trigger asthma attacks.

In 2016, 10% (± <1%) of Washington adults reported having asthma. Asthma prevalence increased from 1999 to 2010, and has been stable since 2011. The prevalence of current asthma among 10th graders was 10% (± 1%) in 2016, and has been stable.

Males, Asians, and Hispanics are less likely to have asthma than are other Washingtonians.

Good asthma care must be coordinated across many areas: healthcare, communities, schools, homes, and worksites. People who have asthma often have other chronic diseases. We know that much of what causes and worsens heart disease, stroke, diabetes, and some cancers also affects asthma. Asthma treatment will be more successful when Washington residents live in environments that make it easier to breathe and live healthy, active lives.

Currently, DOH lacks asthma-specific funding to make statewide policy, environment, and systems changes necessary to adequately and equitably support people with asthma.



1 in 10

Washington adults has asthma

1 in 5

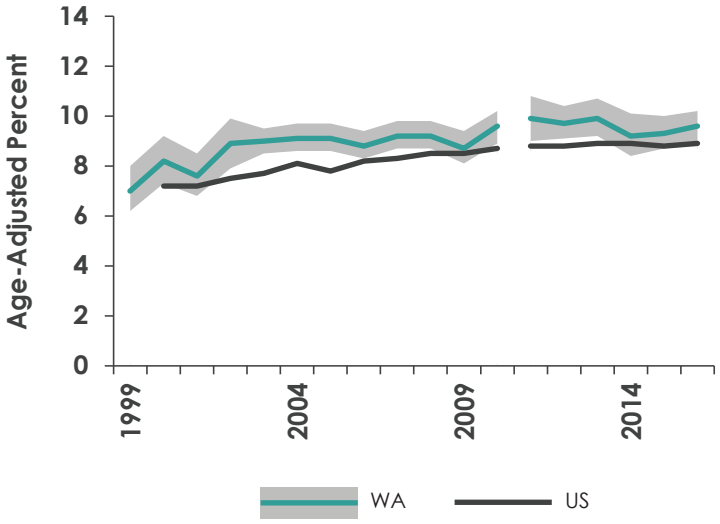
Washington 10th graders has had asthma in their lifetime

Adults

Time Trends

- In the 2016 Behavioral Risk Factor Surveillance System (BRFSS), the prevalence of asthma among Washington State adults was 10% (± <1%).
- Washington adults have a similar prevalence of asthma compared to U.S. adults.
- The prevalence of asthma in Washington has been stable from 2011-2016. Previously, it increased from 7% (± 1%) in 1999 to 10% (± <1%) in 2010.

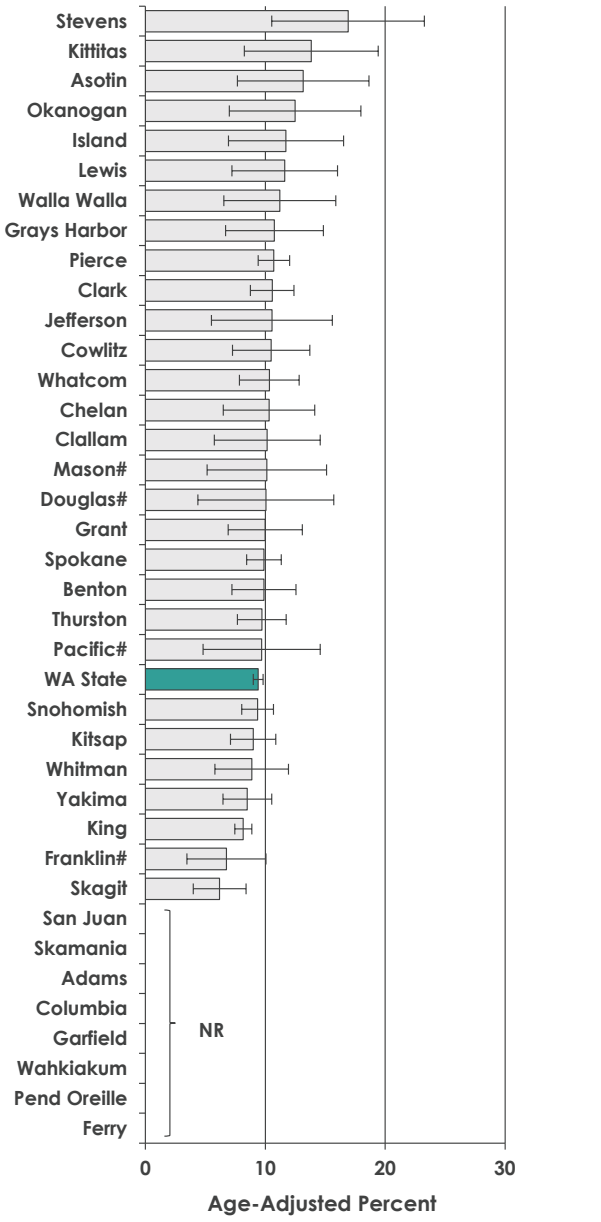
Asthma Prevalence
Washington State & US
BRFSS, 1999-2016



Geographic Variation

There are no counties with adult asthma prevalence that is different than the state prevalence.

Asthma
Washington Counties
BRFSS, 2014 & 2016



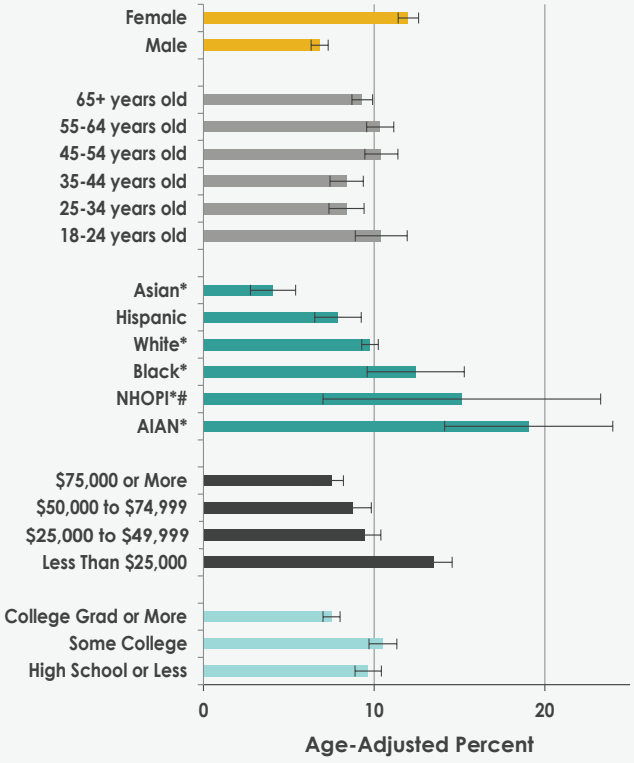
WA State
Same as WA State
Lower than WA State
Higher than WA State

NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2014-2016 BRFSS, males had lower asthma prevalence compared to females.
- Asthma prevalence was lower among adults 25-44 years old.
- Non-Hispanic (NH) Asians had the lowest asthma prevalence followed by Hispanics.
- The asthma prevalence among lesbian, gay and bisexual (LGB) adults was higher than the asthma prevalence among heterosexuals, 17% (±3%) vs 9% (±<1%) overall, 23% (±4%) vs 12% (±<1%) among females, and 11% (±4%) vs 7% (±<1%) among males, respectively (data not shown).

Asthma
Washington State
BRFSS, 2014-2016

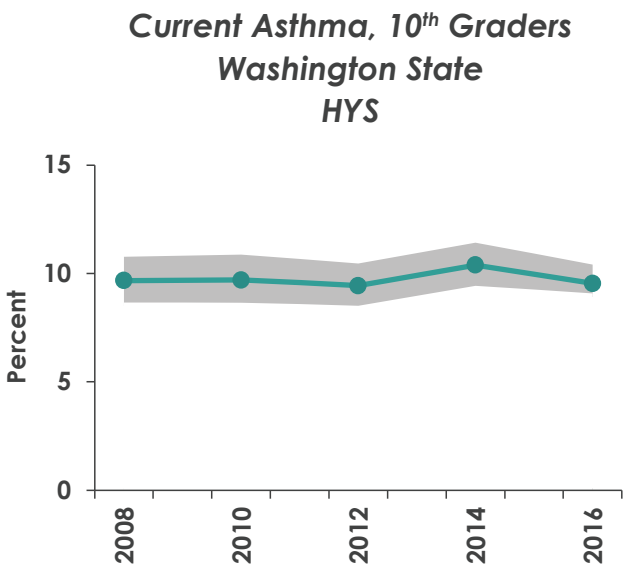


**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

Youth

Time Trends

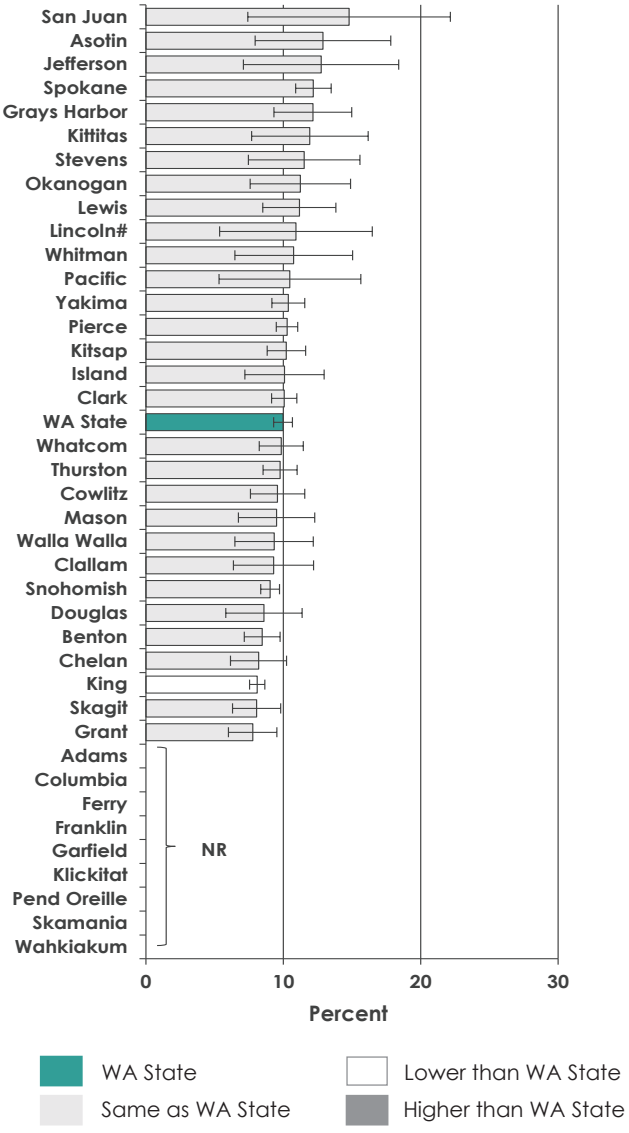
- In the 2016 Washington State Healthy Youth Survey (HYS) among 10th graders, the prevalence of lifetime asthma was 21% (± 1%), and current asthma was 10% (±<1%).
- Washington 10th grade students reported a similar prevalence of asthma compared to U.S. 10th graders.
- The prevalence of asthma among Washington 10th graders has been stable since 2008.



Geographic Variation

- In the combined 2014 & 2016 HYS, King County 10th graders had a lower prevalence of asthma compared to 10th graders in the state as a whole.
- There were no counties where the prevalence of asthma in 10th graders was higher than the prevalence among 10th graders in the state as a whole.

Youth Asthma, 10th Graders
Washington Counties
HYS, 2014 & 2016

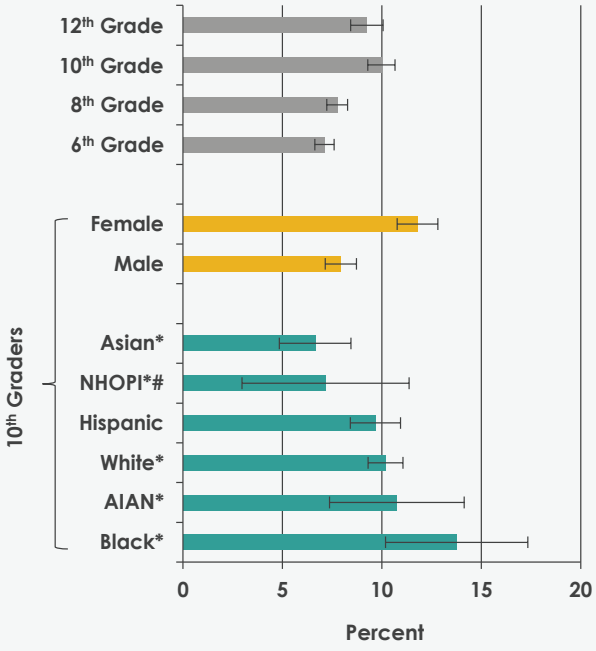


NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the combined 2014 & 2016 HYS, asthma prevalence was highest among 10th and 12th graders.
- Female 10th graders had higher asthma prevalence compared to males.
- Black 10th graders had the highest asthma prevalence, and Asian students had the lowest.

Current Asthma
Washington State
HYS, 2014 & 2016



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing asthma?

In 2016, DOH and partners updated the Washington State Asthma Plan and agreed that in order to adequately improve the quality of life for people with asthma in Washington, three goals need to be met:

1. All people with asthma in Washington will have access to, and receive, affordable, high-quality care according to national guidelines.
2. All people with asthma in Washington will live in healthy homes and communities to support effective self-management and reduce exposure to asthma triggers.
3. All schools and early learning programs in Washington will be asthma-friendly.

In the absence of a state asthma program at the Department of Health, there continue to be some state-level efforts to work toward these goals. For example, there are three performance measures included in the Medicaid Transformation Demonstration that Accountable Communities of Health can choose to focus on, that would impact people with asthma:

- Medication management for people with asthma (5-64 years)
- Medication management for people with asthma (5-64 years)
- Outpatient emergency department visits
- Children's and adolescents' access to primary care practitioners

Additionally, in 2015, the Washington State Legislature expanded its investment in healthy, safe, and energy-efficient low-income weatherization to include improvements that help children and adults combat asthma. The initiative is called Weatherization Plus Health. In its pilot phase from 2016 to 2017, $2.3 million was dedicated to eight grant projects around the state. Pilot projects finished their initial work in June 2017, with program evaluations expected by the end of summer 2018.

Lastly, partners and local asthma coalitions continue to invest their own resources into activities such as:

- Providing direct services for people with asthma in their communities
- Piloting innovative and collaborative programs to help reduce the burden of asthma
- Testing new payment models
- Working together to ensure quality asthma care is accessible and equitable statewide.

See also Outdoor Air Quality

Evidence-based interventions to address asthma are available in the CDC Community Guide.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Current Asthma in Healthy Youth Survey: defined as those students who reported being told by a doctor or nurse that they had asthma, and that they still have asthma.

Race and Ethnicity: Classification described in Appendix C

Female Breast Cancer

Breast cancer is the most frequently diagnosed cancer and the second leading cause of cancer death among Washington women. In Washington State in 2014, there were 6,926 new cases of female breast cancer (age-adjusted incidence rate; 169 per 100,000 women) and 865 women died of breast cancer (age-adjusted mortality rate: 20 per 100,000 women). In 2014, Washington's incidence rate was higher than the U.S. rate.[1] Washington has consistently ranked among the 10 states with the highest rates of newly diagnosed invasive breast cancer.[2]

DOH, along with partner agencies, is working to promote cancer screening. Early detection is key, and collaboration on policies and practices that promote early detection and the implementation of evidence based interventions to increase screening are underway. These interventions center around client reminders, provider reminders, reducing structural barriers to obtaining screening (e.g. mobile mammography and increased clinic hours), and provider assessment and feedback of their client panel's up-to-date screening rate.

1 in 8

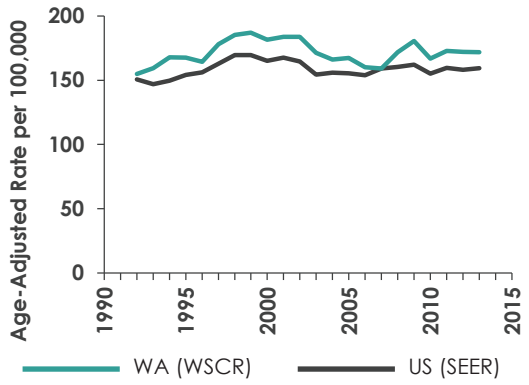
U.S. women will develop breast cancer in their lifetime

Washington is among the 10 states with the highest newly diagnosed breast cancer rates

Time Trends

- In 2014, there were 6,926 new cases of female breast cancer reported in Washington, an age-adjusted incidence rate of 169 per 100,000 which is higher than the U.S. rate.
- Washington has ranked among the 10 states with the highest newly diagnosed invasive breast cancer rates for all but two years since 1999.
- Similar to the U.S. overall, female breast cancer incidence rates in Washington have remained level since 2006.
- Washington has not yet achieved the Healthy People 2020 goal to reduce the incidence of late stage breast cancer in women to 41 cases per 100,000 women. In 2014, 44 cases of late-stage breast cancer were diagnosed per 100,000 Washington women.
- In 2014, 865 women died of breast cancer, an age-adjusted mortality rate of 20 per 100,000.
- The age-adjusted female breast cancer mortality rate has decreased steadily since 1992 when surveillance began, and surpassed the *Healthy People 2020* goal of 21 deaths per 100,000 women in 2012.
- The overall 2014 U.S. five-year relative survival rate for female breast cancer is 92%[1].
- Survival increases with early diagnosis and in 2014, 71% of female breast cancers in Washington were diagnosed at the earliest stage (in situ and localized), 26% at the latest stage (regional and distant) and 4% unstaged.

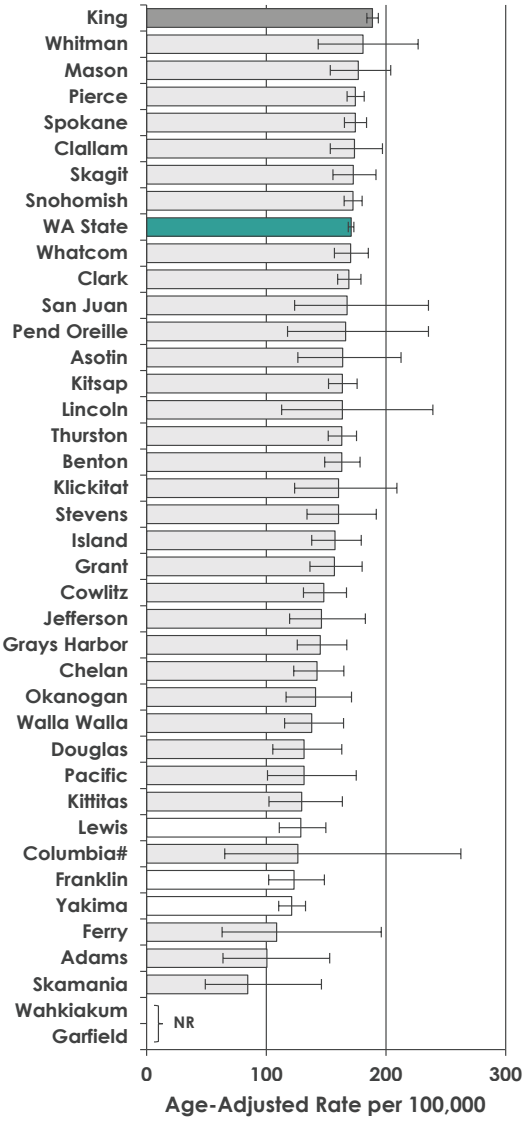
Female Breast Cancer Incidence Rates Washington State & US Cancer Registry, 1992-2014



Geographic Variation

- During 2012-2014 combined, King County had a higher incidence rate of female breast cancer than the state as a whole.
- During 2012-2014 combined, Franklin, Lewis, and Yakima counties had lower incidence rates of female breast cancer than the state as a whole.

Female Breast Cancer Incidence Rates
Washington Counties
Cancer Registry, 2012-2014



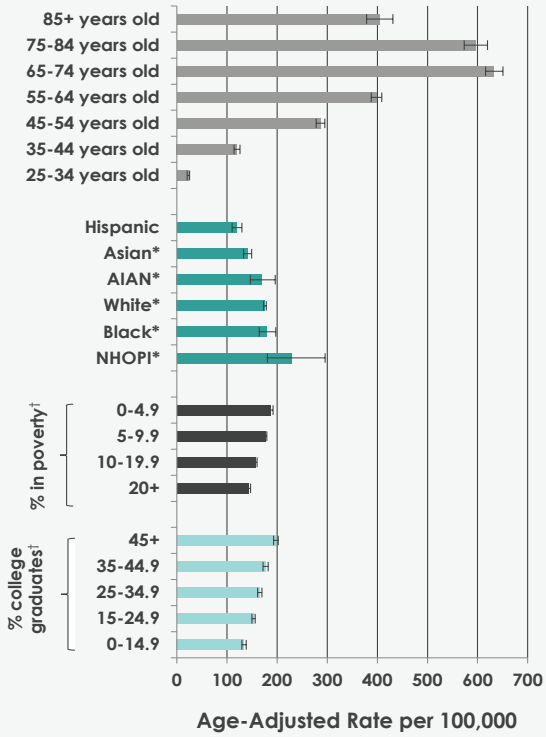
NR: Not reported if RSE ≥ 30% or to protect privacy

#Relative standard error (RSE) is between 25% and 29%

Disparities

- During 2012-2014 Washington women 65-74 years had the highest incidence rate of female breast cancer. Though important to address cancer incidence, incidence is commonly higher in older adults as cancer risk increases with age.
- During 2012-2014, Native Hawaiian and Pacific Islander (NHOPI) women had a higher rate of newly diagnosed breast cancer than White women. Hispanic women in Washington had the lowest rate compared to all other racial and ethnic groups.
- In Washington, for 2010-2014 combined, age-adjusted female breast cancer incidence rates were highest for people living in census tracts where less than 5% of the population lived in poverty.
- In Washington, for 2010-2014 combined, age-adjusted incidence rate for female breast cancer increased as the proportion of census tract residents with a college degree increased.

Female Breast Cancer Incidence Rates
Washington State
Cancer Registry, 2012-2014



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

†Among census tract residents, 2010-2014 data

How is Washington addressing breast cancer?

State, local, and community partners are working to reduce the burden of cancer.

The Department of Health

- Administers the National Breast and Cervical Cancer Early Detection Program for Washington in partnership with regional contractors. This program provides free breast, cervical, and colon cancer screening to eligible people in Washington State, promotes cancer screening, diagnostics and access to treatment, and partners with health systems and payers to implement evidence-based interventions to increase cancer screening and policies that promote cancer screening.
- Implements the Comprehensive Cancer Control program that works with partners to promote the utilization of health plan benefits and worksite wellness through HealthLinks.
- Tracks and monitors the burden of cancer in communities across the state.

Healthcare Systems in Washington

- Increase access to breast cancer screening via mobile mammography and increased clinic hours.
- Monitor and track up-to-date screening rates.
- Provide services for many of our state's most vulnerable populations. Federally Qualified Health Centers, a key element of the healthcare safety net, are partnering with Department of Health, American Cancer Society, and the Susan G. Komen Foundation to increase screening.

Community Based and Nonprofit Organizations

- The American Cancer Society (ACS) in Washington advocates for funding and policies that ensure access to high-quality breast cancer screening for all. They bring together organizational leaders to support cancer prevention, screening, and treatment with their CEOs Against Cancer program and their partnership with Delta, the National Football League, Kroger, and Chevrolet. They provide the *Look Good Feel Better, Reach to Recovery* and patient navigation programs to support people going through treatment and into survivorship.
- The Susan G. Komen Foundation advocates for funding, and provides for the promotion of cancer prevention, screening and treatment.

Evidence-based interventions to increase cancer screening are available in the CDC Community Guide.

Technical Notes

Breast Cancer Incidence: Breast cancer incidence was defined using ICD-O-3 codes C50.0-C50.9 excluding histology codes 9140, 9050–9055, 9590–9992 for diagnosis years 1992–2014. This definition includes ductal and lobular carcinoma *in situ*. When we compare Washington and national incidence, we include the *in situ* cases for both Washington and the nation. Many national reports, such as those commonly published by the American Cancer Society and the National Cancer Institute, do not include *in situ* cases. Incidence rates are lower when *in situ* cases are not included.

Breast Cancer Mortality: Deaths due to breast cancer were defined using the underlying cause of death ICD-9 codes 174.0-174.9 (1992-1998) and ICD-10 codes C50 (1999-2014) reported on the Washington State death certificates.

Confidence Intervals: Definition and examples are described in Appendix C

Percent Living in Poverty and Percent College Graduates: Definition and use is described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Surveillance, Epidemiology, and End Results (SEER) Program: The National Cancer Institute established the SEER Program to assist in the collection, analysis, and dissemination of data useful for the prevention, diagnosis, and treatment of cancer, a requirement of the National Cancer Act of 1971. According to United State Cancer Statistics by the National Cancer Insti-tute and the Centers for Disease Control and Prevention, there are 14 population-based cancer registries and 3 supple-mental registries (which cover about 28% of the U.S. population) that collect data on cancer incidence and survival.

Washington State Cancer Registry (WSCR): Washington law (Revised Code of Washington 70.54.230), established the cancer registry program (WSCR) at the Department of Health. WSCR collects data about cancer diagnosis, treatment, and death in Washington State, as part of a national system. The data are used to identify better ways to prevent, diagnose, and treat cancer, and to plan programs and policies.

Endnotes

[1]National Cancer Institute, Surveillance, Epidemiology, and End Results (SEER) Program. SEER*Stat Database: Incidence - SEER 13 Regs Research Data, Nov 2016 Sub (1992-2014) <Katrina/Rita Population Adjustment> - Linked To County Attri-butes - Total U.S., 1969-2015 Counties. https://seer.cancer.gov. Released April 2017, based on the November 2016 submis-sion. Accessed September 7, 2017.

[2]U.S. Cancer Statistics Working Group, Centers for Disease Control and Prevention and National Cancer Institute. United States Cancer Statistics: 1999-2014 Incidence and Mortality Web-based Report. www.cdc.gov/uscs. Accessed September 7, 2017.

Coronary Heart Disease & Hypertension

Coronary heart disease is the second leading cause of death in Washington State. Coronary heart disease is usually caused by atherosclerosis which can result in decreased blood flow through the blood vessel. This results in decreased oxygen supply to the heart muscle and can cause reduced heart muscle function and destruction of heart muscle cells (myocardial infarction or 'heart attack'). Deaths from coronary heart disease can be prevented or delayed by modifying known risk factors, such as high blood pressure, high blood cholesterol, tobacco use, physical inactivity, obesity and diabetes.

In 2015, the coronary heart disease death rate in Washington State was 80 per 100,000 people.

Males, Native Hawaiian and other Pacific Islanders (NHOPI), American Indians and Alaska Natives (AIAN), blacks, people over 65 years old, and people living in areas with low incomes or less education had the highest coronary heart disease death rates compared to other Washingtonians.

DOH, along with partner agencies, is working to reduce modifiable risk factors, implementing the *Healthier Washington* Plan for Improving Population Health and the Washington State Plan for Healthier Communities, and working to improve emergency cardiac care.

1 in 4

Washington adults has been told by a health professional they have high blood pressure, a modifiable risk factor for coronary heart disease

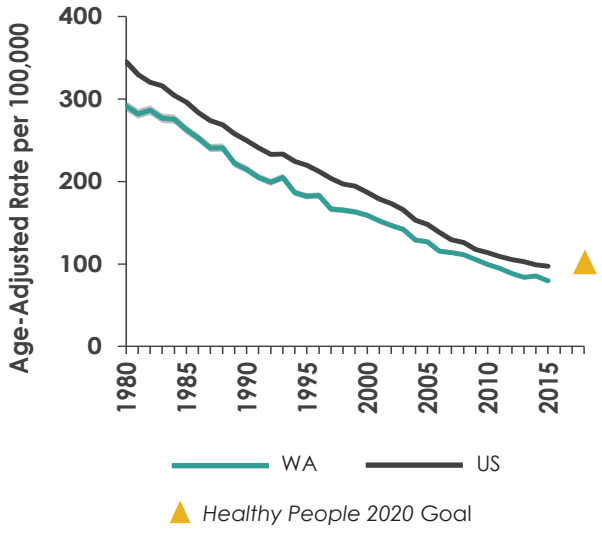
Coronary heart disease is the 2nd leading cause of death in Washington

Coronary Heart Disease

Time Trends

- In 2015, the age-adjusted coronary heart disease death rate in Washington was 80 per 100,000 people.
- Washington has a lower rate of coronary heart disease deaths compared to the U.S.
- The coronary heart disease death rate in Washington has declined substantially over the past 36 years, has met the *Healthy People 2020* goal, and likely will continue to meet it.

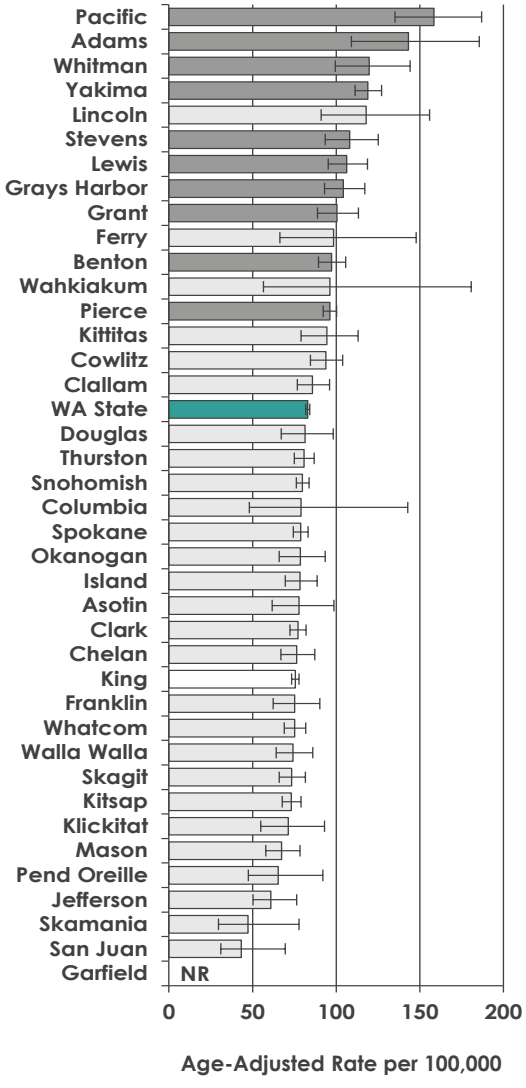
Coronary Heart Disease Deaths
Washington State & US
Death Certificates, 1980-2015



Geographic Variation

- In 2013-2015, coronary heart disease death rates in Adams, Benton, Grant, Grays Harbor, Lewis, Pacific, Pierce, Stevens, Whitman, and Yakima counties were higher than the state rate.
- King County had a lower rate than the state.

Coronary Heart Disease Deaths
Washington Counties
Death Certificates, 2013-2015



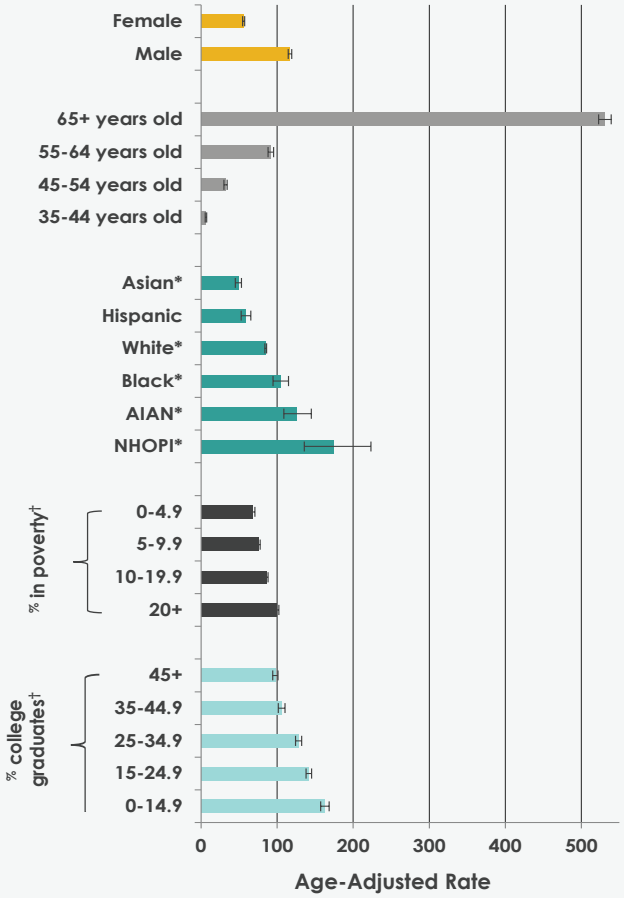
WA State | Lower than WA State
Same as WA State | Higher than WA State

NR: Not reported if RSE ≥ 30% or to protect privacy

Disparities

- In 2013-2015, males had a higher coronary heart disease death rate compared to females.
- Coronary heart disease death rates were highest among those 65 years and older, and even higher among those 85 years and older (1,944 per 100,000 people).
- NHOPI, AIAN, and blacks had the highest coronary heart disease death rates.
- Coronary heart disease death rates increased as residential area levels of education and household income decreased.

Coronary Heart Disease Deaths
Washington State
Death Certificates, 2013-2015



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

†Among census tract residents, 2013-2015 data

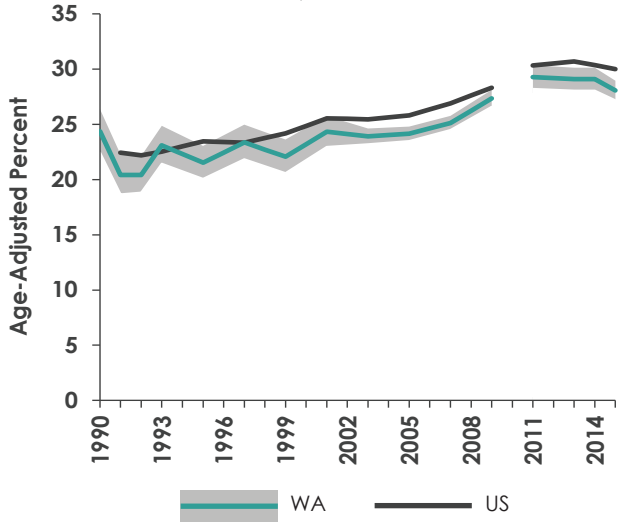
In 2015, 28% (± 1%) of Washington adults reported they had ever been told by a health professional they had high blood pressure, also known as hypertension. Hypertension among Washington adults slightly increased from 1990 – 2010, but has recently been stable. Males, blacks, adults over 65 years old, and adults with low incomes and education are more likely to report having hypertension than other Washington adults.

Hypertension

Time Trends

- In the 2015 BRFSS, the age-adjusted percent of Washington adults reporting ever having hypertension was 28% (±1%).
- Washington has a lower percent of adults reporting hypertension than the U.S.
- Self-reported hypertension among Washington adults slightly increased from 1990-2010. These data are not directly comparable with more recent data due to a change in survey methods. Data since 2011 show the percent to be relatively stable.

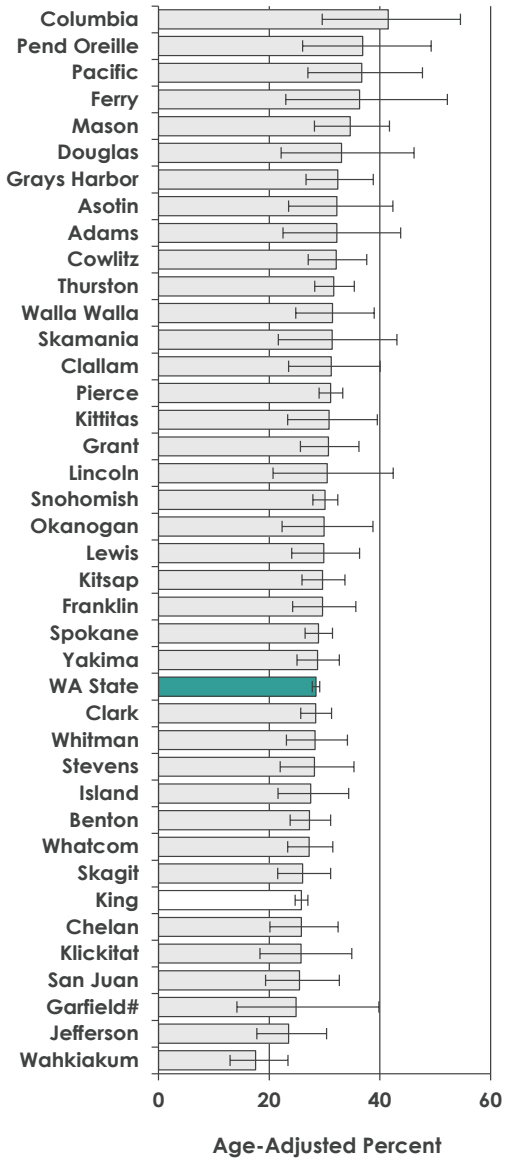
Self-Reported Hypertension
Washington State & US
BRFSS, 1990-2015



Geographic Variation

- In the 2013 and 2015 BRFSS combined, self-reported hypertension was lower in King County compared to the state.
- No county had a higher prevalence than the state.

Self-Reported Hypertension
Washington Counties
BRFSS, 2013 & 2015



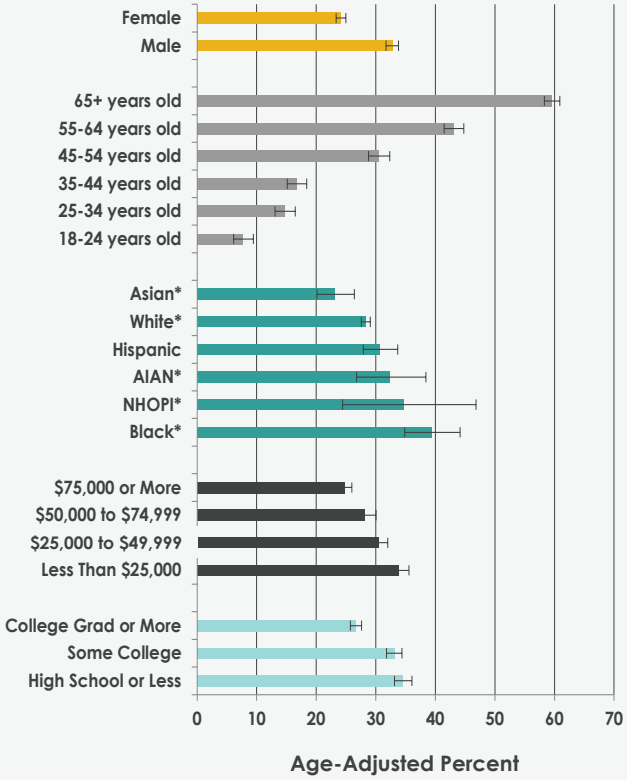
WA State
Same as WA State
Lower than WA State
Higher than WA State

#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2013 and 2015 BRFSS combined, more males reported having hypertension than females.
- Self-reported hypertension was highest among adults 65 years and older.
- A higher percent of black adults reported hypertension than whites.
- Self-reported hypertension increased as levels of income and education decreased.

Self-Reported Hypertension
Washington State
BRFSS, 2013 & 2015



Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing coronary heart disease & hypertension?

DOH and its partners are working to prevent heart disease by addressing many of the modifiable risk factors including high blood pressure; using tobacco or being exposed to secondhand smoke; diabetes, prediabetes, or metabolic syndrome; high cholesterol; being overweight or obese; and lack of physical activity. This is being achieved by implementing the Plan for Improving Population Health based on the Prevention Framework; aligning with the federal public-private Million Hearts partnership to prevent one million cardiovascular events by 2022; and efforts to implement the 2014 Washington State Plan for Healthy Communities. The overarching goals of the plan are:

- Increasing the number of Washingtonians who are healthy at every stage of life

  Strategies include:

  - Increasing access to safe and affordable physical activity where people learn, live, play, work and worship.
  - Reducing tobacco and alcohol advertising, reducing promotions and product placement, and enforcing youth access laws for these products.
  - Increasing the number of places that protect employees, customers, patrons and others from secondhand smoke.
  - Increasing access to healthy foods and beverages where people learn, live, play, work and worship.

- Achieving health equity by eliminating health disparities

  Strategies include:

  - Developing new assessments and systems, so DOH can determine the need for systems to track progress of healthy communities' activities, with a focus on data needed to identify health disparities as well as successful efforts to achieve health equity.
  - Using data to monitor population health.
  - Evaluating interventions, programs, and activities for their impact on health equity.
  - Obtaining and prioritizing sustainable funding.
  - Increasing the number of community-based organizations—including local health jurisdictions, tribal health services, nongovernmental organizations and state agencies—providing population-based primary prevention services.
  - Supporting linkage of clinical and community prevention efforts to mobilize services, resources, and self-management programs in community-based organizations that serve economically and socially disadvantaged populations.
  - Investing resources to build strong and trusting relationships with communities.

- Working to improve emergency cardiac care by increasing the number of people who obtain the correct treatment after a cardiac event.

  To achieve this goal, some important strategies were identified to improve the effective delivery and use of clinical and other preventive services to prevent disease, detect disease early, reduce or eliminate risk factors, and mitigate or manage complications.

  - Enhance and maintain health systems to increase timely access to preventive care, screening and treatment.
  - Increase public and health professional awareness of the importance of screening and follow-up.
  - Promote and provide support to build capacity and availability of healthcare, education, resources and services.

- Offering in-person blood pressure training to individuals representing a variety of organizations (i.e., community-based organizations, Community Health Workers, Health Ministers, and Community Health Representatives), who work within diverse communities, through funding from federal cooperative agreements. This 2.5-hour interactive hands-on, in-person blood pressure training uses automated monitoring devices. This training provides key health messaging about measuring blood pressure accurately, and the importance of sharing the measurements with primary care using paper or electronic tracking methods. Training participants increases their health literacy regarding the meaning of blood pressure readings, and their relationship to heart disease and stroke risk. Participants who complete the training promote control and management of blood pressure in their communities.
- Making a suite of materials available to health systems, clinics and clinical team members to support accurate and consistent blood pressure self-management in English and five additional languages.

See also Tobacco & Vapor Product Use, Binge Drinking & Excess Alcohol Use, Physical Activity, Fruit & Vegetable Intake, and Diabetes & Prediabetes

Evidence-based interventions to address coronary heart disease and hypertension are available in the CDC Community Guide.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Percent Living in Poverty and Percent College Graduates: Definition and use is described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

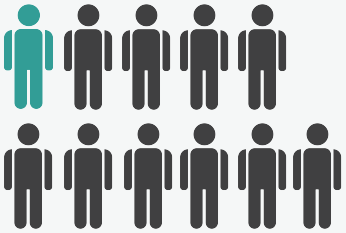
Diabetes & Prediabetes

Diabetes is a chronic condition characterized by high blood glucose (sugar) resulting from the body's inability to use glucose for energy. When too much blood sugar stays in your bloodstream, over time it can cause serious health problems like heart disease, vision loss and kidney disease. Reducing known risk factors, such as tobacco use, dietary patterns that lead to weight gain, physical inactivity, high blood cholesterol, and high blood pressure can prevent type 2 diabetes or delay its onset. Reducing these risk factors in people with diabetes also prevents or lessens the severity of diabetes complications. Diabetes and its complications are leading causes of hospitalization and the seventh leading cause of death.

In 2016, 9% of Washington adults reported they had been told by a health professional they had diabetes. Diabetes among Washington adults increased from 1994 – 2010, but has recently been stable. The prevalence of diabetes among Washington adults is lower than in the U.S.

Males, blacks, Hispanics, American Indian and Alaska Natives (AIAN), adults over 65 years old, and adults with low incomes or less education are more likely to have diabetes than are other Washington adults.

DOH, along with partner agencies, is working to implement the Diabetes Epidemic and Action Report, and the Washington State Plan for Healthy Communities.



1 in 11

Washington adults has diabetes

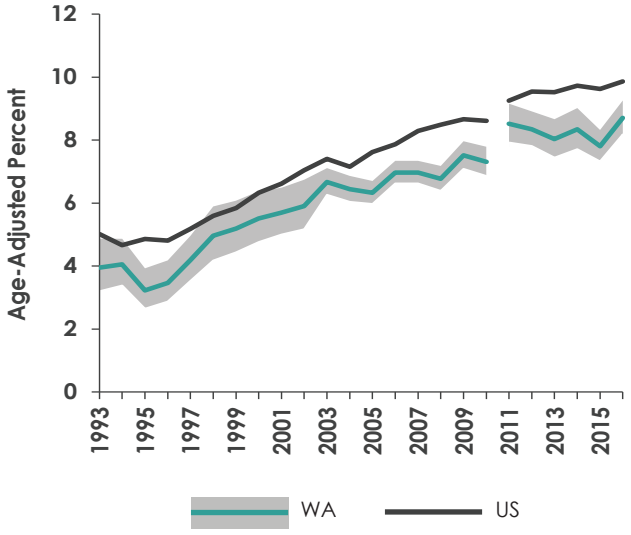
Diabetes is the 7th leading cause of death in Washington

Diabetes

Time Trends

- In the 2016 Behavioral Risk Factor Surveillance System (BRFSS), the age-adjusted prevalence of diabetes among Washington adults was 9% (±1%).
- Washington has a lower prevalence of diabetes compared to the U.S.
- Prevalence of diabetes among Washington adults increased from 1995-2010. These data are not directly comparable with more recent data due to a change in survey methods. Data since 2011 show the prevalence to be relatively stable.

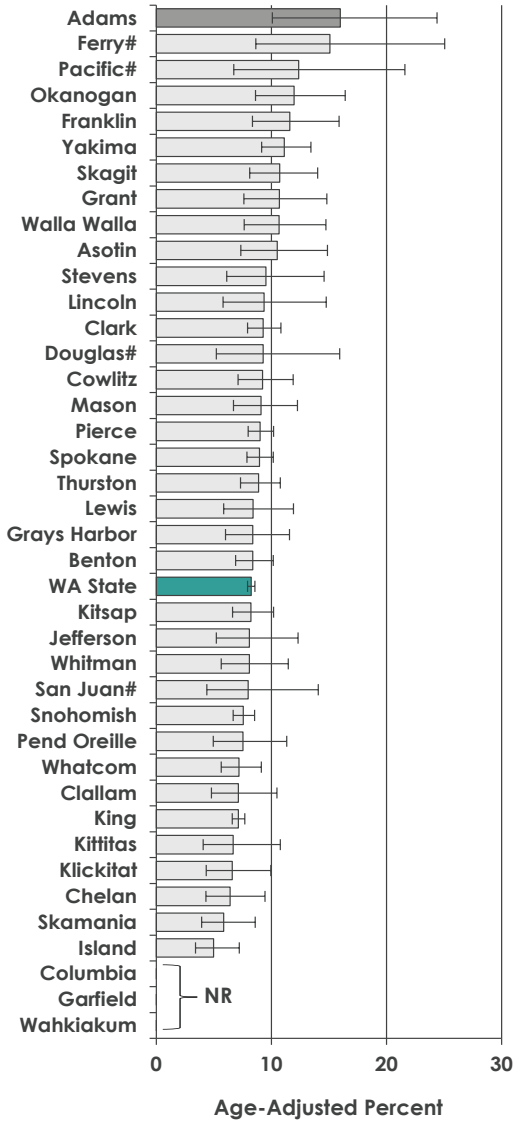
Self-Reported Diabetes
Washington State & US
BRFSS, 1993-2016



Geographic Variation

- In the 2014-2016 BRFSS, diabetes among adults was higher in Adams County compared to the state.
- No county had a lower prevalence than the state.

Self-Reported Diabetes
Washington Counties
BRFSS, 2014-2016



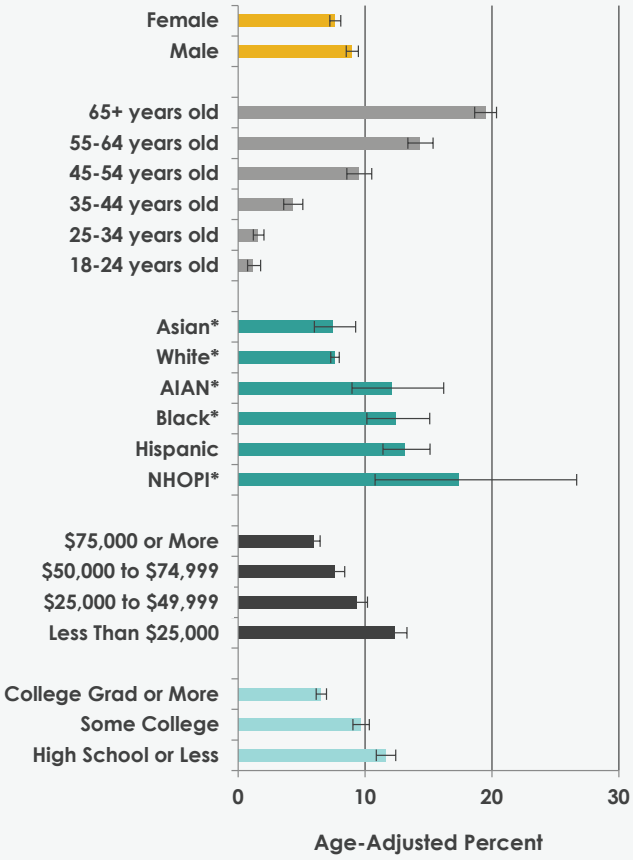
WA State
Same as WA State
Lower than WA State
Higher than WA State

NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2014-2016 BRFSS, males had a higher prevalence of diabetes compared to females.
- Prevalence of diabetes increased with age and was highest among adults 65 years and older.
- Blacks, Hispanics and AIAN had higher prevalence of diabetes than whites.
- Prevalence of diabetes increased as levels of education and household income decreased.

Self-Reported Diabetes
Washington State
BRFSS, 2014-2016



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

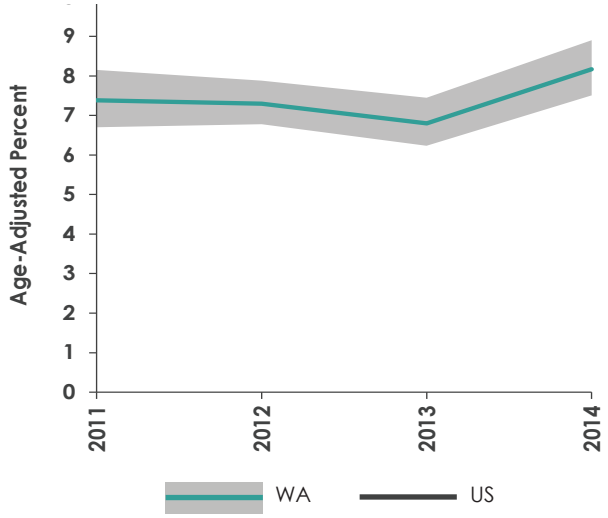
In 2014, 8% (±1%) of Washington adults reported they had been told by a health professional they had prediabetes, which is elevated blood sugar, but not enough for a diagnosis of diabetes. Awareness of prediabetes among Washington adults has been stable since 2011. Awareness of prediabetes is highest among adults over 65 years old and those with low levels of income and education.

Prediabetes

Time Trends

- In the 2014 BRFSS, the age-adjusted percent of Washington adults reporting prediabetes was 8% (±1%).
- Across states, self-reported awareness of prediabetes was much lower than the 2011-2012 national prevalence of prediabetes which was 37% based on adult fasting glucose or A1C level.[1]
- Data since 2011 show the percent of adults aware of having prediabetes to be relatively stable.

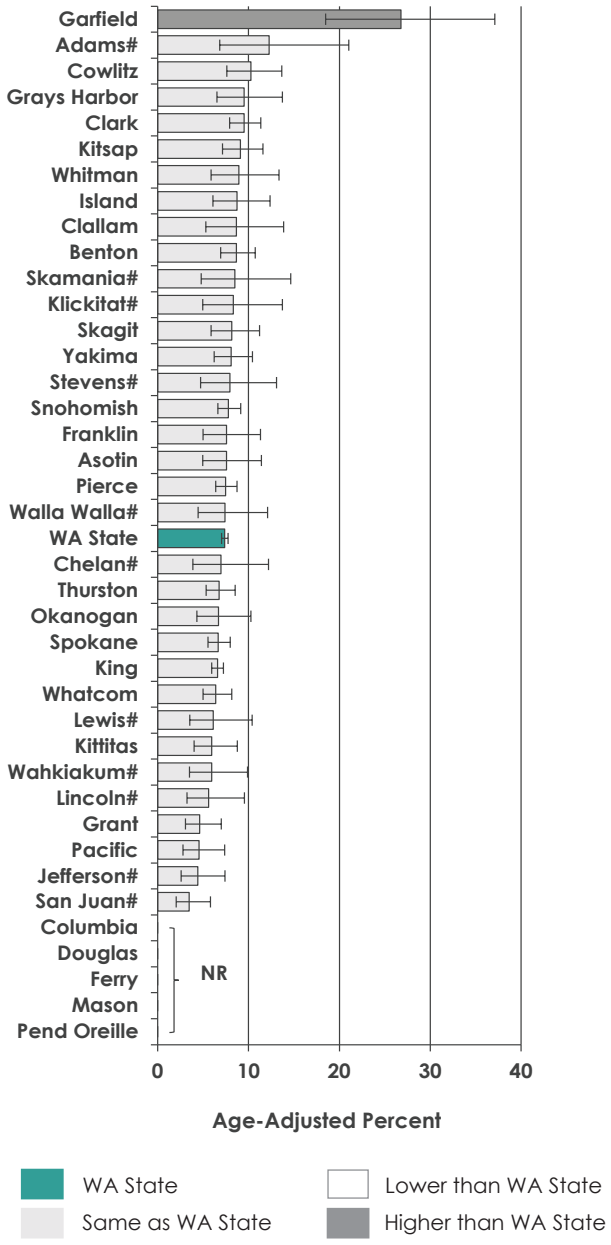
Self-Reported Prediabetes
Washington State
BRFSS, 2011-2014



Geographic Variation

- In the 2012-2014 BRFSS, awareness of prediabetes among adults was higher in Garfield County than the state.
- No county had a lower prevalence than the state.

Self-Reported Prediabetes
Washington Counties
BRFSS, 2012-2014

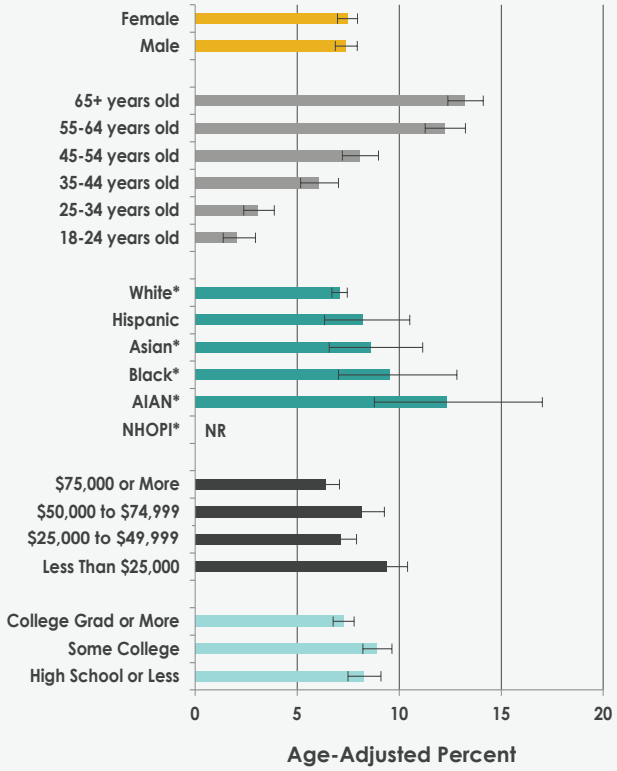


NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2012-2014 BRFSS, awareness of prediabetes increased with age and was highest among adults 65 years and older.
- Awareness of prediabetes was higher among adults with incomes less than $25,000 compared to those with incomes of $75,000 or more. It was also higher among adults with a high school education or less compared to those with a college degree or more.
- No notable differences in prediabetes awareness were seen across genders or race and ethnic groups.

Self-Reported Prediabetes
Washington State
BRFSS, 2012-2014



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing diabetes & prediabetes?

In 2015, the Legislature directed the Department of Health, Department of Social and Health Services, and Health Care Authority to jointly submit a report describing the burden of diabetes in Washington, efforts currently underway to address the burden, and additional resources needed. The 2017 Diabetes Epidemic and Action Report (DEAR) is an update to the first report submitted in 2014. It contains agency action plans and considerations for the Legislature. The agency action plans are organized around six strategies that align with the Healthier Washington Initiative strategies and measures:

- Prevent type 2 diabetes.
- Seek adequate funding for diabetes prevention and care.
- Support optimal self-management of diabetes.
- Include people affected by diabetes in decisions.
- Use diabetes-specific data and information to guide decisions.
- Promote improvements for diabetes prevention and management.

To reduce the incidence of type 2 diabetes and to improve the lives of people with diabetes, the 2017 DEAR strongly encourages the Legislature to consider taking the following actions:

- Maintain and further expand access to healthcare coverage.
- Help make out-of-pocket costs more affordable for patients with diabetes.
- Support *Healthier Washington's* movement toward value-based payment.
- Continue efforts to integrate physical and behavioral healthcare services.
- Encourage Accountable Communities of Heath to implement projects that impact diabetes.
- Ensure all health plans provide optimal diabetes benefits.
- Fund recommendations from the Governor's Council for the Healthiest Next Generation.
- Support students with chronic health conditions.
- Expand staffing and coordination resources for evidence-based, community-based programs.
- Increase utilization of Diabetes Self-Management Education.
- Raise public awareness of diabetes prevention and management.
- Train healthcare providers to screen for diabetes and deliver high-quality diabetes care in culturally and linguistically appropriate ways.
- Support using data to drive decisions and improve linkages between health systems and community support services.

See also Tobacco & Vapor Product Use, Binge Drinking & Excess Alcohol Use, Physical Activity, Fruit & Vegetable Intake, and Coronary Heart Disease & Hypertension

Evidence-based interventions to address diabetes are available in the CDC Community Guide.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Diabetes Type 1 and 2: Diabetes is classified into different types. In type 1 diabetes (5–10% of diabetes), the pancreas no longer makes insulin (which allows glucose to enter many cells); therefore, blood glucose cannot enter these cells to be used for energy. In type 2 diabetes (90–95% of diabetes), the pancreas does not make enough insulin or the body is unable to use insulin correctly. Other types of diabetes might account for 1–5% of diabetes. Prediabetes is a condition in which blood glucose levels are higher than normal but not high enough to be classified as diabetes. Gestational diabetes is a form of glucose intolerance diagnosed during pregnancy. Diagnosis criteria for prediabetes and diabetes from the American Diabetes Association.

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Endnotes

[1]Centers for Disease Control and Prevention. Diabetes Report Card 2014. www.cdc.gov/diabetes/pdfs/library/diabetesreportcard2014.pdf. Published 2015. Accessed September 11, 2017.

HIV

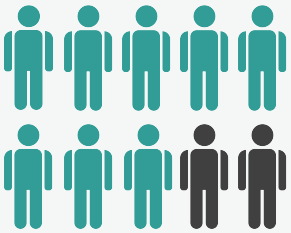
In 2016, the rate of new HIV diagnoses in Washington State was 6.1 per 100,000 residents. This is much lower than the national HIV diagnosis rate. Both state and national rates have declined substantially since the early 1990s due to improved screening and broad availability of effective treatment.

Gay and bisexual men account for roughly three-quarters of people diagnosed with HIV infection in Washington. HIV rates are highest among males, adults ages 25-44, transgender women, as well as black residents and other persons of color. Black rates are roughly six times higher compared to whites. However, more than half of newly diagnosed blacks were born and likely infected outside the U.S. HIV cases tend to be concentrated in urban areas.

DOH estimates that there are nearly 14,000 people living with HIV infection (PLWH) in Washington, of whom 91% have been diagnosed. Almost half of all PLWH in Washington (48%) are over the age of 50.

In an effort to end the HIV epidemic, DOH is implementing an HIV prevention campaign called End AIDS Washington. This campaign focuses on building partnerships between systems and organizations, fostering community engagement, and empowering people and communities disproportionately affected by HIV-related disparities and stigma.

Effective strategies for preventing HIV include the consistent use of condoms during sex, ensuring access to clean needles for injection drug users, routine HIV screening, pre-exposure prophylaxis (PrEP), and the early initiation of HIV treatment for people living with HIV.



8 out of 10

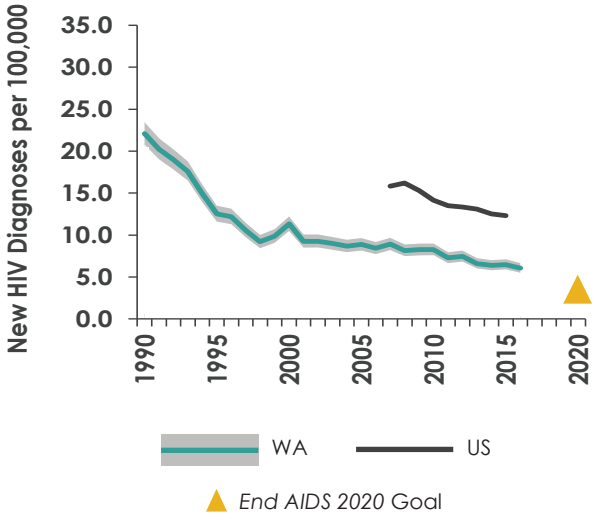
new HIV diagnoses occur in King, Pierce, Spokane, Snohomish, and Clark counties

Optimal HIV medical care not only improves the health of people living with HIV, it also prevents HIV transmission

Time Trends

- In 2016, there were 436 newly diagnosed cases of HIV, resulting in a rate of 6.1 per 100,000 Washington residents.
- Similar to the U.S., the rate of new HIV diagnoses has been slowly declining over the past decade. HIV diagnosis rates in Washington are well below both the national rate and the *Healthy People 2020* target of 9.8 cases per 100,000.
- The greatest decreases in new diagnoses of HIV have taken place among white gay and bisexual men. The numbers of new diagnoses among persons of color remain relatively stable.
- We have not yet achieved the *End AIDS Washington 2020* objective of 3.2 new diagnoses per 100,000.

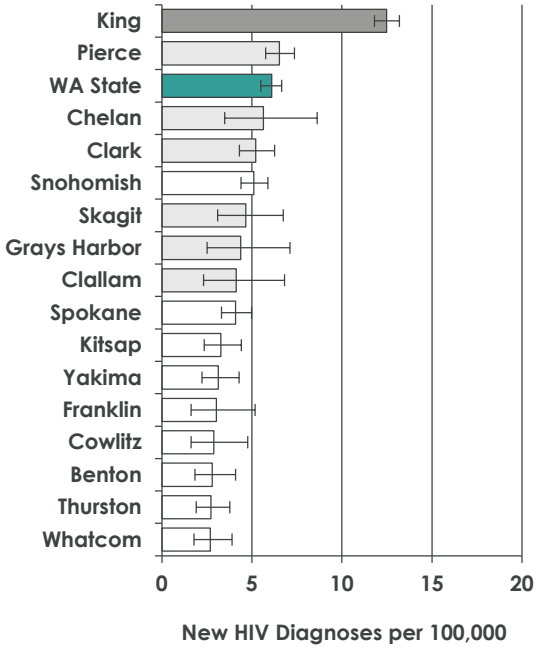
Rates of New HIV Diagnoses
Washington State & US
HIV/AIDS Reporting System (eHARS)



Geographic Variation

- Between 2012 and 2016, King County had the highest HIV diagnosis rate: 12.5 cases per 100,000 residents.
- HIV cases are disproportionately concentrated within urban areas. As a result, the five most urban counties in Washington (King, Pierce, Snohomish, Spokane and Clark), which collectively account for 63% of the state's population, contained 84% of all new HIV diagnoses from 2012-2016.

Rates of New HIV Diagnoses
Washington Counties*
eHARS, 2012-2016



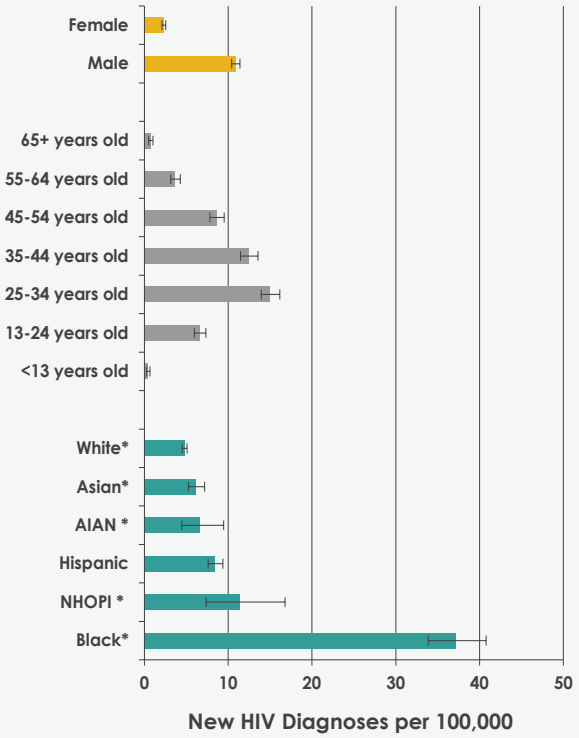
WA State
Same as WA State
Lower than WA State
Higher than WA State

*Rates reported here include counties with 10 or more diagnoses, which excludes 26 counties

Disparities

- DOH estimates that 8%-10% of gay and bisexual men in Washington are HIV-positive. The estimated rate of infection among gay/bisexual men is more than 100 times higher than among heterosexual men.
- In 2012-2016, males had a higher rate of new HIV diagnoses compared to females.
- New HIV diagnoses were highest among those 25-44 years old. However, nearly half (48%) of all PLWH are age 50 and older.
- Blacks had the highest rate of new HIV diagnoses; approximately six times higher than the rate among white residents. Although foreign-born blacks account for only 14% of Washington's black population, they made up more than half of new diagnoses among blacks in Washington from 2012-2016.
- Compared to those born in the U.S., foreign-born cases are much more likely to be diagnosed late in the course of their HIV illness. This delays potential treatment and could put sexual partners at risk for infection.
- U.S.-born blacks are less likely to be successfully linked to HIV medical care within one month of HIV diagnosis.
- Viral load refers to the concentration of virus circulating in a person's bloodstream. Effective HIV treatment suppresses viral load, reduces risk of transmission, and improves health. In Washington, viral load suppression is lowest among HIV-positive young adults, foreign-born Hispanics, transgender women, and persons who inject drugs.

HIV
Washington State
eHARS, 2012-2016

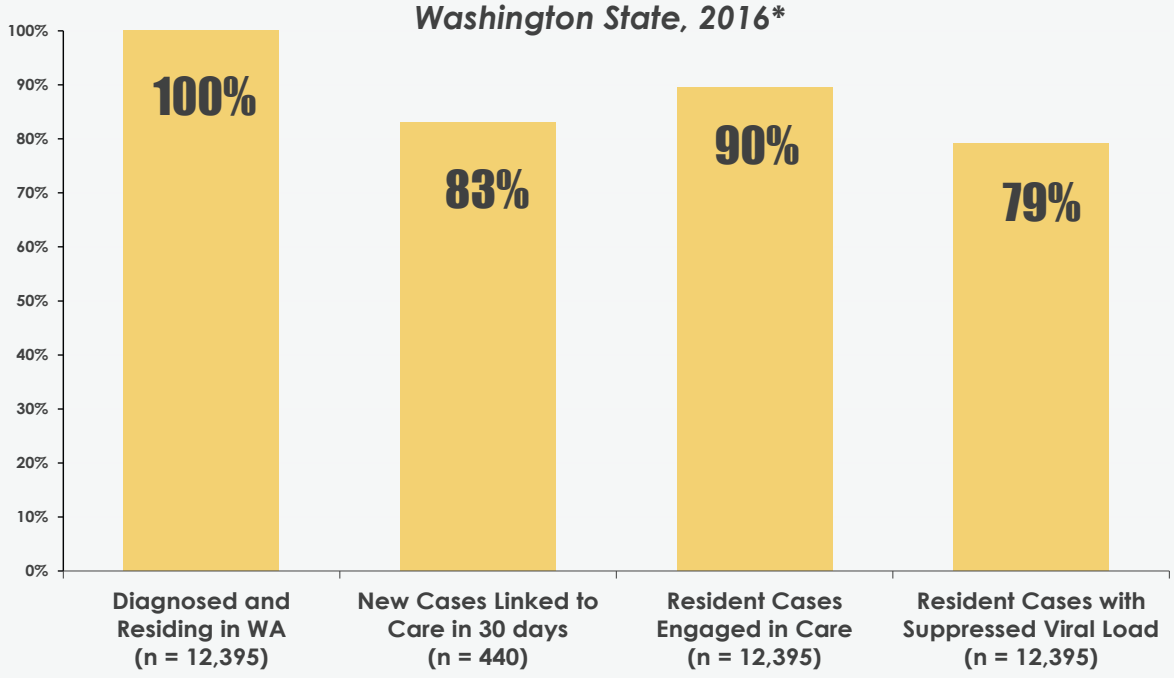


*Non-Hispanic (all races) | AIAN: American Indian/Alaska Native | NHOPI: Native Hawaiian/Other Pacific Islander

Continuum of Care

- Optimal HIV medical care, including treatment with antiretroviral (ARV) medication, not only improves the health of people living with HIV, it also represents one of the most effective ways to prevent HIV transmission. This strategy is sometimes referred to as Treatment as Prevention (TasP).
- The HIV Continuum of Care is a model that describes the steps needed to achieve optimal HIV medical care, from HIV diagnosis to viral load suppression, the result of effective treatment. Recommended by the National HIV/AIDS Strategy, the Continuum of Care serves as a monitoring tool to describe gaps in care delivery within a population. Care continua can also be modified to compare HIV care outcomes between different subpopulations.

HIV Care Continuum Among People Living with or Diagnosed with HIV Infection Washington State, 2016*



*Based on HIV surveillance data reported through June 2017

How is Washington addressing HIV?

Evidence-based HIV prevention strategies include routine HIV screening, TasP, the consistent use of condoms during sex, and ensuring access to clean needles for injection drug users. Each of these strategies have been incorporated into DOH's HIV prevention framework. In addition, DOH promotes and supports the use of pre-exposure prophylaxis (PrEP), which involves prescribing HIV medication to HIV-negative people with high-risk behaviors. Washington was the first state in the nation to offer a drug assistance program for people who meet clinical indications but can't afford PrEP (PrEP DAP).

In 2016, DOH worked closely with community partners to develop and implement the End AIDS Washington Campaign. This campaign emphasizes the importance of building partnerships between systems and organizations, fostering community engagement, and empowering people and communities disproportionately affected by HIV-related disparities and stigma. It includes five goals and 11 recommendations intended to both reduce HIV incidence and improve the health and well-being of PLWH.

End AIDS Washington has five goals to reach by 2020:

1. Reduce rate of new HIV diagnoses by 50%.
2. Increase to at least 80% the proportion of PLWH who have a suppressed viral load.
3. Reduce age-adjusted mortality rates among PLWH by 25%.
4. Reduce HIV-related health disparities among PLWH.
5. Improve the quality of life among PLWH.

The 11 *End AIDS Washington* recommendations include:

1. Identify and reduce HIV stigma, including internal and external stigmas related to race/ethnicity, gender, HIV status, and/or sexual orientation. DOH's new Stigma Reduction Coordinator is working with community members and stakeholders to develop a statewide stigma reduction work plan.
2. Reduce HIV-related health disparities – DOH is using data to identify and better serve populations who are disproportionately affected by HIV-related health disparities. DOH also supports trainings on reducing HIV-related health disparities for staff members and contracted providers.
3. Implement routine HIV testing – DOH is providing training and resources to local health providers to build HIV testing capacity. DOH is also working to clarify testing policies and remove barriers to routine testing.
4. Increase access to pre-exposure prophylaxis (PrEP) – In addition to PrEP DAP, DOH supports the development and training of PrEP navigators to assist people in need of PrEP. DOH is also working with local disease investigation specialists to increase PrEP awareness and provide local referrals.
5. Create healthcare that meets the needs of sexual minorities—DOH is working with national experts to improve cultural competency and improve both access to and quality of healthcare for sexual minorities.

6. Improve HIV prevention and care for substance users—DOH supports syringe exchange programs, and is developing patient navigation programs to support the HIV care and treatment needs of substance users.
7. Remove barriers to insurance and increase healthcare affordability—DOH manages an AIDS drug assistance program which pays the health insurance premiums for PLWH who can't afford HIV treatment. DOH is also working with the Office of the Insurance Commissioner to improve healthcare quality and reduce HIV-related discrimination for both PLWH and people at high risk for infection.
8. Increase access to safe, stable and affordable housing for PLWH—DOH is increasing the support available for HIV-related housing services. DOH's new HIV Housing Coordinator provides technical assistance tolocal providers and case management agencies.
9. Deliver whole-person healthcare to PLWH—DOH has developed new acuity models which will help case managers better assess and serve the healthcare needs of PLWH.
10. Launch Healthier Washington for Youth—DOH is working with state partners to improve education related to HIV and comprehensive sexual health.
11. Include meaningful community engagement and empowerment for people who are disproportionately affected by HIV stigma and disparities—DOH has expanded the size of its workforce dedicated to community engagement. DOH is experimenting with different ways to communicate with local stakeholders, solicit feedback, and strengthen community engagement.

Evidence-based strategies for reducing new cases of HIV and improving the quality of life of people living with HIV infection are described in the End AIDS Washington Report[1], as well as the National HIV/AIDS Strategy.[2]

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

eHARS: The Enhanced HIV/AIDS Reporting System (eHARS) is a Centers for Disease Control and Prevention (CDC)-developed database application that contains Washington State's HIV surveillance registry. eHARS supports and standardizes HIV surveillance activities such as disease reporting, data management, analysis, and the transfer of data to CDC. Each CDC-funded surveillance jurisdiction maintains a separate eHARS installation and submits de-identified data monthly to CDC through a secure data network.

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Endnotes

[1]Washington State Department of Health. *End AIDS Washington 2020.* www.doh.wa.gov/Portals/1/Documents/pubs/410-069-EndAIDSWashington2016Recommendations.pdf. Published August, 2016. Accessed on September 12, 2017.

[2]White House Office on HIV/AIDS Policy. National HIV /AIDS Strategy: Updated to 2020. www.hiv.gov/federal-response/national-hiv-aids-strategy/nhas-update. Published on July 30, 2015. Accessed on September 12, 2017.

Infant Mortality

The infant mortality rate is the number of children who died before their first birthday divided by the number of live births during the year. This rate is used as an indicator of the health and well-being of populations throughout the world and points to underlying issues like the quality of healthcare, access to services, health inequity and individual behaviors. In Washington, the leading causes of infant deaths are birth defects (25% in 2015), Sudden Infant Death Syndrome (SIDS) (13%) and being born too early or too small (13%), which includes preterm and low birth weight infants.

In 2015, 431 of 89,000 Washington State residents died in their first year of life (4.8 per 1,000 live births).

The highest rates of infant mortality occurred among infants born to women who were less than 20 years old, black, American Indian or Alaska Native (AIAN), receiving Temporary Assistance for Needy Families (TANF), or who had a high school education or less.

DOH, along with partner agencies, collaborates to address both the conditions that put infants at high risk for dying in the first year of life as well as activities to prevent specific causes of death, like SIDS.

4.8 per 1,000

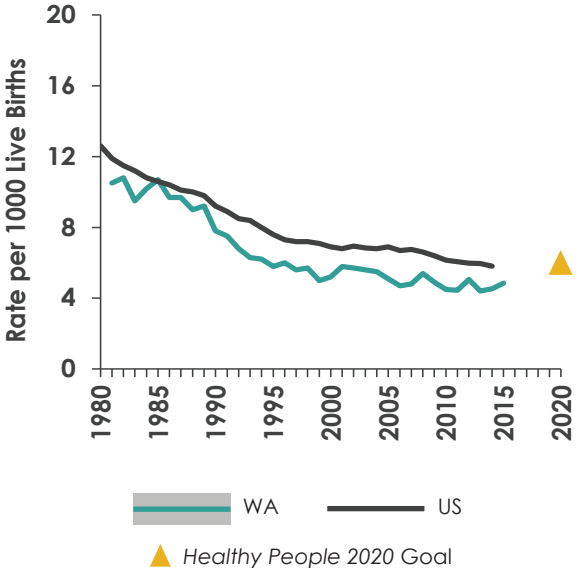
Washington's infant mortality rate is among the lowest in the country

Washington's total infant mortality rate hides racial and socioeconomic disparities

Time Trends

- In 2015, the infant mortality rate among Washington State residents was 4.8 per 1,000 live births, below the *Healthy People 2020* goal of six infant deaths per 1,000 live births.
- The infant mortality rate in Washington State declined substantially from 10.8 in 1982 to 5.0 in 1999. The rate has decreased more moderately since then.
- Washington has a lower rate of infant mortality compared to the U.S., and has been among the states with the lowest rates in the country for several years.

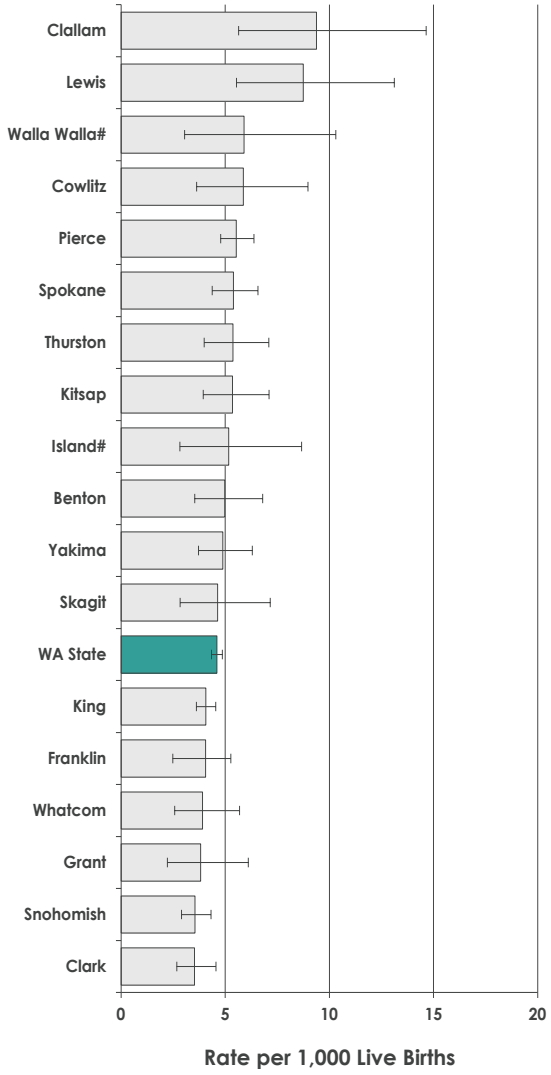
Infant Mortality
Washington State & US
Linked Birth Infant Death File, 1980-2015



Geographic Variation

- During 2013-2015, for those counties with more stable rates, the infant mortality rate was similar to the state rate of 4.6 deaths per 1,000 live births.
- Rates for counties with fewer than 10 infant deaths each during 2013-2015 are not presented.

Infant Mortality Rates
Washington Counties**
Linked Birth Infant Death File, 2013-2015



**Counties not reported here include counties with fewer than 10 cases, RSE ≥ 30% or zero cases

#Relative standard error (RSE) is between 25% and 29%

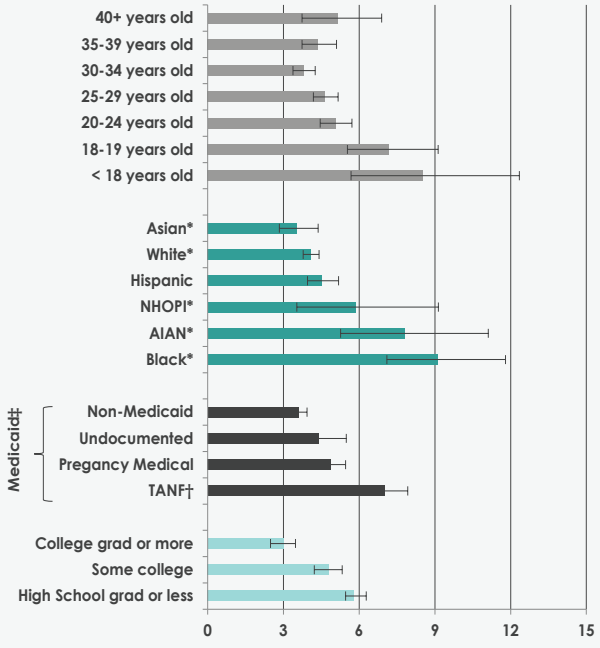
Impact

- The leading causes of infant death in Washington are birth defects (25% of deaths in 2015), Sudden Infant Death Syndrome (SIDS) (13%) and being born too early or too small (13%), which includes preterm and low birth weight infants.
- The contribution of these causes of death differs by race and ethnicity.

Disparities

- Infants born to women under 18 years old had the highest infant mortality rates, and rates are elevated for women under 20.
- Blacks and AIAN had the highest infant mortality rates and these inequities have persisted over time.
- Infants born to women receiving TANF experienced the highest infant mortality rate compared to infants of women on other Medicaid programs and infants of women who were not receiving Medicaid.
- Infants born to women with a high school education or less had the highest infant mortality rates.

Infant Mortality by Maternal Characteristics
Washington State
Linked Birth Infant Death File, 2013-2015



Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

‡*Medicaid Status Source:* First Steps Database, DSHS (2012-14 cohort)

†*TANF:* Temporary Assistance for Needy Families

How is Washington working to reduce infant mortality?

Infant mortality is death due to any cause during the first year of life. The activities listed below are a sample of statewide activities that focus both on the prevention of specific causes of infant death, as well as preventing the conditions which put infants at high risk for death.

- Family Planning. Babies born preterm are more likely to have low birth weight. Women who have already had a preterm birth are more likely to have another one. Having at least one year between pregnancies can reduce the chance of having another preterm birth. In order to allow enough time before having another baby, women need access to reliable birth control. DOH funds 12 family planning agencies across the state.
- Folic Acid Prior to Pregnancy. Washington State Medicaid now pays for prenatal vitamins with folic acid for women of childbearing age and pregnant women with a provider's prescription.
- First Steps Program. This program includes Maternity Support Services (MSS), Infant Case Management (ICM) and Childbirth Education (CBE) for women up to 198% of the federal poverty level.
- Women, Infants, and Children (WIC) Nutrition Program. WIC is a nutrition program for pregnant women, new and breastfeeding moms, and children under five. WIC provides nutrition education, breastfeeding promotion and support and vouchers for a wide variety of nutritious foods, including fresh fruits and vegetables. Pregnant, postpartum and breastfeeding women, and children from birth to five years old, who live below 185% of the federal poverty level, are eligible for WIC.
- Tobacco Cessation. Smoking is a risk factor for preterm birth. Washington also continues to work to reduce the smoking rate by supporting Tobacco 21 legislation to raise the legal age of purchase of tobacco from 18 to 21 years old. CDC funds the Washington State Tobacco Quitline 1-800-QUIT-NOW for the uninsured and underinsured to help men and women of Washington State to quit smoking.
- Newborn Screening. DOH's Office of Newborn Screening tests babies born in Washington for a number of rare but treatable disorders using a dried blood spot specimen taken at the birth site. Newborn screening is one of the most successful public health initiatives in the U.S.
- Washington Safe Haven Law. This law exists to enable a person to relinquish a newborn who is up to three days old, anonymously, and at a safe drop-off location. Confidential toll-free hotline 1-888-510-BABY (2229).
- Infant Safe Sleep. DOH continues to promote safe sleep practices through Child Profile mailings; the Safe to Sleep campaign and C.J. First Candle. In addition, some hospitals in the state have embraced the Cribs for Kids® National Infant Safe Sleep Hospital Certification program.
- Child Death Review. Child Death Review (CDR) is a process through which some Local Health Jurisdictions (LHJs) bring together teams that review deaths of children, under the age of 18, who have unexpectedly lost their lives. Teams identify preventable circumstances in these deaths and consider strategies to improve health and safety for all children.

See also Prenatal Care

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Medicaid: Because we do not have a measure of income among mothers of newborn infants, we use the Medicaid program as a proxy. To do this, we classified women whose pregnancies were covered by Medicaid into three subgroups (from highest to lowest socioeconomic status) based on program eligibility. 'Pregnancy Medical' were women eligible for the pregnancy medical assistance program. These women were U.S. citizens or legal U.S. residents, and were eligible to receive Medicaid because they were pregnant and had incomes at or below 193% of the federal poverty line. 'TANF' were women enrolled in the Temporary Assistance for Needy Families (TANF) program. These women were very low income (generally < 50% the federal poverty level) and received cash assistance (TANF) in addition to Medicaid. 'Undocumented' were women who were not legally admitted for permanent residence, lacked temporary residence status, or were not lawfully present in the U.S. They were eligible to receive Medicaid because they were pregnant and had incomes at or below 193% federal poverty level. Undocumented women were not eligible for TANF although their incomes were often lower than women on TANF. All three Medicaid groups had incomes below most non-Medicaid women.

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Mental Health

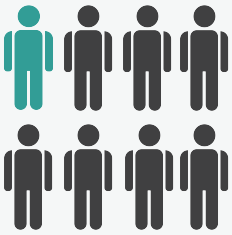
Mental health is vital to overall health and well-being, and forms the foundation for learning, thinking, communicating, emotional growth, resilience and self-esteem. One measure of mental health in adults is self-reported symptoms or experiences around stress, depression, and problems with emotions. When an adult reports 14 or more days during the past month with symptoms in these areas, this is considered poor mental health status.

In 2016, 12% (±1%) of Washington adults self-reported experiencing poor mental health for 14 or more days during the month before interview on the Behavioral Risk Factor Surveillance System (BRFSS) survey. This prevalence has remained stable since 2011. Previous data are not directly comparable due to a change in methods, but they also show rates were relatively stable from 1995-2010. Washington's prevalence is similar to the U.S.

Among adults, self-reported poor mental health was more prevalent among females, those under 24 years of age, and American Indian or Alaskan Natives (AIAN). Self-reported poor mental health prevalence increased as levels of education and income decreased. People reporting poor mental health also reported higher rates of smoking, marijuana use and excessive alcohol use compared to those not reporting poor mental health (data not shown).

Among youth, self-reported experience of extended sadness or hopelessness can be used as a proxy measure for depressive feelings. On the Healthy Youth Survey (HYS), students were asked if they stopped doing usual activities because they felt so sad or hopeless almost every day for two weeks or more during the past 12 months. In 2016, 34% (±2%) of 10th graders reported experiencing depressive feelings. Depressive feelings were more prevalent among females and overall increased with higher grade level.

State agencies, along with partner agencies and providers, are working to promote mental well-being by integrating physical and behavioral health services, implementing the State 5-Year Strategic Plan for Substance Abuse Prevention and Mental Health Promotion, and focusing on supporting safe, stable and nurturing relationships and environments for all children.



1 in 8

Washington adults report having poor mental health

1 in 3

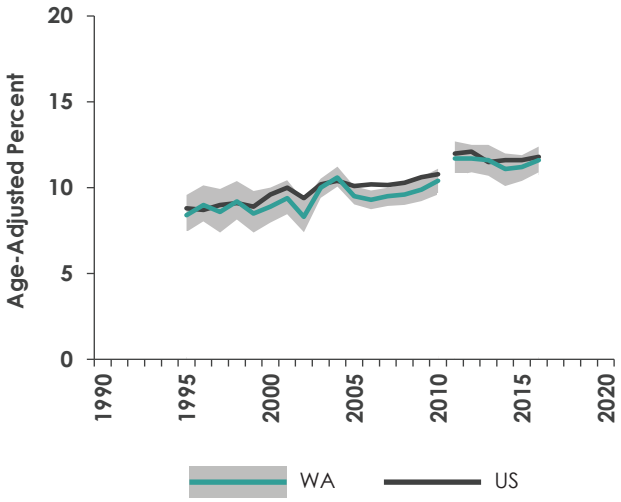
Washington 10th graders report experiencing strongly depressive feelings

Adult

Time Trends

- In the 2016 BRFSS, the prevalence of self-reported poor mental health among Washington State adults was 12% (±1%).
- Washington had a similar prevalence of poor mental health compared to the U.S.
- Poor mental health in Washington has remained stable since 2011. Previous data are not directly comparable due to a change in methods, but they also show rates were relatively stable from 1995-2010.

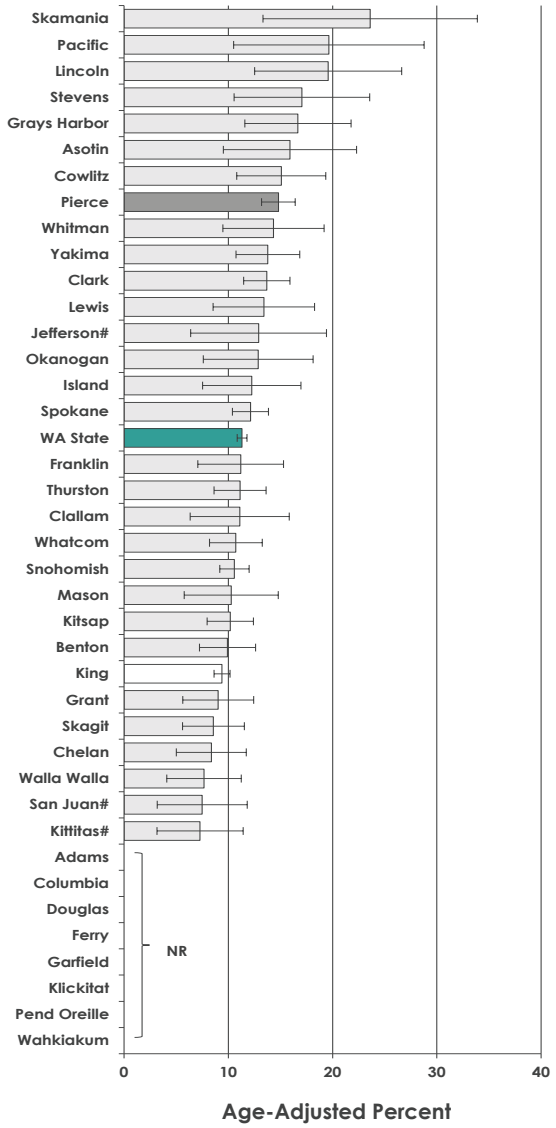
Poor Mental Health Status
Washington State & US
BRFSS, 1995-2016



Geographic Variation

- In the 2014-2016 BRFSS, the prevalence of self-reported poor mental health was higher in Pierce County compared to the state.
- King County had a lower prevalence than the state.

Self-Reported Poor Mental Health
Washington Counties
BRFSS, 2014-2016



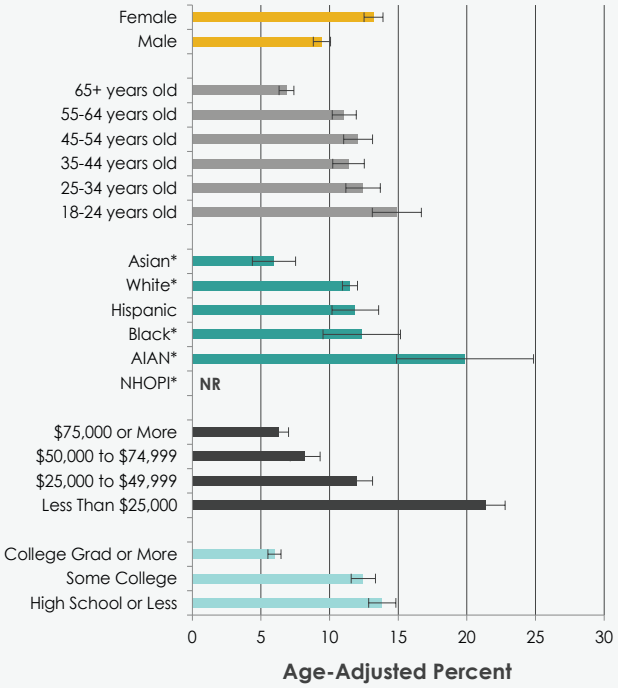
WA State
Same as WA State
Lower than WA State
Higher than WA State

NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- Females had higher prevalence of self-reported poor mental health than males, 14% (±1%) compared to 9% (±1%).
- Young adults ages 18-24 years of age had a higher prevalence of self-reported poor mental health than older age groups. Adults aged 65 and older had the lowest prevalence compared to young adults.
- AIAN had a higher prevalence of self-reported poor mental health compared to whites. Asians had a lower prevalence compared to whites.
- The prevalence of self-reported poor mental health increased as levels of education and income decreased.

Self-Reported Poor Mental Health
Washington State
BRFSS, 2014-2016



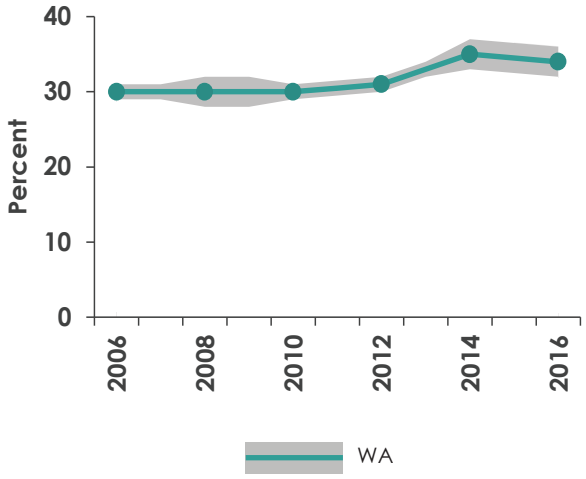
**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

Youth

Time Trends

- In the 2016 Healthy Youth Survey (HYS), the prevalence of depressive feelings among Washington State youth was 34% (±2%).
- Self-reported depressive feelings among youth were stable in Washington from 2006 through 2016.

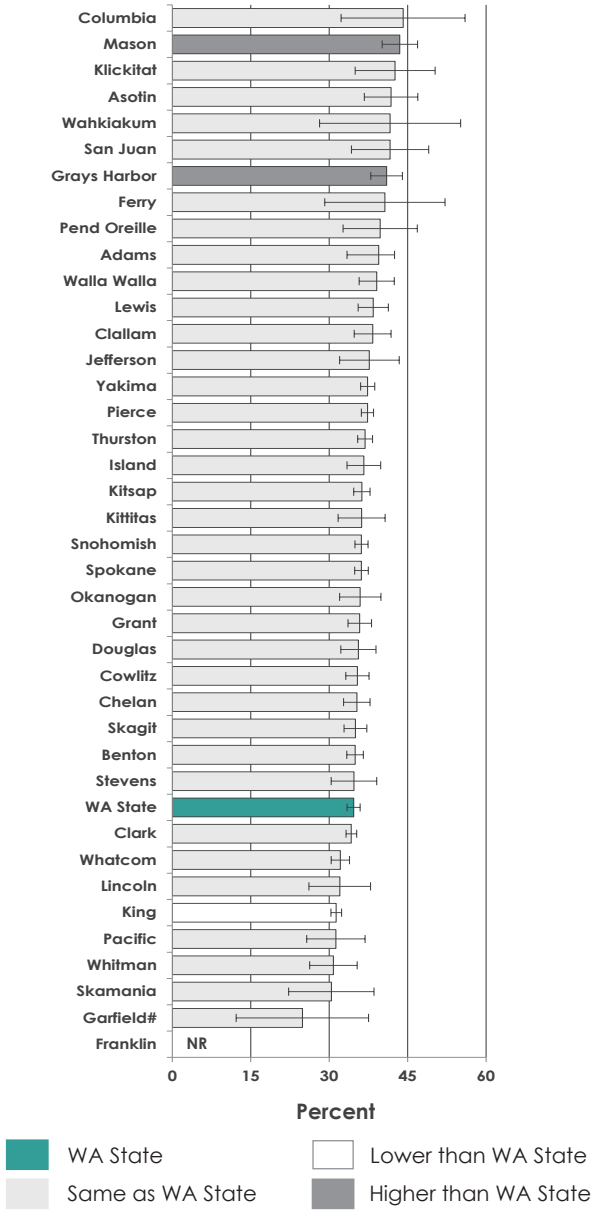
Youth Depressive Feelings, 10th Graders Washington State, HYS



Geographic Variation

- In the 2014 and 2016 HYS combined, the prevalence of depressive feelings among youth was higher in Grays Harbor and Mason counties compared to the state.
- King County had a lower prevalence of depressive feelings among youth than the state.

Youth Depressive Feelings, 10th Graders
Washington Counties
HYS, 2014 & 2016

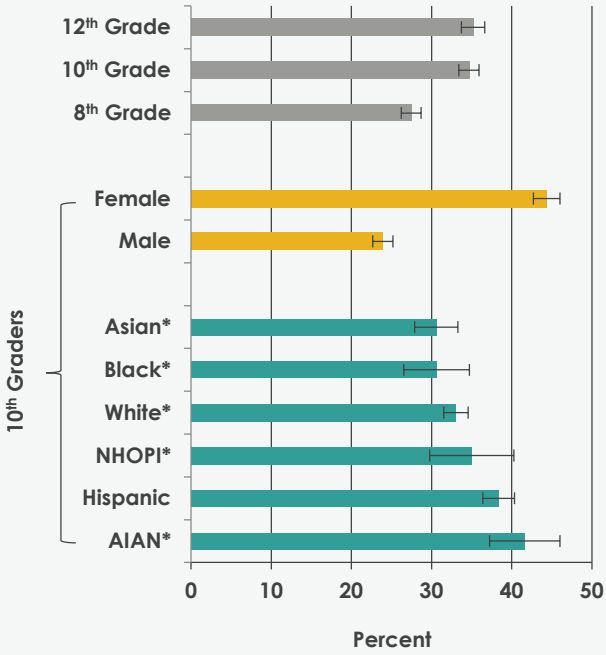


NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2014 & 2016 combined HYS, self-reported depressive feelings were higher among 10th grade females than males, 44% (±2%) compared to 24% (±1%).
- Prevalence of depressive feelings increased with higher grade level.
- The prevalence of depressive feelings was higher among AIAN and Hispanic 10th graders compared to whites.

Youth Depressive Feelings
Washington State
HYS, 2014 & 2016



*Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington promoting mental well-being?

State agencies and partners are working to promote mental well-being by integrating physical and behavioral health clinical services, implementing the State 5-Year Strategic Plan for Substance Abuse Prevention and Mental Health Promotion, and focusing on supporting safe, stable and nurturing relationships and environments for all children. More specifically, state agencies, local public health, education, and social service agencies along with tribal, nonprofit and community organizations have been collaborating to promote mental well-being by:

- Integrating physical and behavioral health services by developing a single system with an integrated network of physical health services, mental health services and substance use disorder services in the Medicaid (Apple Health) program. The system will enable better coordinated care for patients, and less fragmented access to needed services. Care will be managed through a single accountable insurance plan for the client.
- Funding behavioral health organizations to ensure mental health services are available across the state, and providing workforce development and training for prevention and treatment professionals.
- Pursuing initiatives such as the Practice Transformation Support Hub and Pediatric Transforming Clinical Practice Initiative (pTCPi) helping clinicians better use electronic health records to identify populations of interest, track performance improvements, put team-based care into place, and make linkages to community-based services.
- Securing the Medicaid 1115 waiver to make regional investments in integrated clinical models. Resources will support staffing and workforce development to better provide behavioral health services, development of information technology infrastructure to facilitate sharing across provider teams, and increased availability of technology solutions, such as telemedicine.
- Implementing New Journeys programs statewide. The New Journeys Program provides evidence-based early intervention for youth and families who have experienced a first episode of psychosis in order to interrupt the untreated duration of psychosis and support recovery, in addition to symptom management.
- Convening the Family Youth System Partner Round Tables (FYSPRT) which bring together all necessary parties to contribute to continuous improvement to children, youth and family behavioral health services and supports. FYSPRTs are convened at a regional level and each region sends partners to the statewide FYSPRT to share feedback and problem solving.
- Requiring Accountable Communities of Health work on Medicaid Transformation Demonstration Projects related to integration of physical and behavioral health.
- Prioritizing mental health promotion/suicide prevention among many of the 64 Community Prevention and Wellness Initiative communities funded by DSHS/DBHR. Communities identify risk and protective factors in their community that relate to youth alcohol and drug use and related issues such as mental health, and address them locally with appropriate evidence-based strategies.
- Providing DSHS/DBHR funding to 29 federally recognized tribes to provide mental health promotion/suicide prevention services. Tribes develop and implement action plans to address their most important needs.

- Providing training and technical assistance, convening forums, and supporting communication to exchange best practices related to promoting safe, stable, nurturing relationships and environments for children among health and social service providers and educators across the state. This includes sharing research on brain science, resiliency, and trauma-informed approaches.
- Supporting cross-sector collaboration on policy, systems and programs to support safe, stable, nurturing relationships and environments for all children, including working to develop an *Infant Early Childhood Mental Health Plan* for Washington State.
- Working to promote social emotional development and reduce suspension and expulsion of children under eight years old from child care and early learning settings through workforce development efforts such as increasing capacity for reflective supervision and provider access to training.
- Working with Medicaid Managed Care Organizations to increase the rates of covered adults who fill their initial antidepressant medication prescriptions within 30 days, and continue use of the medication as prescribed. Washington data show that Spanish-speaking patients fill their prescriptions at a rate of 35% compared with 53% of English-speaking, and 14% compared with 35%, respectively, continue to take their medication.
- Promoting home visiting programs that reach children and families in those critical first years of life, strengthening the parent-child bond, developing more positive parenting practices, improving school readiness, and connecting families to services—through state agencies and public-private partnerships.

Passing E2SHB 1713 in 2017 which:

- Makes maternal depression screening a covered benefit for mothers of children birth to six months of age.
- Requires provider payment for annual depression screening for 12-18-year-old youth.
- Calls for Department of Early Learning to establish a child care consultation program linking child care providers with evidence-based, trauma-informed and best practice resources.
- Requires behavioral health organizations to reimburse providers of behavioral health services via telemedicine or store.
- Establishes a pilot program in two educational school districts to develop integrated mental health and substance use disorder shared service models.
- Establishes a 24-month child and adolescent psychiatry residency in Eastern Washington through Washington State University.

See also Adverse Childhood Events (ACEs), Suicide & Safe Storage of Firearms, and Access to Behavioral Health Providers

Evidence-based interventions to promote mental well-being are available in www.samhsa.gov/nrepp

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Trauma Informed Approaches: The Federal Substance Abuse and Mental Health Services Administration (SAMHSA) defines 'A program, organization, or a system that is trauma informed {as one that} 1. Realizes the widespread impact of trauma and understands the potential paths for recovery; 2. Recognizes the signs and symptoms of trauma in clients, families, staff, and other involved with the system; 3. Responds by fully integrating knowledge about trauma into policies, procedures, and practices, and 4. Seeks to actively resist re-traumatization.' www.samhsa.gov/nctic/trauma-interventions

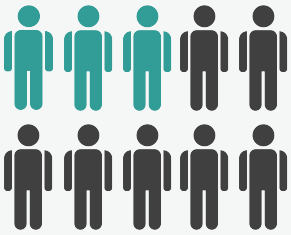
Obesity

Obesity in adults increases the risk of premature death as well as the likelihood of developing hypertension, elevated cholesterol, diabetes, some types of cancer and other chronic illnesses. The U.S. Centers for Disease Control and Prevention (CDC) defines obesity as 'weight that is higher than what is considered as a healthy weight for a given height.'[1] CDC defines adult obesity as a body mass index (BMI) of 30 or higher. BMI is calculated by dividing weight in kilograms by height in meters squared. A child's weight status is determined using age- and sex-specific BMI percentiles. Children with BMIs at the 95th percentile or higher are obese. BMI does not distinguish between fat and lean body mass, so it may overestimate body fat in people with a muscular build and underestimate body fat in people with low muscle mass.[2]

In 2016, 29% (±1%) of Washington adults were obese, and 12% (±1%) of Washington 10th grade students were obese. Obesity among Washington adults increased from 1990 – 2010, but has recently been stable. Obesity among 10th grade students increased slowly from 2002 – 2016. The prevalence of obesity among Washington adults is similar to the U.S., but a lower percentage of Washington 10th graders are obese compared to the U.S.

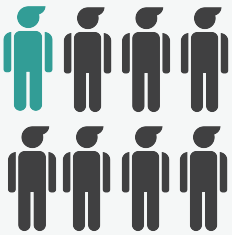
Blacks, Hispanics, males, and adults with low incomes or less education are more likely to be obese compared to other Washingtonians. Among youth, obesity was more common among 12th graders and males. Native Hawaiian or Other Pacific Islander (NHOPI), Hispanic, American Indian and Alaskan Native (AIAN), and black 10th graders had higher obesity prevalence compared to white and Asian 10th graders.

Partners from public health, healthcare, early learning, schools, and communities work together to decrease risk of obesity among youth and adults.



3 in 10

Washington adults are considered obese



1 in 8

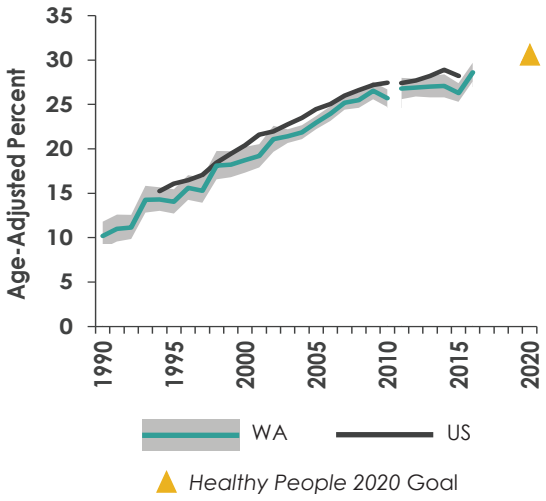
Washington 10th graders is considered obese

Adults

Time Trends

- In the 2016 Behavioral Risk Factor Surveillance System (BRFSS), the prevalence of obesity among Washington State adults was 29% (±1%).
- In 2015, Washington had a similar prevalence of obesity compared to the U.S.
- Obesity among Washington adults increased from 10% in 1990 to 26% in 2010, and remained stable from 2011 to 2016.

Obesity Prevalence
Washington State & US
BRFSS, 1990-2016

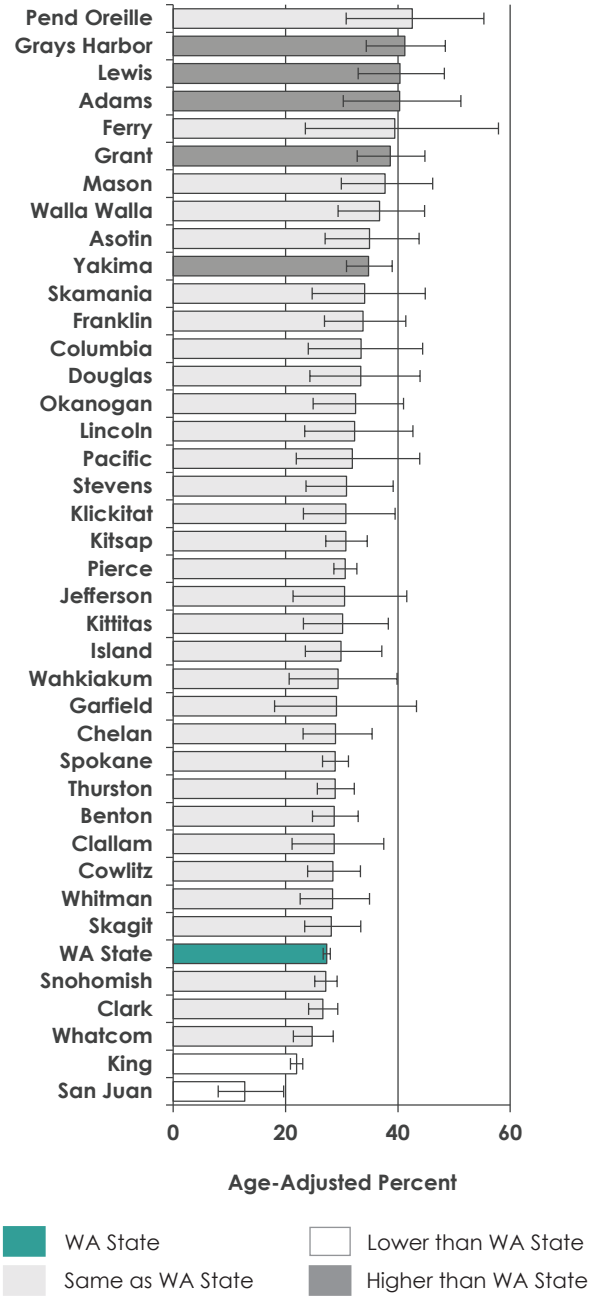


Note: Washington and US data are based on self-reported heights and weights that underestimate obesity; *Healthy People* goals use measured heights and weights.

Geographic Variation

- In the 2014-2016 BRFSS, obesity was lower among adults in King and San Juan counties compared to the state.
- Adams, Grant, Grays Harbor, Lewis and Yakima county adults had a higher prevalence of obesity compared to the state.

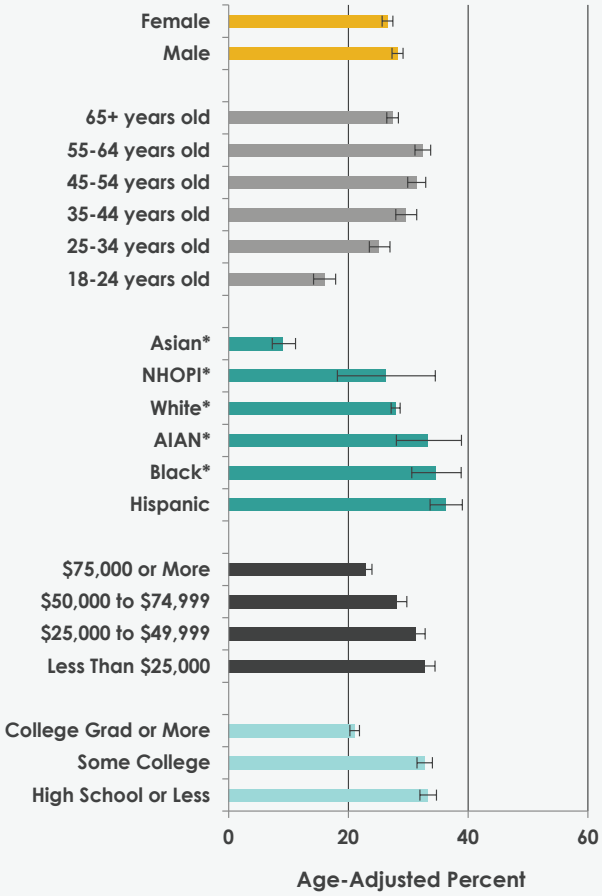
Obesity Prevalence
Washington Counties
BRFSS, 2014-2016



Disparities

- In the 2014-2016 BRFSS, males had a higher prevalence of obesity than females.
- Obesity prevalence was lowest among young adults 18-24 years old.
- Black and Hispanic adults had a higher obesity prevalence compared to white adults, while Asian adults had a lower prevalence of obesity.
- In the 2014–2016 BRFSS, obesity prevalence decreased as levels of education and household income increased.

Adult Obesity
Washington State
BRFSS, 2014-2016



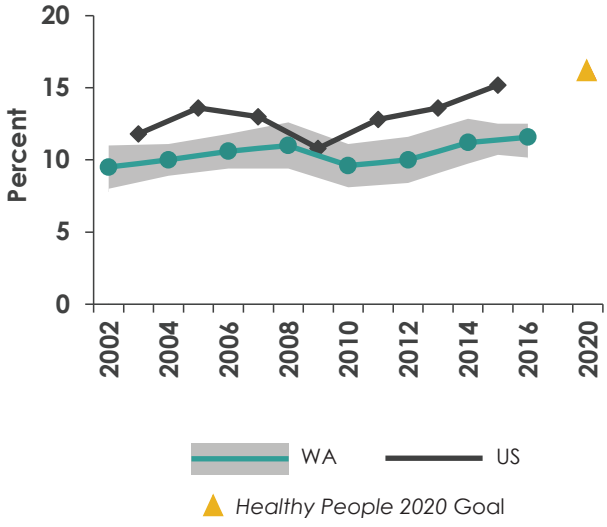
Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

Youth

Time Trends

- In the 2016 Healthy Youth Survey (HYS), the prevalence of obesity among Washington State 10th grade students was 12% (±1%).
- Washington youth have a lower prevalence of obesity compared to U.S. youth.
- Obesity among Washington 10th graders increased slowly from 2002 to 2016.

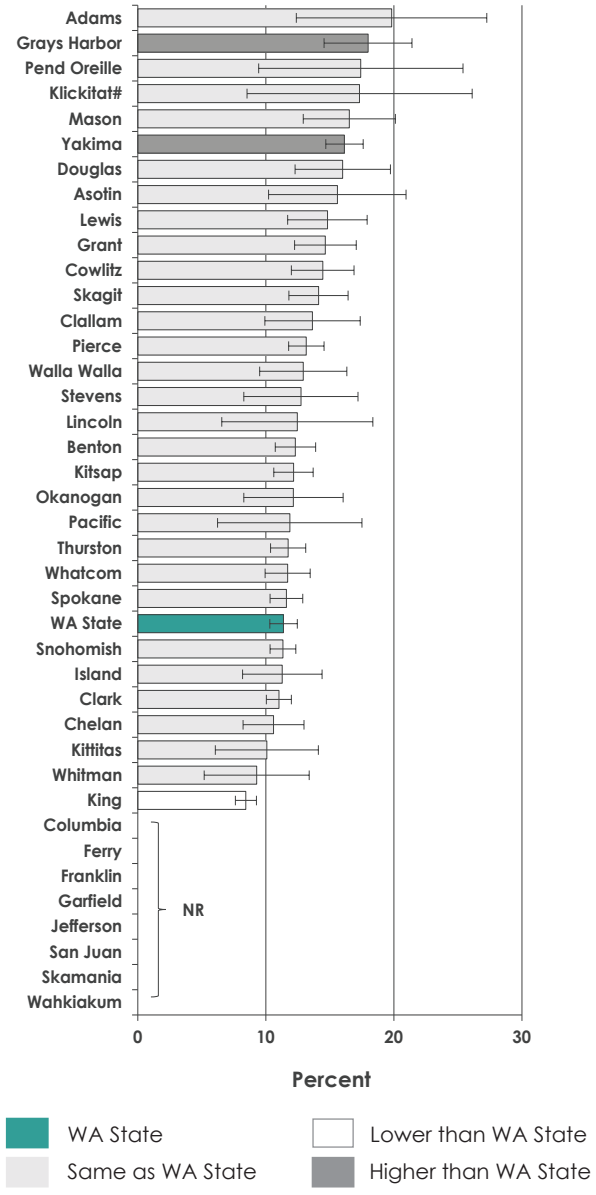
Youth Obesity, 10th Graders
Washington State & US
HYS & YRBSS



Geographic Variation

- In the 2014 and 2016 combined HYS, obesity was lower in King County 10th graders compared to the state.
- Grays Harbor and Yakima county 10th graders had a higher prevalence of obesity compared to 10th graders in the state.

Youth Obesity, 10th Graders
Washington Counties
HYS, 2014 & 2016

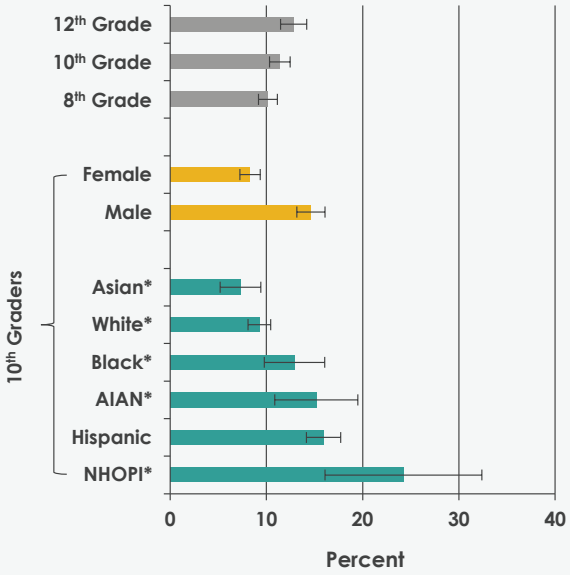


NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2014 and 2016 combined HYS, males had a higher obesity prevalence compared to females.
- Obesity prevalence was at its highest among 12th grade students compared to 8th and 10th grade students.
- NHOPI, Hispanic, AIAN, and black 10th graders had higher obesity prevalence compared to white 10th graders.

Youth Obesity
Washington State
HYS, 2014 & 2016



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington working to decrease obesity?

Organizations throughout the state, including Department of Health, are working on a vast array of approaches to decrease risk of obesity across the life span. Many of these strategies focus on policy, systems and environmental changes to improve nutrition and physical activity outcomes. These strategies can be found in the *Fruit and Vegetable Consumption* chapter and the *Physical Activity* chapter.

Partners throughout the state work to include nutrition and physical activity in their policies, systems and environments; and to collaborate on projects that positively affect multiple goals such as active transportation, creating built environments that promote physical activity, and healthy food system. For example:

- Childhood Obesity Prevention Coalition convenes partners to prioritize issues that our state is facing. Recently, they have focused on healthy transportation options, and decreased sugar sweetened beverage consumption.
- American Indian Health Commission supports the Pulling Together for Wellness Framework which promotes strategies to improve physical, social, emotional and spiritual health throughout the life span using a Native epistemology.
- University of Washington creates child care learning modules to support healthy eating and active living in early learning.
- Center for Multicultural Health is working with the African American community to promote culturally created healthy eating guidelines.
- Local Health Jurisdictions lead or participate in local coalitions aimed at preventing obesity.

Governor Jay Inslee launched the Healthiest Next Generation Initiative in 2014 to help children maintain a healthy weight and enjoy active lives. The Governor's Healthiest Next Generation initiative is an innovative public-private partnership that aims to create a multidisciplinary strategic work group focused on health, early learning and K-12 environments.

The Healthy Eating Active Living Program (HEAL) at the Department of Health strives to reduce the burden of obesity and chronic disease, and increase the proportion of Washingtonians with a healthy weight. Focusing on equitable and sustainable solutions, HEAL builds a healthier Washington through policy, systems and environmental changes that make it easier for people to eat healthy and be active—wherever they are.

Breastfeeding Friendly Washington (BFWA) is a voluntary recognition program encouraging clinics and hospitals to promote and support breastfeeding through changes in their policies and procedures.

The Supplemental Nutrition Assistance Program-Education (SNAP-Ed) program, an obesity prevention grant, serves low-income populations in Washington. SNAP-Ed includes direct education along with policy, systems and environmental changes focused on nutrition and physical activity.

See also Fruit & Vegetable Intake and Physical Activity

Evidence-based interventions to address obesity are available in the CDC Community Guide.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Endnotes

[1]Defining adult overweight and obesity. Centers for Disease Control and Prevention website. www.cdc.gov/obesity/adult/defining.html. Accessed October 6, 2017.

[2]Assessing your weight and health risk. National Heart, Lung and Blood Institute website. www.nhlbi.nih.gov/health/educational/lose_wt/risk.htm. Accessed September 12, 2017.

Oral Health (Tooth Decay)

Tooth decay is caused by the disease known as dental caries, and it is one of the most prevalent chronic diseases in children and adults.[1] Children who experience tooth decay miss more school, have lower academic success, and have an increased risk for lifelong dental problems. Poor oral health can increase systemic inflammation, which over time may limit growth and development, as well as increase the risk of adverse health outcomes including hypertension, cardiovascular disease, and cancer. Routine dental care, community water fluoridation, topical fluoride treatments, and dental sealants can prevent tooth decay.

In 2015, over half (53% ±5%) of Washington State 3rd grade students had any history of dental caries (i.e., caries experience, which means past or present cavities, fillings, or missing teeth from tooth decay). For the purposes of this section, dental caries refers to any history of tooth decay. The proportion of students with dental caries has declined in Washington State, though remains higher than the Healthy People 2020 goal of 49% for children ages 6-9.

The highest proportion of students with dental caries was among American Indian/Alaskan Native (AIAN), Native Hawaiian or Pacific Islander (NHOPI), and Hispanic; as well as those receiving school meal assistance through the National School Lunch Program; and those primarily speaking a language other than English at home.

DOH collaborates with partner agencies to promote evidence-based practices including community water fluoridation, school-based dental sealants, and early access to dental care and caries prevention.

1 in 2

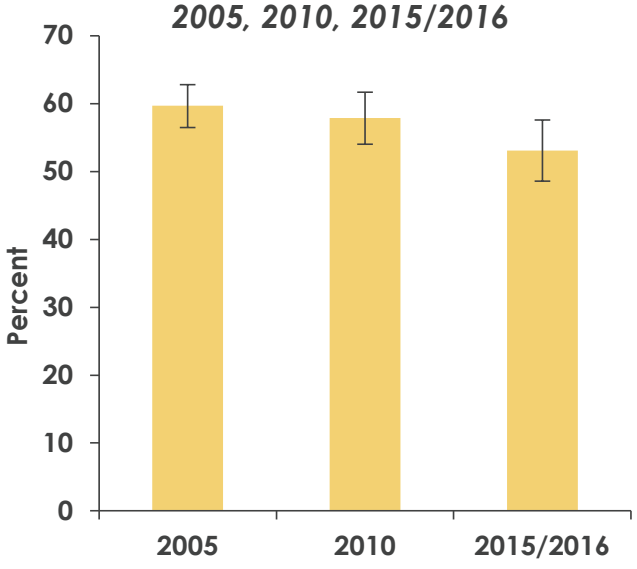
Washington 3rd graders have dental sealants, which can prevent up to 80% of tooth decay

Children who experience tooth decay miss more school, have lower academic success, and have an increased risk for lifelong dental problems

Time Trends

- In 2015, the dental caries rate among 3rd graders in Washington State residents was 53% (±5%).
- Compared to 2005, the dental caries rate among 3rd graders in Washington was lower in 2015/2016.
- Washington's dental caries rate of 53% (±5%) among 3rd graders does not meet the Healthy People 2020 goal of 49% for children ages 6-9.

Dental Caries§ in 3rd Graders
Washington State
Washington Smile Survey
2005, 2010, 2015/2016

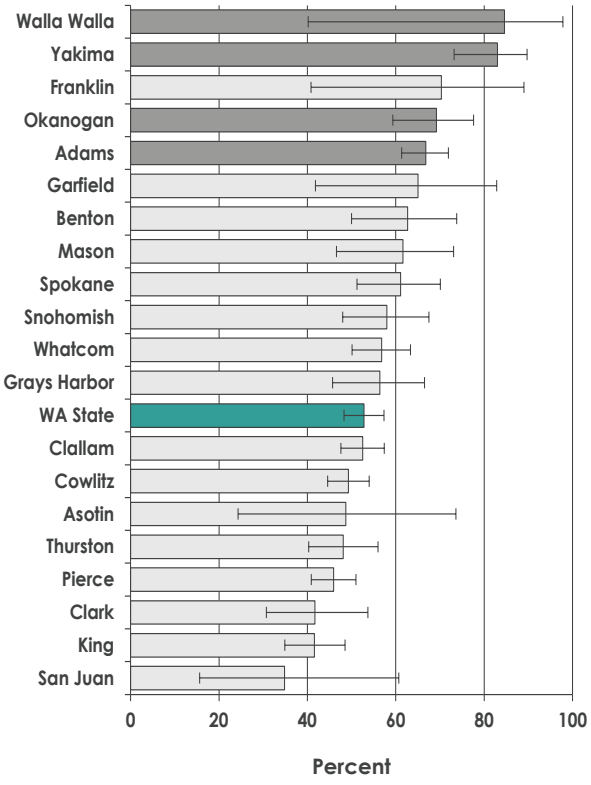


§Any history of tooth decay

Geographic Variation

- Adams, Okanogan, Walla Walla and Yakima counties had higher rates of dental caries among 3rd graders compared to the statewide rate.
- Other counties had rates similar to the Washington state rate for the 2015/2016 survey.

Dental Caries§ in 3rd Graders
Washington & Individual County**
Smile Survey



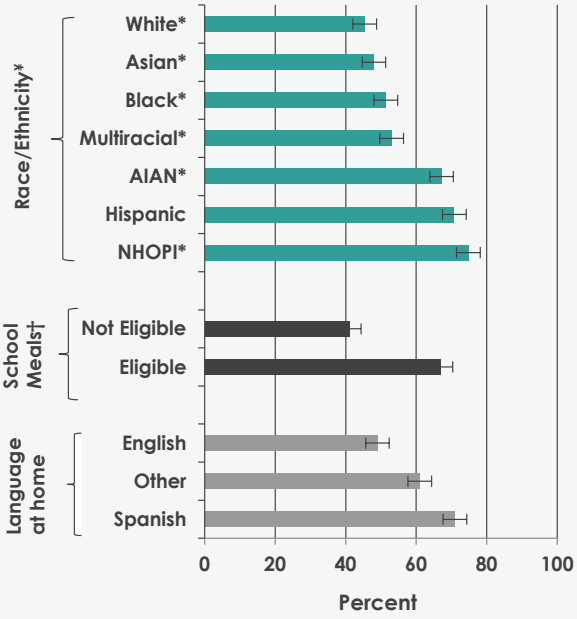
WA State
Same as WA State
Lower than WA State
Higher than WA State

**Counties not displayed either did not conduct a County-level survey or didn't have enough participating schools for a representative sample.

Disparities

- To report findings for race and ethnicity, data for 2nd and 3rd grade were combined. Data for school meals and language spoken at home were for 3rd grade only.
- Race/ethnicity for 2nd and 3rd graders combined in 2015/2016 found NHOPI, Hispanic, and AIAN with higher caries rates than whites.
- Students receiving assistance for school meals under the National School Lunch Program had a higher rate of dental caries than students not receiving assistance.
- Students whose primary language at home was not English had a higher rate of dental caries than students whose primary language was English.

Dental Caries§ in 3rd Graders
Washington State
Washington Smile Survey, 2015/2016



§Any history of tooth decay

†Based on National School Lunch Program eligibility

**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

¥Race/ethnicity combined 2nd and 3rd graders

Dental Sealants

Dental sealants can prevent up to 80 percent of tooth decay in children and adolescents.[2] When provided in school settings, dental sealant programs offer a cost-effective, evidence-based public health approach to preventing disease.[3]

- In the 2015-2016 Smile Survey, 54% (± 6%) of Washington State 3rd grade students surveyed had dental sealants, far more than the *Healthy People 2020* goal of 28% for children ages 6-9.
- Hispanic children were more likely to have dental sealants compared to white children.

Access to Dental Services

Washington is geographically diverse, making access to dental services complicated for many adults and children who live in vast, rural regions of the state. Dentists are in short supply in many of these regions, which can be a barrier to preventive dental care and dental treatment for adults as well as children. Additionally, in many counties, the ratio of Apple Health (i.e., Medicaid) dental providers is small compared with the number of adults and children who need dental care through Apple Health.

- In Washington, 34 of 39 counties are entirely or partly designated as dental Health Professional Shortage Areas (HPSAs).
  - Federal HPSA designations are made for primary care, dental and mental health services. The information gathered in the HPSA designation process can provide key insight about need for providers. Areas designated as a HPSA are able to access additional federal resources, including loan repayment for clinicians and enhanced reimbursement.
  - Dental HPSAs are determined by considering the ratio of population to available dentists, percent of the population below the federal poverty level, water fluoridation status, and travel time to nearest services.
  - The majority of HPSA designations for dental services in Washington are specific to people in low-income households earning 200 percent or less of the federal poverty guidelines.
- **Adults age 21 and over**
  Statewide, just over one-fifth (22 percent) of Medicaid-eligible adults age 21 and over accessed dental care in 2016 (i.e., had a Medicaid claim for dental services). Counting just these adults, the average caseload is 154 clients per dental provider accepting Medicaid clients. In 2016, there were 895 dental providers accepting adult Medicaid clients, down from 942 in 2015.
- **Children and teens**
  Statewide, approximately 56 percent of Medicaid eligible children ages 20 and under accessed dental care in 2016 (i.e., had a Medicaid claim for dental services). The average client caseload per dental provider accepting Medicaid clients is 388.

How is Washington promoting oral health & addressing tooth decay in children?

Washington State has a strong track record of policymakers, public health officials, community advocates and providers collaborating to implement policies and programs to support the oral health of Washington children. Examples of innovative and effective programs and policies in Washington include:

- Access to Baby and Child Dentistry (ABCD)
  Young children ages 0-5 who are eligible for Apple Health (Medicaid) are connected with dentists trained to treat young children. The program includes outreach and education for families about the importance of oral health and how to get their young children into care.
- **Preventive oral healthcare delivered in the pediatrician's office**
  More than 40% of Washington's physicians serving children are trained to deliver preventive oral health services, including providing oral health education and screenings, and applying fluoride varnish during well-child visits.
- **School-based dental sealant programs**
  In Washington, state law allows registered dental hygienists to provide preventive dental services outside of dental offices (e.g., school-based settings).
- **Preventive oral health education in early learning programs**
  Head Start and ECEAP programs, child care providers, and home visitors throughout Washington are trained to identify children at risk for oral health problems, connect them to dental resources, and work with families to prevent decay.
- **Community water fluoridation**
  Adjusting the level of naturally occurring fluoride in drinking water is a proven, cost-effective way to prevent tooth decay. Currently 56 percent of Washingtonians live in communities with optimized levels of water fluoridation.
- Washington State Board of Health: Strategies to Improve the Oral Health of Washington Residents.
  Based on a review of established evidence and best practice models, the Washington State Board of Health approved seven strategic recommendations to be considered by communities, organizations, and agencies seeking to improve the oral health of Washington residents.
- **New provider model**
  To help meet the dental needs of American Indian/Alaska Native children and families living in tribal communities, Washington State passed legislation in 2017 that permits tribes to hire mid-level dental providers, called dental health aide therapists.
- Regional initiatives in dental education (RIDE) program
  The RIDE program developed by the University of Washington School of Dentistry addresses oral health workforce needs in rural and underserved communities. RIDE is a partnership with Eastern Washington University and the UW School of Medicine WWAMI (Washington, Wyoming, Alaska, Montana and Idaho) program. RIDE was funded by the Washington State Legislature in 2007.

See also Fluoridated Drinking Water

Evidence- based interventions to promote oral health and reduce tooth decay in children are available in the CDC Community Guide.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Dental Health Professional Shortage Area: Under certain circumstances, areas and populations in Washington are designated by the federal government as having a shortage of healthcare providers. Health Professional Shortage Area designations are available for primary medical care, primary dental care, and mental healthcare. For more information, visit the DOH Rural Health webpage here.

Medicaid Eligibility: The various eligibility requirements for the Washington Apple Health program (Medicaid) can be found here.

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Smile Survey: The 2015-2016 Washington State Smile Survey collected information on decay experience, untreated decay, severity of the disease, urgency of need for dental care, and the presence of dental sealants. Specially trained dental practitioners visually screened over 14,000 children in preschool, kindergarten, second and third grades from a statewide representative sample of 76 elementary schools and 47 Head Start/ECEAP programs. For more information, access the full report here.

Endnotes

[1]Dental caries (Tooth Decay). National Institute of Dental and Craniofacial Research website. www.nidcr.nih.gov/DataStatistics/FindDataByTopic/DentalCaries/. Accessed October 26, 2017.

[2]Oral health topics: dental sealants. American Dental Association website. www.ada.org/en/member-center/oral-health-topics/dental-sealants. Published October 19, 2016. Accessed September 28, 2017.

[3]Community Preventive Services Task Force. Dental caries (cavities): school-based dental sealant delivery programs. The Guide to Community Preventive Services (The Community Guide) website. www.thecommunityguide.org/findings/dental-caries-cavities-school-based-dental-sealant-delivery-programs. Published 2013. Accessed September 28, 2017.

Suicide & Safe Storage of Firearms

Suicide is a serious public health problem in Washington State. On average, three people die by suicide every day. In 2016, 1,123 Washington State residents died by suicide (the age-adjusted rate was 15 per 100,000 people). In almost half of suicides, a firearm was used.

The highest rates of suicide occur among men, people 45 years old or older, American Indian and Alaska Natives (AIAN), and among people living in census tracts with a higher percentage living in poverty and a lower percentage who have a college degree.

In 2016, 38% (±2%) of adults with firearms in their homes reported storing them safely. During 2015 and 2016, females, people 18-24 and 35-44 years old, Asians, people with at least a college degree and people with an income less than $25,000 were more likely to report having their firearms stored safely at home.

DOH, along with partner agencies, is working to implement the State Suicide Prevention Plan.

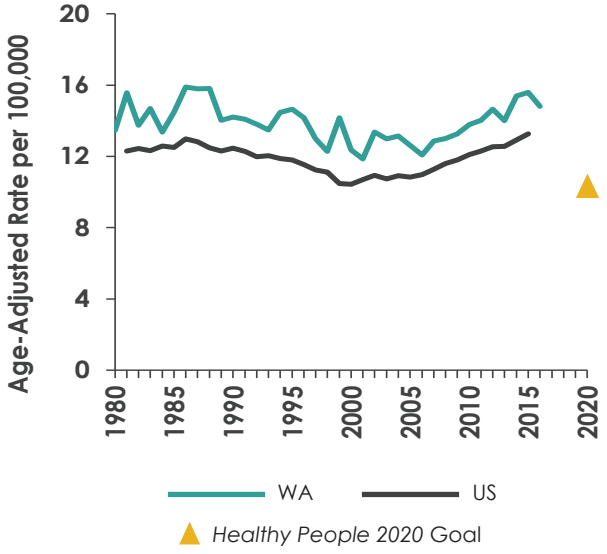
About half of all suicides are by firearm

On average, three Washingtonians died by suicide each day in 2016

Time Trends

- In 2016, the suicide rate among Washington State residents was 15 per 100,000 population.
- Washington has a higher rate of suicide deaths compared to the U.S. (13 per 100,000).
- Suicide rates in Washington increased from 2000 to 2015.

Suicide Deaths
Washington State & US
Death Certificates

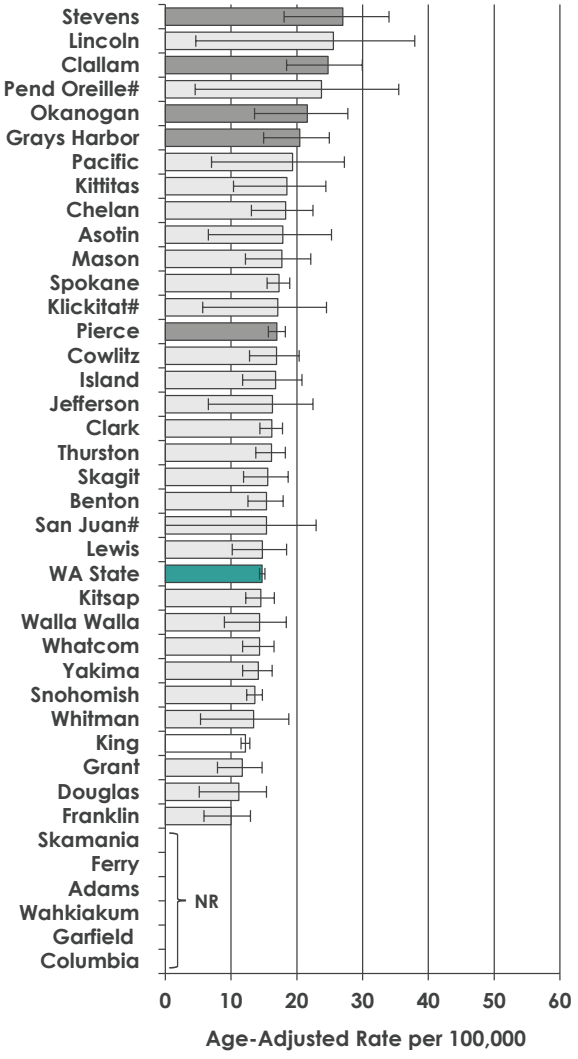


Geographic Variation

For 2011-2015:

- King County had a suicide rate lower than the overall state rate.
- Clallam, Grays Harbor, Okanogan, Pierce, and Stevens counties had rates higher than the overall state suicide rate.

Suicide Rates
Washington Counties
Death Certificates, 2011-2015



WA State
Same as WA State
Lower than WA State
Higher than WA State

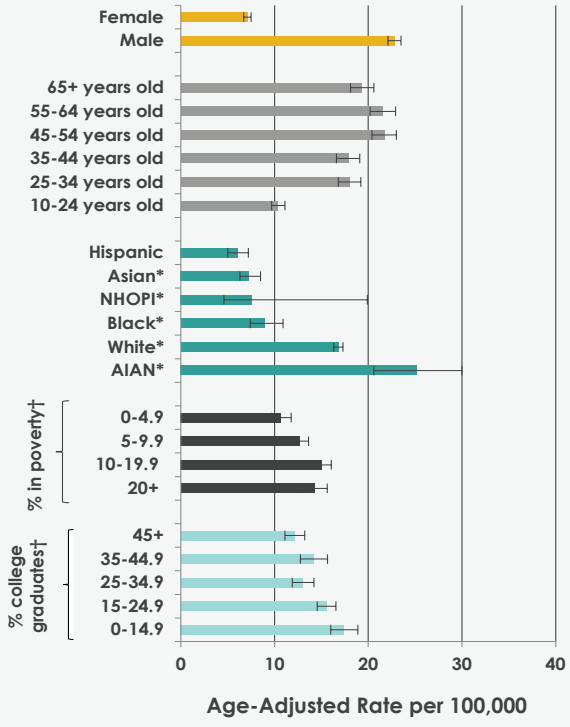
NR: Not reported if RSE ≥ 30% or to protect privacy

#Relative standard error (RSE) is between 25% and 29%

Disparities

- For 2011-2015, males have higher suicide rates compared to females across all age groups (data not shown).
- The highest suicide rates among men are those age 75 and older, while for women the highest rates are among those 45 to 64.
- AIAN have the highest suicide rates followed by whites.
- The highest number of suicides occur among men and women between ages 45-54.
- While we don't have individual socio-economic information, suicide rates are higher in census tracts where 10% or more of the residents lived in poverty, and in census tracts where fewer than 25% of the adult residents graduated from college.

Suicide
Washington State
Death Certificates, 2011-2015



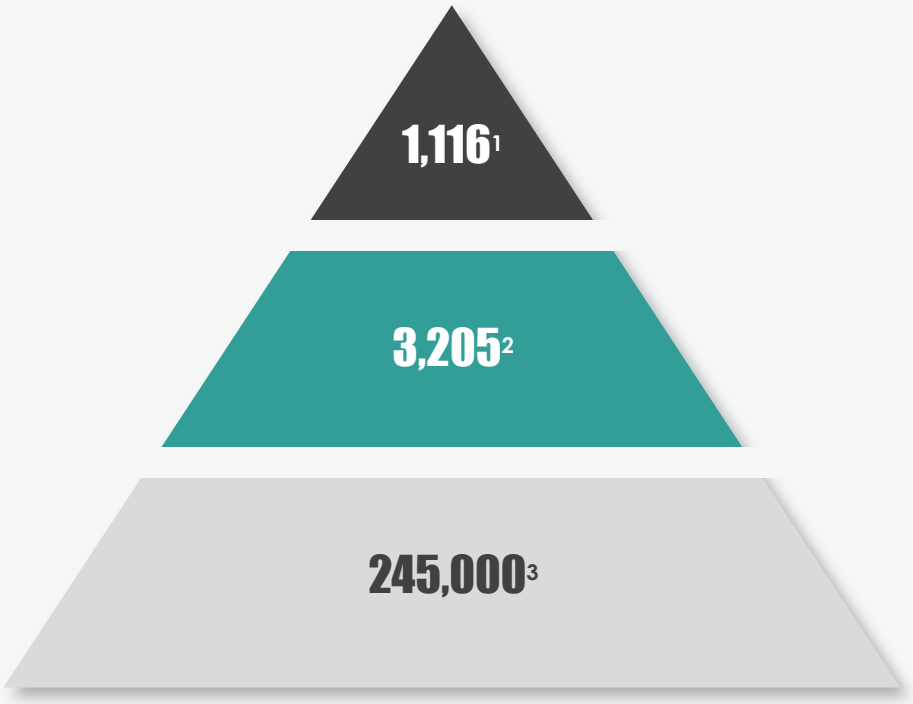
†Among census tract residents, 2012-2014 data

**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

Impact

- There are about three hospitalizations for self-inflicted injuries for every death due to suicide.
- For 2011-2015, almost half of those who died by suicide used a firearm, 24% died by suffocation, and 19% died by poisoning.

Suicide Burden
Washington State



1. **Deaths**
   Suicide listed as underlying cause of death. Washington State Death Certificate Data, 2015.

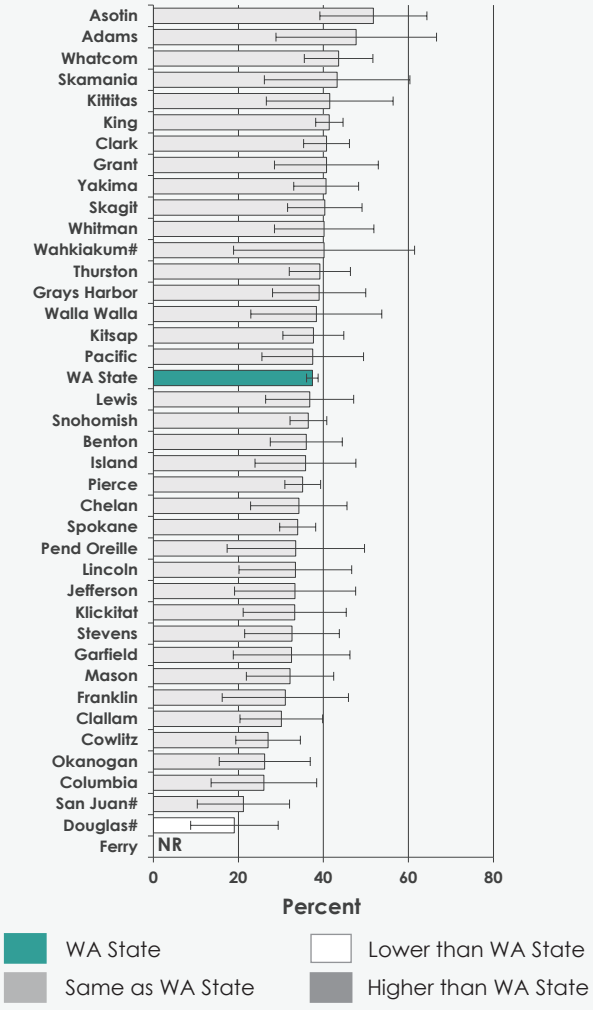
2. **Self Inflicted Harm Hospital Discharges**
   Washington Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS) and Oregon State Hospital Discharge Data, 2015.

3. **Adults with Serious Thoughts of Suicide**
   Estimated from National Survey on Drug Use and Health, 2014-15.

Safe Storage of Firearms

- One way to prevent suicide is to safely store and restrict access to common means of suicide, especially medications and firearms. Lockboxes can be used to safely store both.
- Reported here are available data from the Behavioral Risk Factor Surveillance System (BRFSS) about the safe storage of firearms, defined as keeping firearms unloaded and locked up at home. Data about safe storage of other means of suicide are unavailable.
- In 2016, 38% (±2%) of adults with firearms reported keeping them stored safely at home.

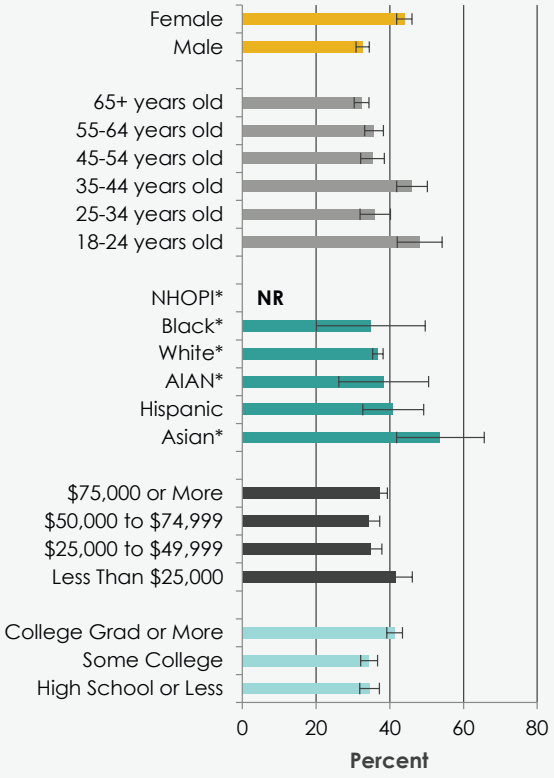
Safe Storage of Firearms
Washington Counties
BRFSS, 2015 & 2016



NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

- In the 2015-2016 BRFSS, females were more likely to report that firearms in their homes were safely stored compared to males.
- Survey respondents 18-24 and 35-44 years old were more likely to safely store their firearms at home compared to respondents of other ages.
- Asians were most likely to safely store their firearms.
- Those with the lowest level of income and the highest level of education were most likely to safely store their firearms.
- Promoting safe storage practices to reduce suicide risk is included in the Washington State Suicide Prevention Plan and the 2012 National Strategy for Suicide Prevention.
- For 2015 and 2016, only residents in Douglas County reported less safe storage of firearms compared to the state.

Safe Storage of Firearms
Washington State
BRFSS, 2015 & 2016



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing suicide & safe storage of firearms?

DOH, partner agencies, local health, tribes and coalitions are working together to implement the Washington State Suicide Prevention Plan, which is based on the National Strategy for Suicide Prevention.

Washington's Results WA Goal 4.1.2.A.g is to reduce the 2015 suicide death rate of 15.6 per 100,000 to 14.0 per 100,000 by 2020.

To reach this goal, DOH and partner agencies are strengthening the data on suicides and firearm deaths, including through use of the National Violent Death Reporting System to provide a more complete picture of circumstances and risk factors surrounding the death. This comprehensive data will improve evidence-based interventions to reduce mortality.

DOH founded the Action Alliance for Suicide Prevention to implement the Governor's Executive Order 16-02: Firearm Fatality Prevention – A Public Health Approach.

Washington legislation (E2SHB 1612) requires certain health professionals licensed in Washington to take a suicide prevention course. DOH is tasked with approving trainings that meet time and content requirements outlined in legislation. Some healthcare professionals are required to take training that includes content on veterans and risk of imminent harm by lethal means. For a complete list of professions and approved trainings, see the 2017 Model List.

DOH is working with the National Suicide Prevention Lifeline and Washington crisis centers to improve services and connect Washington callers with local resources.

Through state funding and a SAMHSA youth suicide prevention grant, DOH and DBHR support rural and tribal communities, and various coalitions, with their youth suicide prevention efforts. DOH contracts with the University of Washington's Safer Homes Coalition to develop suicide prevention and safe storage messages and trainings for firearm retailers and pharmacists (for medications). The DOH SAMHSA grant also contracts with UW for suicide prevention in higher education.

DOH is collaborating with the Department of Veterans Affairs to improve data collection to better understand the burden of suicide among military families and develop policies to help military families in times of crisis.

Harborview Injury Prevention and Research Center runs a campaign called #EndSuicideWA that includes suicide data and information on safe storage. Seattle Children's Hospital supports a Gun Safety Program to promote safe storage of firearms.

The Office of Superintendent of Public Instruction (OSPI) Suicide Prevention Program compiles online resources for Local Education Agencies (LEAs) and regional Educational Service Districts (ESDs) to complete the required plan for responding to emotional or behavioral distress in students. This includes maintaining a model plan template and approved training programs with the Professional Educator Standards Board for school counselors, psychologists, social workers, and nurses. Project AWARE provides no cost Youth Mental Health First Aid training and the Mental Health in High School curriculum resource for schools as they develop content that meets Health Education Standards for social emotional health.

Department of Social and Health Services/ Division of Behavioral Health and Recovery (DSHS/DBHR) and its partners are implementing the goals of the State 5-Year Strategic Plan for Substance Abuse Prevention and Mental Health Promotion. The strategic plan strategies are collaborative policy development, public education, and professional workforce development and training for each of the focus areas. Mental health promotion is one of the focus areas in the plan.

DSHS/DBHR supports the following:

- Mental health promotion/suicide prevention is a prioritized outcome for many of the 64 Community Prevention and Wellness Initiative communities funded by DSHS/DBHR. Communities identify risk and protective factors in their community that relate to youth alcohol and drug use and related issues such as mental health, and address them locally with appropriate evidence-based strategies.
- Provides funding to 29 federally recognized tribes to provide mental health promotion/suicide prevention services. Tribes develop and implement action plans to address their most important needs.
- Behavioral health organizations are funded to ensure mental health services are available across the state.
- Workforce development for prevention and treatment professionals.

Washington State is also working to transform healthcare services. The Health Care Authority, DOH, DSHS/DBHR and partners including managed care organizations, Accountable Communities of Health, local health, healthcare providers and others are working together to integrate physical health services, mental health services and substance use services. These efforts are funded by grants and the Medicaid 1115 waiver and include integrating clinical practices, supporting providers in identifying, serving and monitoring high need populations, developing systems to support information sharing across providers, and integrating payment systems.

See also Mental Health, Access to Behavioral Health Providers, Drug Overdose & Nonmedical Use fo Pain Relievers, and Binge Drinking & Excess Alcohol Use

Evidence-based interventions to prevent suicide are in the Best Practices Registry: Suicide Prevention Resource Center.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Percent Living in Poverty and Percent College Graduates: Definition and use is described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Safe Storage of Firearms: Safe storage of firearms is defined as keeping firearms unloaded and locked up at home.

Health Behaviors

Fruit & Vegetable Intake

Good nutrition is an important component of health and well-being. Assessment of the nutritional status of a population is challenging. While it has limitations, we use fruit and vegetable intake to represent the nutritional quality of the diets of Washingtonians, and to assess whether our interventions are having an impact.

We define low vegetable consumption as those individuals who report consuming vegetables less than one time daily. Similarly, we define low fruit consumption as those individuals who report consuming fruits less than one time daily. In 2015, 17% (±1%) of Washington adults reported low vegetable consumption, and 37% (±1%) reported low fruit consumption. Since 2011, the percentage of adults with low vegetable consumption has decreased, while the percentage of adults with low fruit consumption remained stable. The percentage of adults with both low vegetable and low fruit consumption among Washington adults was lower than adults in the U.S.

In 2016, 36% (±3%) of 10th graders reported low vegetable consumption, and 38% (±2%) reported low fruit consumption. For 10th graders, both low vegetable and low fruit intake remained stable since 2002. The percentage of 10th graders with low vegetable consumption was lower that the U.S. overall and low fruit consumption was similar to the U.S.

Among adults (2013 and 2015 combined), both low fruit and vegetable consumption were more prevalent in adults who were male or 18-24 years of age. Low vegetable consumption was highest among American Indian or Alaskan Native (AIAN), black and Hispanic adults. The percentage of adults with low vegetable or low fruit consumption decreased as levels of education and income increased.

Among youth (2014 and 2016 combined), the percentage with low fruit consumption increased as grade increased. Among 10th graders specifically, low fruit consumption was more prevalent in 10th grade females, while low vegetable consumption was more prevalent in 10th grade black and Hispanic students.

Partners throughout the state are working to support community and state-level changes to improve fruit and vegetable consumption, especially among populations experiencing health disparities.

1 in 6

Washington adults reported consuming vegetables less than once daily

1 in 3

Washington adults reported consuming fruit less than once daily

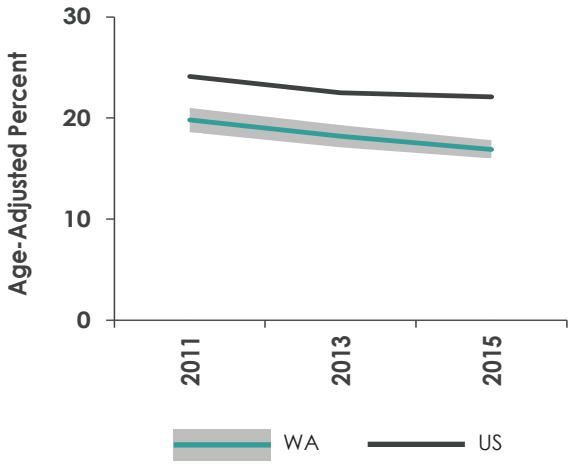
Adults

Time Trends

Vegetables

- In the 2015 Behavioral Risk Factor Surveillance System (BRFSS), the prevalence of low vegetable consumption among Washington State adults was 17% (±1%).
- Washington had a lower prevalence of low vegetable consumption compared to the U.S.
- Washington's prevalence in 2015 was lower than 2011.

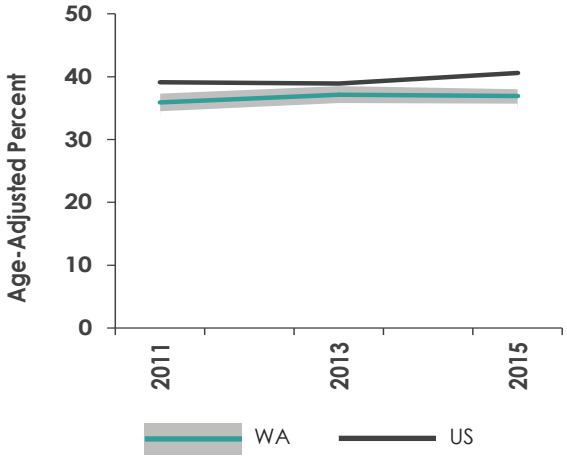
Low Vegetable Consumption (<1 x/day)
Washington State & US
BRFSS, 2011, 2013, 2015



Fruits

- In the 2015 BRFSS, the prevalence of low fruit consumption among Washington State adults was 37% (±1%).
- Washington had a lower prevalence of low fruit consumption compared to the U.S.
- Washington's prevalence in 2015 was similar to 2011.

Low Fruit Consumption (<1 x/day)
Washington State & US
BRFSS, 2011, 2013, 2015

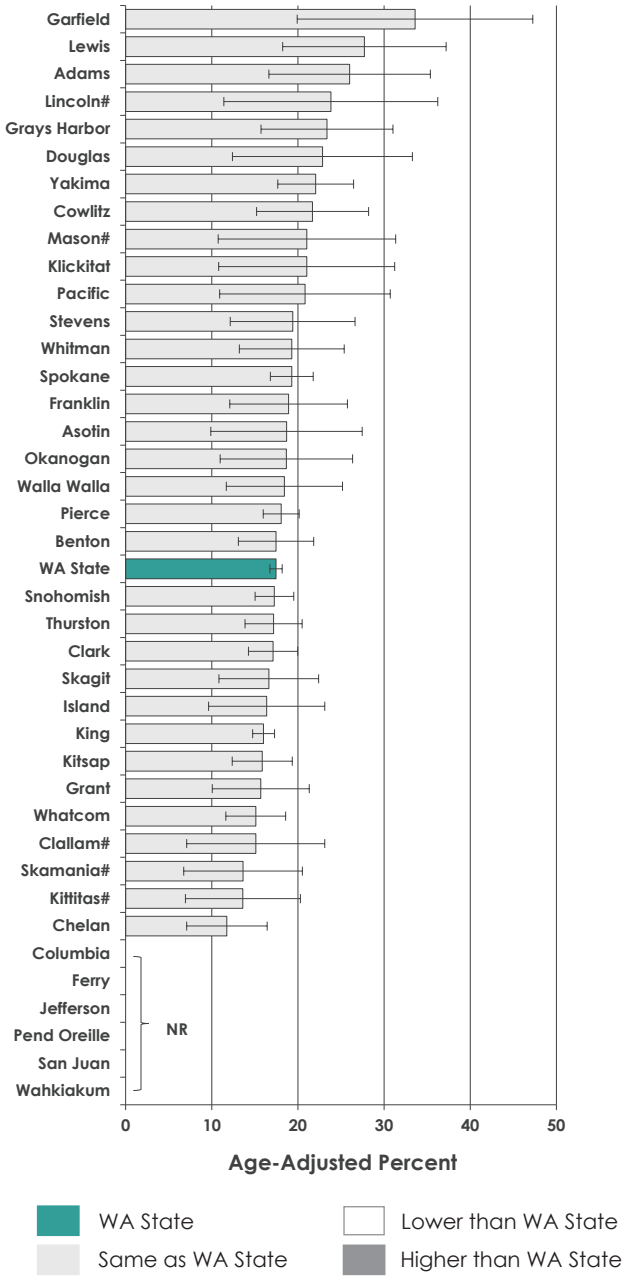


Geographic Variation

Vegetables

In the 2013 and 2015 combined BRFSS, all counties had a similar prevalence as the state overall.

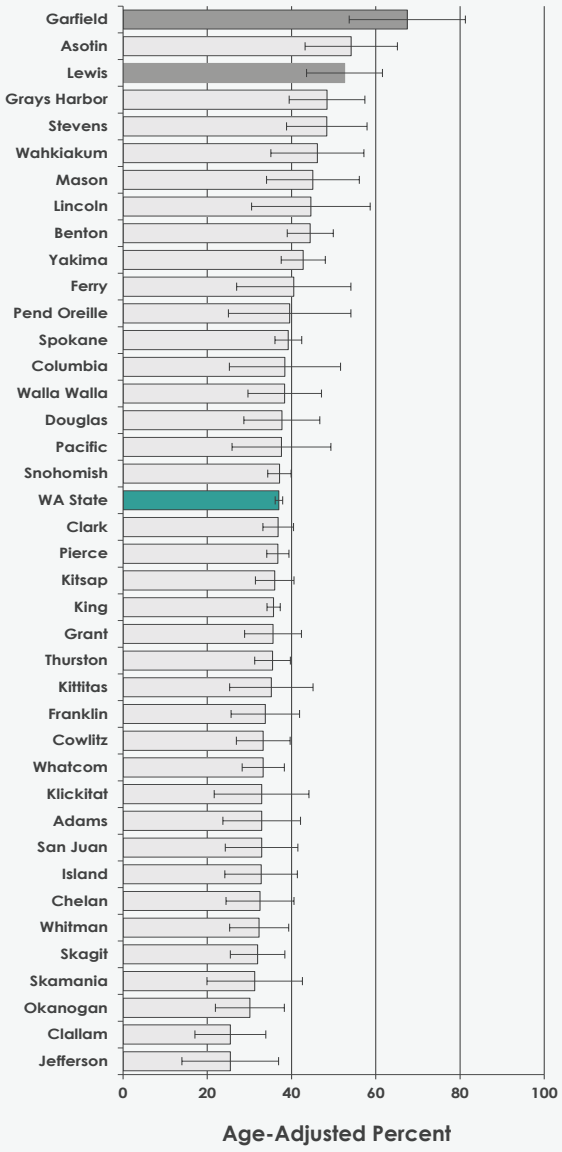
Low Vegetable Consumption (<1 x/day)
Washington Counties
BRFSS, 2013 & 2015



Fruits

- In the 2013 and 2015 combined BRFSS, Garfield and Lewis counties had a higher prevalence of low fruit consumption compared to the state.
- All other counties had a similar prevalence as the state overall.

Low Fruit Consumption (<1 x/day)
Washington Counties
BRFSS, 2013 & 2015



#Relative standard error (RSE) is between 25% and 29% | *NR:* Not reported if RSE ≥ 30% or to protect privacy

Disparities

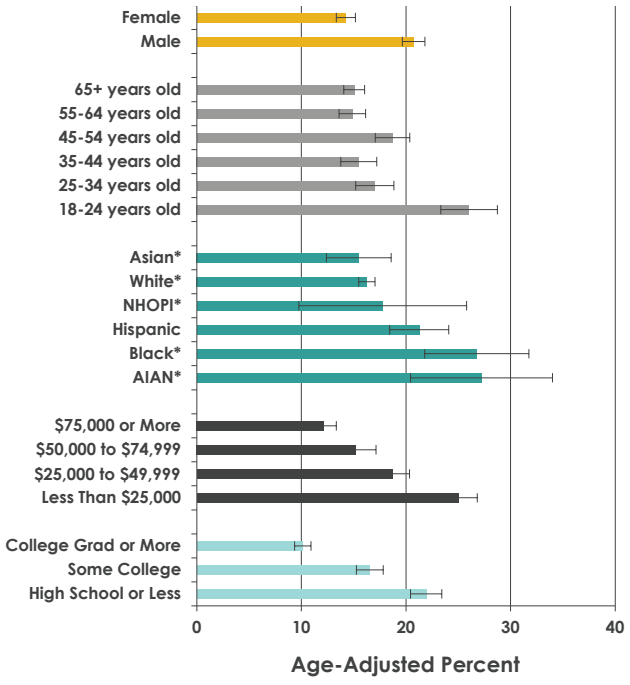
Vegetables

- In the 2013 and 2015 combined BRFSS, the prevalence of low vegetable consumption was higher among males compared to females.
- The prevalence of low vegetable consumption was highest among adults 18-24 years of age.
- Low vegetable consumption was highest among AIAN, black and Hispanic adults.
- The prevalence of low vegetable consumption decreased as levels of education and income increased.

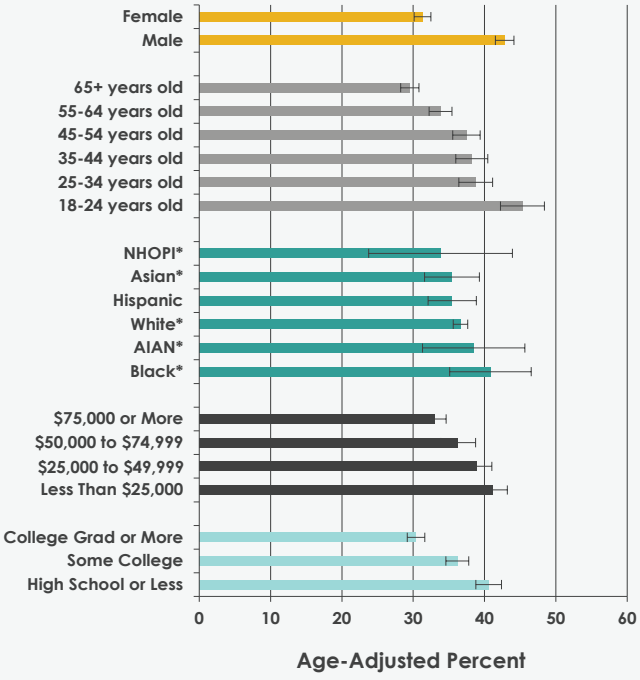
Fruits

- In the 2013 and 2015 combined BRFSS, the prevalence of low fruit consumption was higher among males compared to females.
- The prevalence of low fruit consumption was highest among adults 18-24 years of age.
- Low fruit consumption was similar for all racial/ethnic groups.
- The prevalence of low fruit consumption decreased as levels of education and income increased.

Low Vegetable Consumption (<1 x/day)
Washington State
BRFSS, 2013 & 2015



Low Fruit Consumption (<1 x/day)
Washington State
BRFSS, 2013 & 2015



Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

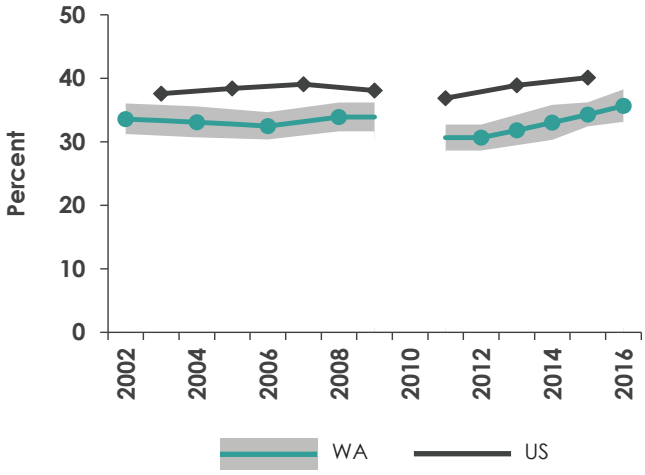
Youth

Time Trends

Vegetables

- In the 2016 Healthy Youth Survey (HYS), the prevalence of low vegetable consumption among Washington State 10th graders was 36% (±3%).
- Washington had a lower prevalence of low vegetable consumption compared to the U.S.
- The prevalence of low vegetable consumption has been stable since 2002.

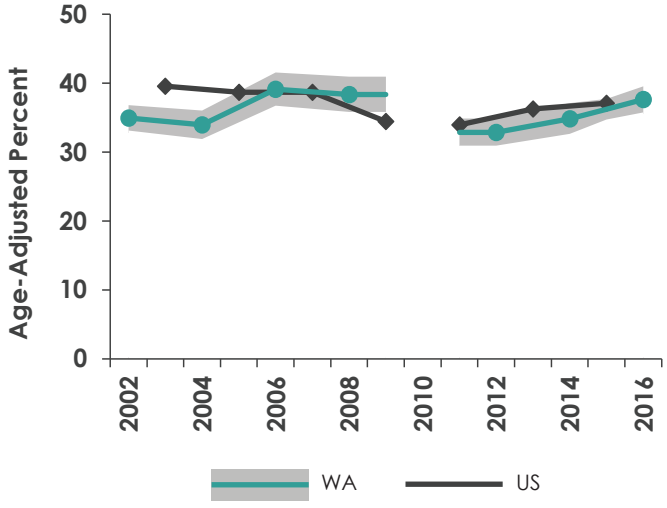
Low Vegetable Consumption (<1 x/day), 10th Graders Washington State & US HYS & YRBSS



Fruits

- In the 2016 HYS, the prevalence of low fruit consumption among Washington State 10th graders was 38% (±2%).
- Washington had a similar prevalence compared to the U.S.
- The prevalence of low fruit consumption among 10th graders has been stable since 2002.

Low Fruit Consumption (<1 x/day), 10th Graders Washington State & US HYS & YRBSS

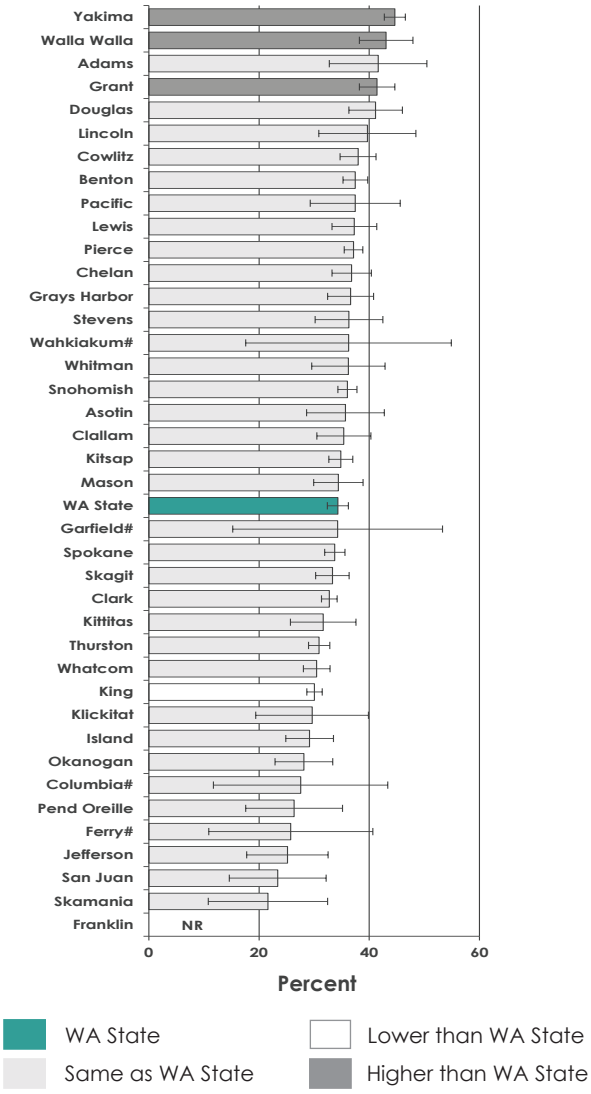


Geographic Variation

Vegetables

- In the 2014 and 2016 combined HYS, low vegetable consumption was higher among 10th graders in Grant, Walla Walla, and Yakima counties compared to the state.
- King County 10th graders had a lower prevalence compared to the state.
- All other counties had a similar prevalence to the state overall.

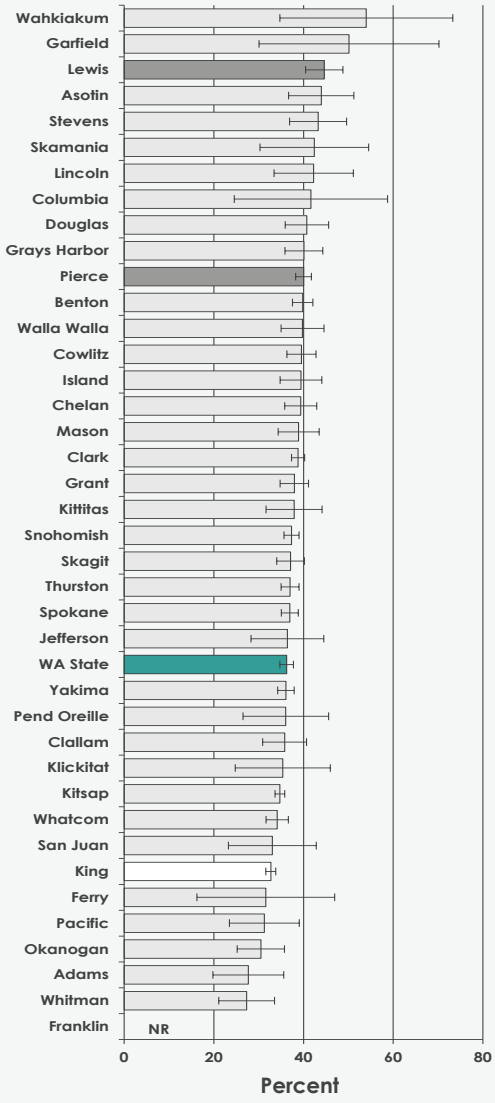
Low Vegetable Consumption (<1 x/day), 10th Graders Washington Counties HYS, 2014 & 2016



Fruits

- In the 2014 and 2016 combined HYS, low fruit consumption was higher in 10th graders in Lewis and Pierce counties compared to the state.
- King County 10th graders had a lower prevalence compared to the state.
- All other counties had a similar prevalence as the state overall.

Low Fruit Consumption (<1 x/day), 10th Graders Washington Counties HYS, 2014 & 2016



#Relative standard error (RSE) is between 25% and 29% | *NR:* Not reported if RSE ≥ 30% or to protect privacy

Disparities

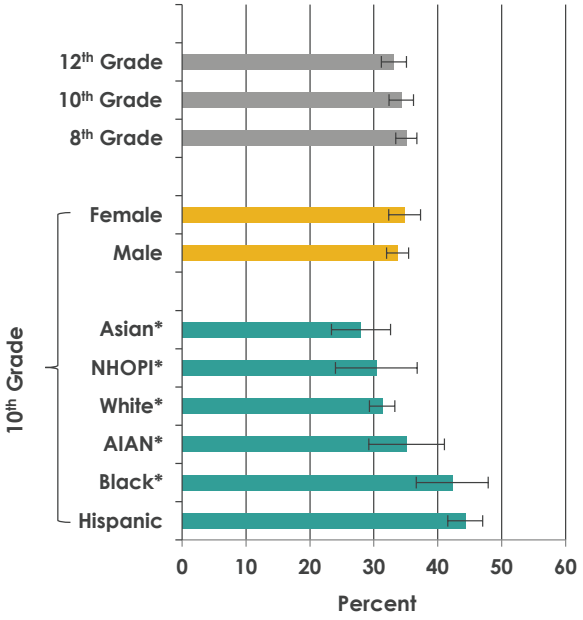
Vegetables

- In the 2014 and 2016 combined HYS, the prevalence of low vegetable consumption was similar between 10th grade females compared to males.
- The prevalence of low vegetable consumption was similar across 8TH, 10th and 12th grade.
- The prevalence of low vegetable consumption was highest among Hispanic and black 10th graders.

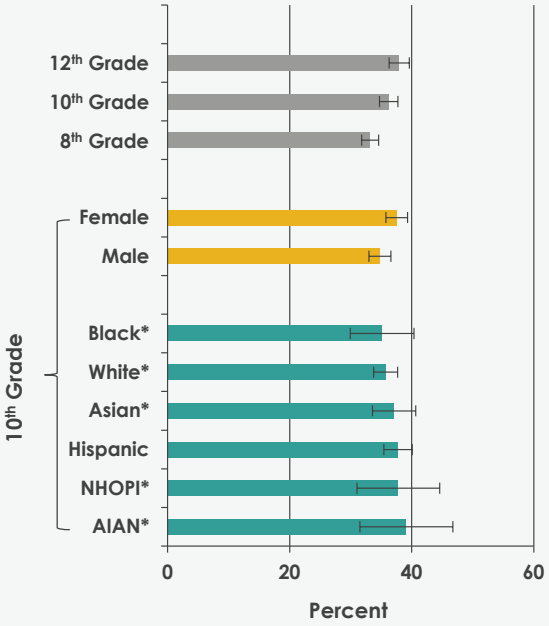
Fruits

- In the 2014 and 2016 combined HYS, the prevalence low fruit consumption was higher among 10th grade females compared to males.
- The prevalence of low fruit consumption was higher for 10th and 12th grade students compared to 8th grade students.
- The prevalence of low fruit consumption was similar across race/ethnicity among 10th graders.

Low Vegetable Consumption (<1 x/day)
Washington State
HYS, 2014 & 2016



Low Fruit Consumption (<1 x/day)
Washington State
HYS, 2014 & 2016



Access to Healthy Foods

- Several factors affect residents' access to healthy foods, including proximity to healthy food retailers, cost, convenience, and access to transportation.
- In Washington State, the majority of urban populations live within a 10-minute drive of a healthy food retailer (i.e., one that participates in the Special Supplemental Nutrition Program for Women, Infant, and Children [WIC]). Nearly all population centers in Washington State live within a 20-minute drive of a healthy food retailer. However, disparities exist in different neighborhoods, including for racial/ethnic minorities and low-income populations.

**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington improving fruit & vegetable intake?

The Department of Health and organizations throughout the state work on strategies including education as well as policy, systems, and environmental approaches to increase fruit and vegetable consumption across the life span. Many of these strategies address increasing accessibility and affordability of fruits and vegetables.

- **Early Learning**
  Partners throughout the state work with early learning programs and systems to help implement best practices in nutrition and physical activity. DOH works with University of Washington's (UW) Center for Public Health Nutrition to develop and host free, accredited, on-line training for early learning providers.
- **Schools**
  Office of Superintendent of Public Instruction works with schools to implement wellness policies and the nutrition standards outlined in the federal Healthy, Hunger Free Kids Act. Recently the legislature funded $5 million for schools to improve physical activity infrastructure/equipment, water bottle filling stations, and equipment related to healthy food.
- **Worksites/Institutional**
  DOH supports executive state agencies to adopt Healthy Nutrition Guidelines related to Executive Order 13-06. UW Health Promotion Research Center continues to work with DOH to oversee a healthy worksite initiative that promotes access to fruits and vegetables. Department of Agriculture continues to work on farm-to-institution initiatives to increase access to local fruits and vegetables.
- **Community**
  With support from the Food Insecurity Nutrition Incentives Grant from USDA, DOH leads dozens of partners to incentivize fruit and vegetable purchases in grocery stores and farmers markets among Supplemental Nutrition Assistance Program (SNAP) customers (formerly called Food Stamps for customers with limited income). DOH's WIC program provides vouchers for fruits and vegetables for women and children five and under who qualify. Community organizations and Local Health Jurisdictions throughout the state are working to improve access to fruits and vegetables through a variety of community initiatives and funding sources, including nutrition guidelines in community centers and faith based organizations, farmers markets, grocery stores, food banks, institutional foodservice, restaurants and community gardens. Organizations such as DOH and Washington State University Extension teach consumers on limited budgets how to shop wisely and prepare healthy foods in programs such as Expanded Food and Nutrition Education Program (EFNEP) and Supplemental Nutrition Assistance Program Education Program (SNAP Ed). The Governor's Healthiest Next Generation initiative seeks to increase access to fruits and vegetables as well.
- **Healthcare**
  DOH works with several healthcare organizations to provide fruit and vegetable cash voucher prescriptions to low-income clients. Several major hospitals are working to improve cafeteria options, and some host or fund onsite or local farmers markets. Some insurance programs incentivize or reward fruit and vegetable consumption.
- This is a sampling of some of the activities around this issue. Because many initiatives take place throughout the state, only a small collection of projects are represented in this document.

See also Obesity

Evidence-based Interventions to promote healthy eating are listed in the CDC Community Guide.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Physical Activity

Physical activity improves health for people of all ages. Physical activity is bodily movement that expends energy. Adults should get 150 minutes of moderate or 75 minutes of vigorous physical activity weekly and muscle strengthening activity two or more days a week. Youth should be physically active for at least 60 minutes on most days.

In 2015, 58% (±1%) of Washington adults met national recommendations for aerobic physical activity, and in 2016, 24% (±2%) of 10th graders met national recommendations for aerobic physical activity. Prevalence rates for adults and youth have remained relatively stable over time. The percentage of Washington adults who met recommendations was higher than the overall U.S. percentage; however, the percentage of Washington youth meeting recommendations was lower than youth in the U.S. overall.

Compared to young adults 18-24 years old, a higher percentage of adults 65 years or older met aerobic physical activity recommendations. The percentage of adults who met recommendations was highest among white adults and overall increased as levels of education and income increased. Among youth, a higher percentage of youth in younger grades (6th and 8th) met recommendations for aerobic physical activity. Among 10th graders, the highest percentages of students meeting physical activity recommendations were observed in males, and both Asian and Hispanic students compared with white students.

Partners throughout the state are working to support community and state-level changes to improve physical activity, especially among populations experiencing health disparities.

1 in 2

Washington adults met national recommendations for aerobic physical activity

1 in 4

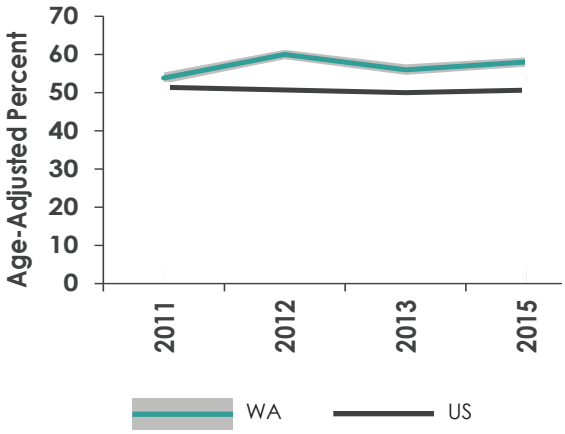
Washington 10th graders met national recommendations for aerobic physical activity

Adult

Time Trends

- In the 2015 Behavioral Risk Factor Surveillance System (BRFSS), the percentage of adults meeting aerobic physical activity recommendations in Washington State was 58% (±1%).
- Washington had a higher prevalence of adults who met recommendations compared to the U.S.
- Over recent years, the percentage of adults meeting aerobic physical activity recommendations in Washington was stable.

Meets Aerobic Physical Activity Recommendations* Washington State & US BRFSS, 2011-2015

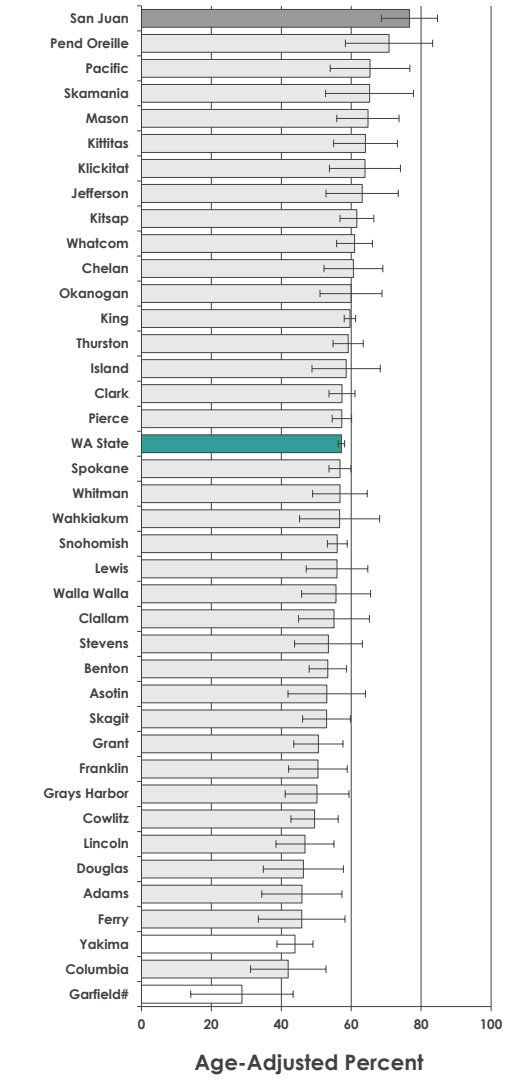


*150+ minutes of moderate or 75+ minutes of vigorous aerobic physical activity each week

Geographic Variation

- In the 2013 and 2015 BRFSS combined, the percentage of adults who met recommendations for aerobic physical activity was lower in Garfield and Yakima counties compared to the state.
- San Juan County had a higher percentage than the state.

Meets Aerobic Physical Activity Recommendations** Washington Counties BRFSS, 2013 & 2015



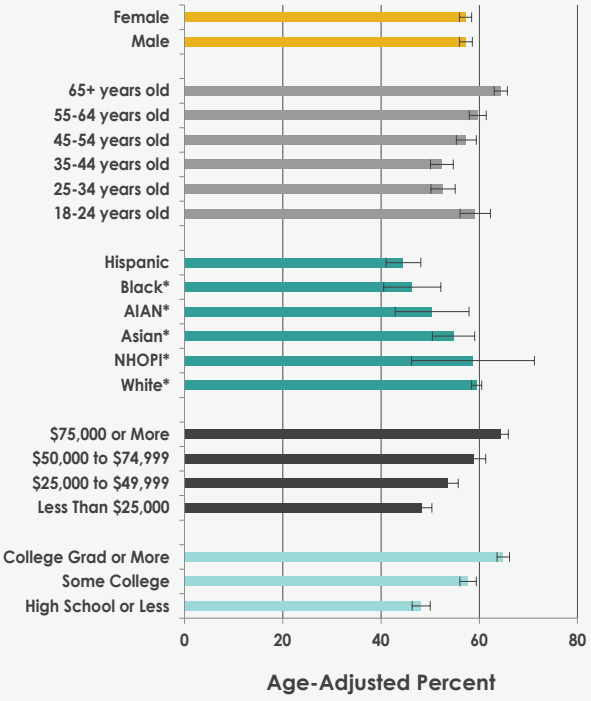
WA State | Lower than WA State
Same as WA State | Higher than WA State

#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2013 and 2015 BRFSS combined, the percentage of adults meeting aerobic physical activity recommendations was similar between males and females
- The percentage of adults who met aerobic physical activity recommendations was lower in adults between 25 and 44 years old and higher in adults 65 years and older compared to young adults 18-24 years old.
- The percentage was lower in Hispanic, black, American Indian or Alaska Native (AIAN), or Asian adults compared to white adults.
- The percentage increased as levels of education and income increased.

Meets Aerobic Physical Activity Recommendations** Washington State BRFSS, 2013 & 2015



*Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

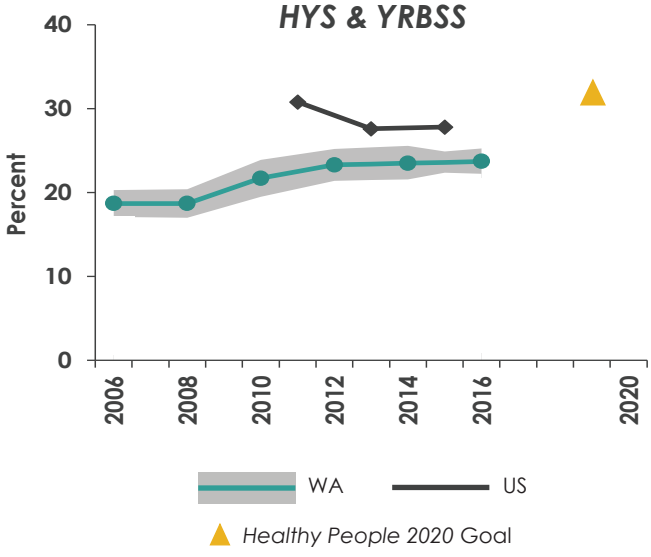
**150+ minutes of moderate of 75+ minutes of vigorous aerobic physical activity each week

Youth

Time Trends

- In the 2016 Healthy Youth Survey (HYS), the percentage of 10th grade youth meeting aerobic physical activity recommendations in Washington State was 24% (±2%).
- Washington had a lower prevalence of 10th graders who met physical activity recommendations when compared to the U.S.
- Over recent years, the percentage of 10th graders meeting aerobic physical activity recommendations in Washington was stable.

Meets Physical Activity Recommendations*, 10th Graders
Washington State & US
HYS & YRBSS

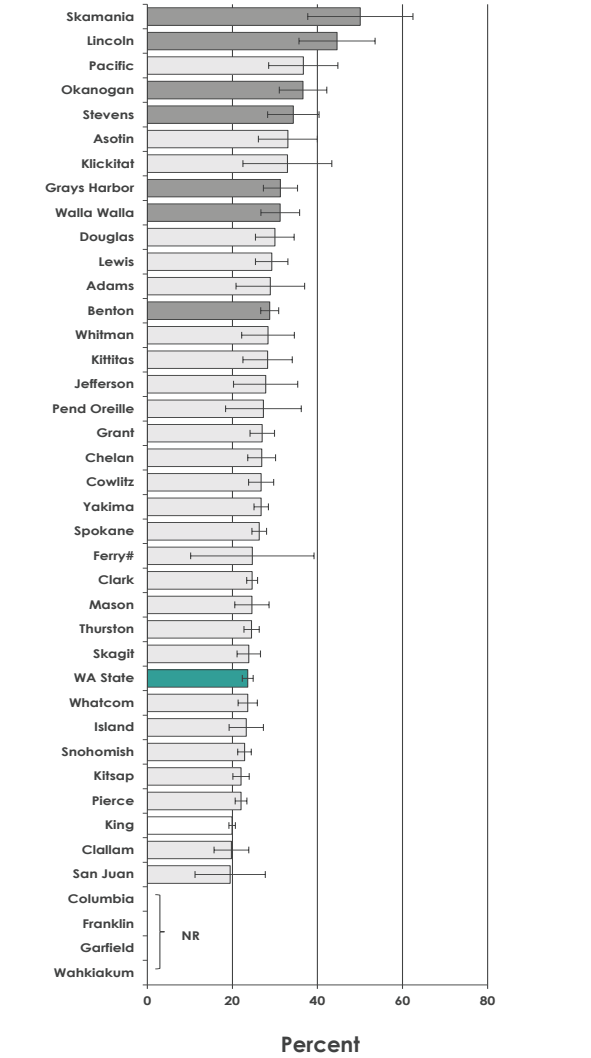


*Reporting at least 60 minutes of aerobic physical activity every day

Geographic Variation

- In the 2014 and 2016 combined HYS, the percentage of 10th graders who met recommendations for aerobic physical activity was lower in King County compared to the state.
- Benton, Grays Harbor, Lincoln, Okanogan, Pacific, Skamania, Stevens and Walla Walla counties' 10th graders had higher percentages compared to the state.

Meets Physical Activity Recommendations**, 10th Graders Washington Counties HYS, 2014 & 2016



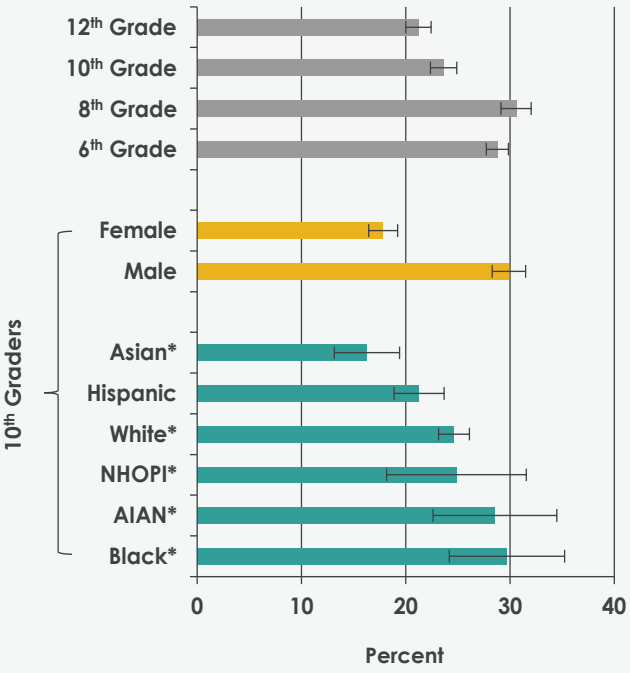
NR: Not reported if RSE ≥ 30% or to protect privacy

#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2014 and 2016 HYS combined, among 10th graders, a higher percentage of males than females reportedly met recommendations for physical activity.
- The percentage of youth who met recommendations for physical activity was higher among younger grades (6th and 8th) compared to higher grades (10th and 12th).
- The percentage of youth who met recommendations for physical activity was lower among Asian and Hispanic 10th graders compared to white 10th graders.

Meets Physical Activity Recommendations** Washington State HYS, 2014 & 2016



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

**Reporting at least 60 minutes of aerobic physical activity every day

How is Washington promoting physical activity?

Organizations throughout the state, including Department of Health, are working on a vast array of approaches to increase physical activity across the life span. Many of these strategies focus on policy, systems and environmental changes that make it easier to be physically active.

- **Early Learning**
  DOH works with University of Washington's Center for Public Health Nutrition to develop and host free, accredited, online training on best practices to increase physical activity—including screen time reduction.
- **Schools**
  Office of Superintendent of Public Instruction works with schools to implement wellness policies and physical education/physical activity in schools. Recently, the legislature funded $5 million for schools to improve physical activity infrastructure/equipment, water bottle filling stations, and equipment related to healthy food. DOH and many partners work to increase Safe Routes to School programs statewide.
- **Worksites/Institutional**
  University of Washington Health Promotion Research Center continues to work with DOH to oversee a healthy worksite initiative that promotes access to physical activity in worksites.
- **Community**
  DOH co-leads a Complete Streets project to make the built environment accessible to all users—including bicycles, pedestrians, and people of all ages and abilities. Community organizations and Local Health Jurisdictions throughout the state are working to improve access to physical activity through a variety of community initiatives and funding sources, including Complete Streets, developing shared use agreements for physical activity, incorporating physical activity into Comprehensive Plans, and coordinating social support. The Governor's Healthiest Next Generation initiative seeks to increase physical activity as well.
- **Healthcare**
  Healthcare organizations provide physical activity prescriptions, coordinate walking groups or free physical activity opportunities, and incentivize gym memberships or other means of physical activity.

This is a sampling of some of the activities around this issue. Because many initiatives take place at the organization and community level, not all projects are represented in this document.

See also Obesity and Fruit & Vegetable Intake

Evidence-based interventions to promote physical activity are available in the CDC Community Guide.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Tobacco & Vapor Product Use

Tobacco/nicotine use is the leading cause of preventable death in the United States, and is responsible for about 17–19% of all deaths in Washington. Cigarette smoking in Washington has declined, but about 14% (±1%) of Washington adults continue to smoke. The prevalence of electronic cigarette, e-cigarette, or vapor product use is about 6% (±1%).

In Washington State, the total cost of healthcare directly caused by cigarette smoking is estimated to be $2.8 billion annually.[1] Cigarette smoking also leads to costs such as workplace productivity losses. Additionally, there are costs related to secondhand smoke exposure, smoking-caused fires, and use of other tobacco products.

Males, American Indians and Alaska Natives (AIAN) and people with low incomes or less education are more likely to smoke and use e-cigarettes than are other Washingtonians. AIAN as well as people with lower income have both higher smoking rates and higher level of exposure to secondhand smoke.

Encouraging and helping tobacco users to quit is essential to reducing tobacco-related disease, death, and healthcare costs. In Washington in 2016, about 54% (±3%) of smoking adults reported having made a quit attempt in the past year.

DOH, along with state, local, tribal and community partners, is working to implement the 2017-2021 Washington Tobacco Prevention and Control Statewide Strategic Plan.

1 in 7

Washington adults continue to smoke although cigarette smoking has declined

Tobacco use is the leading preventable cause of death and disease

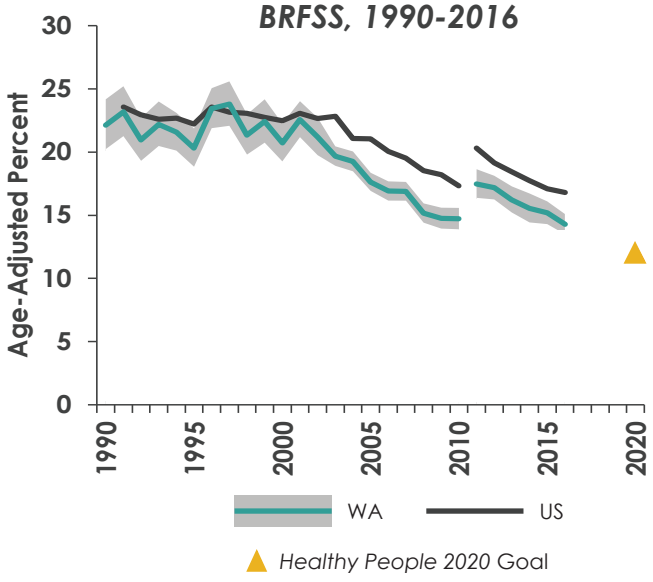
Adults

Time Trends

Current Smoking

- In the 2016 Behavioral Risk Factor Surveillance System (BRFSS), the prevalence of current smoking among Washington State adults was 14% (±1%).
- Washington had a lower age-adjusted prevalence of current smoking compared to the U.S., although both have been declining.
- From, 2011-2016, smoking among Hispanic and white adults decreased.
- In 2016, 4% (±1%) of adults used smokeless tobacco and 8% (±1%) were exposed to secondhand smoke.

Current Cigarette Smoking Prevalence
Washington State & US
BRFSS, 1990-2016



E-Cigarette Use

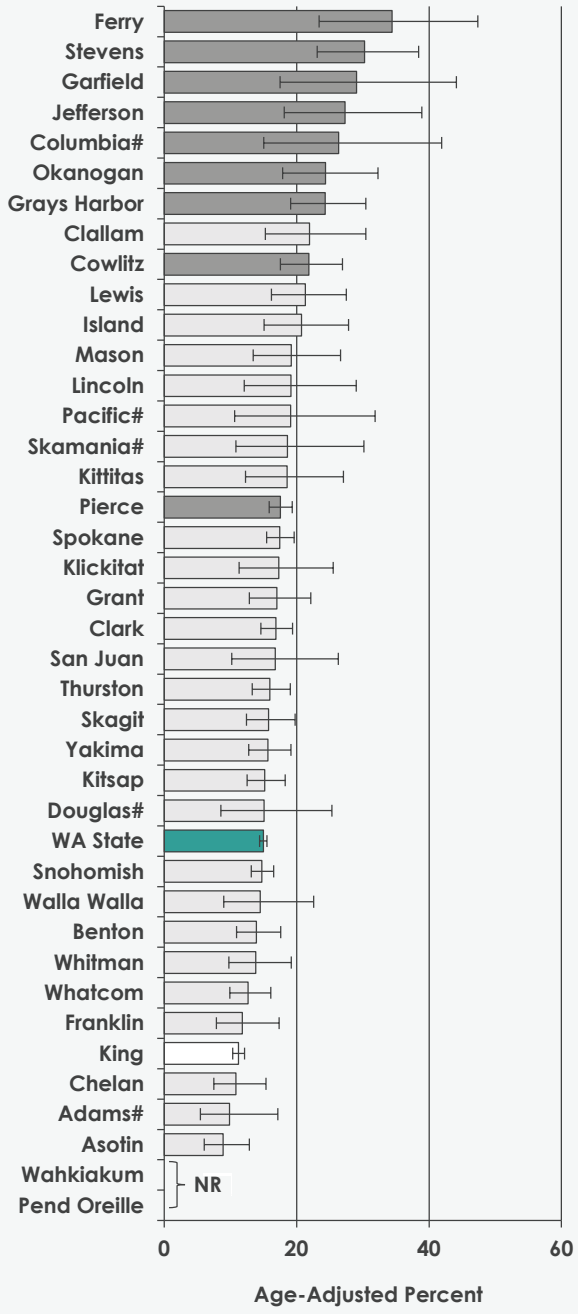
- Vapor products are devices that use a heating element to produce vapor from a liquid solution or other substance that is then inhaled. They include e-cigarettes as well as vape pens, mods and e-hookahs.
- Vapor products often but not always contain nicotine. They may also contain flavored liquids, marijuana products, or other drugs.
- In the 2016 BRFSS, the prevalence of current electronic cigarette, e-cigarette, or vapor product use among Washington State adults was 6% (±1%). Data collection began in 2014, so a time trend is not available.

Geographic Variation

Current Smoking

- In the 2014-2016 BRFSS, the prevalence of smoking in King County was lower than the state.
- Columbia, Cowlitz, Ferry, Garfield, Grays Harbor, Jefferson, Okanogan, Pierce and Stevens counties had a higher prevalence than the state.

Current Cigarette Smoking
Washington Counties
BRFSS, 2014-2016



NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

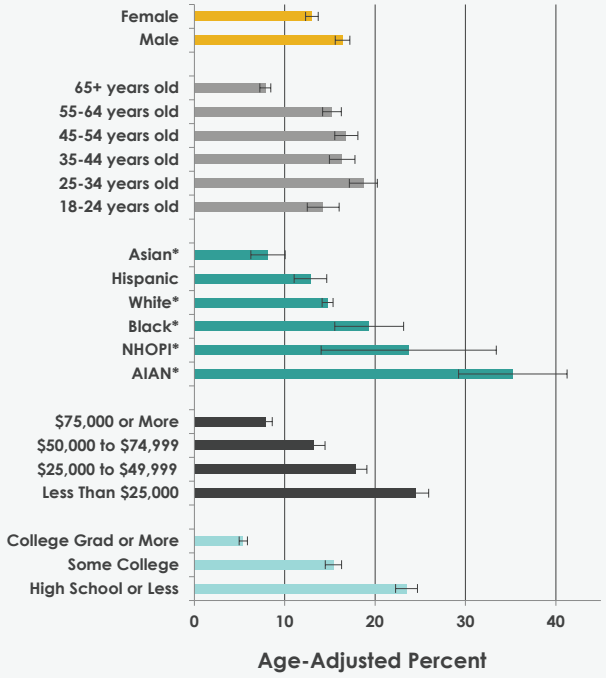
Current Smoking

- In the 2014-2016 BRFSS, males had higher smoking prevalence compared to females.
- Smoking prevalence was at its highest in early adulthood, peaking at 19% (±2%) among 25–34 year olds.
- AIAN had the highest smoking prevalence followed by Native Hawaiian and other Pacific Islanders (NHOPI) and blacks.
- The smoking prevalence among lesbian, gay and bisexual (LGB) people was 21% (±3%), which is higher than the smoking prevalence among heterosexuals (14% ± <1%) (data not shown).
- In the 2014–2016 BRFSS, current smoking prevalence increased as levels of education and household income decreased.
- Nationally, people with behavioral health conditions represent about 25% of the total adult population but account for about 40% of all cigarettes smoked.[2]
- Smokeless tobacco use was higher among men, younger adults, AIAN, veterans and those with less education (data not shown).
- Secondhand smoke exposure was higher among younger adults, AIAN, LGB, those with lower annual household income and those with less education (data not shown).

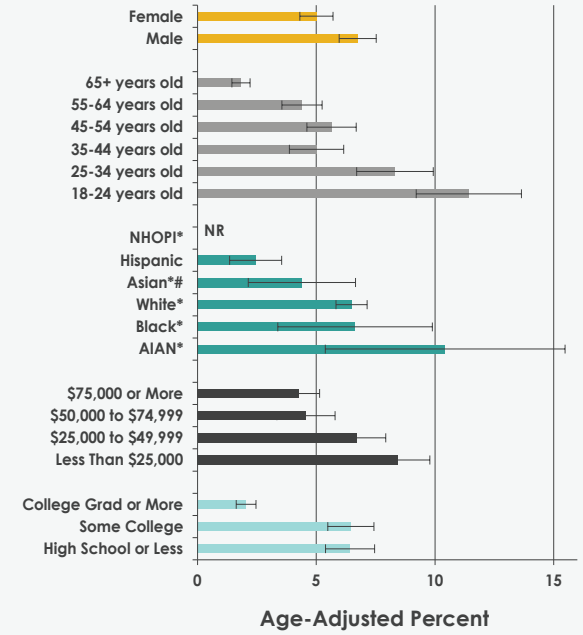
E-Cigarette/Vapor Product Use

- In the 2014-2015 BRFSS, males had higher e-cigarette use compared to females.
- In contrast to reported current smoking, e-cigarette use was at its highest in early adulthood among 18–24 year olds.
- AIAN had the highest e-cigarette use.
- The prevalence of e-cigarette use among those who are lesbian, gay or bisexual (8% ± 3%), was higher than among heterosexuals (6% ± 1%).
- In the 2014–2015 BRFSS, current e-cigarette use increased as levels of education and household income decreased.
- E-cigarette use was more common among current cigarette smokers 22% (±3%), compared to nonsmokers 3% (±1%).

Current Cigarette Smoking
Washington State
BRFSS, 2014-2016



Self-Reported E-Cigarette Use
Washington State
BRFSS, 2014 & 2015



Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

#Relative standard error (RSE) is between 25% and 29%

NR: Not reported if RSE ≥ 30% or to protect privacy

Youth

Time Trends

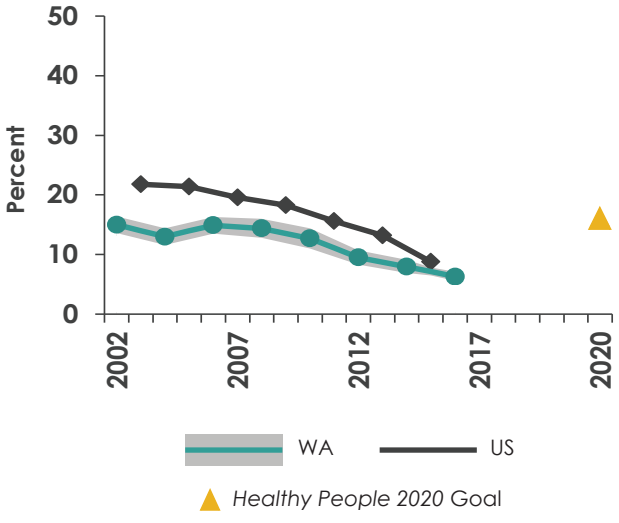
Current Smoking

- In the 2016 Healthy Youth Survey (HYS), 6% (±1%) of 10th graders reported smoking cigarettes in the past month.
- Fewer Washington youth reported cigarette smoking compared to U.S. youth.
- Youth cigarette smoking in Washington has been declining.

E-Cigarette Use

- In the 2016 HYS, 13% (±1%) of 10th graders reported using e-cigarettes or vapor products in the past month.
- In 2016, 71% (±5%) 10th graders who smoked cigarettes also used e-cigarettes or vapor products.

Youth Smoking, 10th Graders
Washington State & US
HYS & YRBSS

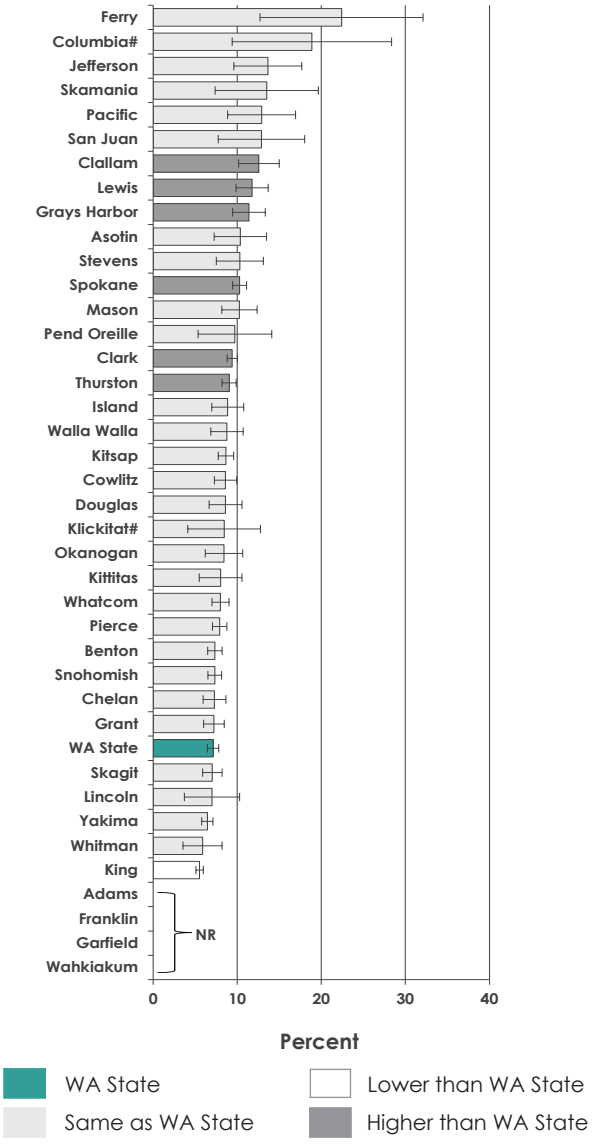


Geographic Variation

Current Smoking

- In the combined 2014 and 2016 HYS, the prevalence of smoking in 10th graders in King County was lower than the state prevalence.
- Among 10th grade students, the prevalence of past 30-day smoking in Clallam, Clark, Lewis, Grays Harbor, Spokane, and Thurston counties was higher than the state prevalence.

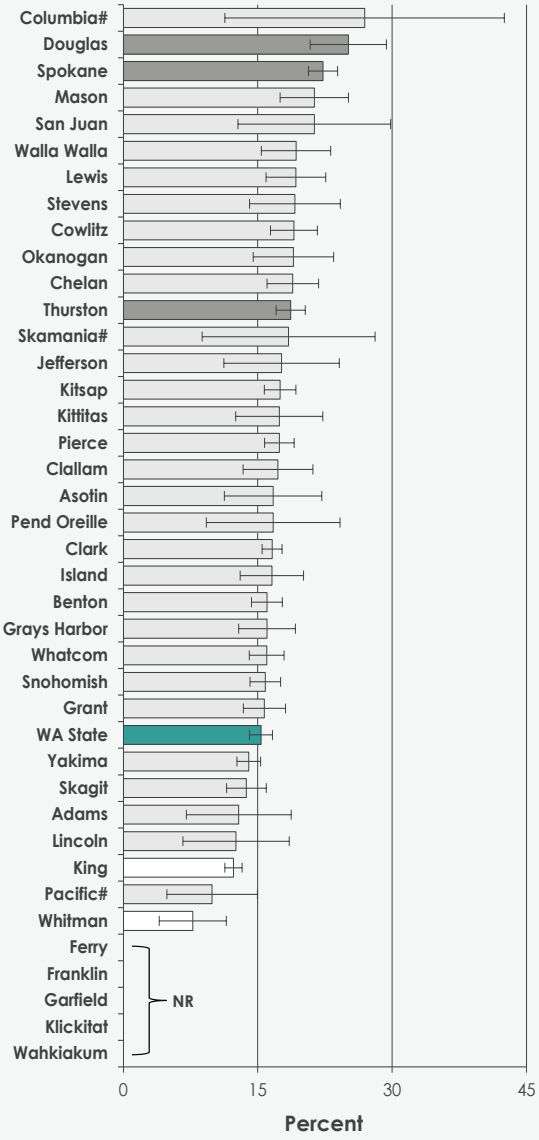
Youth Smoking, 10th Graders Washington Counties HYS, 2014-2016



E-Cigarette Use

- In the combined 2014 and 2016 HYS, reported use of e-cigarettes or vapor products among 10th graders in Whitman and King counties was lower than the state.
- Tenth graders in Douglas, Spokane and Thurston counties reported higher use of e-cigarettes or vapor products than the state.

Youth E-Cigarette Use, 10th Graders Washington Counties HYS, 2014 & 2016



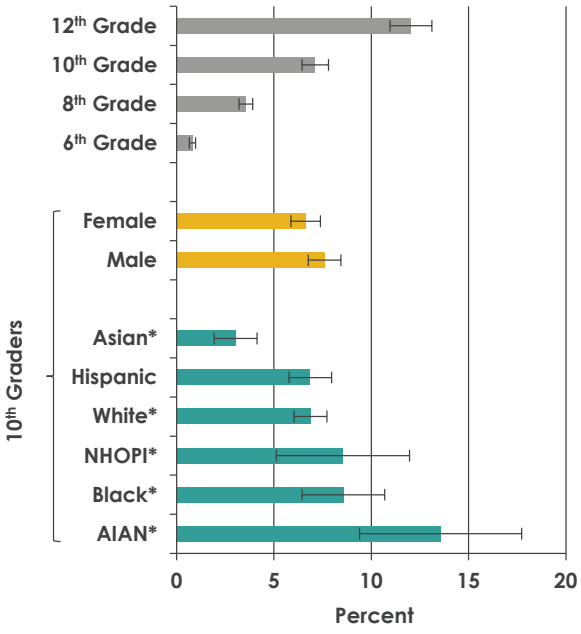
#Relative standard error (RSE) is between 25% and 29% | *NR:* Not reported if RSE ≥ 30% or to protect privacy

Disparities

Current Smoking

- In the combined 2014 and 2016 HYS, smoking prevalence increased with grade.
- Male 10th graders had slightly higher smoking prevalence compared to females.
- AIAN 10th graders had the highest smoking prevalence, and Asian students had the lowest.

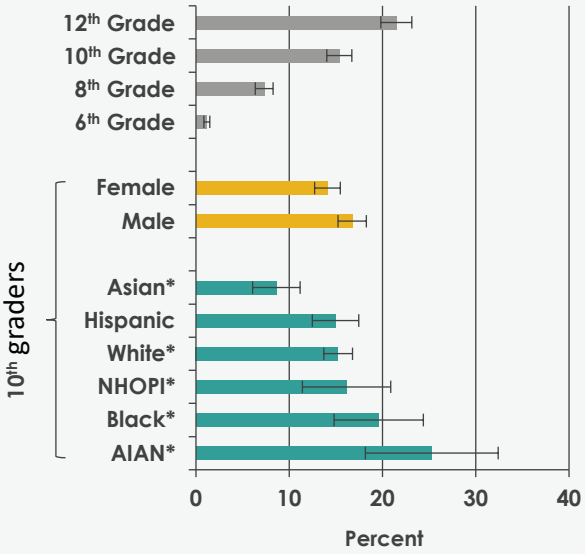
Current Smoking
Washington State
HYS, 2014 & 2016



E-Cigarette Use

- In the combined 2014 and 2016 HYS, e-cigarette use increased with grade.
- Male 10th graders had higher e-cigarette use compared to females.
- AIAN 10th graders had the highest e-cigarette use, and Asian students had the lowest.

Current E-Cigarette Use
Washington State
HYS, 2014 & 2016



Impact

- Tobacco use is the leading preventable cause of death and disease in Washington. Cigarette use is responsible for about 17–19% of all deaths in Washington.
- About 95% of adult tobacco users started using before they turned 21.
- 3,900 Washington youth (under 18) are estimated to become daily smokers each year.

**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing tobacco & vapor product use?

DOH and state, local, community and tribal-related partners are implementing the four goals of the 2017-2021 Washington Tobacco Prevention and Control Statewide Strategic Plan. The four goals include:

1. Reduce tobacco-related disparities among priority populations. This includes adding to our knowledge and understanding of tobacco-related disparities, and educating about these disparities and how best to address them.
2. Prevent youth and young adults from beginning to use tobacco with an emphasis on nicotine consumed through electronic cigarettes and vapor products. This includes efforts to raise the minimum age for purchasing tobacco and vapor products to 21 and supporting the development of local bans on vaping in public places.
3. Leverage resources for promoting and supporting tobacco cessation. This includes consistent diagnosis and treatment of tobacco use and dependence. The Affordable Care Act recommends insurance cover individual, group and telephone-based interventions and all seven FDA-approved medications to quit.
4. Eliminate exposure to secondhand smoke. This includes increasing tobacco- and vape-free environments and increasing compliance with the smoking in public places law.

State policy priorities include:

- Reducing youth access to tobacco and vapor products by increasing the minimum legal age of purchase from 18 to 21 years statewide.
- Educating policymakers and stakeholders on the value of local control to allow for local regulation of combustible and other tobacco and vapor products.
- Demonstrating the importance of restoring appropriate funding level for a comprehensive, evidence-based, statewide and local tobacco prevention and control program according to *CDC Best Practices* guidelines.
- Developing partnerships with healthcare providers to:
  - Enhance screening for tobacco use and referrals to cessation resources
  - Address health insurance regulations so that all licensed healthcare providers can be reimbursed for providing tobacco cessation services.

See also Marijuana Use

Evidence-based interventions to decrease tobacco use are available in the 2014 CDC Best Practices for Comprehensive Tobacco Control Program

Comprehensive tobacco control and prevention strategies for youth and young adults should address all tobacco/ nicotine products, including e-cigarettes/vapor products. The 2016 Surgeon General's Report: E-Cigarette Use Among Youth and Young Adults provides additional information on these evidence-based interventions

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Tobacco Use: The focus of tobacco use throughout this chapter is commercial tobacco use.

Endnotes

[1]Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Best Practices for Comprehensive Tobacco Control Programs—2014. www.cdc.gov/tobacco/stateandcommunity/best_practices/index.htm. Published January 30, 2014. Accessed August 15, 2017.

[2]Substance Abuse and Mental Health Services Administration. Adults with Mental Illness or Substance Use Disorder Account for 40 Percent of All Cigarettes Smoked. The NSDUH Report. www.samhsa.gov/data/sites/default/files/spot104-cigarettes-mental-illness-substance-use-disorder/spot104-cigarettes-mental-illness-substance-use-disorder.pdf .Published on March 20, 2013. Accessed September 12, 2017.

Binge Drinking & Excess Alcohol Use

Excessive alcohol use, including underage drinking and binge drinking, is the third leading preventable cause of death in the U.S.[1] It can lead to increased risk of injuries, violence, liver disease, and some cancers. Excessive alcohol use is one of the most prevalent substance use problems in Washington and has been estimated to cost Washington State about $5.3 billion annually.[2] In 2016, 17% (±<1%) of Washington adults reported binge drinking in the past month. Binge drinking is defined for men as having five or more drinks, and for women as four or more drinks at one time. Binge drinking prevalence has declined since 2011 after being relatively stable from 1990 to 2010. Males, whites and American Indian and Alaska Natives (AIAN) are more likely to report binge drinking than are other Washingtonians. Those with a college education reported slightly lower rates of binge drinking, as did the group with household incomes below $25,000.

While illegal, alcohol use among high school students is common and often consists of binge drinking. In 2016, the prevalence of past 30-day use of alcohol among 10th graders was 20% (± 1%) and binge drinking in the past two weeks was 11% (± 1%, data not shown). Both alcohol use and binge drinking among youth have been declining. Still, youth who begin drinking before age 15 are six times more likely to develop alcohol dependence than those who start after age 21.[3] Females, AIAN and Hispanics reported higher use of alcohol in the past month. Youth alcohol use also increased with grade.

The Department of Social and Health Services Division of Behavioral Health and Recovery (DSHS/DBHR), along with partner agencies, is working to implement the *State 5-Year Strategic Plan for Substance Abuse Prevention and Mental Health Promotion*, one focus of which is reducing underage drinking.

1 in 6

Washington adults reported binge drinking in the past month

1 in 5

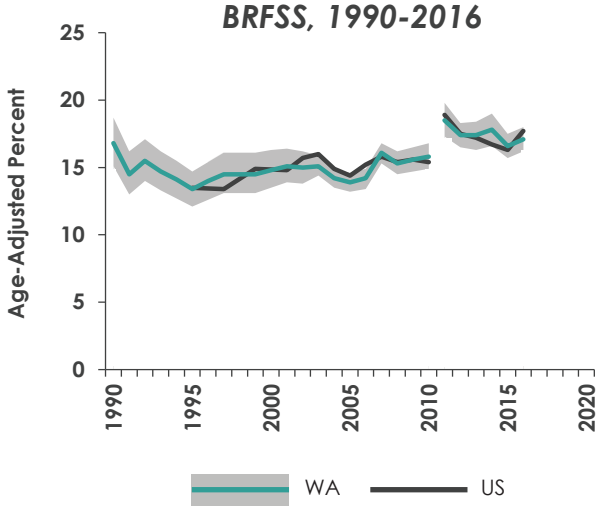
Washington 10th graders used alcohol in the past month

Adults

Time Trends

- In the 2016 Behavioral Risk Factor Surveillance System (BRFSS), the prevalence of binge drinking among Washington State adults was 17% (±<1%).
- For the past 20 years, Washington adults have had a similar prevalence of binge drinking compared to U.S. adults.
- The prevalence of binge drinking in Washington has decreased from 19% (±1%) in 2011. Earlier data are not directly comparable due to a change in survey methods. However, the prevalence of binge drinking was stable from 1990 to 2010.

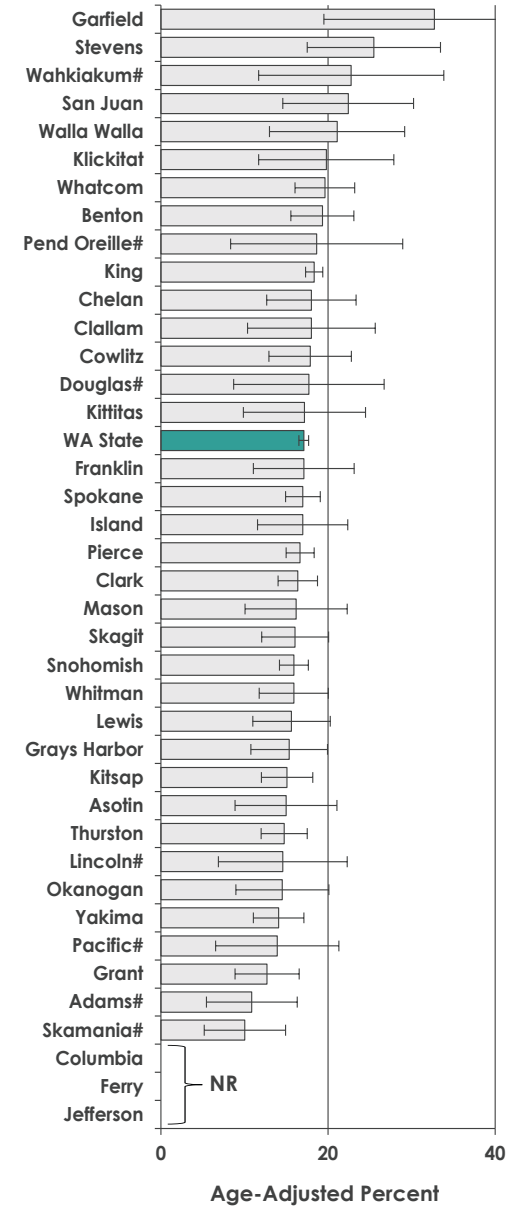
Prevalence of Binge Drinking
Washington State & US
BRFSS, 1990-2016



Geographic Variation

There are no counties with a binge drinking prevalence among adults that is different than the state prevalence.

Self-Reported Binge Drinking
Washington Counties
BRFSS, 2014-2016



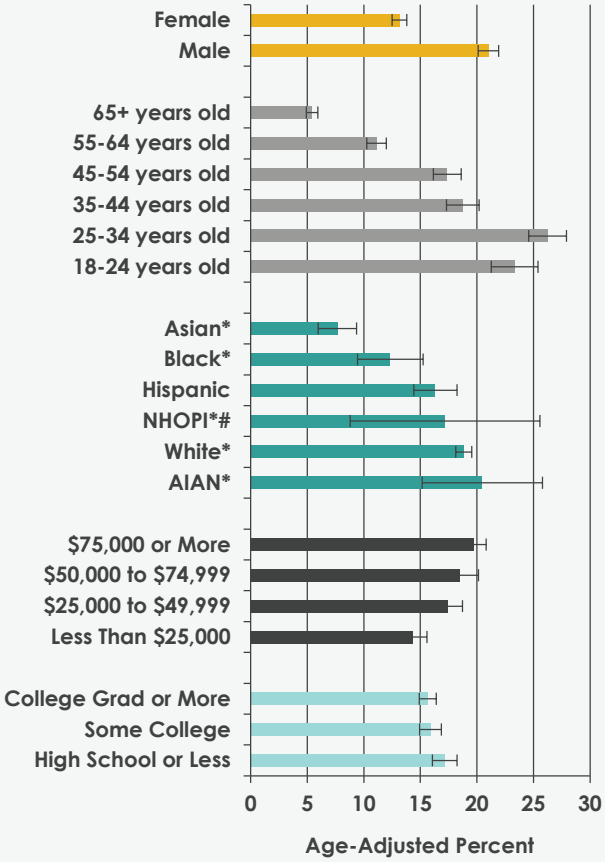
WA State
Same as WA State
Lower than WA State
Higher than WA State

NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2014-2016 BRFSS, males had a higher prevalence of binge drinking compared to females.
- Binge drinking was highest among those 25-34 years old.
- Hispanics, blacks and Asians reported lower binge drinking compared to whites.
- Rates of binge drinking were slightly lower among college graduates compared to those with high school or less education. Rates were also lower among the group with household incomes below $25,000 compared to higher income groups.

Binge Drinking
Washington State
BRFSS, 2014-2016



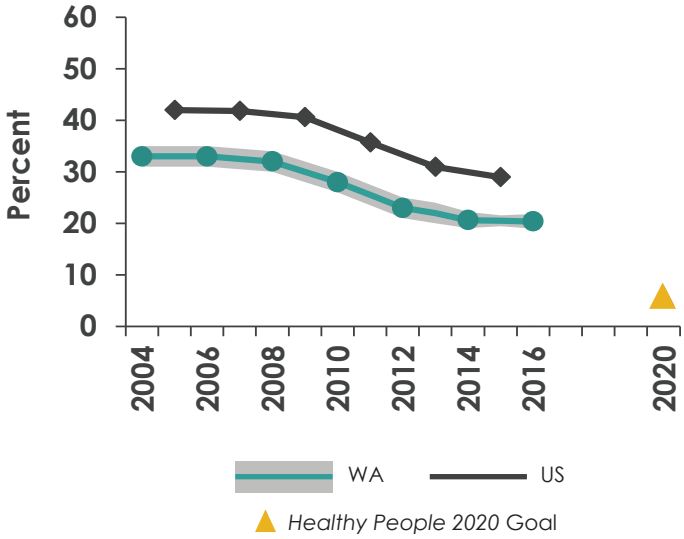
**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

Youth

Time Trends

- In the 2016 HYS, 20% (±1%) of Washington State 10th graders reported using alcohol in the past month.
- Past month alcohol use reported by Washington 10th grade students (20% ±1%) is lower than the 29% reported by U.S. 10th graders.
- The prevalence of drinking alcohol in the past month among Washington 10th graders is declining.

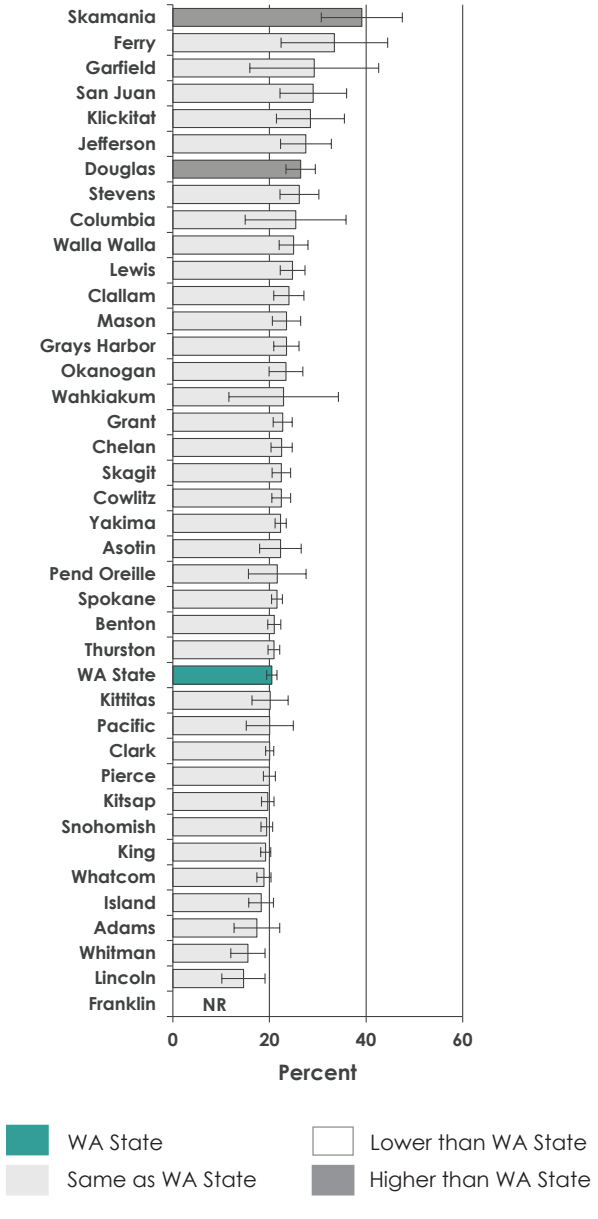
Alcohol Use in Past Month, 10th Graders
Washington State & US, HYS & YRBSS



Geographic Variation

- In 2014 and 2016 HYS combined, 10th graders in Douglas and Skamania counties had a higher prevalence of past month alcohol use compared to 10th graders in the state as a whole.
- There was no county with lower prevalence compared to the state.

Alcohol Use in Past Month, 10th Graders
Washington Counties
HYS, 2014 & 2016

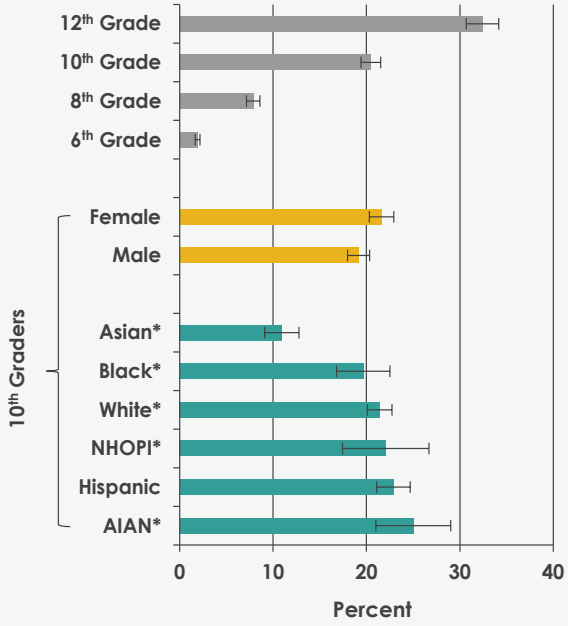


NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the combined 2014 and 2016 HYS, past month alcohol use increased by grade.
- Female 10th graders had higher past month alcohol use compared to males.
- AIAN and Hispanic 10th graders reported higher past month alcohol use compared to white students. Asian students reported lower past month alcohol use.

Alcohol Use in Past Month
Washington State
HYS, 2014 & 2016



*Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing excessive alcohol use?

DSHS/DBHR and its partners are implementing the goals of the State 5-Year Strategic Plan for Substance Abuse Prevention and Mental Health Promotion. The plan's strategies are collaborative policy development, public education, and professional workforce development and training for each of the focus areas. Reducing underage drinking is one of the focus areas in the strategic plan.

DSHS/DBHR staffs the Washington Healthy Youth Coalition (WHY). WHY is an interagency workgroup dedicated to addressing underage alcohol and marijuana use. They work on statewide policy impacts and communication. DBHR and its partner agencies implemented a statewide social norms media campaign targeted to youth ages 12-18 in fall 2017. The goal of the campaign was to correct youth misperception of peer use. The campaign focused on providing information that demonstrated most young people don't drink.

DSHS/DBHR:

- Provides funding to 64 Community Prevention and Wellness Initiative communities that prioritize reduction in underage alcohol use. Communities identify risk and protective factors in their community that relate to youth alcohol use and address them locally with appropriate evidence-based strategies.
- Provides funding to 29 federally recognized tribes to provide prevention and treatment services. Tribes develop and implement action plans to address their most important needs.
- Supports behavioral health organizations to ensure substance use disorder services are available to youth and adults across the state.
- Provides workforce development for prevention and treatment professionals.
- Funds www.starttalkingnow.org.

Washington State is also working to transform healthcare services. The Health Care Authority, DOH, DSHS/DBHR and partners including managed care organizations, Accountable Communities of Health, local health, healthcare providers and others are working together to integrate physical health services, mental health services and substance use services. These efforts are funded by grants and the Medicaid 1115 waiver and include integrating clinical practices, supporting providers in identifying, serving and monitoring high-need populations, developing systems to support information sharing across providers, and integrating payment systems.

See also Mental Health

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Endnotes

[1]Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. *JAMA* 2004 Mar 10;291(10):1238-45.
[2]Sacks JJ, Roeber J, Bouchery EE, et al. State costs of excessive alcohol consumption, 2006. *Am J Prev Med*. 2013;45:474-85.
[3]Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. 2015 National Survey on Drug Use and Health: Detailed Tables. www.samhsa.gov/data/population-data-nsduh/reports?tab=38. Published September 8, 2016. Accessed September 29, 2017.

Marijuana Use

Marijuana use, defined here as any use within the past 30 days, is being closely watched in Washington following legalization of recreational use in 2012. In 2016, the prevalence of marijuana use within the past 30 days among Washington adults was 14% (±1%). The prevalence among adults has increased since 2011. For youth, 17% (±1%) of 10th graders reported using marijuana in the past 30 days and was stable from previous years.

Among adults, marijuana use prevalence was higher among males and younger adults under 35 years of age. White, black, and American Indian or Alaskan Native (AIAN) had the highest prevalence of marijuana use. Prevalence increased as levels of education and income decreased.

Among youth, marijuana use prevalence increased with grade level. Among 10th graders, there was no difference in marijuana prevalence between male and females. Marijuana use prevalence was highest among AIAN, black or Hispanic 10th graders.

DOH, along with partner agencies including Department of Social and Health Services/Division of Behavioral Health Recovery (DSHS/DBHR), is working to prevent the initiation and use of marijuana by youth ages 12-20 throughout Washington State.

1 in 6

Washington 10th graders used marijuana in the past month

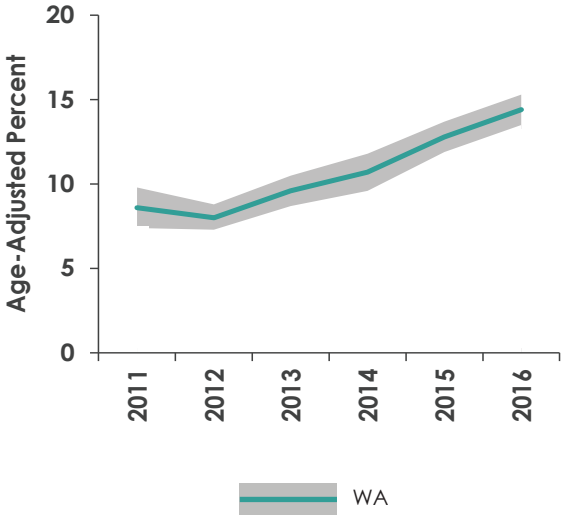
One-third of Washington teens perceive little risk of weekly marijuana use

Adults

Time Trends

- In the 2016 Behavioral Risk Factor Surveillance System (BRFSS), the prevalence of marijuana use among Washington State adults was 14% (±1%).
- Marijuana use among adults has increased in Washington since 2011.

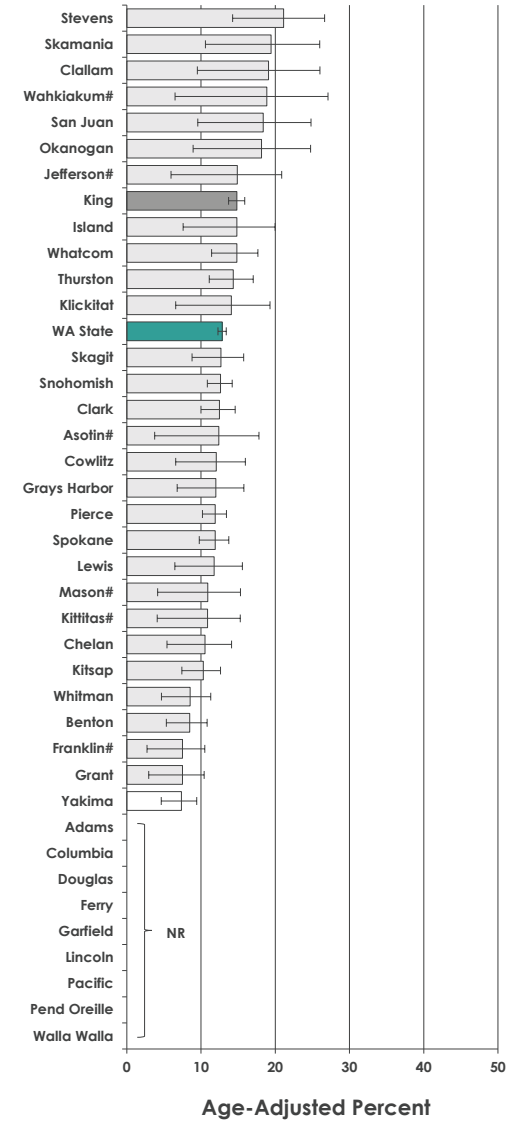
Marijuana Use
Washington State
BRFSS, 2011-2016



Geographic Variation

- In the 2014-2016 BRFSS, prevalence of marijuana use was higher in King County compared to the state.
- Prevalence of marijuana use was lower in Yakima County compared to the state.

Self-reported Marijuana Use
Washington Counties
BRFSS, 2014-2016



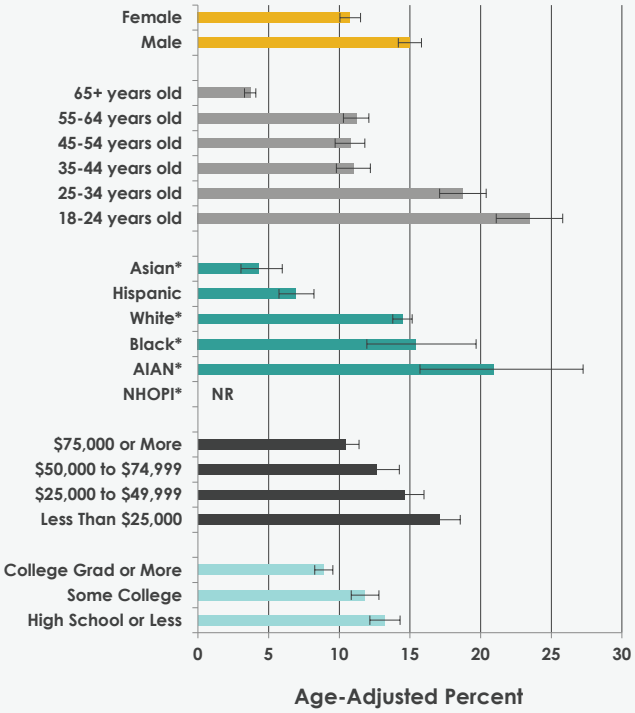
WA State
Same as WA State
Lower than WA State
Higher than WA State

NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2014-2016 BRFSS, males had higher prevalence of marijuana use than females, 15% (±1%) compared to 11% (±1%).
- Marijuana use prevalence was highest among adults 18-24 years of age and decreased with age. Adults aged 65 and older had the lowest prevalence.
- AIAN had a higher prevalence of marijuana use compared to whites. Asians and Hispanics had a lower prevalence than whites.
- The prevalence of marijuana use increased as levels of education and income decreased

Marijuana Use
Washington State
BRFSS, 2014-2016

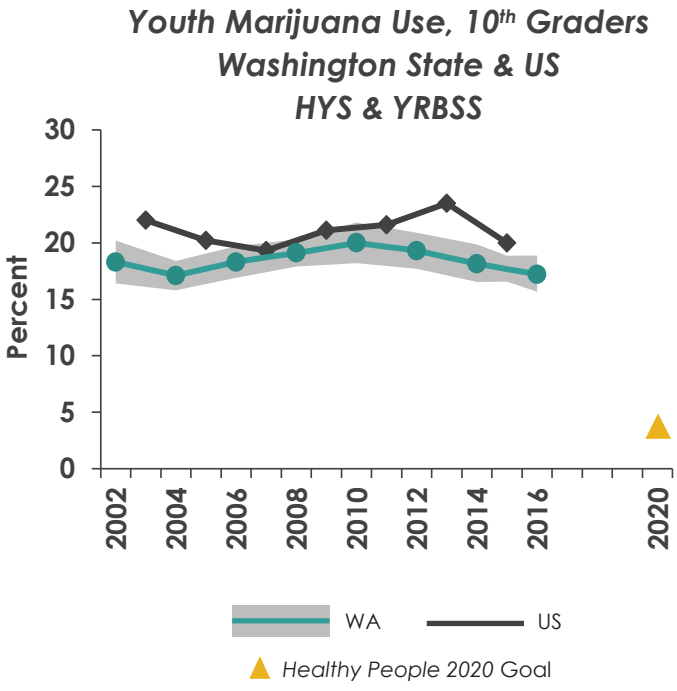


**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

Youth

Time Trends

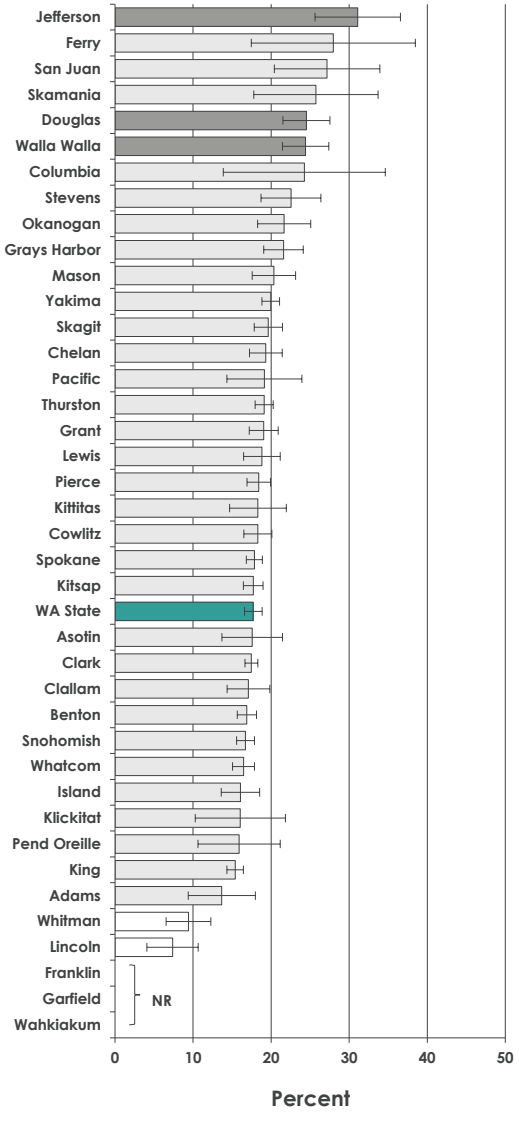
- In the 2016 Healthy Youth Survey (HYS), the prevalence of marijuana use among Washington State 10th graders was 17% (±1%).
- Marijuana use among 10th graders has been stable since 2002.



Geographic Variation

- In the combined 2014 and 2016 HYS, Douglas, Jefferson and Walla Walla counties had a higher prevalence of marijuana use among 10th graders compared to the state.
- Prevalence of marijuana use was lower in Lincoln and Whitman counties compared to the state.

Youth Marijuana Use, 10th Graders
Washington Counties
HYS, 2014 & 2016

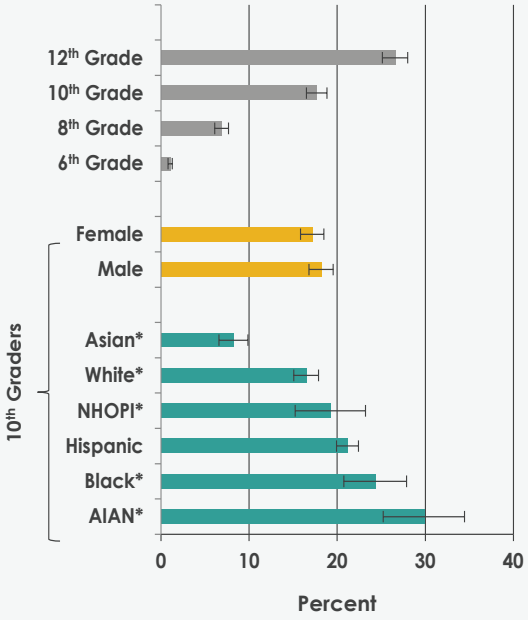


NR: Not reported if RSE ≥ 30% or to protect privacy

Disparities

- In the combined 2014 and 2016 HYS, marijuana use prevalence increased with grade level. Students in 12th grade had the highest prevalence at 27% (±1%).
- Among 10th graders, males and females had a similar prevalence of marijuana use, 18% (±1%) and 17% (±1%), respectively.
- AIAN, black, and Hispanic 10th graders had a higher marijuana use prevalence than white 10th graders, and Asian students had a lower prevalence.

Current Marijuana Use
Washington State
HYS, 2014 & 2016



Risk Perception & Impact

- Many teens perceive little risk of regular (at least once or twice a week) marijuana use. In 2016, 33% (±3%) of 10th graders in the state perceived no/slight risk to regular use.
- Half (51% ±4%) of the 12th graders in the state who reported using marijuana in the past 30 days reported driving within three hours of using marijuana at least once in the past 30 days.

**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing marijuana misuse & abuse?

HB 2136 passed in 2016 mandates that Department of Health (DOH) and the Department of Social Health Services, Division of Behavioral Health and Recovery (DSHS/DBHR) take responsibility for several activities to prevent the misuse and abuse of marijuana, including establishing a public health hotline to provide support and referral to treatment, expanding youth treatment options, implementing evidence and research-based prevention strategies, establishing a media-based public education campaigns for youth and adults separately, funding a community grants program to prevent youth marijuana use and abuse, and funding for the Healthy Youth Survey.

In response, DOH, DSHS/DBHR and other statewide partners with a vested interest in substance use prevention, work to implement the goals of the State 5-Year Strategic Plan for Substance Abuse Prevention and Mental Health Promotion. The plan's strategies are collaborative policy development, public education, and professional workforce development and training for each of the focus areas. Reducing marijuana misuse and abuse is one of the focus areas in the strategic plan.

In addition to the above collaborations, DSHS/DBHR staffs the Washington Healthy Youth Coalition (WHY) with Coalition Chairs represented from DSHS/DBHR and the Liquor and Cannabis Board (LCB). WHY is an interagency workgroup dedicated to addressing underage alcohol and marijuana use. They work on statewide policy impacts and communication. DOH serves on the WHY Coalition and has rolled out multiple marijuana prevention education campaigns with consultation from the WHY Coalition's Communication Impact Team.

Specific to allocations from HB 2136, DSHS/DBHR:

- Provides funding to 64 Community Prevention and Wellness Initiative communities that prioritize reduction in underage marijuana use. Communities identify risk and protective factors in their community that relate to youth substance use and address them locally with appropriate evidence-based strategies.
- Provides funding to 29 federally recognized tribes to provide prevention and treatment services. Tribes develop and implement action plans to address their most important needs.
- Supports behavioral health organizations to ensure substance use disorder services are available to youth and adults across the state.
- Provides workforce development for prevention and treatment professionals.
- Funds www.starttalkingnow.org.

Specific to allocations from HB 2136, DOH:

- Provides funding to the Recovery Helpline, which provides referrals to substance abuse treatment using evidence-based public health approaches and does not solely advocate an abstinence-only approach.
- Provides funding to nine Regional Youth Marijuana Prevention and Education Programs, aligned with the Accountable Communities of Health (ACH) Regions. Each region implements coordinated environmental, policy and systems change prevention strategies, geared to reduce the initiation and use of marijuana by youth.
- Provides funding to five community-based organizations representing priority populations to implement tailored prevention strategies to reduce marijuana use by youth in their respective communities. These contractors assist the DOH Marijuana Prevention and Education Program and its regional and media contractors by collaborating and providing expert consultation and technical assistance on promising and proven practices. The following priority populations were selected based on the prevalence of higher marijuana-related disparities:
  - Black/African American
  - Asian/Pacific Islander/Native Hawaiian
  - Hispanic/Latino
  - American Indian/Alaska Native
  - Lesbian/Gay/Bi-Sexual/Transgender/Queer
- Executes media-based education campaigns, separately targeting youth and adults with scientifically accurate information about the health and safety risks posed by marijuana use.
  - For a statewide youth-focused marijuana prevention campaign, DOH developed Listen2YourSelfie. Through focus groups across the state, youth selected the campaign concept and design. The campaign generated more than 165 million impressions, 455,000 website visits, and nine million video views.
  - In addition, DOH contracted with five tailored media vendors, who represent and serve prioritized populations. These contractors crafted individualized campaigns and messages for the youth populations they serve.
  - For a statewide parent and influential adult-focused campaign, DOH developed Under the influence…of you. Adults from across the state informed the development of this campaign. It was in the field until mid-December 2017.

Washington State is also working to transform healthcare services. The Health Care Authority, DOH, DSHS/DBHR and partners including managed care organizations, Accountable Communities of Health, local health, healthcare providers and others are working together to integrate physical health services, mental health services and substance use services in the Medicaid (Apple Health) program. These efforts are funded by grants and the Medicaid 1115 waiver and include integrating clinical practices, supporting providers in identifying, serving and monitoring high need populations, developing systems to support information sharing across providers, and integrating payment systems.

See also Tobacco & Vapor Product Use

Evidence-based interventions to prevent marijuana use among youth are available from the Substance Abuse and Mental Health Services Administration (SAMHSA) here.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Drug Overdose & Nonmedical Use of Pain Relievers

Since 2000, the rate of use of opioid pain relievers has increased dramatically, leading to an increase in opioid addiction and related morbidity and mortality.[1] In recent years heroin use has been increasing in most demographic groups. Drug overdose deaths involve prescription opioids, heroin, tranquilizers, methamphetamine and other substances. Not uncommonly, multiple drugs and/or drugs and alcohol are identified at death. Trends in the substances involved in overdose deaths change with drug use trends. In 2016, 1,033 Washington State residents died from drug overdose, an age-adjusted rate of 14 per 100,000 people, and 64% of drug overdose deaths in Washington involved an opioid (heroin or prescription opioid).

The highest rates of drug overdose death in Washington occur among men, those 45-54 years old, and American Indian and Alaskan Natives (AIAN).

Data from the 2013-14 National Survey on Drug Use and Health (NSDUH) show that 4% (± 1%) of Washingtonians 12 years old or older have used pain relievers nonmedically, which is similar to the nation. NSDUH also shows young adults 18-25 years old have the highest use (9% ± 2%).[2]

DOH, along with partner agencies, is working to implement the Washington State Opioid Response Plan.

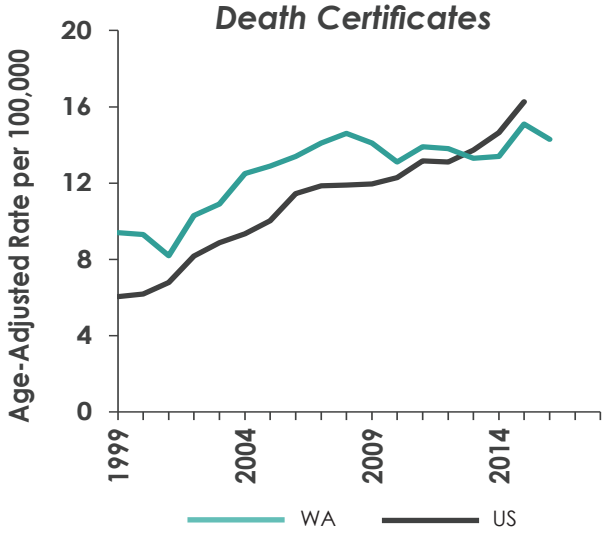
On average, three Washingtonians died of drug overdose each day in 2016

For every overdose death, there were 4.5 hospitalizations and 11 ER visits

Time Trends

- In 2016, the drug overdose death rate among Washington State residents was 14 per 100,000 population.
- While historically Washington's drug overdose death rate has been higher than the national rate, in the past three years the national rate has surpassed our state's rate.
- Drug overdose death rates in Washington have remained relatively stable since 2007.

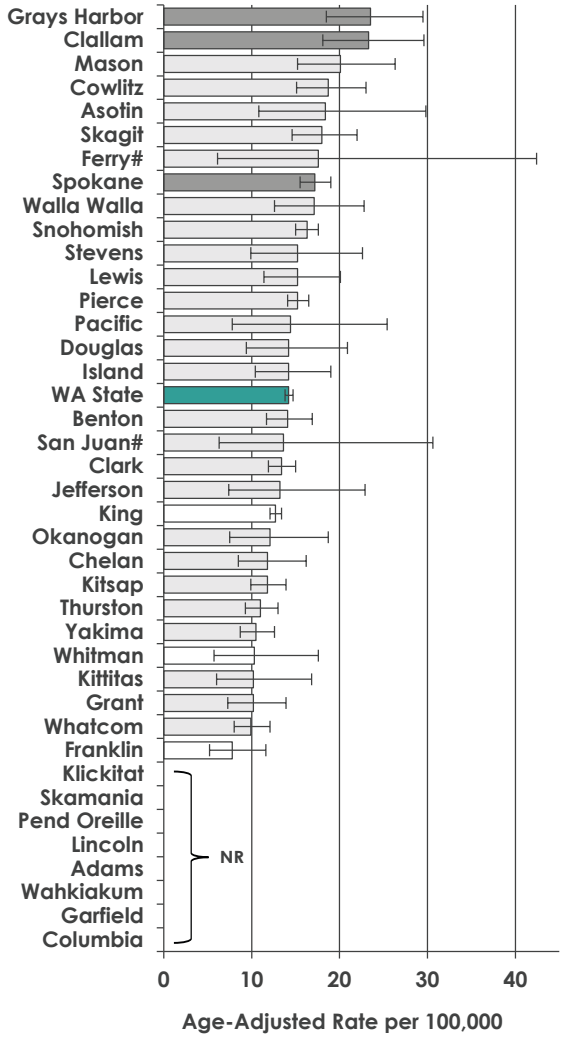
Drug Overdose Deaths Washington State & US Death Certificates



Geographic Variation

- For 2012-2016, Franklin, King and Whitman counties had drug overdose death rates lower than the state.
- Clallam, Grays Harbor, and Spokane counties had higher drug overdose death rates than the state.

Drug Overdose Rates
Washington Counties
Death Certificates, 2012-2016



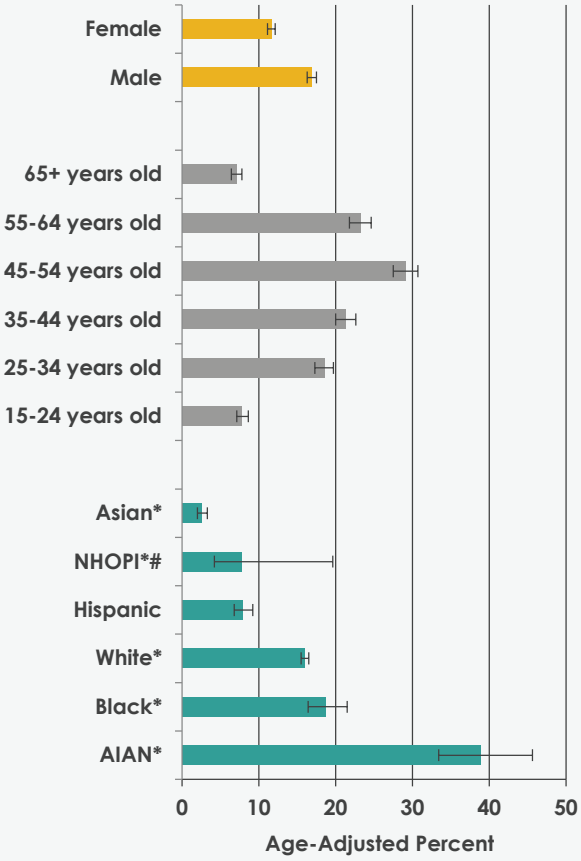
WA State
Same as WA State
Lower than WA State
Higher than WA State

NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Disparities

- During 2012-2016, males had higher drug overdose death rates compared to females.
- Those 45-54 years old had the highest drug overdose death rates.
- AIAN had the highest drug overdose death rates. Blacks and whites had the next highest rates.

Drug Overdose
Washington State
Death Certificates, 2012-2016

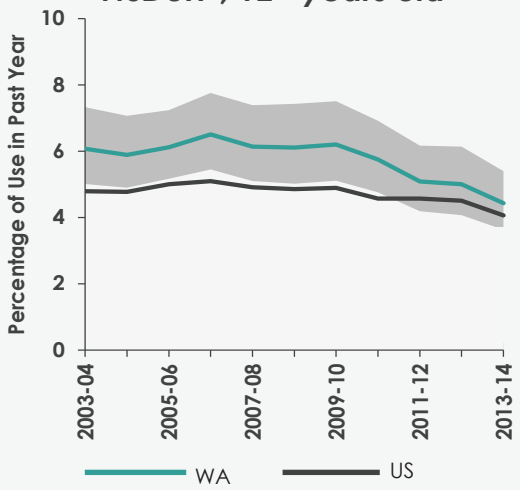


**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

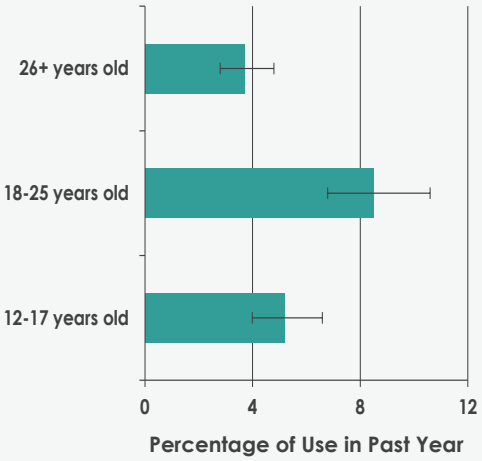
Non-Medical Use of Pain Relievers

- According to the NSDUH, in 2013-2014 the percentage of Washingtonians 12 years and older that have used pain relievers not medically--that is, without a prescription or for reasons other than they were intended—was 4% (± 1%).
- While Washington had historically slightly higher nonmedical use of pain relievers compared to the U.S., since 2010-2011 the prevalence has been similar to the nation as a whole.

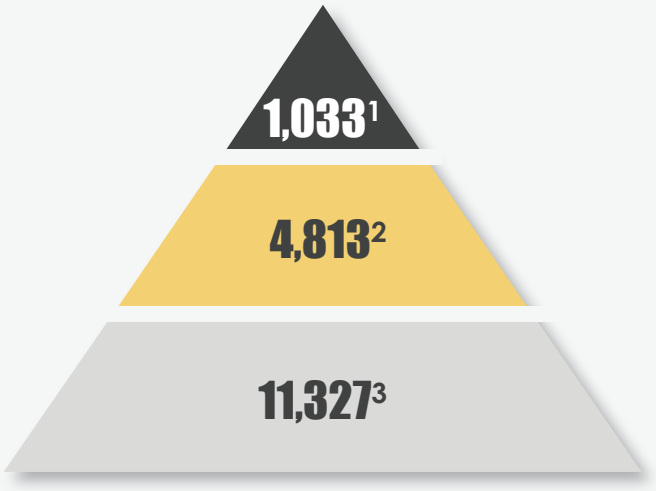
Non-Medical Use of Pain Relievers
Washington State & US
NSDUH*, 12+ years old



Non-Medical Use of Pain Relievers
Washington State
NSDUH*, 2013-2014



Drug Overdose Burden
Washington State, 2016



1. **Deaths**
   Drug overdose listed as underlying cause of death. Washington State Death Certificate Data, 2016.
2. **Drug Overdose Hospitalizations**
   Washington Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS), 2016.
3. **Drug Overdose ED** Visits**
   Analyzed and provided by the Emergency Department Information Exchange, 2016. Includes data from 96 out of the 100 Washington emergency departments.

Impact

The burden of overdoses is significantly underestimated when only deaths are considered. In 2016, there were 4.5 times as many hospitalizations and nearly 11 times the number of visits to emergency departments for drug overdose compared to the number of deaths. In addition, many nonfatal overdoses are not treated at a hospital and, therefore, are not counted in currently available data.

*National Survey of Drug Use and Health

***ED:* Emergency Department

How is Washington addressing drug overdose deaths?

Washington State has been focused on reducing opioid deaths. To reach this goal, state government agencies have been collaborating with local health departments, the University of Washington, professional groups and community organizations across Washington State.

DOH and its partner agencies are implementing the Governor's Executive Order 16-09: Addressing the Opioid Use Public Health Crisis. The *Executive Order* directs state agencies to work with partners across the state to implement the Washington State Opioid Response Plan. The plan outlines four goals and related strategies that are being implemented by a number of stakeholders across diverse professional disciplines and communities:

Goal 1
Prevent inappropriate opioid prescribing and reducing opioid misuse and abuse.

Goal 2
Treat individuals with opioid use disorder and link them to support services, including housing.

Goal 3
Intervene in opioid overdoses to prevent death.

Goal 4
Use data and information to detect opioid misuse/abuse, monitor morbidity and mortality, and evaluate interventions.

Collectively, the strategies and specific actions to achieve these goals target individuals, professionals, communities and systems. Four workgroups focused on prevention, treatment, criminal justice, naloxone distribution (drug used to rapidly reverse opioid overdose) and data meet regularly to coordinate the work toward these goals and communicate progress and needs across partners.

Washington State legislation passed in 2017 to assist in addressing opioid overdoses includes:

- HB 1427 will assist with opioid treatment, expand the prescription monitoring program, and create new rules for prescribing opioids.
- SB 5514 will improve the Department of Health's ability to monitor drug overdoses by collecting data from emergency departments.

Department of Social and Health Services/ Division of Behavioral Health and Recovery (DSHS/DBHR) and its partners are implementing the goals of the State 5-Year Strategic Plan for Substance Abuse Prevention and Mental Health Promotion. The plan's strategies are collaborative policy development, public education, and professional workforce development and training for each of the focus areas. Reducing opioid and prescription drug misuse and abuse is one of the focus areas in the strategic plan.

DSHS/DBHR supports the following:

- Reduction of opioid and prescription drug misuse and abuse is a prioritized outcome for many of the 64 community prevention and wellness initiative communities funded by DSHS/DBHR. Communities identify risk and protective factors in their community that relate to youth alcohol and drug use, and address them locally with appropriate evidence-based strategies.
- Provides funding to 29 federally recognized tribes to provide prevention and treatment services. Tribes develop and implement action plans to address their most important needs.
- Behavioral health organizations are funded to ensure substance use disorder treatment services are available to youth and adults across the state.
- Workforce development for prevention and treatment professionals.

Washington State is also working to transform healthcare services. The Health Care Authority, DOH, DSHS/DBHR and partners including managed care organizations, Accountable Communities of Health, local health, healthcare providers and others are working together to integrate physical health services, mental health services and substance use services. These efforts are funded by grants and the Medicaid 1115 waiver and include integrating clinical practices, supporting providers in identifying, serving and monitoring high need populations, developing systems to support information sharing across providers, and integrating payment systems.

See also Suicide & Safe Storage of Firearms and Mental Health

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Endnotes

[1]Kolodny A, Courtwright DT, Hwang CS, Kreiner P, Eadie JL, Clark TW and Alexander GC. The Prescription Opioid and Heroin Crisis: A Public Health Approach to an Epidemic of Addiction. *2015 Annu Rev Public Health*. 36:559-74. www.annualreviews.org/doi/pdf/10.1146/annurev-publhealth-031914-122957

[2]Center for Behavioral Health Statistics and Quality. National Survey on Drug Use and Health, 2003-2014. Substance Abuse and Mental Health Services Administration, Rockville, MD. www.samhsa.gov/data/population-data-nsduh/reports?tab=38. Accessed September 29, 2017.

Healthcare Access & Preventive Care

Healthcare Access

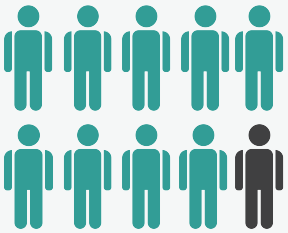
Access to healthcare is multifaceted, involving aspects such as the availability and location of healthcare providers, health coverage and affordability of services. The Affordable Care Act brought important increases in the number of residents with health insurance coverage beginning in 2014. Health insurance, while vitally important, does not guarantee access. Patient deductible and co-pays may not be affordable or patients may be unable to find a provider who has capacity and accepts their health plan. Health systems lacking capacity due to workforce challenges is a prominent rural issue. While only part of the issue, health insurance coverage and having a personal healthcare provider are key to access.

In 2015, 91% (±1%) of Washington adults 18-64 years old had health insurance coverage. The percentage of adults with health insurance coverage was stable from 2008-2013, and then increased.

In 2016, 74% (±1%) of Washington adults had a personal healthcare provider. The percentage of adults having a personal healthcare provider was stable from 2011 to 2015. The percentage of adults having a personal healthcare provider in Washington is similar to that in the U.S.

Fewer males, Hispanic adults, younger adults, and adults with low incomes or less education reported having health insurance coverage or a personal healthcare provider compared to other Washingtonians.

DOH, along with partner agencies, is working to improve access to health insurance and primary healthcare providers.



9 in 10

Washington adults have health insurance coverage

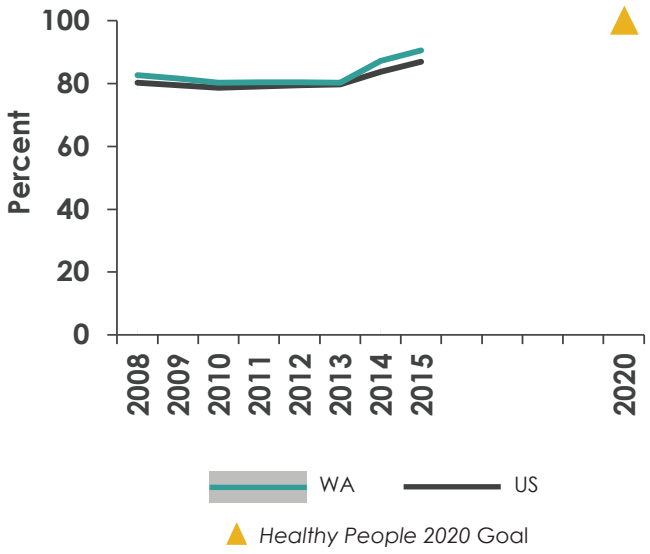
Healthcare access - measured by health insurance or having a healthcare provider - is worse in rural areas of Washington

Time Trends

Health Insurance

- In the 2015 American Community Survey (ACS), 91% (±1%) of Washington adults 18-64 years old reported health insurance coverage.
- The 2015 proportion of adults with health insurance (91% ±1%) reflects an increase following the implementation of the Affordable Care Act in 2014. Prior to this, health insurance coverage among Washington adults 18-64 years old was stable at about 80% (±1%) from 2008-2013.[1]
- ACS data from 2008-2013 showed a similar percentage of Washington adults 18-64 years old reported having health insurance coverage compared to the U.S. In 2014 and 2015, a higher percentage of Washington adults reported having health insurance coverage compared to the U.S.

Health Insurance Coverage (age 18-64)
Washington State & US
ACS, 2008-2015



Important Consideration

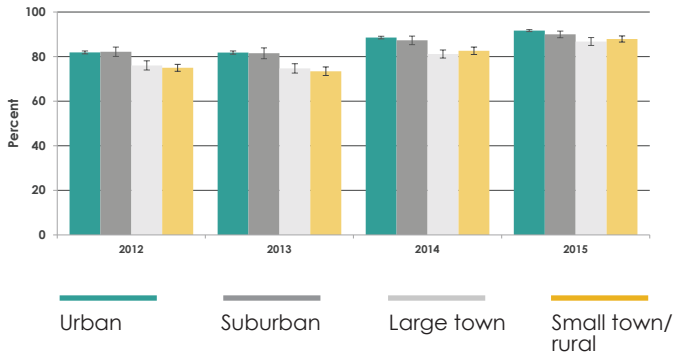
Multiple years of data are needed to explore geographic variation and disparities. Because changes due to the implementation of the Affordable Care Act may have differed across geographic areas or demographics, patterns reported in the following sections may not entirely reflect the current state.

Geographic Variation

Health Insurance by Rural-Urban Geography*

- In 2012-2015 ACS, the percent reporting health insurance coverage in large town and small town/rural areas was lower than in urban and suburban areas.
- While the percent reporting health insurance coverage increased for both urban and rural areas after 2013, the urban-rural coverage gap remained.

Health Insurance Coverage (age 18-64)
Washington State
ACS PUMS, 2012-2015

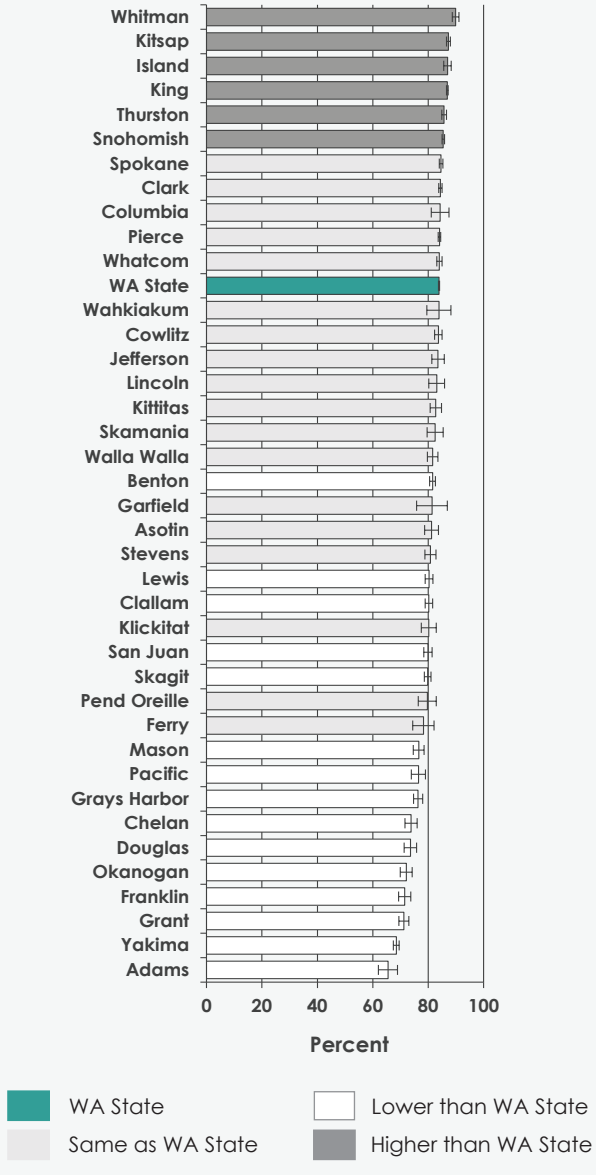


*Geography is classified using a modified scheme, based on Rural Urban Commuting Area (RUCA) codes, version 3.1; into urban, (e.g., Seattle), suburban (e.g., North Bend), large town (e.g., Oak Harbor), and small town/ rural (e.g., Port Stanley).

Health Insurance

- In 2011-2015 ACS, the percentage of adults reporting health insurance coverage was lower in Adams, Benton, Clallam, Chelan, Douglas, Franklin, Grant, Grays Harbor, Lewis, Mason, Okanogan, Pacific, San Juan, Skagit, and Yakima counties compared to the state.
- The percentage of adults reporting health insurance coverage was higher in Island, King, Kitsap, Snohomish, Thurston and Whitman counties compared to the state.

Health Insurance Coverage (age 18-64)
Washington Counties
ACS, 2011-2015

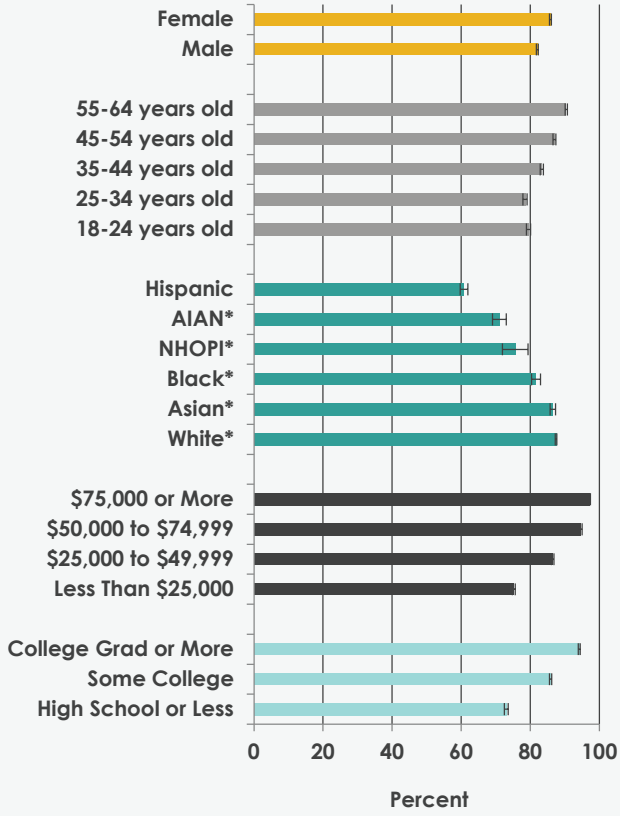


Disparities

Health Insurance

- In the 2011-2015 ACS, a higher percentage of females reported health insurance coverage compared to males.
- Reported health insurance coverage increased with age among adults 18-64 years old.
- Hispanic, American Indian or Alaskan Native (AIAN), Native Hawaiian or Other Pacific Islander (NHOPI), black, and Asian adults 18-64 years old reported lower health insurance coverage compared to white adults.
- Reported health insurance coverage increased as levels of education and household income increased.

Health Insurance Coverage (age 18-64)
Washington State
ACS PUMS, 2011-2015



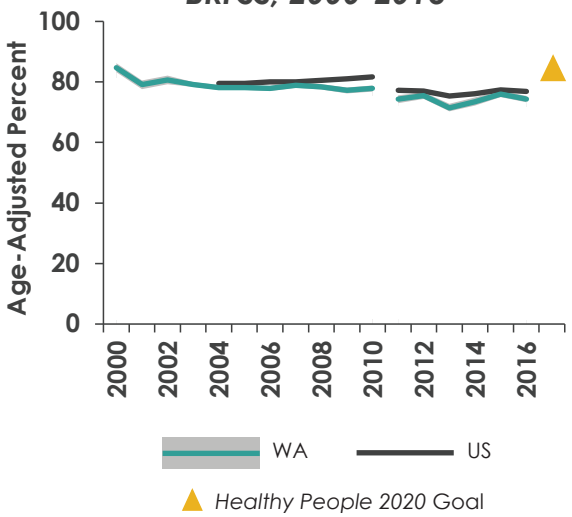
Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

Time Trends

Personal Healthcare Provider

- Washington has historically had a lower percentage of adults reporting a personal healthcare provider compared to U.S. adults in the Behavioral Risk Factor Surveillance System (BRFSS).
- In the 2016 BRFSS, the percent reporting a personal healthcare provider among Washington State adults was 74% (±1%).

Adults with Personal Healthcare Provider
Washington State & US
BRFSS, 2000-2016

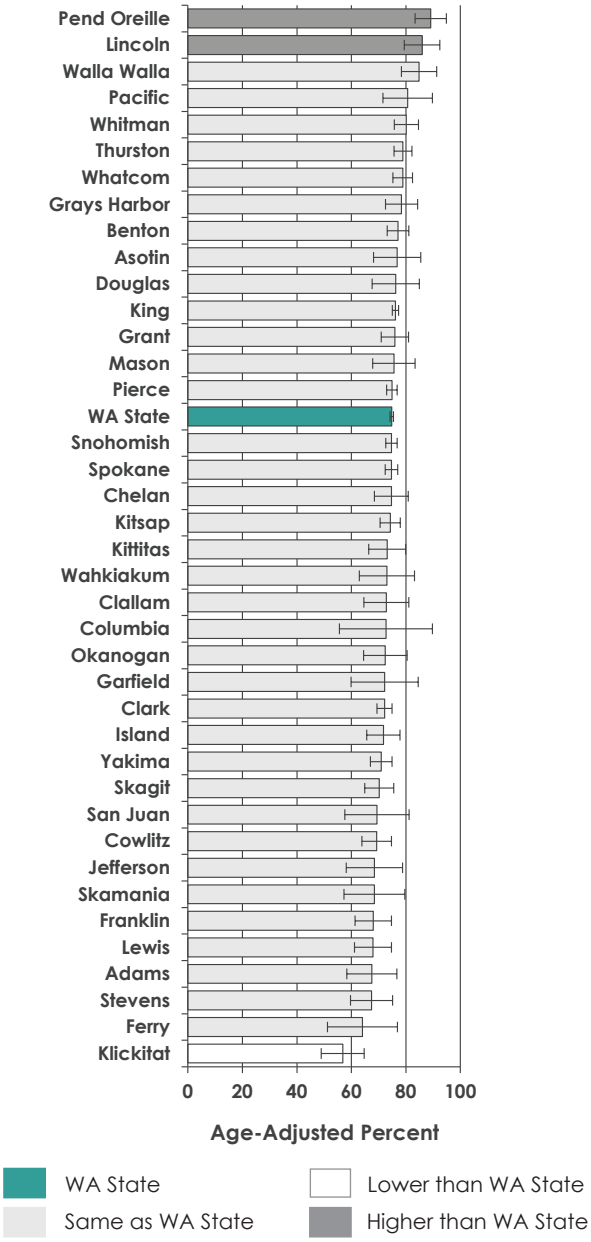


Geographic Variation

Personal Healthcare Provider

- In the 2014-2016 BRFSS, Lincoln and Pend Oreille counties had a higher percentage of adults who reported having a personal healthcare provider compared to the state.
- Klickitat County had a lower percentage of adults who reported having a personal healthcare provider compared to the state.

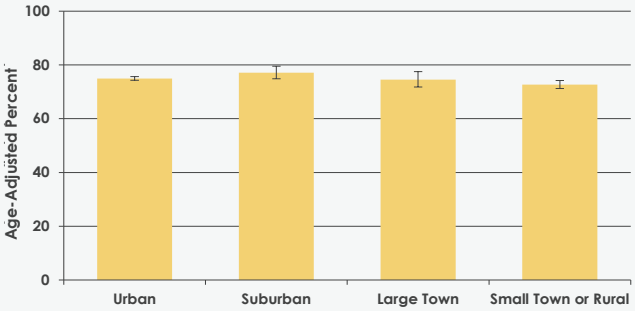
Adults with Personal Healthcare Provider
Washington Counties
BRFSS, 2014-2016



Personal Healthcare Provider by Rural-Urban Geography*

- The percent of the population with a personal healthcare provider in small town/ rural areas was lower than in urban and suburban areas, between 2012 and 2015.

Adults with Personal Healthcare Provider
Washington State
BRFSS, 2012-2015



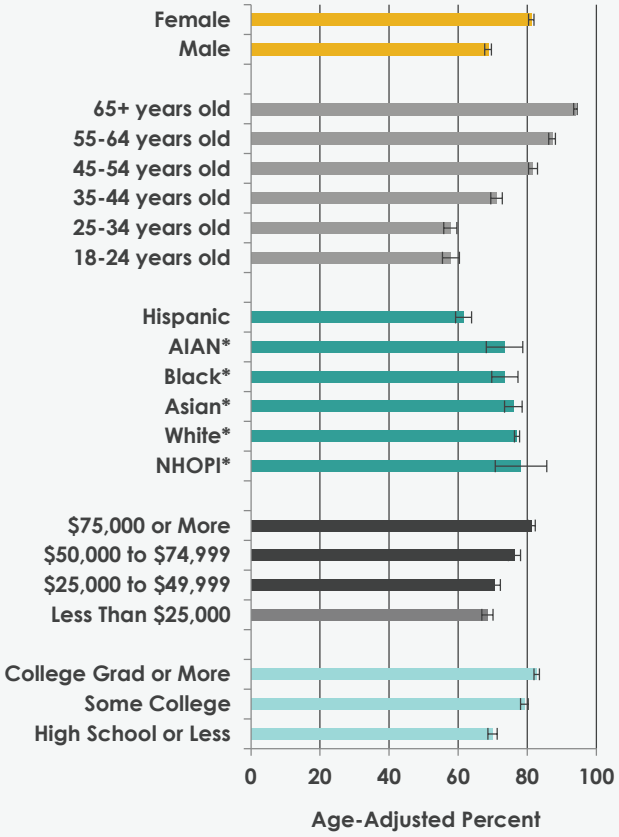
*Geography is classified using a modified scheme, based on Rural Urban Commuting Area (RUCA) codes, version 3.1; into urban (e.g., Seattle), suburban (e.g., North Bend), large town (e.g., Oak Harbor), and small town/rural (e.g., Port Stanley).

Disparities

Personal Healthcare Provider

- In the 2014-2016 BRFSS, a higher percentage of females reported having a personal healthcare provider compared to males.
- Having a personal healthcare provider increased with age among adults.
- A lower percentage of adults reporting Hispanic ethnicity had a personal healthcare provider compared to white adults.
- Having a personal healthcare provider increased as levels of education and household income increased.

Adults with Personal Healthcare Provider
Washington State
BRFSS, 2014-2016



Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington working to improve healthcare access?

DOH and its partner agencies are working to improve access to health insurance and primary healthcare providers in order to improve healthcare access.

Sustained access to high quality care requires a focus on primary care providers as the center of the health system, reducing use of hospitals and emergency departments. Workforce is a key to access, which requires an emphasis on recruitment and retention of physicians, nurse practitioners and physician assistants, as well as other members of the care team (such as registered nurses, social workers, physical therapists, and pharmacists). Communities also need a range of available services such as home health and hospice, obstetric care and supports that enable people with chronic illnesses to retain independence. Rural and urban medically underserved communities have more significant access challenges and therefore receive more focused interventions.

The following strategies are used to sustain and improve healthcare access across the state:

- Education and incentives to facilitate recruitment and retention for the healthcare workforce, for example loan repayment incentives tied to service obligations to work in rural and urban underserved locations.
- Payment model innovations and practice transformation supports to transition to value-based payment and care systems, including redesign of the Medicaid system as part of the Healthier Washington initiative (under the State Innovation Model (SIM) grant and the Medicaid Transformation Project Demonstration).
- Stabilization of safety net, tribal and rural healthcare organizations through technical assistance, grant-writing and provider network development.
- Improved integration of behavioral health and oral care with physical health to move toward whole person care, with an emphasis on medical homes.
- Identification of care system gaps and development of community-based solutions.
- More than 100 free clinics and charitable medical events help fill the gap for medical, dental and behavioral health services for people with low incomes or without health insurance. DOH funds the Volunteer and Retired Provider (VRP) program, contracted through Washington Healthcare Access Alliance (WHAA). The VRP program covers malpractice insurance for professional volunteers and for those who are not using their license for any paid work, and also pays for license renewal. WHAA approves qualified volunteers and sites for the VRP program.

See also Access to Behavioral Health Providers

Evidence-based interventions to improve access to healthcare are available from the Rural Health Information Hub and Rural Health Research Centers.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Health Insurance Coverage: The percentage of adults 18-64 years of age was measured by the following question in the American Community Survey: 'Is this person CURRENTLY covered by any of the following types of health insurance or health coverage plans?' Respondents that answered 'yes' to any coverage type option were considered to have health insurance coverage.

Personal Healthcare Provider: The percentage of adults with a personal healthcare provider was measured by the following question in the Behavioral Risk Factor Surveillance System: 'Do you have one person you think of as your personal doctor or healthcare provider?' Respondents that answered 'yes, only one' or 'more than one' were considered to have a personal healthcare provider.

Race and Ethnicity: Classification described in Appendix C

Rural Urban Geography Classification: The Washington State Department of Health (DOH) Rural-Urban Classification Scheme is derived from the Rural Urban Commuting Areas (RUCA) codes created for the Federal Office of Rural Health and Policy (OFRHP) based on Census 2010 data and information for all census tracts (and approximation of the RUCA codes for all ZIP codes) in the United States. The basic framework of RUCA codes is grouped into four levels based mainly on population size and patterns of primary commuting flow. The DOH Rural-Urban Classification Scheme put the basic framework of the census 2010 based RUCA codes in context and created a modified four-tier rural-urban classification scheme at the sub-county level (census tracts and ZIP codes) of geography. This modified scheme refocused on population size and population density. The four categories include: Urban core (larger populations of 50,000 or more and primary flow within the urbanized area), Suburban (moderate population of 10,000-49,999; primary flow within large urban cluster; population density over 100 per square mile), Large town (population of 2,500-9,999; primary flow with in small urban clusters; population density over 100 per square mile), and Small town/Rural (population under 2,500; primary flow outside an urbanized area/urban cluster; population density less than 100 per square mile).The DOH rural-urban classification guideline document is available from: www.doh.wa.gov/Portals/1/Documents/1500/RUCAGuide.pdf.

Endnotes

[1]Yen W. Uninsured Rate Changes in Washington State's Population Groups 2013-14. The Washington State Office of Financial Management website. www.ofm.wa.gov/researchbriefs/2015/brief074.pdf. Washington State Health Services Research Project: Research Brief No. 074. Published December 2015. Accessed October 19, 2017.

Access to Behavioral Health Providers

Mental health is vital to overall health and well-being. Those who experience mental health symptoms may be more likely to qualify for disability benefits, and may also be more susceptible to suicidal thoughts or actions.[1] In 2016, 12% (±1%) of Washington adults self-reported experiencing poor mental health for 14 or more days during the month prior to interview. Washington also has a higher rate of suicide death compared to the U.S. and suicide rates have been increasing.

Access to behavioral healthcare can be an important aspect of improving mental health and preventing suicide. This section focuses on the number and distribution of providers which is a key component of access to behavioral healthcare, along with insurance coverage and affordability. While Washington State as a whole has a higher rate of behavioral health providers per population than the U.S., these clinicians are not equally distributed through the state. Some counties have greatly restricted access to psychiatrists and other behavioral health providers and 35 of 39 counties are federally designated as Mental Health Professional Shortage Areas.

DOH, along with partner agencies, is working to assess the types of clinicians providing behavioral health services and their distribution within the state. Areas of greatest need are targeted for workforce interventions such as loan repayment for providers and enhanced technical assistance. Overall, behavioral health providers encompass mental health and substance use disorder providers. Currently available data is limited to mental health providers specifically.

In Washington, there is 1 mental health provider for every 360 people

By county, the ratio of behavioral health providers ranges from 1 for every 262 people to 1 for every 3,378 people

Provider Rate

- In the *County Health Rankings*, the rate of mental health providers in Washington was 278 per 100,000 during 2016 representing one provider serving about 360 people.
- Washington had a much better provider rate than the U.S. overall (200 per 100,000 overall with the U.S. median of 90 per 100,000).
- Overall, Washington's mental health provider rate improved between 2013 and 2016.

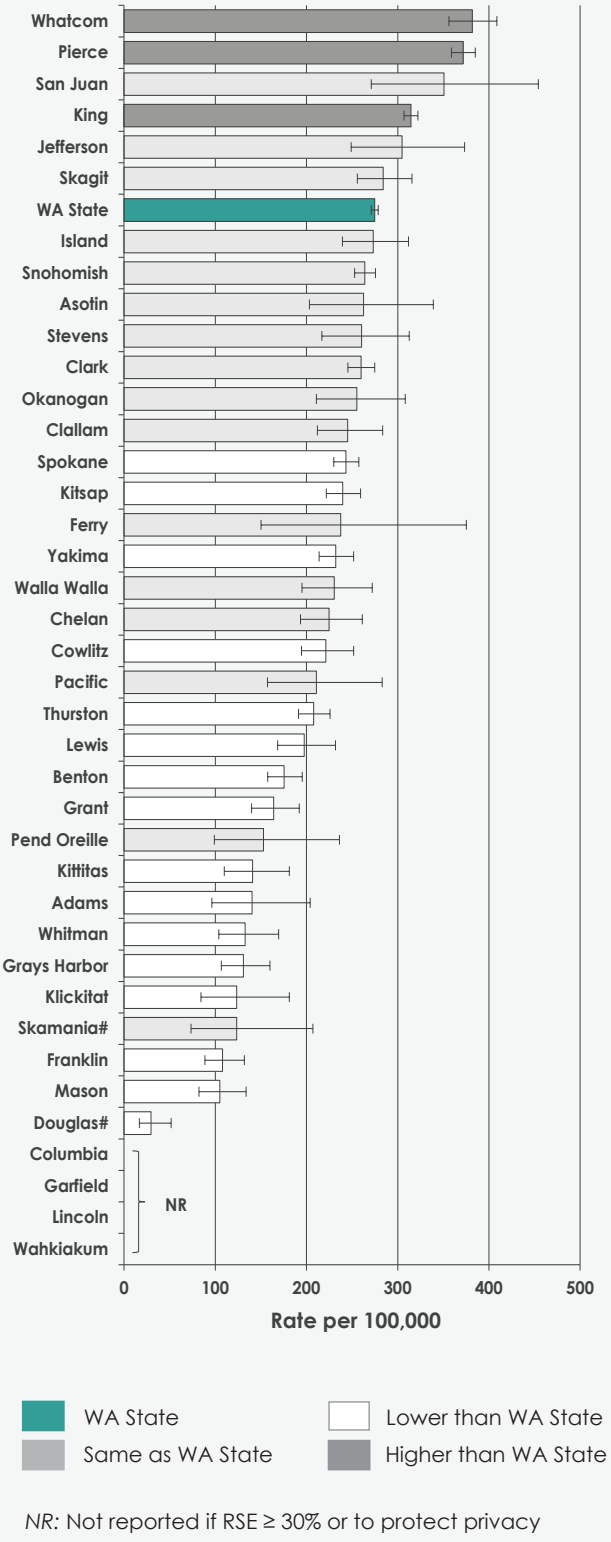
Mental Health Provider, rate per 100,000
Washington State & US
County Health Rankings, 2013-2016

Year	US (overall)	WA Rates	WA County Range
2013	132	184	20 to 279
2014	189	244	36 to 362
2015	204	263	35 to 385
2016	200	278	30 to 385

Geographic Variation

- The rate of mental health providers per 100,000 population varied by county.
- In the *County Health Rankings*, the rate of mental health providers in King, Pierce, and Whatcom counties was greater than the state rate during 2016.
- The rate was lower than the state rate in Adams, Benton, Douglas, Franklin, Grant, Grays Harbor, Kitsap, Kittitas, Klickitat, Lewis, Mason, Spokane, Thurston, Whitman and Yakima counties.

Mental Health Provider Rate
Washington Counties
County Health Rankings, 2016



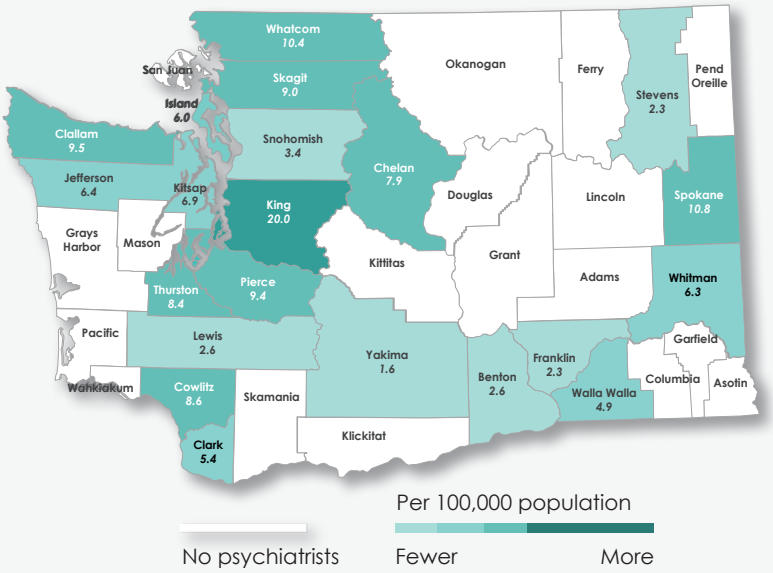
NR: Not reported if RSE ≥ 30% or to protect privacy
#Relative standard error (RSE) is between 25% and 29%

Access to Psychiatrists

Access to psychiatrists varies greatly across the state. An analysis by the University of Washington Center for Health Workforce Studies found large between-county differences in the available psychiatric physician workforce.[2]

King County had the greatest number of psychiatrists per 100,000 population, almost double that of Spokane, the county with the next greatest number of psychiatrists per 100,000 population. In 2016, 17 counties did not have a psychiatrist reporting direct patient care. Individuals living in some rural counties may access psychiatrists' care through part-time visiting providers or telepsychiatry services.

Washington Psychiatrists Rate, 2016



Data Source:

AMA Physician Masterfile, 2016
Analysis, UW Center for Health Workforce Studies

Health Professional Shortage Areas

Federal designations of health professional shortage areas (HPSA) are made for primary care, dental and mental healthcare services. The information gathered in the HPSA designation process can provide key insight about need for providers. Areas designated as a HPSA are able to access additional federal resources, including loan repayment for clinicians and enhanced reimbursement.

Mental healthcare HPSAs are determined by considering the ratio of population to available psychiatrists, percent of the population below the federal poverty level, ratio of individuals over age 65 or under age 18 in the population, alcohol abuse prevalence, substance abuse prevalence, and travel time to reach the next closest services. A HPSA designation for a geographic area requires a population to psychiatry ratio of greater than 30,000:1. A HPSA designation for a specific population requires a ratio greater than 20,000:1.Travel time must be at least 20 minutes to be considered.

- In 2017, King, Pierce, Snohomish and Thurston counties did not have a mental health HPSA designation.
- Many counties had a geographic designation for the entire county population.
- Cowlitz, part of Spokane, Wahkiakum, and Whatcom counties had a designation for their low-income population.
- Clark County had a designation specifically for their migrant population.

Federally Designated Health Professional Shortage Areas for Mental Care, January 2017

Data Source:

Designation data from the Office of Community Health Systems

How is Washington promoting access to behavioral health providers & care?

DOH, Health Care Authority, Department of Social and Health Services and partner agencies are working to improve access to behavioral health providers and behavioral healthcare through the following activities:

Integration of physical and behavioral health services:

- **Integrating payment**
  Washington is changing how it pays for delivery of physical health services, mental health services, and substance use disorder services in the Medicaid (Apple Health) program. Payment systems are being integrated to create one system that offers an integrated network of providers, better coordinated care for patients, and less fragmented access to services they need. Care will be managed through a single accountable insurance plan for the client.
- **Integrating clinical practice**
  Integrating payment systems is necessary for integration of service delivery, but it is not enough. Across Washington, clinicians have access to practice transformation support through the Practice Transformation Support Hub and initiatives such as the Pediatric Transforming Clinical Practice Initiative (pTCPi). This support helps clinicians better use their electronic health records to identify their populations of interest and track performance improvements, put team-based care into place utilizing a variety of providers, and more effectively make linkages to community-based services.

Working to address gaps in availability of behavioral health providers/services:

- Identification of the types of clinicians providing behavioral health services and their distribution across the state. Areas of greatest need across the state are targeted for workforce interventions such as loan repayment for providers and technical assistance addressing workforce topics for behavioral health employers.
- Completing the data collection process for the Health Professional Shortage Area designations and submitting applications to the U.S. Department of Health and Human Services. These designations are important for employers and clinicians to be able to access additional federal workforce resources and are used for program eligibility across many federal programs. DOH staff also provide technical assistance on a variety of workforce topics to behavioral health employers across the state.
- The recent Medicaid 1115 waiver will complement the transition to integrated managed care by making significant regional investments in integrated clinical models. Resources will support staffing and workforce development to address provision of behavioral health services. They will also support development of information technology infrastructure that allows for better sharing of information between provider teams about patients and increased availability of technology solutions to access, such as telemedicine.

Leveraging work on Medicaid Demonstration projects through the Accountable Communities of Health:

- All Accountable Communities of Health are required to work on demonstration projects related to integration of physical and behavioral health and opioids. Significant regional resources will be available to develop workforce, information, and payment infrastructure that supports delivery of whole person healthcare and strengthens the system of community services available outside of clinic walls.

See also Mental Health, Suicide & Safe Storage of Firearms, and Healthcare Access

Technical Notes

Access to Psychiatrists: The University of Washington Center for Workforce Studies analysis of the available psychiatric physician workforce included physicians with a psychiatric specialty, an in-state practice address, who were age 74 or younger, and who provided direct patient care and were not a federal employee. This analysis used data from the American Medical Associations Physician Masterfile from 2016.

Behavioral Health Provider: Behavioral health providers encompass mental health (such as psychiatrists, psychologists, and social workers) and substance use disorder providers (such as chemical dependency professionals and physicians with addiction specialty).

Confidence Intervals: Definition and examples are described in Appendix C

County Health Rankings' Mental Health Providers: The County Health Rankings focus on mental health providers including psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers that treat alcohol and other drug abuse, and advanced practice nurses specializing in mental healthcare.[3]

Relative Standard Error: Definition and how it was used is described in Appendix C

Endnotes

[1]Bilder S, Mechanic D. Navigating the disability process: persons with mental disorders applying for and receiving disability benefits. *The Millbank Quarterly,* 2003;81(1):75-106.

[2]American Medical Association Physician Masterfile, 2016. Analysis by University of Washington Center for Health Work force Studies. June 2017 (map).

[3]Mental health providers. County Health Rankings website. www.countyhealthrankings.org/measure/mental-health-providers. Accessed October 20, 2017.

Childhood Immunizations

Vaccination saves lives and has substantially reduced illness, disability, and death from several childhood diseases such as measles, mumps, and pertussis. The National Immunization Survey (NIS) provides important information on vaccine coverage at the state and national levels[1], and the Washington State Immunization Information System (WA IIS) captures geographic variations in vaccine coverage within the state.[2]

Among children 19–35 months old in Washington State, the NIS-estimated vaccination coverage rate for the 4:3:1:3:3:1:4 series (see Technical Notes) in 2015 was 77% (±6%), statistically similar to the 2015 national coverage rate of 72% (±1%). Washington's estimated childhood vaccination estimates were similar for children in families with incomes above and below the poverty level.

DOH, along with state, local, tribal, community and legislative partners, is working to increase childhood vaccination coverage through universal access to immunizations, tracking immunizations, collaborating with healthcare plans, and providing information and resources to parents and providers.

3 in 4

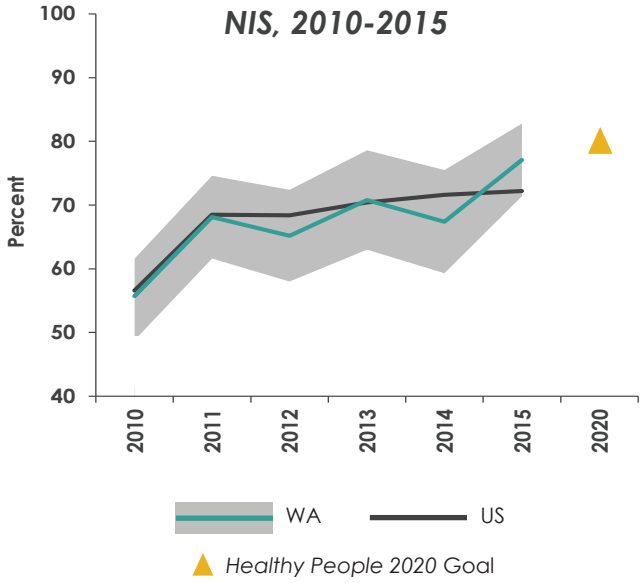
Washington children 19-35 months old receive required vaccinations

In Washington, vaccine coverage for 19-35 month olds has been increasing since 2010

Time Trends

- Similar to the United States, Washington's coverage rate for the 4:3:1:3:3:1:4 vaccine series has shown an upward trend since 2010.
- Despite improvements, neither Washington nor the U.S. overall has met the *Healthy People 2020* target of 80% coverage.

Percentage of children 19-35 months who received recommended vaccines for 4:3:1:3:3:1:4
Washington State & US
NIS, 2010-2015



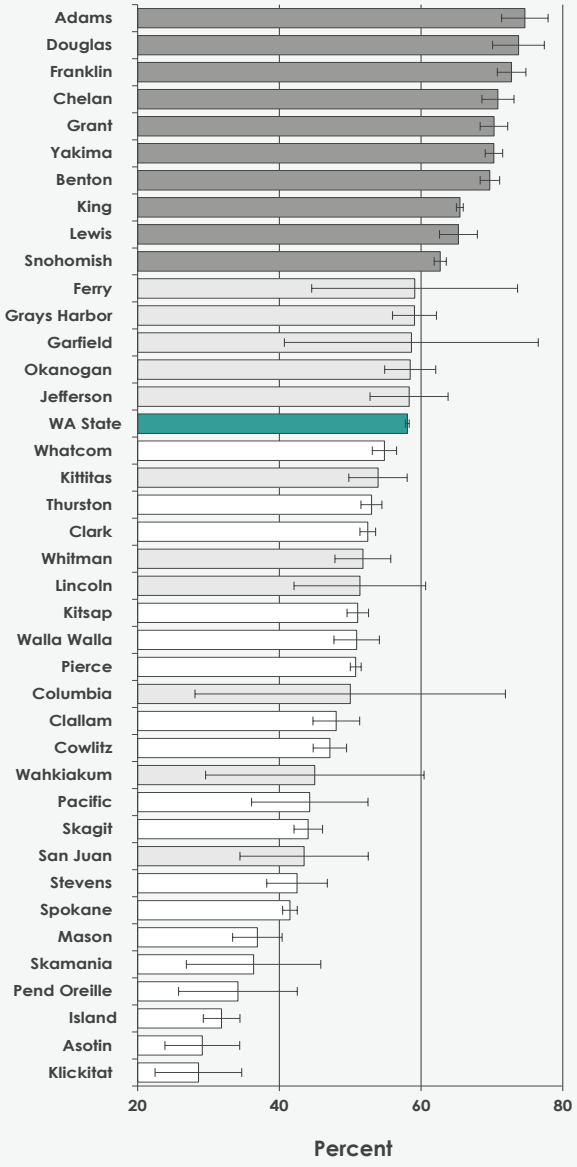
Geographic Variation

- Because NIS relies on small samples (n=200-300 in WA), it can provide coverage at the state level but not at the county level. WA IIS tracks immunization status by patient for Washington residents. The coverage from the WA IIS is lower than the true population coverage because reporting is not mandated. The degree of underreporting is similar across counties, so WA IIS can be used to report coverage by county.
- In 2015, the WA IIS 4:3:1:3:3:1:4 coverage rate was significantly lower in Asotin, Clallam, Clark, Cowlitz, Island, Kitsap, Klickitat, Mason, Pacific, Pend Oreille, Pierce, Skagit, Skamania, Spokane, Stevens, Thurston, Walla Walla and Whitman counties and significantly higher in Adams, Benton, Chelan, Douglas, Franklin, Grant, King, Lewis, Snohomish and Yakima counties as compared to the state. Rates of the 7-vaccine series ranged from 29% (±6%) in Klickitat to 75% (±3%) in Adams. Some of this difference may be due to differences in provider reporting to WA IIS.

Disparities

- The 2015 NIS data show there was no difference in the 7-vaccine series between Washington children living below poverty and children living at or above the poverty level.
- In addition, Hispanic children in Washington had similar coverage compared to non-Hispanic white children. Due to the small NIS sample size, coverage estimates are not available for other race or ethnicity subgroups in Washington.

Percentage of children 19-35 months who received recommended vaccines for 4:3:1:3:3:1:4 Washington State, IIS, 2015



How is Washington increasing childhood vaccination coverage?

Public health officials at the state and local levels are working hard to increase childhood vaccine coverage, by:

- Creating, promoting and distributing materials teaching parents about the benefits and risks of vaccination.
- Maintaining webpages and social media for parents and similar audiences.
- Encouraging providers to recommend vaccination at every opportunity.
- Promoting provider reminder/recall efforts.
- Increasing awareness of vaccine coverage through data webpages.
- Hosting and promoting MyIR, a web portal where parents and families can access their own immunization records.
- Supporting the Immunity Community campaign to address vaccine hesitancy.
- Maintaining state-level immunization requirements for child care facilities.
- Offering online education about school and child care requirements, vaccine storage and handling, IIS use, and more.

Other statewide efforts include:

- Offering no-cost vaccinations to all children through age 18.
- 'Immunize Washington,' a partnership which recognizes providers with high vaccination rates.
- Incorporating childhood immunization goals in Medicaid managed care contracts.
- Pulling health plans together in a partnership to improve strategies that increase vaccination throughout the lifespan.

Evidence-based interventions to improve childhood immunization rates are available in the CDC Community Guide.

Technical Notes

4:3:1:3:3:1:4 vaccine series: The 4:3:1:3:3:1:4 vaccine series is defined as four doses DTaP; three doses polio; one dose MMR; three or four doses. Haemophilus influenza type b [Hib], depending on product type; three doses hepatitis B; one dose varicella; and four doses pneumococcal conjugate vaccines.

Confidence Intervals: Definition and examples are described in Appendix C

Immunization Data Sources: The National Immunization Survey and the Washington Immunization Information System are described here.

Endnotes

[1]National Immunization Surveys. Centers for Disease Control and Prevention. www.cdc.gov/vaccines/imz-managers/nis/index.html. Accessed on August 10, 2017.

[2]Immunization Data. Washington State Department of Health, Office of Immunization and Child Profile. www.doh.wa.gov/DataandStatisticalReports/HealthBehaviors/Immunization/ImmunizationInformationSystem. Accessed on March 15, 2017.

Prenatal Care

Early initiation of prenatal care is an important way to improve maternal and infant health outcomes. Women who receive delayed (after first 12 weeks of pregnancy) or no prenatal care are at risk for having undetected complications of pregnancy that can result in severe maternal or infant morbidity or death.

Prenatal care improves birth outcomes, but how many visits and when is not as well established. Ideally women would access medical care before getting pregnant so they can get any chronic illness stabilized, adjust medications and begin taking daily folic acid.

In 2016, 74% of Washington State resident women who gave birth received prenatal care during their first trimester of pregnancy. This is below the *Healthy People 2020* goal of increasing the proportion of pregnant women who receive prenatal care beginning in the first trimester to 77.9%.

Women who were less than 25 years old, Native Hawaiian and Pacific Islander (NHOPI) women, women receiving Temporary Assistance for Needy Families (TANF) and women with a high school education or less had the lowest percent of first trimester prenatal care.

Many different agencies across the state are engaged in the work of improving prenatal care and birth outcomes.

3 in 4

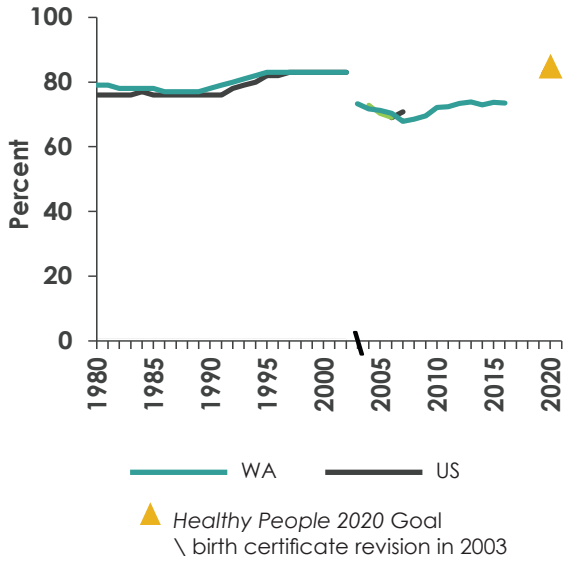
Washington women who give birth begin prenatal care in the first trimester

In Washington, fewer women under 25 begin prenatal care in the first trimester

Time Trends

- In 2016, the first trimester prenatal care rate among Washington State women who gave birth was 74%, lower than the Healthy People 2020 goal of 77.9%, but an increase in recent years.
- Following a revision to the U.S. standard birth certificate in 2003, there is limited national data for comparison. The standard certificate changed how prenatal care was reported and not all states have adopted the new certificate.

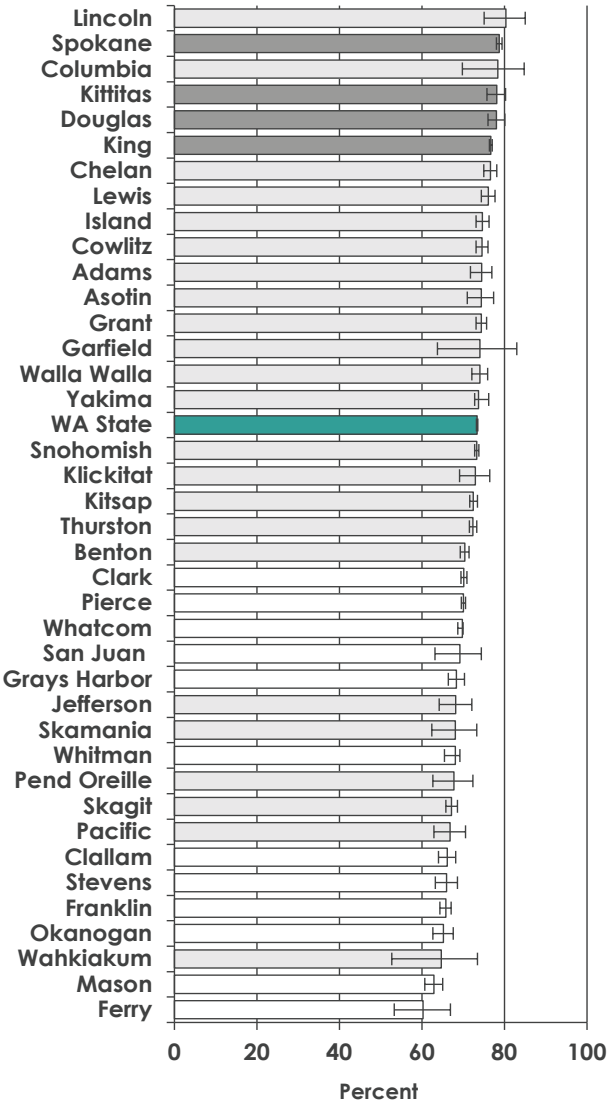
First Trimester Prenatal Care
Washington State & US
WA Birth Certificate, 1980-2016



Geographic Variation

- For 2014-2016, Douglas, King, Kittitas, and Spokane counties had a first trimester prenatal care rate higher than the state.
- Clallam, Clark, Ferry, Franklin, Grays Harbor, Mason, Okanogan, Pierce, San Juan, Stevens, Whatcom, and Whitman counties had a lower rate.

First Trimester Prenatal Care
Washington Counties
Birth Certificates, 2014-2016

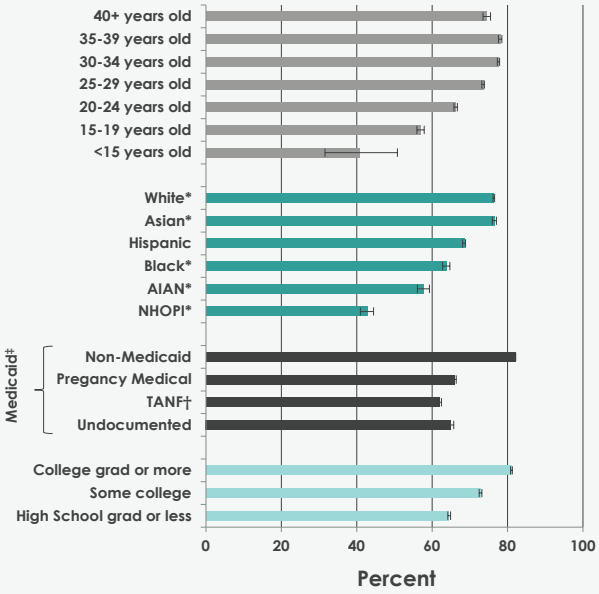


WA State
Same as WA State
Lower than WA State
Higher than WA State

Disparities

- Women under 25 years old had the lowest first trimester prenatal care rates.
- NHOPI , American Indian and Alaska Native (AIAN), black and Hispanic women all had lower first trimester prenatal care initiation rates than white women.
- Pregnant women under each program of Medicaid—Temporary Assistance for Needy Families (TANF), Pregnancy Medical and Undocumented women—had lower first trimester prenatal care rates compared to women who were not receiving Medicaid.
- Women with a high school education or less had the lowest first trimester prenatal care rates.

First Trimester Prenatal Care
Washington State
Birth Certificates, 2014-2016



Impact

- Early initiation of prenatal care can be hampered or improved by system, provider and individual practices.
- Availability and accessibility of appointments, insurance coverage and provider practices, as well as unintended or late recognition of pregnancy, financial constraints, alcohol and substance use, and personal and cultural beliefs can influence early initiation of prenatal care.

‡ *Medicaid Status Source:* First Steps Database, DSHS

**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

†*TANF:* Temporary Assistance for Needy Families

How is Washington promoting early & continous prenatal care?

Many different agencies across the state are engaged in the work of improving prenatal care and birth outcomes.

- The *March of Dimes* has been working to increase the number of providers who offer evidence-based group prenatal care as this method of care has been shown to decrease both low birth weight and preterm births.
- The Washington State Hospital Association has created the Safe Deliveries Roadmap and has a section on prenatal care that is free to all providers in the state for a reference on offering quality prenatal care.
- The Health Care Authority provides the First Steps Maternity Support Service program which targets women at risk for poor birth outcomes and pays for additional prenatal interventions.
- Department of Health is a large contributor to the Family Health Hotline which helps women get connected with health insurance and prenatal care resources.
- WIC and family planning contractors refer women to prenatal care providers.
- Department of Health and the Health Care Authority partner to improve first trimester prenatal care for women on Medicaid.

See also Infant Mortality

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Medicaid: Because we do not have a measure of income among mothers of newborn infants, we use the Medicaid program as a proxy. To do this, we classified women whose pregnancies were covered by Medicaid into three subgroups (from highest to lowest socioeconomic status) based on program eligibility. 'Pregnancy Medical' were women eligible for the pregnancy medical assistance program. These women were U.S. citizens or legal US residents, and were eligible to receive Medicaid because they were pregnant and had incomes at or below 193% of the federal poverty line. 'TANF' were women enrolled in the Temporary Assistance for Needy Families (TANF) program. These women were very low income (generally < 50% the federal poverty level) and received cash assistance (TANF) in addition to Medicaid. 'Undocumented' were women who were not legally admitted for permanent residence, lacked temporary residence status, or were not lawfully present in the U.S. They were eligible to receive Medicaid because they were pregnant and had incomes at or below 193% federal poverty level. Undocumented women were not eligible for TANF although their incomes were often lower than women on TANF. All three Medicaid groups had incomes below most non-Medicaid women.

Race and Ethnicity: Classification described in Appendix C

Physical & Built Environment

Fluoridated Drinking Water

Fluoridating drinking water is one strategy used to improve oral health outcomes. In Washington, 46% of the population (approximately 3.3 million) received fluoride-treated drinking water. Some areas in Washington have naturally occurring fluoride, and some Group A public water systems fluoridate drinking water (see figures). Group A water systems are regulated public systems serving 25 people or more. An individual's exposure to fluoride in drinking water may be uncertain due to their consumption of bottled water and beverages or consumption from a nonfluoridated water supply.

DOH, along with partner agencies, is working to promote the individual and community-wide health benefits along with cost savings from drinking water with fluoride. These include reduced health inequities associated with dental caries, and health benefits regardless of age, income, race or geographic location.

46%

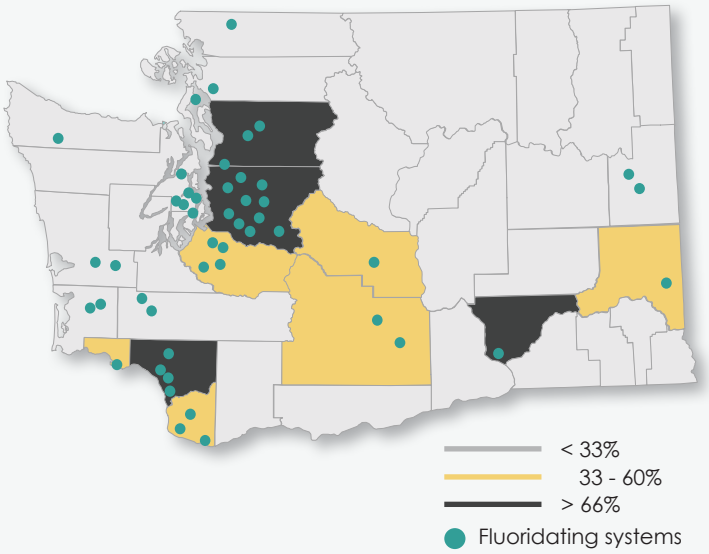
of Washington residents receive fluoride treated drinking water

By county, the range of Washington residents receiving fluoride treated drinking water is from 2% to 80%

Fluoridated Water

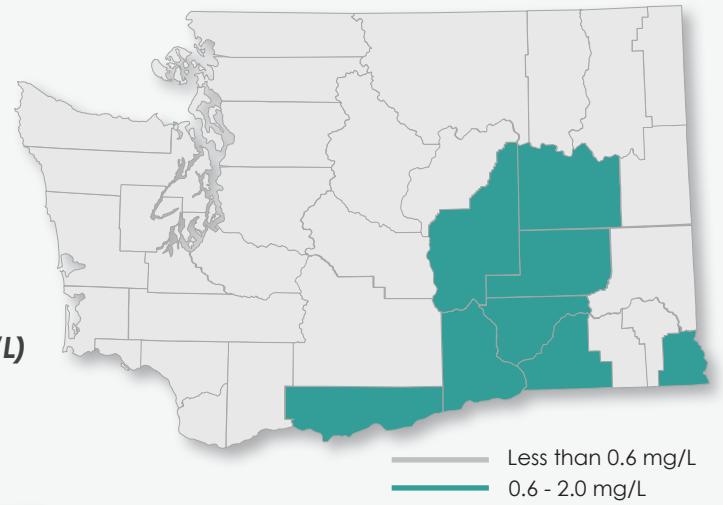
- The map below shows Group A public water systems that supply 100% of their service area with water treated with fluoride and the percent of the population in each county served by these systems.
- This map does not represent the approximately 20% of the total state population that is not served by Group A systems, those populations that live in counties with significant naturally occurring fluoride in groundwater (Adams, Asotin, Benton, Franklin [included below because it also fluoridates Group A systems], Grant, Klickitat, Lincoln, and Walla Walla—see map of Naturally Occurring Fluoride Average by County) or Group A systems with less than 100% of their population receiving treated water (often because of connections between water systems that may allow for a mixture of fluoridated and unfluoridated water).

Percent of Population Fluoridated Water at Dentally Significant Levels (0.6 - 2.0 mg/L) Washington State Sentry Database, 2000-2016



- The map below shows counties that have sources with significant naturally occurring fluoride. In these counties, the average fluoride levels of tested Group A public water systems are at dentally significant levels (0.6 – 2.0 mg/L) (data from samples between Jan. 2000 and May 2015).

Naturally Occurring Fluoride Average by County Washington State Sentry Database, 2000-2015



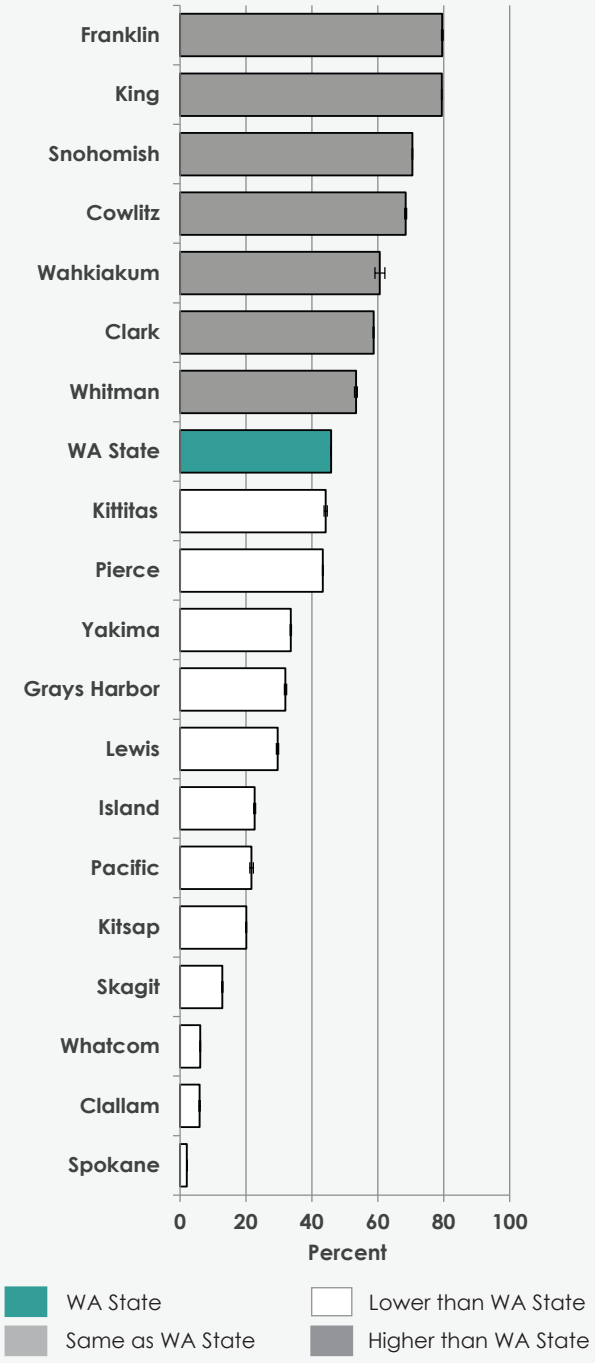
Geographic Variation

- Across counties in Washington State during 2016, 2 to 80 percent of the population on Group A systems received fluoride-treated water. Approximately half of our counties have at least one Group A system that treats with fluoride (N=19 counties).
- In 2016, Clark, Cowlitz, Franklin, King, Snohomish, Wahkiakum and Whitman counties had a higher percentage of the population receiving fluoridated drinking water from Group A systems compared to the state.
- Clallam, Grays Harbor, Island, Kitsap, Kittitas, Lewis, Pacific, Pierce, Skagit, Spokane, Whatcom and Yakima counties had a lower percentage of the population receiving fluoridated drinking water from Group A systems compared to the state.

Disparities

- Counties with high percentages of priority populations such as people of color, children under 19, or people with low income or limited English proficiency may not have fluoride available to them in their tap water (i.e., Adams, Grant, Okanogan and Chelan).
- The 2012 and 2014 BRFSS telephone survey questions that provide an indication of the prevalence of oral disease include: 'Have you had any permanent teeth removed because of tooth decay or gum disease?' and 'Do you have a painful or aching mouth?' Residents of Garfield, Mason and Skamania counties do not have access to fluoridated tap water; and BRFSS results indicated higher rates of oral disease for adults in these counties.

Percent of County Population that Received Fluoridated Drinking Water from Group A Systems Washington Counties Sentry Database, 2016



Note: Chart displays data for Group A public water systems delivering fluoridated water to 100% of service area. Systems that are either not fluoridated or not at 100% of service area are not included in numerator. Denominator is entire population of county/state.

How is Washington promoting fluoridated drinking water?

DOH and partners work to improve overall oral health outcomes. Availability of fluoridated drinking water is one method that leads to better outcomes. Agency activities promoting the inclusion of fluoride in drinking water include:

- Review and promotion of established evidence-based best practice models.
- Support to the Washington State Board of Health on their recommendation to support and promote community water fluoridation.
- Training of water system operators and engineers in the safe delivery of optimally fluoridated water, along with the public health benefits of water fluoridation.
- Providing information support to community leaders addressing water system fluoridation concerns.

Further actions to improve oral health in Washington can focus on cities or counties that do not currently fluoridate their public water systems. Outreach could include facilitating routine dental visits, the promotion of the benefits of water fluoridation by dentists, recommendation of other sources for fluoride (toothpaste), or assistance with establishing and monitoring fluoride in their public water system. Culturally aware messaging in additional languages such as Spanish, Vietnamese and Russian would reach populations with limited English Proficiency on the value of fluoride for improved oral health.

See also Oral Health (Tooth Decay)

Evidence-based interventions to promote oral health including community water fluoridation are available from in the CDC Community Guide.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Outdoor Air Quality

Particulate matter ($PM_{2.5}$) is a measure of outdoor air quality. Exposures to $PM_{2.5}$ are associated with adverse cardiovascular and respiratory health effects. People with pre-existing conditions, children and the elderly have increased risk of adverse health effects from breathing $PM_{2.5}$.

For most areas in Washington, $PM_{2.5}$ levels are not considered to contribute to an elevated risk to health. In some areas, however, with higher levels or that have isolated daily events of high $PM_{2.5}$ concentrations, $PM_{2.5}$ levels do pose an increased health risk to local residents.

DOH, along with partner agencies, is working to evaluate risks from air pollution across the state so that we can identify at-risk populations and provide recommendations to reduce exposure.

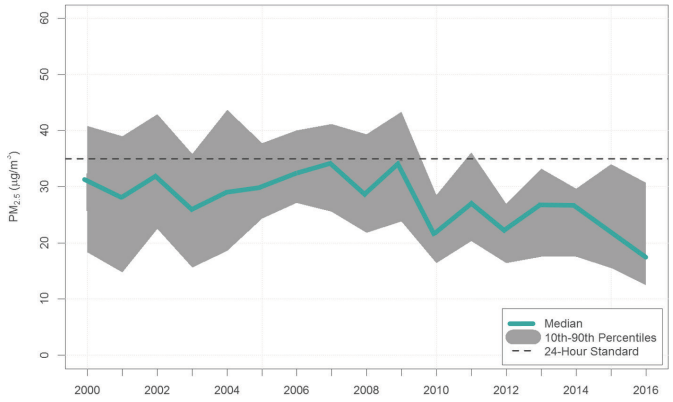
Since 2000, levels of fine particulate matter ($PM_{2.5}$ or less) have generally declined in Washington

Residential wood burning, vehicle emissions, road dust and wildfires are major contributors to particulate matter

Particulate Matter

- Levels of fine particulate matter (particles with a diameter less than 2.5 µm, or $PM^{2.5}$) generally declined in Washington State since 2000.
- The U.S. had a similar decreasing trend—credited to previous reductions in industrial emissions as well as more recent reductions in vehicle emissions and increased adoption of improved woodstoves.

Peak 24-hour $PM_{2.5}$ Concentrations Regulatory Monitoring Network Washington State

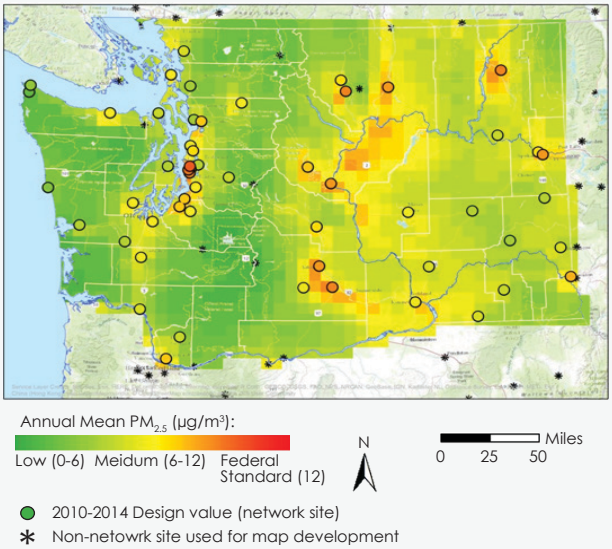


Source: Department of Ecology, Air Quality Program

Geographic Variation

- Most areas in Washington had annual PM2.5 concentrations that are well below the federal standard. However, even in areas with relatively low annual $PM_{2.5}$ levels, on a short-term basis air pollution can reach levels that are unhealthy for sensitive groups and the general public.
- Different sources contribute to elevated $PM_{2.5}$ levels. In 2011 for example, the top two sources of emissions varied by county:
  - King County - residential wood burning and vehicle emissions
  - Yakima County - residential wood burning and road dust
  - Okanogan County - road dust and agricultural/forest prescribed burns (followed closely by smoke from wildfires)
- The composition of $PM_{2.5}$ changes throughout the year as many sources have a seasonal component. Wildfires generally occur in summer months. Road dust concentrations are higher when the ground is drier, typically in the summer. Residential wood burning occurs in the fall, winter and spring.

Modeled/Monitored Annual Average $PM_{2.5}$ Concentrations Washington State Regulatory Monitoring Network, 2010-2014



Note: The shading reflect the range of average concentrations from 0 to the federal standard for annual mean $PM_{2.5}$

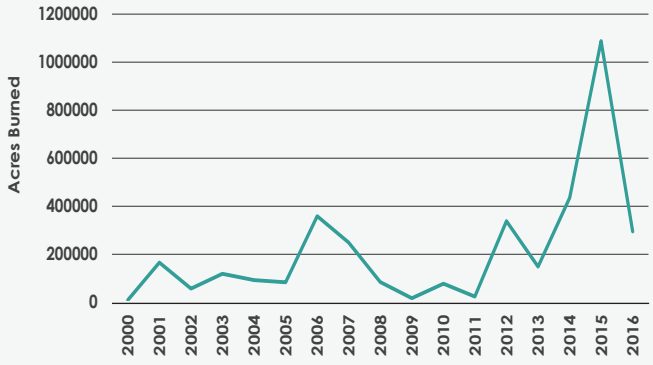
Source: Department of Ecology, Air Quality Program

- The highest 24-hour $PM_{2.5}$ levels are mainly attributed to residential wood burning and wildfires. In part, residential wood burning levels are higher because people burn wood for heat in the colder months when there is more air stagnation and less mixing of air, leading to greater build-up of pollutants. In contrast, wildfires typically occur in the summer and there can be very high levels of smoke that last for a relatively short time.

Smoke from Wildfires

- Smoke from wildfires contains many different pollutants, including $PM_{2.5}$.
- Wildfires have increased in size and intensity in Washington, as in other parts of the western United States over the past decades. The increasing intensity of wildfires is thought to be due mainly to a combination of forest management practices and climate change.[1]
  - o Historically, forest management practices have suppressed wildfires. More recent practices recognize that allowing for more regular small wildfires and controlled burns is needed to prevent large scale wildfires.[2]
  - o Climate change is bringing drier, warmer conditions that are increasing the size of total area burned by forest fires most years.[3, 4]
- During the 2012 wildfires in central Washington, $PM_{2.5}$ concentrations were hazardous as defined by the Washington Air Quality Advisory. An evaluation found increased hospital and outpatient clinic visits for asthma, respiratory and chest symptoms, especially among children.[5]

Land Burned by Wildfires
Washington State
Washington Tracking Network, 2000-2016



Source: Department of Health, Washington Tracking Network, 'wildfires'. Data obtained from the Northwest Interagency Coordination Center, July 10, 2017.

How is Washington promoting improved outdoor air quality?

DOH works with local health jurisdictions (LHJs), Washington State Department of Ecology, Local Air Authorities, and others to identify when and where ambient air pollution reaches levels of concern, and to identify and alert populations that are most affected. DOH integrates these data with scientific evidence to provide several services, including:

- Maintaining updated websites about air quality that provide descriptions and health guidelines such as steps individuals can take to reduce exposure to air pollution.
- Providing air quality and health data on the Washington Tracking Network for public use.
- Collaborating with LHJs to develop health messaging about air pollution that is relevant at a local level.
- Responding to citizen complaints and emerging issue concerns about air pollution with evaluations that identify a level of risk (when possible), and options for mitigation.
- Coordinating with climate change specialists to identify and prepare for impacts on health due to changes in air quality.

Ambient $PM^{2.5}$ levels are regulated at the federal level by the Environmental Protection Agency, the state level by the Washington Department of Ecology, and regionally by clean air authorities. Numerous strategies are employed to address various sources of $PM_{2.5}$ such as vehicle emissions testing and standards, and requirements to use technological controls to reduce industrial emissions.

The public can also help reduce ambient $PM_{2.5}$ levels by taking steps like reducing vehicle use, replacing uncertified woodstoves, not burning yard waste, and using electric yard equipment as an alternative to gas-powered equipment.

Through each of these activities at the local, state and federal level, we contribute to efforts to reduce air pollution for the protection public health.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Particulate Matter. Particulate matter refers to fine particles in the air. $PM_{2.5}$ refers to airborne particles that are 2.5 micrometers or smaller in size. These particles are so small they can be inhaled deep into the lungs and cause a variety of serious health problems. $PM_{2.5}$ is measured at point sources throughout Washington.

Endnotes

[1]McKenzie D, and Littell JS. Climate change and the eco-hydrology of fire: will area burned increase in a warming western USA? Ecol Appl 2016; 27(1):26-36. doi: 10.1002/eap.1420

[2]Vegetation and Fuels. The Science Analysis of the National Cohesive Wildland Fire Management Strategy Web site. https://cohesivefire.nemac.org/vegetation-fuels. Accessed September 1, 2017.

[3]Snover AK Mauger GS, Whitely Binder LC, Krosby M, and Tohver I. Climate Change Impacts and Adaptation in Washington State: Technical Summaries for Decision Makers. State of Knowledge Report prepared for the Washington State Department of Ecology. Climate Impacts Group, University of Washington, Seattle; 2013.

[4]Littell, JS et al. Forest Ecosystems: Vegetation, Disturbance, and Economics. Chapter 5 in Dalton MM, Mote PW, and Snover AK, eds. Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities. Washington, D.C.: Island Press; 2013.

[5]Washington State Department of Health. Surveillance Investigation of the Cardiopulmonary Health Effects of the 2012 Wildfires in North Central Washington State. www.doh.wa.gov/Portals/1/Documents/Pubs/334-385.pdf. Published December 2015. Accessed September 1, 2017.

Shellfish Harvesting

Open shellfish harvesting areas are an indicator of good water quality. Washington State monitors marine water quality at more than 1,700 marine water sampling sites and evaluates potential pollution sources along shorelines to assure safe shellfish for the consumer. While mandatory for commercially harvested shellfish, stringent water quality requirements also assure public health is protected for other water recreation uses.

DOH works with local, state, federal, tribal and nongovernmental organizations to identify and mitigate pollution that leads to unsafe marine environments, food and recreation. These efforts protect public health, result in a cleaner Puget Sound, and increase access to beaches for recreational and commercial shellfish harvesting.

4,803

Washington commercial shellfish harvesting acres have had net improvement since 2007

Stringent water quality requirements assure safe shellfish and protect public health for other water recreation

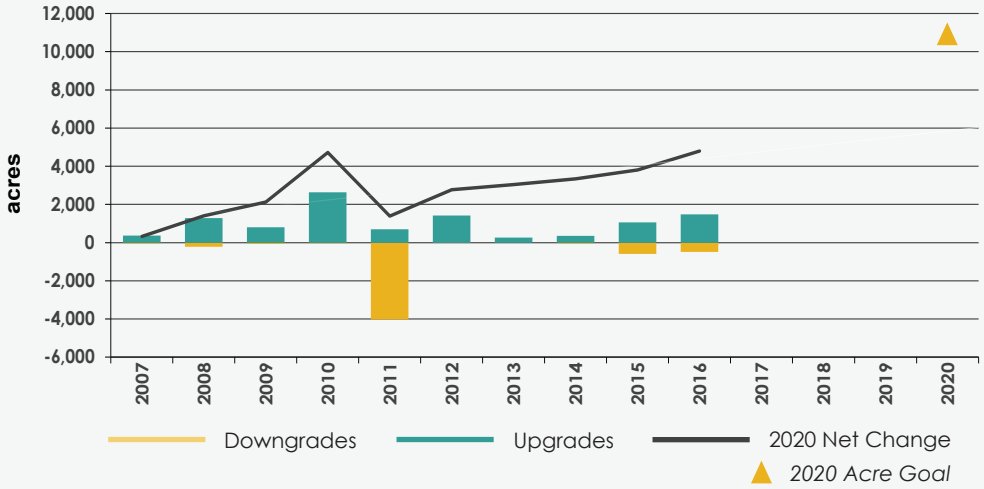
Harvestable Shellfish Acreage = Safer Puget Sound

- DOH collects and evaluates marine water quality, inspects potential shoreline pollution sources, and manages the classification (i.e., Approved, Conditionally Approved, Restricted, or Prohibited) of more than 200,000 acres in Puget Sound. The program depends on the success of local, state, federal and tribal agencies to identify and correct pollution problems.
- In 2007, DOH adopted a stretch-goal of a net 10,000-acre improvement (e.g., approved or with fewer restrictions) for Puget Sound shellfish harvesting areas by 2020. Other state and federal agencies and the Governor's Office subsequently adopted similar stretch-goals. An increase in the number of harvestable acres indicates the correction of pollution sources, increased shellfish harvesting opportunities, and the protection of public health.
- Since 2007, DOH has seen a net improvement to 4,803 harvestable shellfish acres (through 2016), with positive gains each year. An exception was in 2011 when 4,000 acres of the Samish Bay Shellfish Growing Area were downgraded. During the same time period, DOH made 83 shellfish growing area classification changes (e.g., shellfish bed upgrades, downgrades); approximately 75% of which were due to improved marine water quality.

Commercial Shellfish Harvesting

- The improvement and decline of water quality in shellfish harvesting areas is used as a measure of the health of Puget Sound.
- Between 2007 and 2016, there was a net improvement to 4,803 commercial shellfish harvesting acres.
- There was a steady increase in acreage available for harvesting since 2011.

Change to Shellfish Harvesting Areas
Washington State, Puget Sound Area
DOH Shellfish Program, 2007-2016



Overcoming Barriers

To be successful, DOH and its partners must overcome the barriers to maintaining safe marine water. Engagement of stakeholders, development of actions, and implementation of projects ensure this success.

Actions needed to overcome barriers include:

- Implement practices that eliminate polluted runoff from agricultural activities.
- Create effective and sustainable pollution identification and correction programs.
- Develop and implement onsite sewage system management plans.
- Effectively manage waste from boaters.
- Develop a wastewater treatment plant outfall strategy for Puget Sound.

How is Washington addressing Puget Sound water quality?

DOH continues to work with its partners to identify and mitigate pollution sources around recreational and commercial shellfish harvesting areas. DOH partnership actions include:

- Participating in stakeholder groups aimed at the development of partnerships and the implementation of projects related to non-point pollution correction and prevention, including but not limited to:
  - Results Washington, Goal 3, Goal Council.
  - Results Washington, Shellfish Coordination Group.
  - Department of Agriculture's Dairy Nutrient Advisory Committee.
  - Clean Samish Initiative, Executive Committee.
  - Whatcom Clean Water Program.
  - Puget Sound-wide Shellfish Protection Districts.
- Investing Environmental Protection Agency, National Estuary Program funds in Puget Sound projects to further pollution identification and correction (PIC) programs, managing onsite sewage systems, implementing agricultural best management practices (BMPs), and controlling boaters' waste.
- Engaging local governments, state agencies, and tribes in coordinated projects that improve marine water quality.

Technical Notes

Classification Options: Approved – Open, except during emergency conditions. Conditionally Approved – Open, except during predictable conditions that cause higher bacteria levels in the marine water (rainfall, season, river flow related temporary closures). Restricted – Closed to direct harvest. Shellfish must be moved to an Approved or Conditionally Approved area and allowed to purge before harvest. Prohibited – Closed.

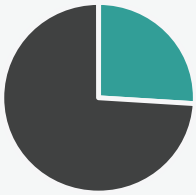
Social Determinants

Adverse Childhood Experiences (ACEs)

Severe or repeated exposure to harmful experiences without the support of caring adults can cause toxic stress responses in children, which puts them at risk for a range of health, learning and behavior problems across their life span.[1, 2] Adverse childhood experiences (ACEs) reported by adults include verbal, physical or sexual abuse and measures of family dysfunction that have occurred over the course of their lives. The ACE score has been used as a measure of cumulative exposure to traumatic stress in childhood. ACEs have been associated with increased mortality and morbidity due to a variety of causes, with risk increasing with the number of ACEs experienced.[3] In 2011, 26% (± 1%) of Washington adults reported having had three or more adverse childhood experiences (ACEs).

Females, American Indian and Alaska Natives (AIAN), young adults 18-34 years old, and people with low incomes or less education were more likely to report having had three or more ACEs compared to other Washingtonians.

DOH, along with partner agencies, is working to prevent and mitigate the impact of childhood trauma and create safe, stable, nurturing relationships and environments for children.



26%

Washington adults have experienced 3 or more ACEs

ACEs have been associated with increased mortality and morbidity due to a variety of causes

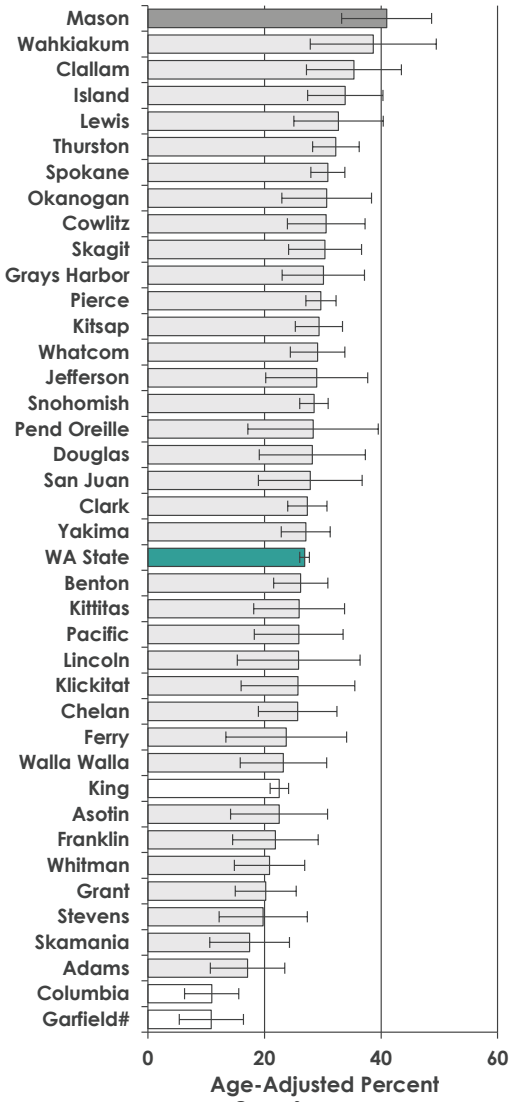
Time Trends

- In 2011, 26% (± 2%) of Washington adults reported having had three or more ACEs.
- In 2010, questions were added to the Behavioral Risk Factor Surveillance System (BRFSS) addressing adverse childhood experiences in 10 states (including Washington). In these states, 22% of adults reported having had three or more ACEs.
- With only three years of data, we are not able to measure trends over time in the percent of adults with ACEs in Washington.

Geographic Variation

- In 2009-2011, Mason County was the only county where adults reported a higher prevalence of having three or more ACEs compared to the state.
- In Columbia, Garfield and King counties, adults reported a lower prevalence of having had three or more ACEs compared to the state.

Prevalence of 3+ ACEs
Washington Counties
BRFSS, 2009-2011



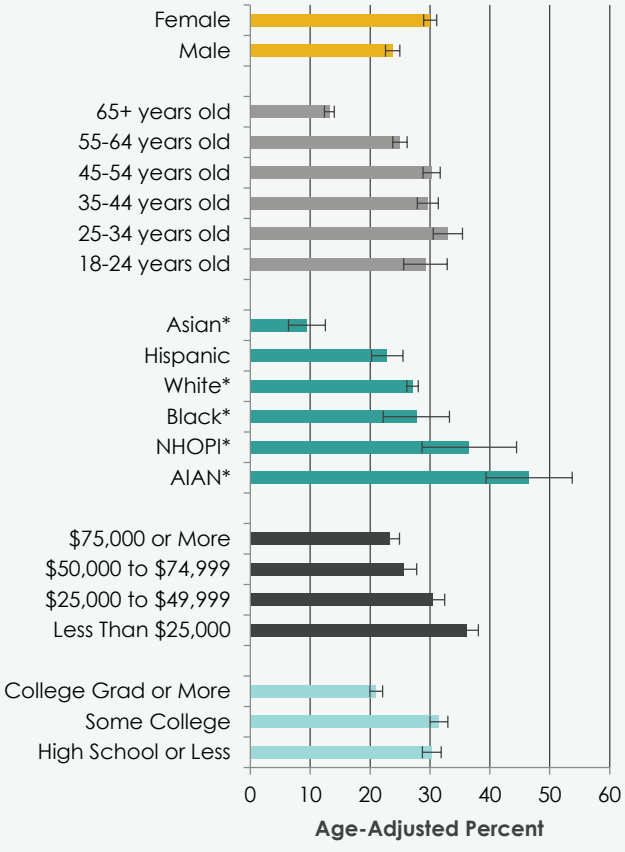
WA State
Same as WA State
Lower than WA State
Higher than WA State

#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2009-2011 BRFSS, females were more likely to report having three or more ACEs compared to males.
- Having had three or more ACEs was similar among those 18-54 years old, lower for those 55-64 years old, and lowest among those 65 years old and older.
- AIAN had the highest prevalence of having had three or more ACEs, and Asians had the lowest prevalence.
- Having had three or more ACEs increased as levels of education and household income decreased.

Prevalence of 3+ ACEs
Washington State
BRFSS, 2009-2011



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing adverse childhood experiences?

DOH and other state agencies are working with partners to prevent and mitigate ACEs through home visiting and trauma-informed approaches in schools. Many local communities also have cross-sector groups that provide educational opportunities and coordinate initiatives to prevent ACEs and promote trauma-informed approaches across their communities.

DOH and its partner agencies are implementing the Essentials for Childhood Initiative, which supports cross-sector collaboration to support safe, stable, nurturing relationships and environments for all children by enhancing parents' capacity to promote healthy child and youth development, strengthening family economic security, and preventing and mitigating the impact of trauma. DOH also provides Title V Maternal and Child Health Services funding to local health jurisdictions to address ACEs and promote resiliency.

The Office of Superintendent of Public Instruction (OSPI) convenes the Social Emotional Learning Benchmarks workgroup to implement the Social Emotional Learning Framework for all Washington children enrolled in K-12 education.

OSPI is implementing the Compassionate Schools Initiative by providing training and technical assistance to schools on developing compassionate classrooms and staff attitudes to promote learning and engagement for all children, with a focus on those chronically exposed to stress and trauma in their lives.

Pediatric Transforming Clinical Practices Initiative (pTCPi), a partnership between DOH, Molina Healthcare and the Washington Chapter of the American Academy of Pediatrics, links clinicians with behavioral health professionals to address ACEs.

Community Based Child Abuse Prevention grants are administered by Department of Early Learning to address child abuse prevention by strengthening and supporting families. Efforts focus on comprehensive supports for families, promoting the development of parenting skills, improving access to formal and informal resources and promoting meaningful parent leadership using the Protective Factors Framework.

Department of Social and Health Services/Division of Behavioral Health and Recovery (DSHS/DBHR) and its partners are implementing the goals of the State 5-Year Strategic Plan for Substance Abuse Prevention and Mental Health Promotion. While reducing ACEs is not one of the focus areas in the strategic plan, ACEs data was considered in the prioritization along with other behavioral health data. Efforts include funding 64 Community Prevention and Wellness Initiative community coalitions, Tribal mental health promotion projects among 29 federally recognized tribes to adopt evidence-based approaches to address their most important needs, and workforce development for prevention and treatment professionals, including trauma informed care and trauma-focused cognitive behavioral therapy training.

State agencies and public-private partnerships promote home visiting programs that reach children and families in those critical first years of life, strengthening the parent-child bond, developing more positive parenting practices, and improving school readiness.

Washington State is also working to integrate physical health services, mental health services and substance use services in the Medicaid (Apple Health) program. These efforts are funded by grants and the Medicaid 1115 waiver and include integrating clinical practices, supporting providers in identifying, serving and monitoring high need populations, developing systems to support information sharing across providers, and integrating payment systems.

Blue Ribbon Commission on the Delivery of Services to Children and Families. On Feb. 18, 2016, Gov. Inslee issued an executive order establishing the Washington State Blue Ribbon Commission on Delivery of Services to Children and Families. His executive order directs the Commission to recommend the organizational structure for a new department focused solely on children and families. HB1661 (signed into law on July 6) follows the suggestions of the Blue Ribbon Commission and established the Department of Children, Youth and Families (DCYF), which will restructure how the state serves at-risk children and youth with the goal of producing better outcomes in all Washington communities. DCYF is charged to focus on supporting and strengthening families before crises occur and leveraging every contact with families as an opportunity to improve the course of a child's life and help to minimize further harm.

See also Mental Health, Access to Behavioral Health Providers, and Domestic Violence & Sexual Violence

Evidence-Based Interventions to address ACEs are available in the CDC Preventing Child Abuse and Neglect: A Technical Package for Policy, Norm, and Programmatic Activities.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Trauma Informed Approach: A program, organization or system that is trauma informed, which means that it realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; responds by fully integrating knowledge about trauma into policies, procedures, and practices; and seeks to actively resist re-traumatization.[4]

Endnotes

[1]Harvard University, Center on the Developing Child. The Foundations of Lifelong Health Are Built in Early Childhood. https://developingchild.harvard.edu/. Published July 2010. Accessed August 9, 2017.

[2]Institute of Medicine. From Neurons to Neighborhoods: The Science of Early Childhood Development. Washington, DC: The National Academies; 2000. https://doi.org/10.17226/9824.

[3]Felitti VJ, Anda RF, Nordenberg et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med 1998;* 14(4):245-258.

[4]Trauma-informed approach and trauma-specific interventions. Substance Abuse and Mental Health Services Administration Web site. www.samhsa.gov/nctic/trauma-interventions. Published August 14, 2015. Accessed September 8, 2017.

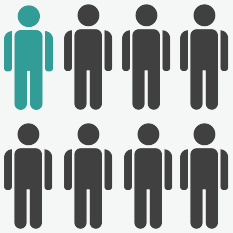
Domestic Violence & Sexual Violence

Domestic violence is any type of physical, sexual, or psychological harm done by a current or former partner or spouse (both heterosexual and same-sex); it also includes stalking, and loss of reproductive control such as refusal to use a condom. Domestic violence that includes abusive sexual behavior which take place within the context of a current or former intimate relationship is also referred to as intimate partner sexual violence.

About 12% (±1%) of respondents reported ever having been injured by an intimate partner, according to the 2011 Behavioral Risk Factor Surveillance System (BRFSS). Injuries by intimate partners were highest among females, those 25-64 years of age, those with household incomes less than $50,000, and those who did not earn a college degree.

In the 2016 Healthy Youth Survey, 18% (±2%) of 10th graders in Washington reported that they had been made to engage in unwanted kissing, sexual touch or intercourse.

DOH and partner agencies are focused on reducing domestic violence and sexual violence by implementing comprehensive primary prevention and intervention strategies. Some of these strategies include addressing the needs of pregnant and parenting survivors of violence, training home visiting professionals in screening for domestic violence, and facilitating youth mentoring programs to develop skills for healthy relationships.



1 in 8

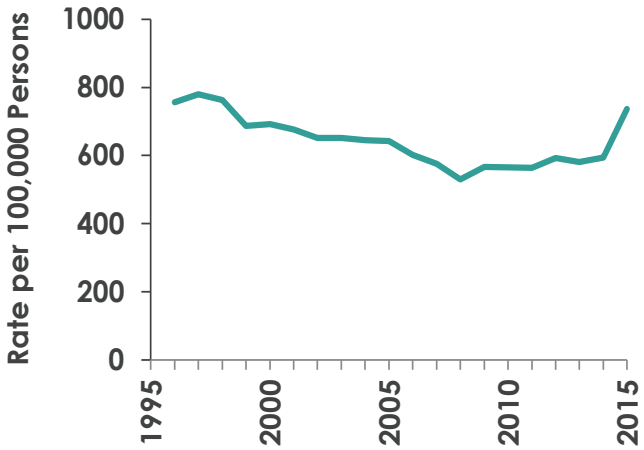
Washington adults report having been injured by an intimate partner

More than 1 in 6 Washington 10th graders have been made to engage in unwanted sexual activity

Time Trends

- In 2015, the domestic violence offenses rate in Washington State was 737 per 100,000 population (representing 51,491 offenses).[1]
- Washington's rate of domestic violence offenses increased in 2015 after several stable years.

Reported Domestic Violence Offenses
Washington State
CORE*, 1996-2015

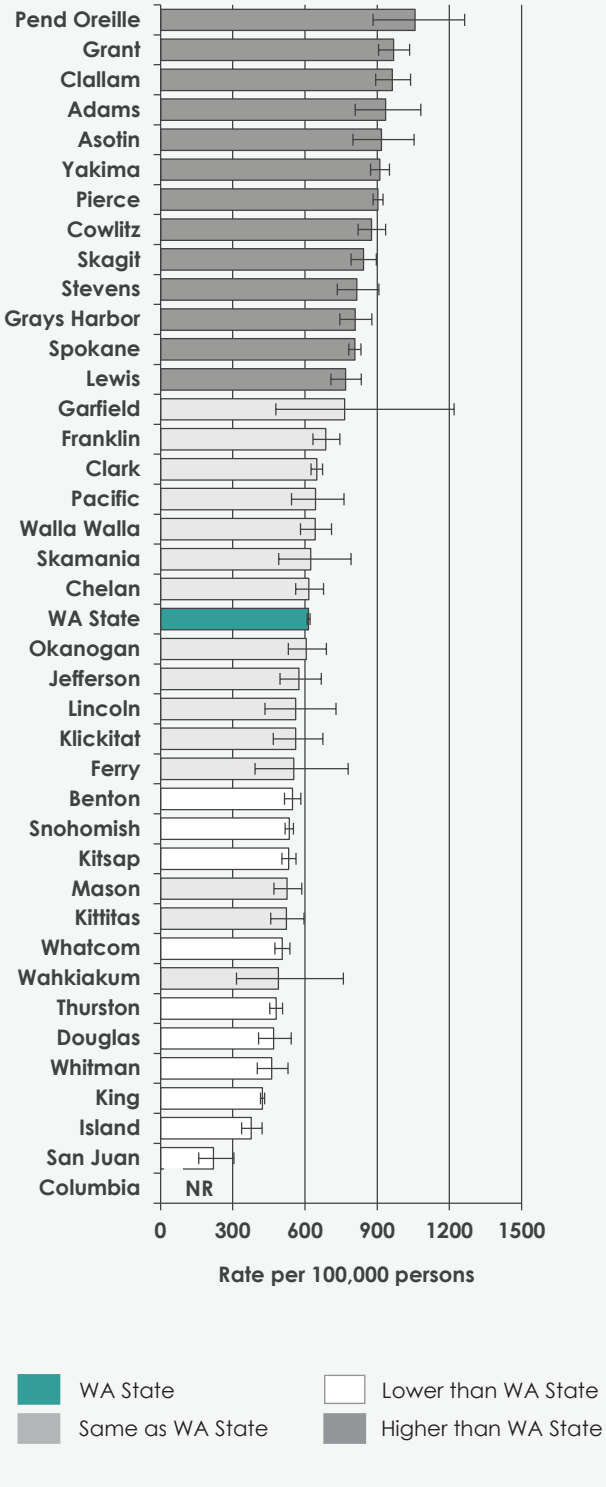


**DSHS CORE:* Department of Social and Health Services, Community Outcome and Risk Evaluation Information System.

Geographic Variation

- In 2011-2015, domestic violence offense rates varied dramatically by county, from 220 per 100,000 in San Juan to 1057 per 100,000 in Pend Oreille County.
- Adams, Asotin, Clallam, Cowlitz, Grant, Grays Harbor, Lewis, Pend Oreille, Pierce, Skagit, Spokane, Stevens, and Yakima counties had higher domestic violence offense rates compared to the state rate.
- Benton, Douglas, Island, King, Kitsap, San Juan, Snohomish, Thurston, and Whitman counties had lower domestic violence offense rates than the state.

Reported Domestic Violence Offenses Washington Counties, DSHS CORE, 2011-2015



**DSHS CORE:* Department of Social and Health Services, Community Outcome and Risk Evaluation Information System.

NR: Not reported if RSE ≥ 30% or to protect privacy

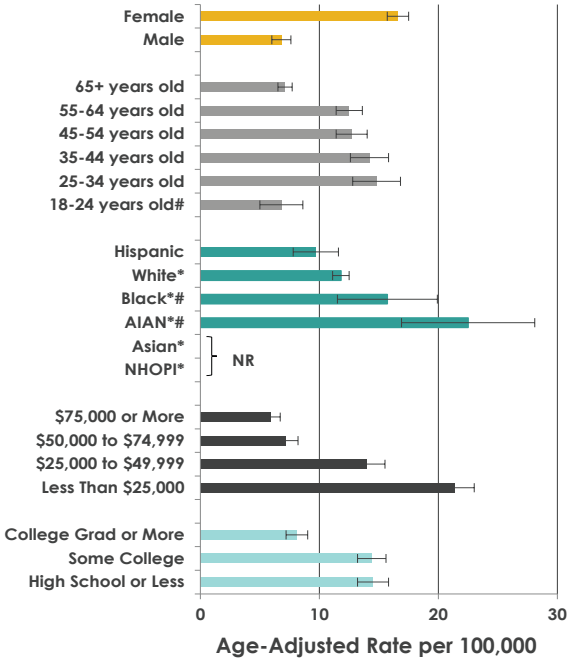
Disparities

The most current self-reported domestic violence data is from the 2011 BRFSS.

- Overall about 15% (±1%) of Washington adults reported experiencing domestic violence in their lifetime – 19% (±1%) of females and 10% (±1%) of males.
- About 12% (±1%) of Washington adults reported ever being injured by an intimate partner: 17% (±1%) of females and 7% (±1%) of males.
- Adults 25-64 years old had the highest rates of injury by an intimate partner.
- American Indian or Alaska Native (AIAN) adults reported a higher prevalence of injuries by an intimate partner compared to white adults.
- Individuals with lower household income were more likely to report injuries by an intimate partner (<$50,000) compared to individuals with higher income.
- Injuries by intimate partners were higher among individuals who did not earn a college degree.

Note: Domestic violence offenses reported to the police are not available by selected demographics (e.g., age, gender).

Injured by Partner During Lifetime
Washington State
BRFSS, 2011



*Non-Hispanic (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

NR: Not reported if RSE ≥ 30% or to protect privacy

#Relative standard error (RSE) is between 25% and 29%

Sexual Violence

Sexual violence includes rape, being made to penetrate someone else, sexual coercion, unwanted sexual contact, and unwanted noncontact sexual experience such as harassment and flashing.

Sexual violence can happen to anyone regardless of ethnicity, race, religion, profession, gender, sexual orientation or income. Sexual violence can occur in any type of relationship or be perpetrated by a stranger. Most perpetrators of sexual violence are known to their victims, but the type of relationship varies. For example, acts of sexual violence are often perpetrated by acquaintances and non-spouse relatives.

Intimate Partner Sexual Violence (IPSV) is one term used to refer to all forms of sexual assault that take place within the context of a current or former intimate relationship. IPSV is a form of domestic violence.

Sexual violence data in Washington that address time trends, and geographic and demographic variations are limited. DOH is working to strengthen state-level surveillance data.

The 2010-12 National Intimate Partner and Sexual Violence Survey (released 2017) gives insight into experiences of intimate partner sexual violence in Washington.

- A higher rate of women in Washington had experienced contact sexual violence in their lifetime compared to U.S. women, 45% (±6%) and 36% (±1%) respectively. This would mean that, on average, approximately 1,168,000 women in Washington had been victims of sexual violence during their lifetime.[2]
- In Washington, a current or former intimate partner was reported to be the perpetrator of sexual violence about 40% of the time.
- Twice as many women (45%)compared to men (22%) in Washington reported experiencing sexual violence in their lifetime.

The most recent youth data in Washington (2016) found that 18% (±2%) of 10th graders in Washington reported in the Healthy Youth Survey that they had been made to engage in unwanted kissing, sexual touch or intercourse.

How is Washington addressing domestic, sexual & intimate partner violence?

DOH and partner agencies are implementing domestic, sexual and intimate partner violence prevention and intervention strategies that include:

- Addressing the needs of pregnant and parenting survivors of violence (such as through the Enlace Project).
- Providing training to implement universal screening (using tools such as Futures Without Violence Safety Cards) and adapting guidelines for healthcare providers.
- Training home visiting professionals to increase comfort and skill level in screening for domestic violence, including advanced training to offer safety planning services to their clients as needed.
- Promoting healthy relationship skills, social norms change, and youth-facilitated mentoring to connect youth with their peers. These efforts promote attitude and behavior change by talking about topics connected to intimate partner and sexual violence such as rigid gender roles, consent and respect.

In Washington, two projects funded by the Centers for Disease Control and Prevention are underway. The first, the Rape Prevention and Education (RPE) program, implements comprehensive strategies focused on the primary prevention of sexual violence in multiple communities across Washington. The second project supports DOH's efforts to strengthen its capacity to track and monitor sexual violence indicator data. State-level data is important to better understand the burden of sexual violence perpetration in Washington and better inform prevention and intervention efforts to respond to this public health problem.

Evidence-based interventions to address domestic, sexual and intimate partner violence are available in the CDC Technical Packages for Violence Prevention.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Contact Sexual Violence. The National Intimate Partner and Sexual Violence Survey describes contact sexual violence as rape, being made to penetrate someone else, sexual coercion, and/or unwanted sexual contact.

Intimate Partner Violence. Intimate partner violence (IPV) is 'any type of physical, sexual, or psychological harm done by a current or former partner or spouse (both heterosexual and same-sex)'; IPV includes abusive behavior and is sometimes called domestic violence.[2]

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Sexual Violence. The National Intimate Partner and Sexual Violence Survey measures five types of sexual violence including rape, being made to penetrate someone else, sexual coercion, unwanted sexual contact, and unwanted non-contact sexual experiences such as harassment and flashing.[3]

Endnotes

[1]Washington State Department of Social and Health Services. Risk and Protection Profile for Substance Abuse Prevention in Washington State. www.dshs.wa.gov/data/research/research-4.47-state.pdf. Published July 2017. Accessed September 11, 2017.

[2]Washington State Department of Health. Intimate Partner Violence has Serious Health Impacts in Washington State. www.doh.wa.gov/Portals/1/Documents/140-166-IntimatePartnerViolence-Factsheet.pdf. Accessed October 12, 2017.

[3]Smith, S.G., Chen, J., Basile, K.C., Gilbert, L.K., Merrick, M.T., Patel, N., Walling, M., & Jain, A. The National Intimate Partner and Sexual Violence Survey (NISVS): 2010-2012 State Report. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. US Dept. of Health and Human Services. www.cdc.gov/violenceprevention/pdf/NISVS-StateReportBook.pdf. Published April 2017. Accessed October 12, 2017.

Homelessness & Inadequate Housing

Homelessness is often caused by a complex combination of interwoven social and health factors. Poor physical and mental health can both cause and result in homelessness. Illness or injury can lead to lost income, the loss of a job and health insurance leading to a downward spiral in health. Homelessness can result in illness due to exposure to the elements outdoors, communicable disease exposures, violence, and poor nutrition. Homelessness has been defined as existing when people lack 'a fixed, regular, and adequate nighttime residence'.[1] They may be in sheltered (e.g., emergency shelter or transitional housing) or unsheltered (e.g., outside or in vehicles) situations, and may e single adults, families, and youth.

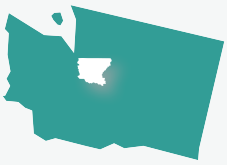
Washington conducts an annual point in time count of sheltered and unsheltered people experiencing homelessness in each county. This count does not include people in supported housing. In 2017, there were an estimated 21,112 homeless people living in Washington for a rate of 289 per 100,000 people. Overall, the rate decreased from 2005 to 2013, and has been increasing since, largely due to increased rents, low vacancy rates and slow wage growth.

To address this increase, the state is working with stakeholders to improve general housing affordability by improving zoning and planning, permitting, development and financing, and construction processes.[2]

The state continues to improve the efficiency of the existing homeless crisis response system investments through implementation of additional performance benchmark and planning requirements.[3]

1 of 346

Washington residents is homeless

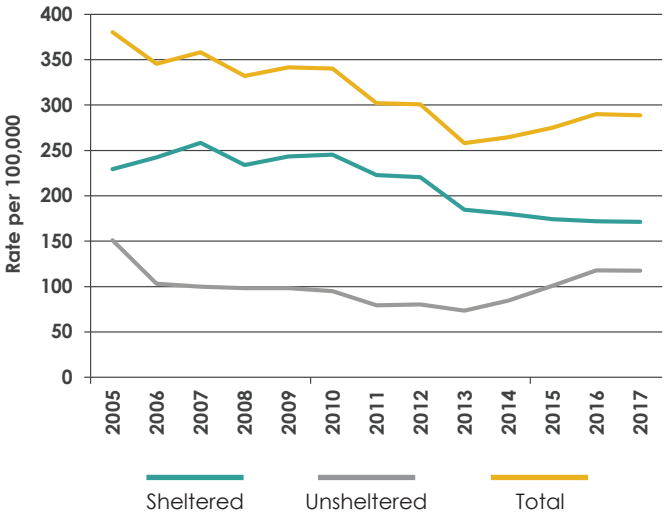


Over half of the people experiencing homelessness are in King County

Time Trends

- In 2017, there were 21,112 people in Washington experiencing homelessness. In 2005 there were more people expe-riencing homelessness (23,970), and in 2013 there were fewer people experienc-ing homelessness (17,760).
- There were 12,521 people sheltered and 8,591 unsheltered in 2017.
- The overall rate of homelessness in 2017 was 289 per 100,000 people. The rate of sheltered people was 171 per 100,000, down from 185 in 2013. The rate of un-sheltered people was 118 per 100,000, up from 73 in 2013.

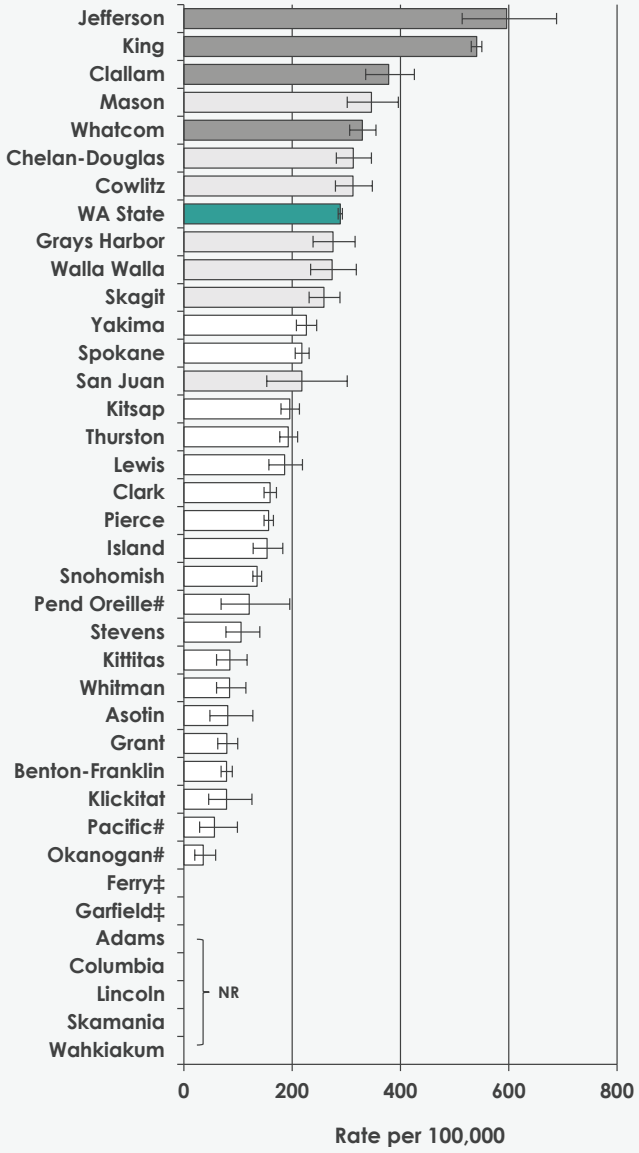
Homeless Population
Washington State
Point in Time Count, 2005-2017



Geographic Variation

- In the 2017 Point in Time Count (PIT), one-half of the people experiencing homelessness in Washington were in King County (11,643 people). King County comprises about 30% of the state population.
- Counties with between 500 and 2,000 people experiencing homelessness included Clark, Kitsap, Pierce, Snohomish, Spokane, Thurston, Whatcom and Yakima counties.
- Clallam, Jefferson, King, and Whatcom counties had rates of homelessness that were greater than the state rate. In two counties, Jefferson and King, the homelessness rate was more than 500 per 100,000.
- There were multiple counties where the rate of homelessness was less than the state rate including Asotin, Benton-Franklin, Clark, Grant, Island, Kitsap, Kittatas, Klickitat, Lewis, Okanogan, Pacific, Pend Oreille, Pierce, Snohomish, Spokane, Stevens, Thurston, Whitman, and Yakima counties.

Homelessness Washington Counties, Point in Time Count, 2017



WA State
Same as WA State
Lower than WA State
Higher than WA State

‡County had zero cases

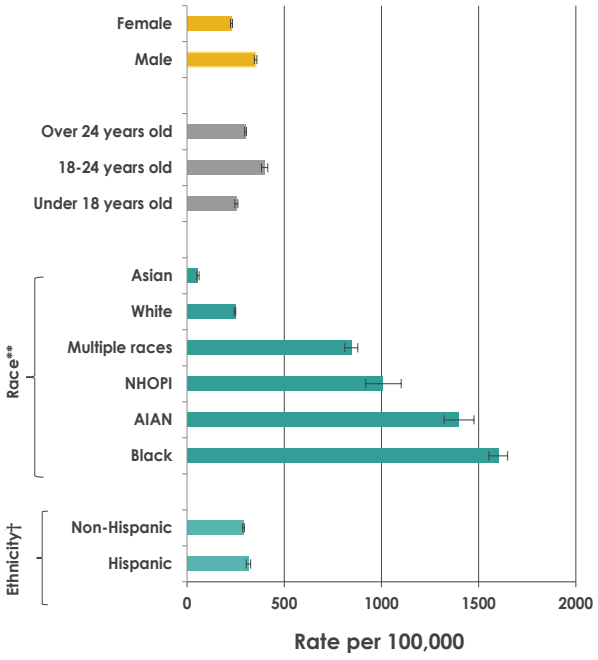
NR: Not reported if RSE ≥ 30% or to protect privacy

#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2017 Point in Time count, young adults 18-24 years of age had the highest rate of homelessness.
- Males experienced homelessness at a higher rate than females.
- Black, American Indian or Alaskan Native (AIAN), Native Hawaiian or Other Pacific Islanders (NHOPI), and those individuals of multiple races experienced homelessness at higher rates than white individuals. Asian individuals had a lower rate of homelessness compared to white individuals.
- The rate of homelessness was higher among Hispanics.

Homelessness (Sheltered & Unsheltered)
Washington State
Point in Time Count, 2017



†Ethnicity includes all races combined

**AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

***Race includes all ethnicities combined*

Inadequate Housing

Getting homeless people and families into any permanent housing will have long-lasting benefits to their health. However, there are health risks and hazards associated with inadequate housing that should be considered when addressing this problem. Common issues in inadequate housing are:

- Lead hazards from chipping and peeling paint in pre-1979 housing and lead risks in drinking water from onsite plumbing.
- Lack of functioning fire and carbon monoxide alarms.
- Trip and fall hazards like unsafe stairs, missing handrails, and uneven flooring.
- Indoor air quality problems from mold, moisture, radon, or particulate matter from wood burning stoves.

These issues can cause lead or carbon monoxide poisonings, cause or exacerbate chronic respiratory problems, and contribute to lung cancer or cardiovascular disease risk, and injuries from falls.

People living in inadequate housing often don't have the control and/or the financial means to improve their living conditions by addressing the quality of their home or shelter. The CDC has identified home improvement loans and grants as one of their HI-5 strategies to improve Health Impacts in five years by addressing social determinants of health. Home improvements that address dampness, temperature and energy efficiency have been shown to improve respiratory and mental health, and reduce doctors' visits. Home health interventions can also reduce the risk of exposure to lead, radon, asbestos, carbon monoxide and mold, and reduce risks for trips and falls. The Washington State Department of Commerce completed a $2.3 million Weatherization Plus Health pilot program in the summer of 2017 to address some of these needs.

How is Washington addressing homelessness & inadequate housing?

- The recently updated Homeless Housing Strategic Plan[3] describes how the homeless crisis response system plans to continue improving the 1) identification, assessment, and prioritization of people facing homelessness; 2) effectiveness and efficiency of housing interventions; 3) and identification of the policy changes and resources necessary to house all people living unsheltered.
- The Washington State Department of Commerce issues grants to county governments and other designees through the Consolidate Homeless Grant (CHG). As part of the Strategic Plan, the department has added to and refined contract performance benchmarks and technical assistance to better guide the use of available housing resources toward those most in need using the most efficient interventions.
- The Washington State Department of Commerce has a special focus on homeless youth. The Office of Homeless Youth Prevention and Protection Programs (OHY) works statewide to reduce and prevent youth and young adults from experiencing homelessness. The five areas of focus include: stable housing, family reconciliation, permanent connections, education and employment, and social and emotional well-being.
- The Washington State Department of Commerce Weatherization Plus Health pilot program focused on reducing asthma triggers by controlling moisture, mold and dust. They also provided carbon monoxide detectors and downspout repair. These are the 'plus health' components of a weatherization program that already increases energy efficiency and warmth in the homes of low-income homeowners.
- As part of Results Washington Goal 4 (healthy and safe communities/supported people), Goal 3.1.c aims to decrease the number of homeless people from the anticipated increase to 25,221 in 2018 to 24,222 by 2020.
- As part of Washington State's Medicaid transformation, the Foundational Community Supports program recently launched. This program creates two new targeted benefits that include services that help the most vulnerable beneficiaries get and keep stable housing and employment, in support of their broader health needs.
- As part of the End AIDS in Washington State initiative, Goal 8 is to increase access to safe, stable, and affordable housing for people living with and at risk for HIV.

See also HIV

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Counts of Homelessness: A description of different methods for counting homelessness and what they mean is described here.

Homelessness Point in Time Count: Methods for the annual Point in Time Count are described here.

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Endnotes

[1]Homeless Emergency Assistance and Rapid Transition to Housing: Defining 'Homeless'. 24 CFR Parts 91, 582, and 583 (page 76013). www.hudexchange.info/resources/documents/HEARTH_HomelessDefinition_FinalRule.pdf. Published December 5, 2011. Accessed September 11, 2017.

[2]Washington Department of Commerce. 2017 Housing Affordability Response Team (HART) Recommendations. www.commerce.wa.gov/wp-content/uploads/2016/10/ahab-hart-affordablehousing-report-2017.pdf. Published June 2017. Accessed September 11, 2017.

[3]Washington Department of Commerce. Homeless Housing Strategic Plan. www.commerce.wa.gov/wp-content/uploads/2017/01/V3-hau-hlp-final-homeless-strategic-plan-2017.pdf. Published January 2017. Accessed September 11, 2017.

Inadequate Social Support

In 2012, 22% (±1%) of Washington adults reported inadequate social support—that is, they reported never, rarely or only sometimes getting the social and emotional support they need on the Behavioral Risk Factor Surveillance System (BRFSS).

Among adults, self-reported inadequate social support was more prevalent among males and those adults who were Native Hawaiian or Other Pacific Islander (NHOPI), Hispanic, black, or Asian. Self-reported inadequate social support prevalence increased as levels of education and income decreased.

State agencies, along with partner agencies and providers, are working to integrate clinical physical health, mental health and substance use services.

1 in 5

Washington adults report inadequate social support

Those with a high school or less education were twice as likely to report having inadequate social support compared to those with at least a college education

Time Trends

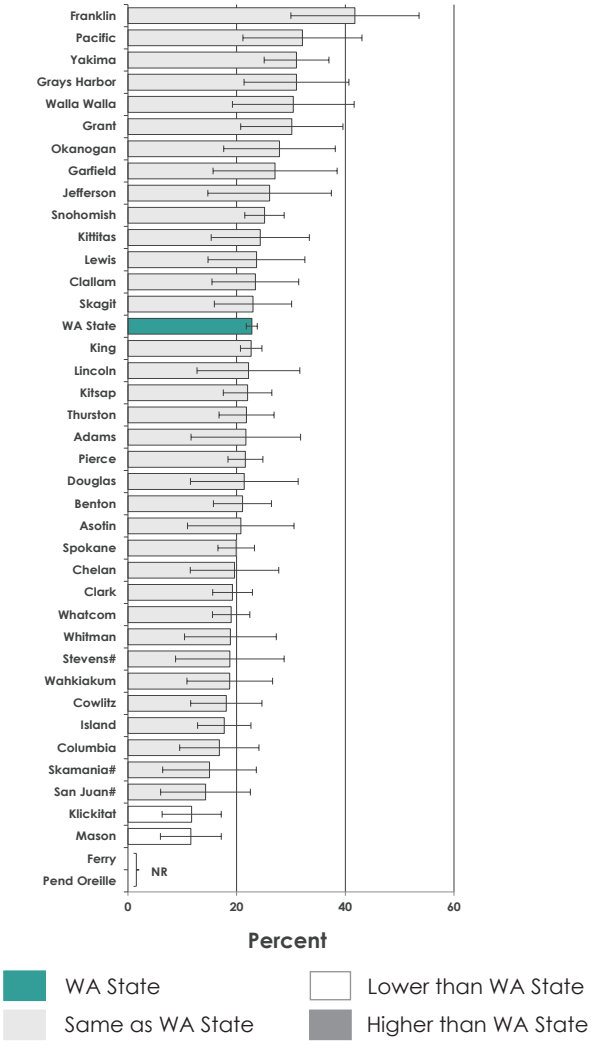
Only data from the 2012 BRFSS are available for this indicator.

- In 2012, the prevalence of inadequate social support among Washington adults was 22% (±1%).

Geographic Variation

- In the 2012 BRFSS, self-reported inadequate social support was lower in Klickitat and Mason counties compared to the state.
- The prevalence for all other counties was similar to the state prevalence.

Self-reported Inadequate Social Support Washington Counties, BRFSS, 2012



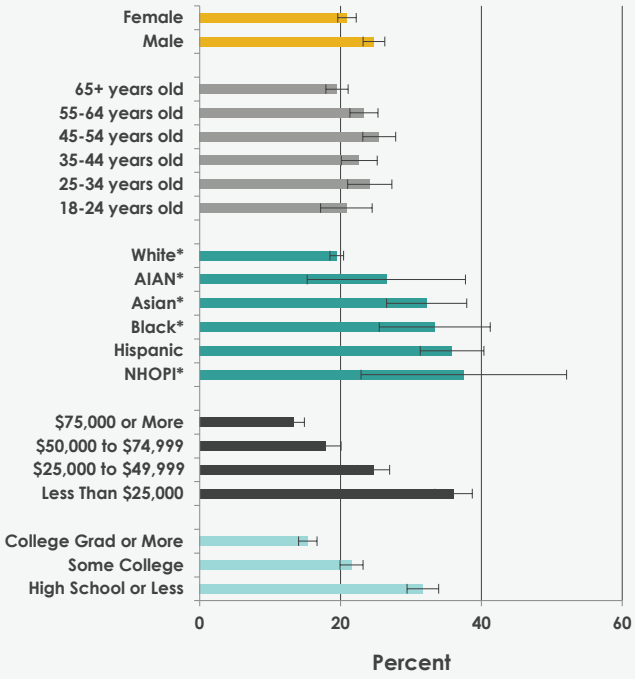
NR: Not reported if RSE ≥ 30% or to protect privacy

#Relative standard error (RSE) is between 25% and 29%

Disparities

- In the 2012 BRFSS, self-reported inadequate social support was higher in males compared with females.
- There were no major difference based upon age group.
- NHOPI, Hispanic, black, and Asian adults reported higher prevalence of inadequate social support compared to white adults.
- The prevalence of inadequate social support increased as levels of education and income decreased.

Self-reported Inadequate Social Support Washington State, BRFSS, 2012



**Non-Hispanic* (all races) | *AIAN:* American Indian/Alaska Native | *NHOPI:* Native Hawaiian/Other Pacific Islander

How is Washington addressing inadequate social support?

The Health Care Authority, Department of Social and Health Services, DOH and partners including Managed Care Organizations, Accountable Communities of Health, local health, healthcare providers and others are working together to transform healthcare by integrating physical health services, mental health services and substance use services in the Medicaid (Apple Health) program.

Washington is integrating physical and behavioral health services by developing a single system that offers an integrated network of services within the Medicaid (Apple Health) program. The system will enable improved coordinated care for patients, and less fragmented access to needed services. Care will be managed through a single accountable insurance plan for the client.

See also Mental Health

Initiatives such as the Practice Transformation Support Hub *and* Pediatric Transforming Clinical Practice Initiative (pTCPi) are helping clinicians better use electronic health records to identify populations of interest, track performance improvements, put team-based care into place, and make linkages to community-based services.

The Medicaid 1115 waiver will make regional investments in integrated clinical models. Resources will support staffing and workforce development to better provide behavioral health services, development of information technology infrastructure to facilitate sharing across provider teams and increased availability of technology solutions, such as telemedicine.

Accountable Communities of Health are required to work on Medicaid Demonstration Projects related to integration of physical and behavioral health.

Technical Notes

Confidence Intervals: Definition and examples are described in Appendix C

Race and Ethnicity: Classification described in Appendix C

Relative Standard Error: Definition and how it was used is described in Appendix C

Summary of Key Issues

The data presented on these 27 key issues for Washington State yield important patterns and trends. The list of key issues selected by stakeholders reveals an emphasis on behavioral health and a priority placed on 'upstream' and root causes that influence health. In addition to several leading causes of morbidity and mortality, including coronary heart disease, diabetes, suicide and asthma, stakeholders seemed to emphasize substance use (tobacco and vapor product use, excess alcohol use, marijuana use and drug overdoses) and mental health needs (self-reported poor mental health and access to behavioral providers). They further identified important social determinants as priorities, notably housing and homelessness, nutrition and limited access to healthy foods, poverty, and inadequate social support.

The data show that with few exceptions, Washington State has similar or better health outcomes, similar or lower risk factor prevalence, and similar or higher protective factor prevalence compared to the United States. Notable exceptions to this include Washington's higher breast cancer incidence, higher suicide rate, lower percent of population reporting a personal healthcare provider, and higher percent of women reporting lifetime sexual violence. Further investigation of these particular health issues to understand why Washington appears to fare worse than the country may shed light on opportunities for prevention, policy, or system change.

Looking across these key issues uncovers important health disparities in our state. Across the majority of indicators, American Indians and Alaska Natives are reported to experience worse health than other racial and ethnic groups. Blacks and Hispanics also experience poorer health compared to whites across several indicators. The data also show Native Hawaiians and Pacific Islanders frequently have elevated rates, but they also have large variability in their rates, likely due to small sample sizes, so we cannot conclude these are true differences. Across these key issues, we also observe a gradient across education and income, where those with the lowest education or lowest income experience worse health than those with more education or income.

Lastly, a number of patterns are revealed from exploring the data by county. Some of our smaller counties like Columbia, Ferry, Garfield and Wahkiakum frequently do not have enough data to reliably report, even after aggregating several years' of data, hampering assessment in these counties. Among counties with data, Grays Harbor, Lewis and Yakima counties frequently have poorer health compared to the state, while King County experiences some of the most favorable health outcomes and behaviors. The range in values across counties can be quite large. But so, too, can the range within a single county, although we often lack adequate data to explore this. For example, a recent study reported life expectancy across neighborhoods in King County varied by 18 years for men, further underscoring the need to explore differences within counties.[1]

This profile provides a high-level overview of important health issues in Washington State and efforts underway to address them. The patterns described above highlight the need to work together as an aligned health system engaging the full complement of multi-sector partners to address the root causes of our most pressing health issues.

To make real progress, we must focus on a more defined list of issues, and support and build on existing efforts. To that end, we reviewed the top issues across all stakeholder groups and combined some of the issues to identify a more focused list of priority health issues for the state. These priority health issues are:

- Child immunization
- Diabetes
- Drug and alcohol abuse
- Healthcare access
- Healthy weight with a focus on healthy eating and active living
- Housing and homelessness
- Mental health
- Tobacco use

These priority health issues lay the foundation for our next *State Health Improvement Plan*. We hope to establish a framework for reducing health inequities, address these priorities with partners from multiple sectors, and work with impacted communities to identify solutions. In the next section, we outline statewide assets and resources we can mobilize in this effort. By addressing these priority issues, we ultimately seek to reduce the vast differences in life expectancy across neighborhoods, and by race and ethnicity.

Statewide Assets & Resources

As noted earlier, our population faces serious challenges—our population is aging, climate change is predicted to present new threats to our health, and we experience a number of health disparities. We are better able to address these challenges when we can marshal the strengths and assets that exist across the state to facilitate and align the development of state and local community solutions to these health challenges. This chapter provides a high-level assessment of the state's strengths and assets that support improvements in our population's health. This includes assets within the public health system, the healthcare system, state, tribal, and local governments, community partners, and advocacy organizations.

Using Public Health as Chief Health Strategist model, we begin this chapter with a discussion of the resources and assets in the governmental public health system. This system includes state, tribal, and local entities. In its role as the Chief Health Strategist, the governmental public health system supports the collection and sharing of data, convenes community partners around key health issues, and leads or assists in policy development. As the Chief Health Strategist, the governmental public health system must work with many disparate partners to improve population health. Health happens beyond the public health and healthcare delivery systems, so we have organized this chapter to reflect the breadth of work that impacts health. Like earlier chapters, this section is framed by the determinants of health with sections on:

- Governmental public health
- Healthcare access, clinical and preventive care
- Physical and built environments
- Social determinants

We highlight the work of key statewide partners in healthcare but also in areas ranging from education to housing, employment and transportation. These issues have as great an influence on health outcomes as the traditional public health and healthcare sectors. This is not an exhaustive list of partners, rather it is a synthesis of partners that DOH frequently convenes and collaborates with as we work to improve population health. Highlighted programs represent work of these partners that relates to health and is broader than current collaborations with the Department of Health.

In addition to the overarching agencies, partners, and programs listed below, other partnerships and programs associated with each key health issue are described in those specific areas of the *State Health Assessment*. To find resources and assets related to suicide prevention, for example, one would look on page 90 for specific programs and partnerships working to address suicide in Washington State.

'Health cannot be bought at the supermarket. You have to invest in health. You have to get kids into schooling. You have to train health staff. You have to educate the population.'

— Hans Rosling

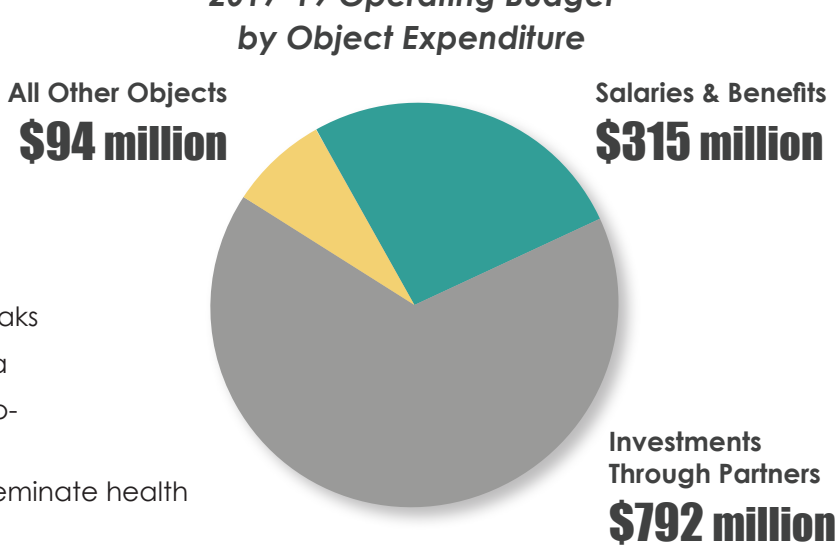
Governmental Public Health System

Governmental public health is unique in its direct obligation to all of Washington's residents. From ensuring safe drinking water, to tracking disease outbreaks, to regulating healthcare providers, we provide foundational services communities rely on every minute of every day.

Along with the state Department of Health, Washington's governmental public health system consists of the State Board of Health, 35 local health departments, and tribal governments and organizations.

Washington State Department of Health

The Washington State Department of Health responds to population health needs based on input from the Governor's office, the state legislature, the federal government, other state agencies, local health jurisdictions, tribes, communities and community partners.



DOH has about 1,800 employees who:

- Track communicable disease outbreaks
- Collect, assess and share health data
- Lead efforts on health policy development and implementation
- Develop health information and disseminate health messages
- Regulate drinking water, ensure food safety, and protect communities from other environmental health threats
- License healthcare providers and regulate facilities
- Prepare for and respond to emergencies and potential health disasters

Washington State Board of Health

The Washington State Board of Health (SBOH) helps to prevent disease and protect the health of all Washingtonians by developing rules and policy recommendations for a broad range of health issues. SBOH also helps coordinate the Governor's Interagency Council on Health Disparities and develops legislative health impact reviews. The Board strives to promote health equity and eliminate health disparities.

Local Public Health Organizations

Thirty-five local health jurisdictions (LHJs) across Washington carry out programs at the local level to promote health, prevent disease and build healthy communities. LHJs are local government agencies, often tied to county governments. They are independent from the state. The state Department of Health and the LHJs partner on health improvement planning, implementing federal grants and initiatives, and building foundational public health services across the state. LHJs partner with local community service and health organizations, hospital and health systems, nonprofits, and community members to influence population health within their community. The table below lists the size and resources for each LHJ.

Total Expenditures for Local Health Jurisdictions Washington State, 2016

LHJ	OFM 2016 Population Estimate	FTEs	Population per FTE	Total Expenditure	Expenditures per Capita
Adams	19,510	9	2,230	$692,042	35
Asotin	22,150	6	3,977	$552,922	25
Benton-Franklin	279,170	90	3,089	$9,156,804	33
Chelan-Douglas	116,630	37	3,152	$3,485,508	30
Clallam	73,410	28	2,594	$3,114,788	42
Clark	461,010	87	5,299	$11,146,479	24
Columbia	4,050	4	1,000	$378,096	93
Cowlitz	104,850	28	3,712	$2,912,131	28
Garfield	2,200	3	705	$250,307	114
Grant	94,610	28	3,335	$2,708,728	29
Grays Harbor	72,820	24	2,992	$2,686,069	37
Island	82,910	36	2,335	$3,861,518	47
Jefferson	31,090	33	934	$4,090,476	132
Kitsap	262,590	103	2,559	$12,929,476	49
Kittitas	43,710	18	2,442	$1,474,354	34
Klickitat	21,270	16	1,363	$1,499,901	71
Lewis	76,890	37	2,067	$4,949,308	64
Lincoln	10,640	6	1,935	$498,384	47
Mason	62,320	19	3,237	$2,081,026	33
NE Tri-County	65,090	21	3,119	$2,022,128	31
Okanogan	41,730	11	3,703	$1,041,036	25
Pacific	21,180	16	1,359	$731,231	35
San Juan	16,320	26	638	$3,788,889	232
Seattle-King	2,105,100	1,344	1,566	$212,422,248	101
Skagit	122,270	26	4,732	$4,123,462	34
Skamania	11,500	2	5,583	$1,573,376	137
Snohomish	772,860	129	6,000	$15,936,556	21
Spokane	492,530	218	2,261	$25,829,624	52
Tacoma-Pierce	844,490	261	3,231	$32,132,242	38
Thurston	272,690	77	3,532	$7,860,331	29
Wahkiakum	4,000	3	1,231	$313,229	78
Walla Walla	60,730	18	3,328	$1,340,304	22
Whatcom	212,540	75	2,821	$19,043,338	90
Whtiman	47,940	11	4,523	$835,598	17
Yakima	250,900	25	10,072	$5,209,951	21
Total	**7,183,700**	**2,875**	**n/a**	$402,671,859	**n/a**

Source: 2016 Budget Accounting and Reporting System (BARS) Report

Tribes and Tribal Health Organizations

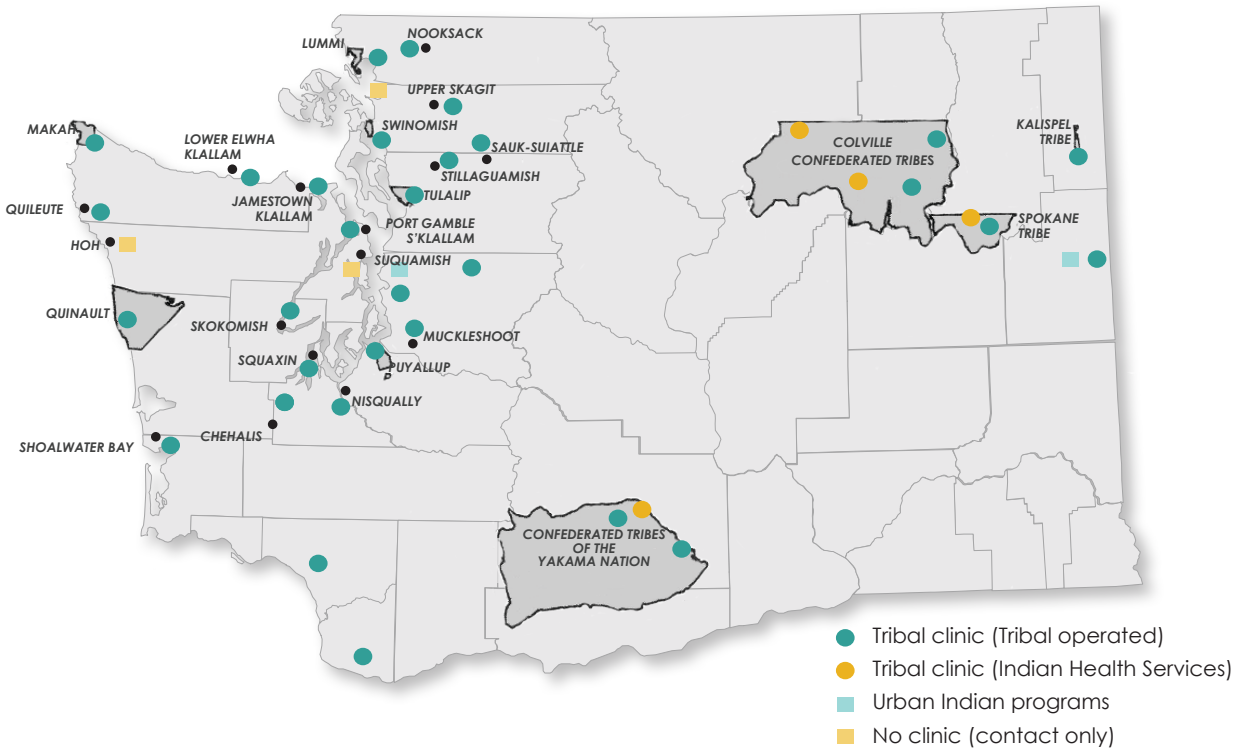
As independent sovereign nations, tribal governments also have their own unique governmental public health systems. On tribal lands, public health service delivery varies from nation to nation. In some cases, the tribe provides a wide variety of public health services to its people. In other situations, tribes partner with LHJs for the provision of public health. Other tribes rely on the federal Indian Health Service to address their public health needs. Work is underway to improve governmental public health linkages between the tribes, local health jurisdictions, and the state to assure core services are available for all Washington residents and that tribes are determining which of these services are important in their communities. This map displays the locations of tribal lands and tribal health clinics throughout Washington.

Beyond the 29 federally recognized tribes in Washington, the American Indian Health Commission (AIHC), the Northwest Portland Area Indian Health Board (NPAIHB), and the Urban Indian Health Institute (UIHI) are important parts of tribal public health infrastructure. The NPAIHB and the UIHI are two of the 12 Tribal Epidemiology Centers in the country and are deemed Tribal Public Health Authorities, providing key surveillance, assessment, and public health research for and with the tribes and urban Indian health programs. AIHC and NPAIHB are unique in that all tribal governments in Washington appoint delegates to represent their nations on these boards, and health issues are prioritized and driven by the tribes across the state. Two additional urban Indian health organizations, Seattle Indian Health Board and the NATIVE Project of Spokane, are large agencies that serve all American Indians and Alaska Natives (AIANs) in their catchment areas.

Washington State Office of Financial Management

The Washington State Office of Financial Management (OFM), while not technically part of governmental public health, produces data integral to public health work. These data include population and demographic data, educational research data, healthcare access, utilization and capacity data, and criminal justice, labor force and economic data.

Washington State
Federally Recognized Tribes

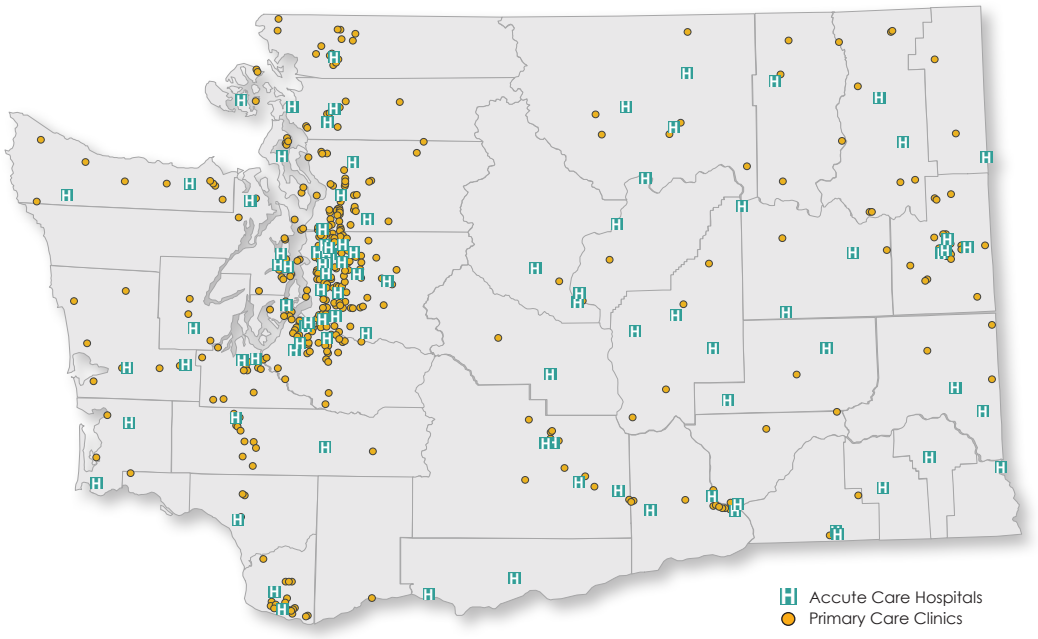


Healthcare Access, Clinical, and Preventive Care

The assets and resources highlighted below make up the infrastructure for providing healthcare in Washington, address access to healthcare by regulating and providing health insurance, and promote healthcare quality.

In Washington, the majority of our healthcare delivery system is located in urban areas along the I-5 corridor and in Spokane on the Idaho border. The map below shows the 103 acute care hospitals and 1,419 primary care clinics across Washington. Among these, the large rural areas of the state are served by 39 critical access hospitals and more than 110 Rural Health Clinics. DOH licensed approximately 430,000 health practitioners in 2017 from a variety of disciplines including physicians, nurses, dentists, pharmacists, emergency medical technicians, mental health counselors, massage therapists and many more health professionals.

Washington State
Acute Care Hospitals and Primary Care Clinics, 2017



The passage of the Affordable Care Act (ACA) led to several statewide initiatives to improve healthcare. In 2014, Washington received a 5-year State Innovation Model grant from the Centers for Medicaid and Medicare. The grant seeks to achieve better quality of care, lower costs, and improved health for the population of Washington. Washington also expanded Medicaid coverage, created Accountable Communities of Health (ACHs), built a state Healthcare Exchange, improved data systems, and is currently integrating physical and behavioral healthcare. The transformation initiative, called Healthier Washington, uses policy and regulatory levers to improve population health and build healthier communities through regional collaborations, and to improve healthcare services by promoting quality over quantity.

Washington State Health Care Authority

The Washington State Health Care Authority (HCA) administers both the Medicaid program and the Public Employees Benefit Board (PEBB). Under the Affordable Care Act, HCA has implemented Medicaid expansion in Washington, and leads Washington's health system transformation initiative, *Healthier Washington*, described above.

Washington State Office of the Insurance Commissioner

The Washington State Office of the Insurance Commissioner (OIC) regulates and ensures consumer protection for all insurance products in Washington State, including private health insurance.

Washington Health Benefit Exchange

The Washington Health Benefit Exchange manages a marketplace where residents of Washington are able to obtain health insurance (both Medicaid and private options). More than 225,000 people in Washington used the exchange to enroll in health insurance for 2017.

Access to healthcare services that allow individuals to prevent disease and receive treatment when they become ill is critical to the health of Washingtonians. DOH partners with a wide variety of agencies and organizations to improve the healthcare system, and increase access to critical health services including acute care, emergency medical, trauma and obstetric services across the state. These include the agencies listed above as well as DOH's 28 boards, commissions and advisory committees.

Other partners include, but are not limited to:

- Washington State Hospital Association (WSHA)
- Washington State Medical Association (WSMA)
- Washington State Nursing Association (WSNA)
- VA Puget Sound Health Care System
- Washington State Department of Social and Health Services (DSHS)
- The Bree Collaborative
- Foundation for Healthcare Quality
- Washington State Perinatal Quality Collaborative
- Washington Association of Community and Migrant Health Centers
- Washington Rural Health Collaborative
- Northwest Rural Health Network
- Rural Health Clinic Association of Washington
- Washington Rural Health Association
- Home Care Association of Washington
- Washington State Hospice and Palliative Care Organization
- Washington Health Alliance
- Washington Healthcare Access Alliance
- Volunteer and Retired Providers Program
- Healthcare professional organizations
- Patient advocacy organizations

Washington also has a number of coalitions made up of hospitals, clinics, home care providers, local government, emergency medical services and trauma care councils, tribes and others that work together to help plan a coordinated regional healthcare response for emergencies. The coalitions' work includes helping healthcare systems to create, exercise and update their response plans, and participating in emergency response training.

Physical and Built Environment

Several state agencies work to protect our state's natural resources and work to ensure the built environment – the roads, housing, workplaces, city planning and parks – and their interactions with our natural environment promote clean air and water and support health and well-being. Key statewide partners are described below:

Washington State Department of Ecology

The Washington State Department of Ecology is Washington's environmental protection agency. Their mission is to protect, preserve and enhance Washington's land, air and water for current and future generations. They were founded in 1970 as the first agency in the nation dedicated to environmental protection. Nearly 70 percent of their budget is passed through to local communities to pay for projects that benefit the environment. Major health-related improvements this agency works on include:

- Water quality assessments
- Wastewater treatment
- Reducing toxic chemicals and hazardous waste
- Protecting clean air and addressing climate change
- Cleaning up toxic spills and nuclear waste

Washington State Department of Agriculture

The Washington State Department of Agriculture oversees everything related to agricultural production in Washington with programs related to animal and livestock treatment and health, inspection of commodities produced in Washington, food safety, and plant protection. Health-related issues this agency addresses include:

- Food safety
- Pesticide regulation

Washington State Department of Labor and Industries

The Washington State Department of Labor and Industries is dedicated to the safety, health and security of Washington's 2.5 million workers. They help employers meet safety and health standards and inspect workplaces when alerted to hazards. As administrators of the state's workers' compensation system, they are similar to a large insurance company, providing medical and limited wage-replacement coverage to workers who suffer job-related injuries and illness. Rules and enforcement programs also help ensure workers are paid what they are owed, that children's and teens' work hours are limited, and that consumers are protected from unsound building practices. Labor and Industries also houses the Safety and Health Assessment & Research for Prevention program which conducts occupational health surveillance and research.

Washington State Department of Transportation

The Washington State Department of Transportation leads statewide and local efforts developing roads, public transit, sidewalks, walking paths, bike lanes and alternative transportation. Major health-related improvements this agency works on include:

- Pedestrian and bicycle program
- Safe Routes to School program
- Complete Streets
- Improving public transportation
- Rural public transportation
- Vanpool investments

Washington Traffic Safety Commission

The Washington Traffic Safety Commission is our state's designated highway safety office. They share a vision with numerous other state and local public agencies to reduce traffic fatalities and serious injuries to zero by 2030. They lead statewide efforts and build partnerships to save lives and prevent injuries on our roadways for the health, safety, and benefit of our communities. Major health-related improvements this agency works on include:

- Impaired and distracted driving
- Speed
- Young drivers
- Seat belts & occupant protection

In addition, DOH partners with a number of research centers, community-based organizations and coalitions who also work to promote the health and safety of our natural and built environments.

Social Determinants

Community Development and Economic Factors

Economic factors such as economic stability, employment rates, incomes, the cost of living and community resources and investments significantly influence the health of individuals and communities. Lack of economic stability and resources has immediate impacts on individuals' ability to access adequate food, shelter, and healthcare. Impoverished communities are less likely to be able to provide support or resources for their members, and may experience more crime and increasing community instability.[2] Beyond these tangible impacts, living in extreme poverty has been shown to increase toxic stress which can lead to negative health impacts and increase in chronic disease.[3] To improve economic stability across the state, we collaborate with partners who work to increase employment, incomes, community resources and investments in communities:

Washington State Department of Commerce

The Washington State Department of Commerce touches every aspect of community and economic development: planning, infrastructure, energy, public facilities, housing, public safety and crime victims, international trade, business services and more. They work with local governments, businesses and civic leaders throughout the state to strengthen communities so all residents may thrive and prosper. Major health-related improvements this agency works on include:

- Homelessness
- Affordable housing
- Strengthening rural communities
- Energy assistance
- Advocacy for crime victims

Washington State Employment Security

The Washington State Employment Security focuses on supporting people who are unemployed or looking for work. They work to close skills gaps of employees and employers, ensure that all workers find jobs, explore new apprenticeships and expand support for career-connected learning. Major health-related improvements this agency works on include:

- Unemployment benefits
- Finding employment
- Job training
- Paid family and medical leave
- Youth Service Corp

Education

Researchers have developed strong evidence supporting the link between education and long-term health outcomes. A lack of education is associated with poorer health, lower life expectancy and poverty.[4] Improving education is key to improving health for the next generation of Washingtonians. We work closely with partners to help ensure that all of our youngest Washingtonians are healthy and ready to learn when they reach school age, have access to an excellent education, and to improve educational attainment for all students. Our partners include:

Office of the Superintendent of Public Instruction

The Office of the Superintendent of Public Instruction (OSPI) oversees K-12 education in Washington. They support 1.1 million children in Washington to lead healthy lives, make healthy choices, graduate from high school, and be ready for career, college and life. OSPI works on a number of areas to support the healthy development of students.

- Child nutrition
- Health and fitness
- Sexual health
- Graduation a Team Effort (GATE)
- Building Bridges: Dropout Prevention, Intervention and Reengagement
- Healthy Youth Survey[5]
- Mental health

Department of Early Learning

The Department of Early Learning (DEL) offers programs and services that support healthy child development and school readiness for the approximately 89,000 children born in Washington each year. They focus on children from birth to 5 years. They help ensure high-quality, safe and healthy learning environments, offer comprehensive preschool education to vulnerable children, provide family support and information. They also oversee services for infants and toddlers with disabilities or developmental delays. Here are some of their health-related programs:

- Child care
- Disabilities or developmental delays
- Strengthening families
- Home visiting

Washington State Department of Children, Youth and Families

In July 2017, Governor Inslee signed HB 1661 creating the Washington State Department of Children, Youth and Families to restructure how the state serves at-risk children and youth with a goal of better outcomes across Washington. The agency will have a yearlong transition and will then offer services now provided by the Department of Social and Health Services and Department of Early Learning.

State Board of Community and Technical Colleges

The State Board of Community and Technical Colleges advocates, coordinates and directs Washington State's system of 34 public community and technical colleges. Each year, about 381,000 students train for the workforce, prepare to transfer to a university, gain basic math and English skills, or pursue continuing education.

Washington Student Achievement Council

The Washington Student Achievement Council provides strategic planning, oversight, advocacy, and programs to support increased student success and higher levels of education in Washington. They facilitate analysis and research to increase educational attainment and system development, provide college savings opportunities through the Guaranteed Education Tuition (GET) program, and prepare underrepresented middle and high school students for postsecondary education through early outreach and success programs such as College Bound and GEAR UP. They connect and align the work of educational programs, schools, and institutions to support student transitions from secondary and postsecondary education to the workforce.

Washington State Public Universities

Washington State is home to six publicly funded 4-year universities, including: University of Washington, Washington State University, Western Washington University, Eastern Washington University, Central Washington University and the Evergreen State College. These universities have a number of programs and schools which educate the next generation of healthcare providers, public health and social service workers, policy makers, engineers, and other students who will go on to work on health-related programs. They also house faculty research grants and dedicated research centers across a variety of disciplines that impact health, healthcare, social welfare and the physical and built environment.

Social Services

Many social services are critical to providing supports that individuals and families need to live healthy lives. These include food and cash assistance, children's and youth services, adult care, mental health and addiction services, and disability support.

Washington State Department of Social and Health Services

The Washington State Department of Social and Health Services (DSHS) administers many of these social and health service programs in Washington State, and partners with several other state agencies. Some specific services include:

- Basic Food program
- Temporary Aid to Needy Families (TANF)
- Child Welfare
- Long-Term Care Services
- Children's Behavioral Health
- Substance Use Treatment Services
- Disability Support
- Juvenile Rehabilitation

Social and Community Context

Social and community context encompasses a broad array of influences on healthy communities. Healthy communities are those that have: a sense of identity, a sense of social cohesion, and a sense of belonging. Increasingly, researchers are exploring whether and how these community characteristics improve health and wellbeing.[6]

A number of philanthropic, nonprofit, education-based, religious, commerce-connected partnerships work to enhance the health and connectedness of communities. DOH helps support many of these partnerships with prevention and education grants that these groups and local communities braid together to support local initiatives. Washington has a number of statewide collaborations that work to build healthier communities, including but not limited to:

- Children's Alliance
- Foundation for Healthy Generations
- Washington State Community Action Partnership
- Strengthening Communities
- Thrive Washington
- Washington Nonprofit Institute
- United Ways of the Pacific Northwest
- Washington 2-1-1
- Within Reach

Washington also has a number of large philanthropies that support multiple projects to address health issues, health equity, and social welfare, and to enhance social and community cohesion. These include the Bill and Melinda Gates Foundation, Thomas V. Giddens Jr. Foundation, the Ballmer Group, Marguerite Casey Foundation, Annie E. Casey Foundation, the Bezos Family Foundation, Group Health Foundation, and others. Philanthropy Northwest is a powerful regional network for philanthropists of all types who are committed to Alaska, Idaho, Montana, Oregon, Washington and Wyoming. They promote, facilitate and drive collaborative action by community investors to build resilient, equitable and inclusive communities.

Summary

Washington State has a large number of resources and assets to improve health; however, they are spread across a number of groups and organizations. This creates an environment that is very conducive to innovation, but makes it challenging to sustain, spread, and share resources and knowledge statewide. DOH's Chief Health Strategist role coordinates across partners of this decentralized system.

While our state has many resources and partnerships, we also have disparities in access to services and resources. Most healthcare and preventive services are aligned with the larger urban areas of the state, such as along the I-5 corridor and in Spokane. Some neighborhoods have little access to fresh healthy foods or safe places to exercise. Neighborhoods, especially marginalized neighborhoods, are impacted by environmental pollutants left from military and industrial activities. Much of our state economy is agricultural, both on land and in the ocean. Climate change poses serious threats to our economy, agriculture, and infrastructure.

As stewards of population health, DOH will continue to provide foundational public health services to safeguard the public's health, provide data to communities and partners to support them in developing solutions to local health issues, and convene partners to address systemic issues and policies needed to improve the overall health of Washington State.

Gaps & Opportunities

Throughout the development of this *State Health Assessment*, stakeholders identified both needs and opportunities as we collectively move forward to address the most pressing health issues in our state. What follows is a brief description of the issues raised for us to keep in mind as we complete the *State Health Assessment* and transition to work on the state health improvement plan.

Data Gaps and Opportunities

In developing indicators to explore for the *State Health Assessment* as well as during our stakeholder workshops, people asked about a number of health conditions and risk behaviors for which we do not currently have data. These include important health conditions that don't necessarily result in hospitalization, such as Alzheimer's disease and dementia, mental health symptoms and disorders, substance use disorders, and neurodegenerative and autoimmune diseases. Our current statewide data sources depend largely on death and in-patient hospitalization data, which influences the conversation around critical health topics. We are developing a system with emergency department and sentinel outpatient data, which will broaden the perspective, but remain limited in the depth of information we have on health behaviors and healthcare access. In addition, access to information on the Washington population served by Medicaid and how their health status and behaviors compare to all Washingtonians has not been well integrated into our reporting systems and is not reported here. One goal of our State Innovations Model grant has been on building alignment across health data systems, and we have begun working more closely with our peers in other state agencies to share strategies and definitions as we all work toward an overarching view of health in Washington.

Stakeholders also highlighted gaps in health data across the life span. While we have excellent information on newborns, we have little data on children under 11, relying predominantly on national surveys that can provide state-level estimates at best. As we continue to work more closely with our peers in early learning and education, the importance of information on early child development is clear. We need data on younger children in order to assess development and appropriate linkage to health, education and preventive services, as well as to evaluate interventions aimed at promoting healthy child and youth development. In addition, for issues such as child abuse and neglect, we lack data that cover the entire Washington population.

Most of our data are quantitative, relying on administrative data, surveys, and disease surveillance systems. These data are critical for describing the health of Washingtonians but are much richer when combined with qualitative data. The quantitative data answer how much of an issue we have and who is affected, but qualitative data can address why certain groups are more impacted, how people access services, and what barriers people face. We do not currently have mechanisms for integrating qualitative information into our assessment in a holistic way.

The granularity of data also remains challenging. We report on data across six racial and ethnic categories; however, our stakeholders are interested in greater breakdowns of this data as each category comprises several populations with differing cultures, traditions, identities and health needs. In Washington, we group all Asian populations together, but we have several sizable Asian subpopulations, including Chinese, Filipinos, Asian Indians, Vietnamese and Koreans. Many of our health data sources can and do collect this information, but population denominators do not exist below the state level, preventing calculation of accurate rates. Similarly, stakeholders are interested in tribal information, which is often not available. Data on other important groups at increased risk are also inconsistently collected. For example, we need more data on the Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) populations as well as the population with disabilities and chronic conditions. And these data are needed not just at the state or county level, but at the census tract level to allow for evaluation of targeted health strategies.

We also lack data and valid and reliable measures on several topics important to communities and coalition groups. Issues such as Adverse Childhood Experiences are not commonly collected

and reported from health encounter data. Nor are data on resiliency, social support, family and school connectedness, self-determination, or trust included. As we become more dependent on electronic health records, this shortfall may become more pronounced and we need to determine ways to gather this information.

Integrating data across multiple levels of the social ecological model remains a struggle for us. Our tendency is to resort to individual level indicators, but as we acknowledge and develop our understanding of the influences of the physical and built environment and social determinants on health, we need to develop frameworks that incorporate measures not only of individual health and behaviors, but also measures of family, community and whole society assets and well-being. Such measures can help us monitor needs and evaluate health promoting interventions at these levels.

Finally, we need to determine how to integrate important health concerns from our historical medical model with measures and indicators advanced by communities. The Swinomish Tribe has developed health indicators reflective of their history and cultural values and vital to their community and sense of well-being.[7] These indicators do assess health on several levels—individual, family and community. This is critical work that we can envision being repeated among other tribes and communities in Washington. Integrating these indicators and perspectives into a picture of health of all Washingtonians remains challenging. We need to do more work in this area both to elevate local concerns, as well as to better integrate state and federal resources available to address local concerns.

Process Gaps and Opportunities

In addition to important data gaps and opportunities, conducting this assessment has also brought to light process gaps and opportunities. With the renewed emphasis on better aligning public health and primary care to work toward the triple aim of better health, better care and lower cost, the role of public health as Chief Health Strategist and the pace of change in healthcare, the importance of more timely data cannot be overestimated. Increasingly, we feel the need for a state health assessment that is continuous, with up-to-the-minute data reflective of interventions in the field, rather than a static report which may be out of date by the time it is complete. We seek an assessment that can better leverage in an ongoing way the important work conducted for community needs assessments, community health needs assessments, tribal health assessments and issue-specific assessments to identify gaps across the state and better align our interventions.

To better serve these assessments as well as better integrate their learnings, we need to develop systems that can better provide data for their use and better capture ongoing input and feedback, regarding important indicators, concerns, strategies, interventions, successes and shortfalls. Currently, we have some opportunities to make progress in developing these desired systems. The Office of Financial Management is overseeing the development of the All Payer Claims Database to promote healthcare price transparency. Healthier Washington with its focus on healthcare transformation is working to better integrate public health and primary care data systems for decision support, care coordination and health surveillance. In addition, DOH is working on better integration of health surveillance systems to streamline the data collection, data preparation, data sharing and data visualization process to more efficiently use resources and better support the data needs of our programs and stakeholders. We are also beginning to partner with the Northwest Center for Public Health Practice at the University of Washington, which recently received a grant focused on identifying, gathering and visualizing data to more effectively address rural health disparities in Washington, Idaho and Oregon.

As we transition toward work on our state health improvement plan, these partnerships as well as the many partnerships highlighted throughout this document will be critical in addressing these data and process gaps. Addressing the data and process gaps are a vital part of moving ahead in addressing the priority health issues identified through this assessment, and working across all of our systems on the social determinants of health and root causes in order to address longstanding inequities and improve the health of Washingtonians.

Conclusions & Next Steps

This assessment highlights the population changes, changing environment, and important contexts for understanding the health of Washingtonians in the 21st century. While as a whole Washington experiences better health than the country, this picture hides disturbing disparities in life expectancy. Together with our stakeholders, we have identified priority health issues for our focus in order to address these disparities, including:

- Child immunization
- Diabetes
- Drug and alcohol abuse
- Healthcare access
- Healthy weight with a focus on healthy eating and active living
- Housing and homelessness
- Mental health
- Tobacco use

To make progress in addressing these issues and the longstanding disparities in health will involve committed leadership. Our state values collaboration and partnerships are numerous, but marshalling our collective efforts and resources to truly make a difference will require us to develop a shared vision and framework to move forward together as one Washington. Our hope is that as we transition to work on the state health improvement plan, we will be developing that framework on which to align existing efforts, work together to sustain what works, and develop approaches and strategies to address newly identified needs and gaps. That framework will also need to help us transition to a 21st century infrastructure to support this work, including more timely, flexible and improved data systems and tools to help us better track efforts and progress across partners, to share learning and resources, and be more strategic in our efforts.

Work on the state health improvement plan has already begun with identifying existing statewide initiatives and plans focused on our priority health issues and the social determinants underlying them. Our next step is to map these efforts across partners by their focus and reach to set the stage for more detailed planning conversations. We look forward to working with our many existing cross-agency state, local and tribal workgroups to develop a plan that reflects all of the work being done and identifies where as a state we will focus on addressing gaps.

We invite you to join us!

Endnotes

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[6]Chuang YC, Chuang KY, Yang TH. Social cohesion matters in health. *International Journal for Equity in Health*, 2013; 12:87

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Appendices

Appendix A: Health Indicators

The following table includes the indicators considered in the development of the *State Health Assessment*. Data are organized into a background section and into five domains: health outcomes, health behaviors, healthcare access and preventive care, physical and built environment, and social determinants. The table includes population estimates for Washington State, the United States, and a comparison between the two for the most recent data available as of the Spring of 2016 when stakeholder engagement activities occurred. Data years available were dependent on the data source and ranged from 2008 to 2015 (with most being 2013 and 2014). Additional information is available upon request. Data for some indicators were not available at time of stakeholder meetings or in some instances indicators were suggested by stakeholders.

🔖 identifies indicators that were selected as key issues and for which data sections were completed. Within the report, related indicators were combined into common sections (e.g., diabetes and prediabetes).

Health Topic	Indicators	WA Data (95% CI)	National Data	WA vs US
Context of Health	Population growth; age and gender composition, race/ethnicity, education level, income distribution, unemployment, wealth	-	-	
Mortality	Life expectancy at birth	80.4 years	78.8 years	better
Mortality	Leading causes of death	-	-	
Hospitalization	Leading causes of hospitalization	-	-	
Hospitalization	Age-adjusted hospitalization rate per 100,000	8,452.3 (8,430.8-8,473.9)	N/A	
🔖 **Infant Mortality**	Infant death rate per 1,000 live births	4.5 (4.1-5.0)	5.8	better
🔖 **Self Reported Mental Health**	Age-adjusted percent of adults who report 14+ days poor mental health in past month	11.0 (10.1-12.0)	11.5	
Self Reported Health Status	Age-adjusted percent with fair or poor self reported general health	14.6 (13.6-15.7)	15.7	better

Health Outcomes

Health Topic	Indicators	WA Data (95% CI)	National Data	WA vs US
Coronary Heart Disease	Age-adjusted coronary heart disease death rate per 100,000	86	99	better
Stroke	Age-adjusted stroke death rate per 100,000	34.7 (33.4-36.1)	35.6	better
Hypertension	Age-adjusted percent of adults who have ever been told by a doctor they had high blood pressure	29.1 (28.0-30.1)	30.7	better
Diabetes	Age-adjusted percent of adults who have ever been told by a doctor they had diabetes	8.3 (7.7-9.0)	9.7	better
Prediabetes	Age-adjusted percent of adults without diabetes who have ever been told they have prediabetes	8.2 (7.5, 8.9)	8.2	
Obesity	Age-adjusted percent of adults with self reported BMI ≥30	27.1 (25.8-28.4)	28.9	better
Asthma	Age-adjusted % of adults who have ever been told by a doctor they had asthma and still have asthma	9.2 (8.4-10.1)	8.9	
Lung Cancer	Age-adjusted lung cancer incidence rate per 100,000	61.6 (60.7 - 62.4)	63.7	better
Breast Cancer	Female age-adjusted breast cancer incidence rate per 100,000	135.0 (133.3 - 136.7)	123	worse
Colon Cancer	Age-adjusted colorectal cancer incidence rate per 100,000	38.7 (38.1 - 39.4)	41.9	better
Suicide	Age-adjusted suicide death rate per 100,000	15.4 (14.5-16.3)	12.9	worse

Health Topic	Indicators	WA Data (95% CI)	National Data	WA vs US
Drug Overdose Deaths	Age-adjusted drug overdose death rate per 100,000	13.3 (12.4-14.1)	14.6	better
Motor Vehicle Crash Related Deaths	Age-adjusted motor vehicle traffic death rate per 100,000	7.6 (6.9-8.3)	10.3	better
Falls	Age-adjusted fall hospitalization rate among those 65 years old and older per 100,000	1,619.5 (1,593.4-1,645.9)	N/A	
Low Birth Weight	% of live singleton births with a birth weight less than 2,500 grams	6.4 (6.3-6.6)	8	better
Unintended Pregnancy	% of pregnancies that were unintended	41 (38-45)	N/A	
Child Abuse	Rate of child protective services reported children who received an investigation per 1,000	26.6	43.7	worse
HIV	HIV incidence rate per 100,000	6.3 (5.9-7.1)	12.5	better
Hepatitis	Hepatitis C (chronic) incidence rate per 100,000	94.6 (92.3-96.9)	N/A	
Tuberculosis	Tuberculosis incidence rate per 100,000	2.8 (2.4-3.2)	3	
Sexually Transmitted Infections	Chlamydia, gonorrhea, and syphilis incidence rates per 100,000	Chlamydia - 376.7 (372.1-381.2) Gonorrhea - 88.1 (85.9-90.3) Syphilis - 4.8 (4.3-5.4)	Chlamydia - 456.1 Gonorrhea - 110.7 Syphilis - 6.3	better
Oral Health	Dental caries in 3rd graders	57.9 (54.0-61.7)	N/A	
Pertussis	Pertussis incidence rate per 100,000	8.6 (7.9-9.3)	10.4	

Health Behaviors

Health Topic	Indicators	WA Data (95% CI)	National Data	WA vs US
Alcohol/ Excessive Drinking	Age-adjusted % of adults who binge drank (5+ drinks in one sitting for men, 4+ for women) in the past month	17.7 (16.6 - 18.9)	16.7	worse
Tobacco	Age-adjusted % of adults who are current smokers (smoked at least 100 cigarettes in life and currently smokes every day or some days)	15.5 (14.4-16.7)	17.7	better
Physical Activity	Age-adjusted % of adults that met aerobic physical activity guidelines	56.3 (55.0-57.6)	50.2	better
Safe Storage of Firearms	Percent of adults with firearm present at home who keep it locked and unloaded	35.5 (33.4 - 37.8)	N/A	N/A
Nutrition	Age-adjusted % of adults who consumed < 1 servings of fruits per day	36.0 (34.7-37.4)	37.0	
Nutrition	Age-adjusted % adults who consumed < 1 servings of vegetables per day	18.2 (17.2-19.3)	22.4	better
Marijuana	Age-adjusted % of adults who have used marijuana in the past 30 days	10.6 (9.5-11.7)	N/A	N/A

Health Topic	Indicators	WA Data (95% CI)	National Data	WA vs US
E-Cigarette Use	Age-adjusted % of adults who have used e-cigarettes in the past 30 days	5.8 (5.1 - 6.6)	N/A	N/A
Illicit Drug Use	% of adults (18+) who have used cocaine in past year	2.0 (1.5-2.8)	1.8	
Illicit Drug Use	% of adults (18+) with non-medical use of pain relievers in past year	4.4 (3.5-5.4)	4.0	
Immunizations	% of children 19-35 months who received recommended vaccines for 4:3:1:4:3:1:4	67.4 (59.3-75.5)	71.6	worse
Immunizations	% of adults 65 years old and older who received flu vaccination	59.2 (57.1-61.3)	59.6	
Immunizations	% of adults 65 years old and older who received pneumonia vaccination	73.4 (71.4-75.5)	69.3	better

Healthcare Access and Preventive Care

Health Topic	Indicators	WA Data (95% CI)	National Data	WA vs US
Healthcare Access	% of adults 18-64 years old that have health insurance	87 (85.8-88.2)	84	better
Healthcare Access	Age-adjusted % of adults that have a personal health care provider	73.4 (71.5-75.4)	76.1	worse
Mammography Screening	% of women 50-74 years old that had mammogram in last 2 years	77.5 (75.4-79.4)	78.5	
Colorectal Screening	% of those 50-75 years old that had recommended colorectal cancer screening	69.7 (67.9-71.4)	66.1	better
Prenatal Care	% of women who receive first trimester prenatal care	73.0 (72.7-73.3)	74.1	worse
Developmental Screening	% of children 10 months to 5 years with standardized developmental screening	29.9 (24.0 - 35.9)	30.8	
Healthcare Access	% of persons with chemical dependence who have access to treatment services	-	-	N/A
Healthcare Access	Access to behavioral health provider	-	-	
Multiple Chronic Conditions Among Older Adults	% of Medicare enrollees 65 years old or older with 4 or more chronic conditions	28	35.8	better

Physical and Built Environments

Health Topic	Indicators	WA Data (95% CI)	National Data	WA vs US
Outdoor Air Quality	Percent of days that air pollution from particulate matter less than 2.5 microns in diameter (PM2.5) did not meet EPA standard	county only	N/A	N/A
Indoor Air Quality	Percent of 10th graders reporting second-hand smoke exposure	28.0 (25.2, 30.8)	N/A	N/A
Shellfish	Percent of commercial shellfish areas approved for harvesting	78%	N/A	N/A
Drinking Water Quality	Percent of population on Group A water systems	85%	N/A	N/A
Drinking Water Quality	Percent of population with fluoridated drinking water system	TBD	N/A	N/A
Access to Parks	% living within a half a mile of a park	49	39	better
Limited Access to Healthy Foods	% low income and not living close to a store	TBD	N/A	
Living Near a Highway	% living within 150 meters of a highway	2.9	3.7	better
Environmental Lead Exposure	Lead screening rate in children < 6 years	-	-	
School/ Childcare Environment	Child care programs meeting best practice standards for healthy eating, physical activity	-	-	N/A
Climate Change	Number of extremely hot days	4	N/A	N/A

Social Determinants

Health Topic	Indicators	WA Data (95% CI)	National Data	WA vs US
Socioecnomic Position	% 25 years old or older with college education or more	32.3 (32.1 - 32.5)	29.3	better
Violent Crime	Violent crime offenses per 100,000	225.7	365.5	better
Domestic Violence	Percent of women who have experienced sexual violence in their lifetime	42.6 (34.7 - 50.9)	35.6 (34.1-37.1)	worse
Long Commute - Driving Alone	% of commuters who drive alone more than 30 minutes each day to work	33.3 (32.6 - 33.8)	33.8	
Severe Housing Problems	Housing lacks kitchen or plumbing, severely over-crowded, or cost exceeds 50% of income	18.1	19.4	better
Inadequate Social Support	% of adults reporting inade-quate social support	22.7	19.6	worse
Children in Poverty	% of persons < 18 below poverty	18.1 (17.7 - 18.5)	21.9	better
Linguistic Isolation	Population 5+ who speaks English less than very well	7.8 (7.7 - 7.9)	8.6	better
Transportation	Percent of income spent by median income family on transportation	18.8	N/A	N/A
Severe Housing Problems	Homelessness	-	-	
Adverse Child Experiences	Adverse child experiences	-	-	

Appendix B: Comparison of State & Local Key Issues

During the development of the *State Health Assessment* (SHA), we reviewed local health jurisdiction (LHJ) key health issues and compared them to those in the SHA. The goals were to identify important issues missing in the SHA and to better understand the alignment between community and SHA identified issues.

Many of the 35 LHJs in Washington State conduct health assessments to better understand local health issues. These assessments provide valuable insight into the local population's health status and help direct available resources to address community health needs. Thirty-two LHJs completed Community Health Assessments (CHA, led by the LHJ), Community Health Needs Assessments (CHNA, in partnership with local hospitals), Community Health Improvement Plans (CHIP, with local community partner agencies or organizations), or summaries of community health based on the County Health Rankings.

Of the *State Health Assessment* key issues, 12 issues were shared by more than half of the LHJs.

Key issues shared by state and local assessments	# of LHJs
Obesity	31
Healthcare access (those with/without health insurance)	27
Tobacco	25
Alcohol/excessive drinking	24
Mental health	23
Diabetes	22
Oral health	18
Nutrition – vegetable consumption	18
Nutrition – fruit consumption	17
Prenatal care	17
Poverty	17
Suicide	17

In addition to the *State Health Assessment* key issues, many LHJs highlighted other key health issues. Of these additional issues, five were shared by 25% or more of the LHJs.

Issues identified in local assessments only	# of LHJs
Birth and abortion-related: teen birth rate, teen pregnancy, birth rate, births to smoking moms, and abortions	15
Provider to patient ratio (and shortage)	15
On-time graduation rate	11
Avoidable emergency department visits or preventable hospital stays	8
Could not afford to see usual source of care or personal doctor or did not see a doctor or receive needed care due to cost	8

There were also key issues identified for the *State Health Assessment* that were not identified in any of the LHJ assessments.

Issues identified in state assessment only
Fluoridated drinking water
Prediabetes
Safe storage of firearms

The complete list of local assessment reports is available on the DOH website. The list may assist state and local public health, Accountable Communities of Health, healthcare organizations, non-profit agencies, and community members to better understand community health and may promote collaboration on the key issues facing Washingtonians.

Appendix C: Data Sources & Technical Notes

Primary Data Sources

Brief descriptions of the major data systems used in this *State Health Assessment* follow. Additional information is available here.

- Behavioral Risk Factor Surveillance System
- Birth Certificate System
- Cancer Registry
- Census Population Counts and Intercensal and Postcensal Estimates
- Death Certificate System
- Healthy Youth Survey

Behavioral Risk Factor Surveillance System (BRFSS)

Purpose

BRFSS provides indicators of health-risk behavior, preventive practices, healthcare use and access, knowledge and attitudes about health-related behaviors and practices, and prevalence of selected diseases in Washington.

Coverage

BRFSS surveys adults ages 18 and older living in non-institutional settings in Washington.

- Since 2003, it has been offered in English and Spanish.
- From 1987–2010, BRFSS included adults living in households with landline telephones. In 2011, the survey began including a sample of cell phones. The proportion of surveys completed on cell phones has increased from 5% of calls in 2011 to 47% in 2016.
- In addition to the statewide sample, since 2003, BRFSS has oversampled small counties to allow reporting of BRFSS information by county.

Data Reporting

To maximize the ability to generalize from the sample to Washington State residents, CDC weights respondents' answers based on probability of selection into the sample and demographic characteristics of Washington's population. With the incorporation of cell phone respondents in 2011, the weighting methods changed to a method often referred to as 'raked weighting.' Because of this change in methods, data from 2011 on are not comparable to data in 2010 and earlier. We show this discontinuity with a break in the trend line on graphs.

Limitations

- BRFSS does not represent people who do not speak English or Spanish. Estimates for Washington residents of Asian heritage are especially likely to be biased due to language barriers.
- BRFSS does not represent people who live in institutions or other group settings, such as dormitories, group homes, hospitals, in-patient drug treatment facilities, jails or prisons.

Birth Certificate System

Purpose
Birth certificates establish legal rights associated with birth, paternity and adoption, and provide public health information about births and newborns.

Coverage
The birth certificate system covers all births to Washington State residents, including those for residents who give birth in other states; the Washington State Department of Health Center for Health Statistics estimates the system to be more than 99% complete.

Limitations
High unknowns in some fields (such as the month prenatal care began and pre-pregnancy obesity) may make patterns and trends difficult to interpret.

Cancer Registry

Purpose
The Washington State Cancer Registry (WSCR) monitors the incidence of cancer to understand, control and reduce the occurrence and burden of cancer in Washington (RCW 70.54.230).

Coverage
WSCR includes information on residents of Washington, including those diagnosed and treated in other states; the Department of Health WSCR program estimates that WSCR includes more than 95% of cancer cases in Washington residents.

Limitations
Those reporting cancer cases to WSCR record information on race and Hispanic origin from the medical record or other reliable sources available at the time. Using information from the medical record alone historically resulted in underreporting of American Indian and Alaska Native (AIAN) and Hispanic people with cancer.

Census Population Counts and Intercensal and Postcensal Estimates

Purpose
The U.S. Constitution mandates a count of people living in the United States (the U.S. Decennial Census) every 10 years to determine how many seats each state will have in the U.S. House of Representatives. Locally developed intercensal and postcensal estimates provide population counts for noncensus years. Department of Health uses these data as denominators for calculating rates of health events.

Limitations
Although the Census Bureau attempts to obtain information from every known household, homeless people, undocumented people who deliberately avoided the census for fear of disclosure to the Immigration and Naturalization Service, urban poor living over commercial addresses, and others may not be counted by the census.

Death Certificate System

Purpose

Death certificates establish legal benefits and provide information about causes of death and characteristics of decedents.

Coverage

The death certificate system covers all deaths in Washington and those of Washington residents who die in other states; the Washington State Department of Health Center for Health Statistics estimates that the system includes 99% of deaths to Washington residents.

Limitations

- Reported deaths in this report use the underlying cause of death.
- Underreporting of specific race and ethnicity classifications (such as among American Indian or Alaska Natives) may underestimate death rates for these groups.
- Death rates can underestimate the magnitude of health problems for deaths that might be underreported due to social stigma (such as AIDS and suicide) and for conditions that diminish the quality of life but are not fatal (such as chronic alcoholism).

Healthy Youth Survey (HYS)

Purpose

The HYS provides indicators of health-related risk and protective factors and health status among youth.

Coverage

State and county samples and county censuses include public school students in grades 6, 8, 10 and 12. The survey is offered in English and Spanish and administered in even years since 2002. The Youth Risk Behavioral Surveillance System of the Centers for Disease Control and Prevention was also used for national rates.

Limitations

- Data are self-reported and not otherwise verified.
- Most data reported are limited to 10th graders due to sample size and survey completion rates.

Additional Data Sources

Brief descriptions of the additional data systems used in specific sections of this *State Health Assessment* follow.

Air Quality

Section
Outdoor Air Quality

Purpose
The Air Quality Program is a source for air quality information in Washington that tracks air quality, determines if air quality meets standards, and evaluates health impacts (Washington State Department of Ecology).

More information

American Community Survey (ACS)

Section
Healthcare Access

Purpose
The ACS in an annual survey of population, social, economic, and housing characteristics conducted throughout the U.S. by the Census Bureau with estimates down to census tract and block group level.

More information

Community Outcome and Risk Evaluation (CORE) Information System

Section
Domestic Violence & Sexual Violence

Purpose
The Community Risk Profiles details the risk and protection profiles for substance abuse prevention planning using the Community Outcome and Risk Evaluation (CORE) Information System. CORE obtains and integrates data annually from the Washington Association of Sheriffs and Police Chiefs (WASPC): Uniform Crime Report (UCR), National Incident-Based Reporting System (NIBRS), and Population Estimates: Washington State Office of Financial Management, Forecasting Division (Washington State Department of Social and Health Services).

More information

County Health Rankings

Section
Access to Behavioral Health Providers

Purpose
The County Health Rankings detail factors that influence health and show that health experience varies from area to area (Robert Wood Johnson Foundation and the University of Wisconsin).

More information

Technical Notes

Technical notes pertinent to multiple sections are described below. Technical notes that are specific to individual sections are described in those sections.

Area-Based Measures

Percent living in poverty and percent college students

Sections that provide data from the Death Certificate System or the Washington State Cancer Registry use area-based measures of economic resources and educational attainment because records in these systems do not contain relevant individual-level measures. We use two area-based measures in a few sections of the *State Health Assessment*, 1) the percent living in poverty and 2) the percent of college graduates among census tract residents.

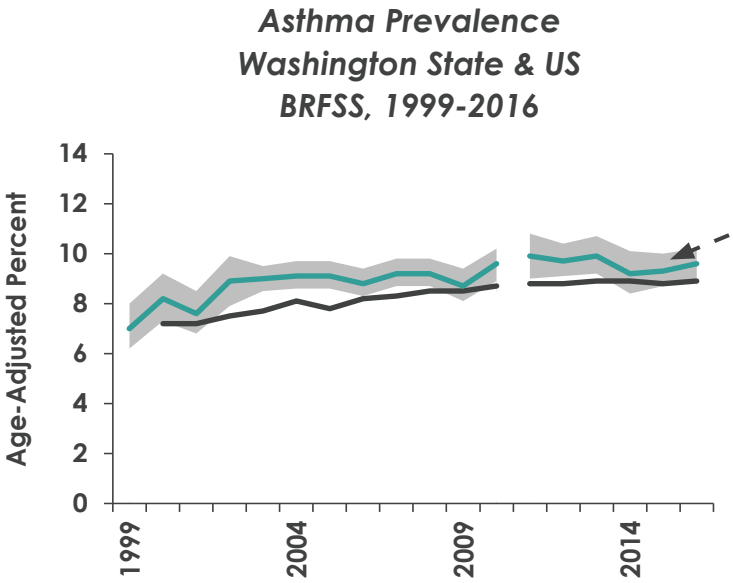
The percent of the population with a given characteristic such as living in poverty or graduating college describes the general economic or educational level of people in one's nearby community. The measures describe individuals themselves to some extent because people living in neighborhoods where, for instance, a high percentage of residents are poor are more likely to be poor themselves compared to people in neighborhoods where there is less poverty (and the same with college graduates). For reference, the federal poverty level in 2016 for a single person was $11,880 and for a family of four was $24,300.

The U.S. Census Bureau uses census tracts (with 2,500–8,000 residents) to collect, tabulate and present census information. The American Community Survey (ACS), a part of the U.S. Census, provides information on poverty and educational level by census tract. We grouped census tracts into four categories for poverty (less than 5%, 5%–9.9%, 10%–19.9% and 20% or more of census tract residents living in poverty) and five categories for educational attainment (less than 15%, 15%–24.9%, 25%–34.9%, 35%-44.9% and 45% or more of census tract residents with college degree). Multiple years of ACS data were aggregated (e.g., 5 years) to produce census tract level estimates. We then assigned these values to the deaths and population to develop death rates and rates of cancer incidence by census tract category.

Confidence Intervals

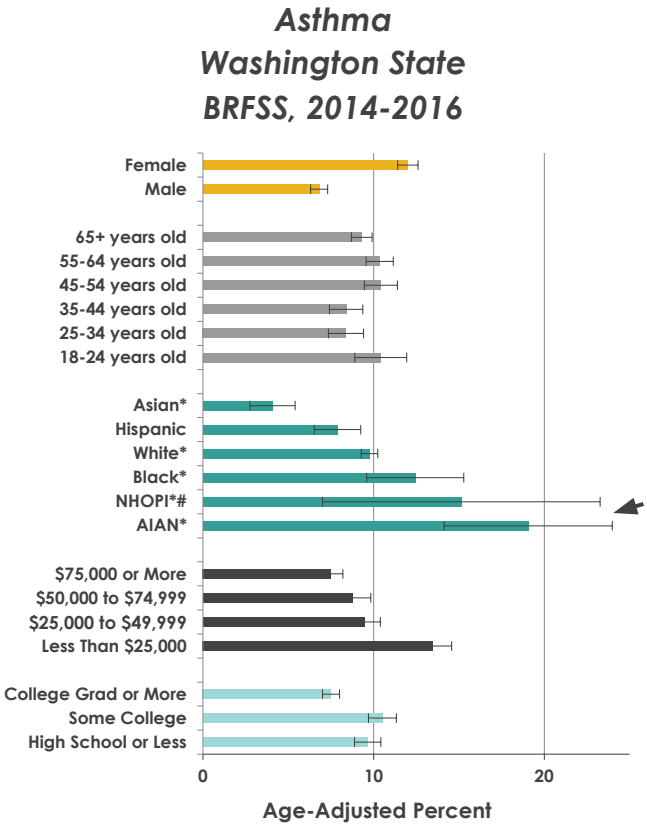
Confidence intervals provide a measure of how much a rate, percent or other estimate might vary due to random factors or chance. They are used with survey data to account for the difference between a sample from a population and the population itself. A 95% confidence interval captures the true value of the estimate in 95 out of 100 cases. Confidence intervals are generally large for small sample sizes and decrease as the sample size increases. Confidence intervals do not account for variation due to missing, incomplete, or inaccurate data.

For this report, the 95% confidence intervals are portrayed on line graphs with shading around the Washington State line, on bar and column charts with error bars, and in text as a number spread around an estimate (e.g., ± 1%) similar to the graphs on the next page.



95% Confidence Interval

Graph shows 95% confidence interval for the Washington rate as grey shading. For ease of use, only the 95% confidence interval for Washington is displayed.



95% Confidence Interval

Graph shows 95% confidence interval for the Washington rate as error bars.

Race and Ethnicity

Race and ethnicity categories follow the federal standards for reporting on race and ethnicity and reflect self-identified race and ethnicity, with the exception of death data. In analysis, Hispanic or Latino ethnicity was considered before race. Data presented for Hispanics includes Hispanics of any race. Data presented for the five race categories: American Indian or Alaska Native (AIAN), Asian, black or African American, Native Hawaiian or Pacific Islander (NHOPI) and white includes only non-Hispanics. In addition, these race categories include people who identify with a single race only. The 4% of Washingtonians who identify with multiple races are not presented. This will have a greater impact on younger populations who are more likely to identify with multiple races. We have not included multiple races as we don't currently have denominators for all people who identify with a given race. In addition, this group represents people with a variety of different identities. A higher proportion of people identifying as AIAN and black identify with multiple races and are more impacted by this exclusion. It is also important to note the single race only categories (e.g., American Indian or Alaska Native, Asian, black, Hispanic, Native Hawaiian or Other Pacific Islander, white) presented throughout the *State Health Assessment* include aggregate groups of people and may obscure differences in health status and risk or protective behaviors of subpopulations. For example, subpopulations of Asians, such as Chinese, Filipino, Asian Indian, Vietnamese, Korean and other groups may have different health status from what is presented for Asians. Similarly, African born black populations may have different health status from U.S. born blacks and what is presented for blacks. Because people identifying with multiple races make up a larger proportion of those identifying as AIAN and black, caution should be used in interpretation. Also note that race and ethnicity categories are aggregate groupings and may obscure differing health status and risk behaviors of sub-populations.

Relative Standard Error

The relative standard error (RSE) provides a measure of reliability (also termed 'statistical stability') for statistical estimates. When the RSE is large, the estimate is imprecise and we term such rates or proportions 'unstable' or 'not reliable.' In these instances, the data analyst needs to balance issues of the right-to-know with presenting data that might be misleading.

For this report, any data element where the RSE was 30% or greater was suppressed due to the unreliability of the estimate. Data elements where the RSE was between 25% and 29% were annotated with a flag (#) to suggest using caution with the potentially unreliable estimate.

Rural Urban Geography Classification

The Washington State Department of Health (DOH) Rural-Urban Classification Scheme is derived from the Rural Urban Commuting Areas (RUCA) codes created for the Federal Office of Rural Health and Policy (OFRHP) based on Census 2010 data and information for all census tracts (and approximation of the RUCA codes for all ZIP codes) in the United States. The basic framework of RUCA codes is grouped into four levels based mainly on population size and patterns of primary commuting flow. The DOH Rural-Urban Classification Scheme put the basic framework of the census 2010 based RUCA codes in context and created a modified four-tier rural-urban classification scheme at the sub-county level (census tracts and ZIP codes) of geography. This modified scheme refocused on population size and population density. The four categories include: Urban core (larger populations of 50,000 or more and primary flow within the urbanized area), Suburban (moderate population of 10,000-49,999; primary flow within large urban cluster; population density over 100 per square mile), Large town (population of 2,500-9,999; primary flow with in small urban clusters; population density over 100 per square mile), and Small town/Rural (population under 2,500; primary flow outside an urbanized area/urban cluster; population density less than 100 per square mile).The DOH rural-urban classification guideline document is available from www.doh.wa.gov/Portals/1/Documents/1500/RUCAGuide.pdf.

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