Health Disparities in Snohomish County
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Background

What Are Health Disparities?

Not everyone in Snohomish County has access to the same health opportunities. Health disparities are differences in the burden of diseases, injury, violence, or limited opportunities to reach ideal health. Health disparities are experienced by socially disadvantaged populations and may be distinguished by race or ethnicity, income, education, gender, disability, geographic location, or sexual orientation. These disparities are directly related to the unequal distribution of social, political, economic, and environmental resources.

Although significant progress has been made in improving the health of residents in the county, health disparities remain a serious concern. We must focus on health equity, and give individuals the opportunity to attain their full health potential, regardless of socially determined circumstances.


How Do We Address Health Disparities?

In order to address health disparities in Snohomish County, an understanding of the conditions and factors that influence health is needed.

Conditions in which people are born, grow, live, work, and age influence a host of health risks and outcomes. These conditions and factors are called social determinants of health. Social determinates are mostly responsible for health inequities, or the unfair and avoidable differences in health status within and between communities. Conditions and factors can be divided into three types: those that threaten health, those that promote health, and those that protect health.

The graphic, developed by Dahlgren and Whitehead (1991), illustrates the range of conditions and factors that influence health.


Why Release a Health Disparities Report?

The aim of this report is to call attention to health disparities in Snohomish County. It is the first of what will be a series of reports that monitor health disparities throughout the county and over time. While it is intended to be comprehensive, it is by no means exhaustive.
Sociodemographics of Snohomish County

Snohomish County, Washington, has a population of 757,600, making it the third most populous county in the state. The majority of its population is concentrated in the western half of the county.

Health Reporting Areas

The Snohomish Health Reporting Areas (SHRAs) are developed to coincide with city boundaries, when possible. They are based on aggregations of U.S. Census Bureau census tracts and they include individual cities, groups of smaller cities, and unincorporated areas of Snohomish County. The names of the SHRAs are based on census county subdivisions, which are delineated by the Census Bureau for statistical purposes. The names of the sub-divisions are based on a place or well-known local area that identifies its location.

SHRAs were created to help communities, policymakers, and government officials as they think about local public health problems and health policy solutions. SHRAs will be used throughout the report when data are available at the census tract level and when there is sufficient a sample.

There are 11 SHRAs:
- Arlington, Stanwood & Darrington
- Marysville
- Granite Falls, Lake Stevens & Snohomish
- Sultan, Skykomish & Monroe
- North Everett
- South Everett
- Mukilteo & North Lynnwood
- Edmonds, Mountlake Terrace & West Lynnwood
- Bothell & Brier
- Mill Creek & Silver Firs
- Tulalip Bay & the North Coast

In This Report

To understand health disparities between educational, economic, and racial/ethnic groups in Snohomish County, it is helpful to examine the educational, economic, and racial/ethnic diversity of county residents. This report begins with a demographic and social description of Snohomish County. Health disparities across a range of topics are explored and include: life expectancy, leading causes of death, general health, mental illness, substance use, overweight/obesity, physical activity, chronic disease, health care access, cancer, maternal and child health, and adolescent health outcomes.
Income

The median household income in Snohomish County was $63,381 in 2013. The average median household income in Snohomish County’s poorest SHRA was $55,757 while the wealthiest SHRA was $100,390. The poorest SHRAs are North Everett and South Everett where 10% and 13% of families respectively, live below the poverty line.

What is a healthy community?

A healthy community continuously works to improve its physical and social environments and provides support to people on a day to day basis. They are designed and built to improve the quality of life for all people who grow, live, work, and age within their borders. In healthy communities, people are able to make choices between a range of healthy, available, accessible, and affordable options.

Race and Ethnicity

Snohomish County is racially and ethnically homogenous. In 2014, the population was 73% White, 9% Asian, 4% multiracial, 3% African American, 1% American Indian or Alaska native, and 0.5% Pacific Islander. About 10% of residents identified as Hispanic or Latino (of any race).
Income and Poverty

On average, fewer Snohomish County residents are poor compared to state and national populations. According to the 2013 American Community Survey, 11.2% of county residents lived below the federal poverty line which is a slight increase from 10% in 2010 and 7.1% in 2000. In comparison, 14% of the Washington State population and 16% of the US population lived below the federal poverty line in 2013.

About 15% of Snohomish County households had an income less than $25,000 in 2014.

What is the Federal Poverty Line (FPL)?

The FPL is a measure of income level released every year by the Department of Health and Human Services. FPLs are used to decide if you are eligible for certain programs and benefits. Here are current FPL amounts:

- Single individual: $11,770
- Family of 2: $15,930
- Family of 3: $20,090
- Family of 4: $24,250


Poverty and Health

Living in poverty can have a devastating effect on health. But how and why poverty and health are linked is complicated. Health behaviors can be related to the risk of disease and death. One reason is a lack of health insurance. Many of the health behaviors individuals engage in—or don’t engage in—are influenced by surrounding circumstances, such as where a person lives. For example, neighborhoods that have high crime rates, low performing schools, or reduced access to grocery stores or markets where healthy foods are available can also negatively affect a person’s health. This can impact diet and prevent engaging in physical activity which influences the risk of disease and death.

Poverty is both a cause and a consequence of poor health. In order to break the cycle of poverty, the social and economic factors that jeopardize health and limit the ability to make healthful choices need to be addressed.


Household income differs among racial and ethnic groups. In Snohomish County, Black and American Indian and Alaska Native residents are, on average, more poor than White and Asian residents.

### Household Income by Race

<table>
<thead>
<tr>
<th>Race</th>
<th>Less than $25,000</th>
<th>$25,000 to $49,999</th>
<th>$50,000 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black/African American</td>
<td>23%</td>
<td>14%</td>
<td>18%</td>
</tr>
<tr>
<td>White</td>
<td>47%</td>
<td>33%</td>
<td>24%</td>
</tr>
<tr>
<td>Asian</td>
<td>14%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Hispanic/Latino (of any race)</td>
<td>18%</td>
<td>45%</td>
<td>56%</td>
</tr>
<tr>
<td>American Indian and Alaska Native</td>
<td>20%</td>
<td>20%</td>
<td>24%</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander</td>
<td>18%</td>
<td>14%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2006-2010 American Community Survey

### How is race related to health?

Racial disparities in health are widespread and often associated with poor physical and mental health. For most of the leading causes of death, Black/African Americans, as well as American Indians have higher death rates than Whites. Racial discrimination may influence health because (1) exposure to stress may result in negative emotional states which generate psychological distress; (2) coping mechanisms may include unhealthy behaviors (such as alcohol use); (3) psychological and behavioral responses to stress can result in significant changes in several physiological systems.


### Education

In Snohomish County, 24% of the population graduated high school or passed the General Education Development tests, and 21% received a bachelor’s degree.

Education generally results in better jobs and higher incomes. Research also suggests that individuals with better education live longer and healthier lives.

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates
Disparities in Health in Snohomish County

General Health

Life Expectancy

Life expectancy is the average age to which a newborn baby can expect to live. This is a measure often used to describe the overall health status of a population. In Snohomish County, the life expectancy generally increased in every SHRA income group during the years 2000 to 2014. The gaps in life expectancy among income groups have remained stable over time. In 2014, life expectancy in the poorest SHRA was 3 years shorter than the wealthiest SHRA.


Health Disparities in Snohomish County

Racial and ethnic disparities in life expectancy exist in Snohomish County as well as throughout Washington State. Among Snohomish County residents, Black males, on average, live 2 years less than White males compared to a 4 year disparity in Washington. For female Snohomish County residents, the difference is smaller, 1 year, compared to a 2-year disparity in Washington. The disparity in life expectancy has been relatively stable over the past 10 years.

Life Expectancy among Males


Life Expectancy among Females

Leading Causes of Death

Residents of Snohomish County’s poorest SHRAs have consistently higher mortality rates from almost all diseases compared to residents of its wealthiest SHRAs. For example, deaths due to liver disease and accidents are almost three times and two times higher respectively, in the poorest SHRAs. Alzheimer’s disease, influenza and pneumonia are more common causes of death in wealthier communities.

<table>
<thead>
<tr>
<th>Cause Of Death</th>
<th>Low-income SHRAs (deaths per 100,000 in 2014)</th>
<th>High-income SHRAs (deaths per 100,000 in 2014)</th>
<th>Lowest-income SHRA higher by...</th>
<th>Highest-income SHRA higher by...</th>
</tr>
</thead>
<tbody>
<tr>
<td>All causes</td>
<td>751</td>
<td>599</td>
<td>1.3 times</td>
<td></td>
</tr>
<tr>
<td>Heart disease</td>
<td>205</td>
<td>160</td>
<td>1.3 times</td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>163</td>
<td>169</td>
<td>About the same</td>
<td></td>
</tr>
<tr>
<td>Accidents</td>
<td>46</td>
<td>22</td>
<td>2.0 times</td>
<td></td>
</tr>
<tr>
<td>Alzheimer’s disease</td>
<td>39</td>
<td>60</td>
<td>1.5 times</td>
<td></td>
</tr>
<tr>
<td>Chronic lower respiratory diseases</td>
<td>51</td>
<td>30</td>
<td>1.7 times</td>
<td></td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>35</td>
<td>20</td>
<td>1.7 times</td>
<td></td>
</tr>
<tr>
<td>Suicide</td>
<td>17</td>
<td>11</td>
<td>1.6 times</td>
<td></td>
</tr>
<tr>
<td>Liver disease and cirrhosis</td>
<td>12</td>
<td>4</td>
<td>2.8 times</td>
<td></td>
</tr>
<tr>
<td>Pneumonitis due to solids and liquids</td>
<td>15</td>
<td>8</td>
<td>1.7 times</td>
<td></td>
</tr>
<tr>
<td>Influenza and pneumonia</td>
<td>5</td>
<td>8</td>
<td>1.5 times</td>
<td></td>
</tr>
</tbody>
</table>

All rates are age-adjusted per 100,000 population


Years of Potential Life Lost

Premature death can be defined as death before age 65. Years of potential life lost (YPLL) is a measure of early death and is used to represent the total number of years not lived by people who die before reaching a given age. Deaths among younger people contribute more to the YPLL measure than deaths among older people. The rate of premature death is almost twice as high in the poorest SHRA than in the wealthiest SHRA.

<table>
<thead>
<tr>
<th>Cause Of Death</th>
<th>Lowest-income SHRA</th>
<th>Highest-income SHRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of deaths that are premature (&lt; 65 years)</td>
<td>31%</td>
<td>27%</td>
</tr>
<tr>
<td>Total years of potential life lost</td>
<td>7,133</td>
<td>2,406</td>
</tr>
<tr>
<td>Total years of potential life lost per 100,000 population</td>
<td>4,289</td>
<td>2,197</td>
</tr>
<tr>
<td>Total years of potential life lost per premature death</td>
<td>17</td>
<td>16</td>
</tr>
</tbody>
</table>

Some conditions tend to take peoples’ lives earlier than others, and disparities exist between racial groups. For example, among Asian Snohomish County residents, accidents make up 53% of the years of potential life lost before age 65.

<table>
<thead>
<tr>
<th>Cause Of Death</th>
<th>Black/ African American</th>
<th>White</th>
<th>Asian</th>
<th>American Indian and Alaska Native</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart disease</td>
<td>10%</td>
<td>13%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Cancer</td>
<td>20%</td>
<td>19%</td>
<td>30%</td>
<td>7%</td>
</tr>
<tr>
<td>Accidents</td>
<td>20%</td>
<td>25%</td>
<td>53%</td>
<td>29%</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases</td>
<td>5%</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>2%</td>
<td>3%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Suicide</td>
<td>0%</td>
<td>14%</td>
<td>17%</td>
<td>10%</td>
</tr>
<tr>
<td>Liver disease and cirrhosis</td>
<td>0%</td>
<td>3%</td>
<td>1%</td>
<td>8%</td>
</tr>
</tbody>
</table>


**Self-Reported Health**

Self-reported health status is a general measure of health-related quality of life in a population. This measure is based on responses to the question: “Would you say that in general your health is excellent, very good, good, fair, poor?” Self-reported health status is a reliable measure of current health.

On average, Snohomish County residents with lower incomes and less years of education tend to report worse health compared to those with higher incomes and more years of education.


Mental Health

Serious mental illness is a mental, behavioral, or emotional disorder resulting in serious functional impairment, which significantly interferes with or limits an individual’s major life activities. In 2014, it was estimated that 4.2% of adults in the United States have serious mental illness.

Mental health problems are more common among female residents of Snohomish County compared to males. They are also more common among residents with lower incomes and less years of education compared to wealthier residents and those with more years of education.


Smoking

More male residents of Snohomish County currently smoke cigarettes compared to females.

One in four Snohomish County residents ages 25 to 34 are smokers, and the percentage of adults who are current smokers decreases after age 35.

In general, smoking is more common among Snohomish County residents with less years of education. Smoking rates decrease as education levels increase. Similarly, smoking is more common among Snohomish County residents with lower incomes compared to those with higher incomes.

### Alcohol Use

In Snohomish County, 58% of residents said they consumed alcohol in the past month.

While alcohol use is often viewed as socially acceptable, excessive use of alcohol is a major cause of death and disability in the United States. Men are generally more likely than women to drink excessively.

Overall, more males in Snohomish County were heavy drinkers than females, though rates vary by age. Heavy drinking rates were greatest for females between the ages of 18 and 24.

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**Current Smoking by Education-Level and Income**


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**Heavy Drinking by Gender and Age**

Note: Heavy drinking is defined as consuming 8 or more drinks per week for women and 15 or more drinks per week for men.


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Overweight and Obesity

In Snohomish County, 66% of residents are overweight or obese. More males are overweight or obese compared to females, regardless of annual household income. When looking at overweight and obesity rates by sex and income, the greatest percentage of overweight and obese residents are males with annual incomes of $50,000 or more.

![Overweight and Obesity by Gender and Income](chart)

Note: Adults with a body mass index (BMI) between 25.0 and 29.9 are considered overweight, and those with a BMI of 30.0 or higher are considered obese.


Physical Activity

The Physical Activity Guidelines for Americans (2008) recommends adults do two types of physical activity each week to improve health: aerobic and muscle-strengthening. In Snohomish County, 20% of residents met both aerobic and muscle-strengthening guidelines, 33% met the aerobic guidelines only, and 9% met the strengthening guidelines only. More males than females, of any annual income, met the aerobic and muscle-strengthening guidelines. The greatest percentage of residents meeting both guidelines were males and females with an annual income between $25,000 and $49,999.

![Physical Activity by Gender and Income](chart)

Note: Physical activity is defined as meeting both aerobic and muscle strengthening guidelines.

Source: Washington State Department of Health, Center for Health Statistics, Behavioral Risk Factor Surveillance System 2011 and 2013 supported in part by Centers for Disease Control and Prevention
Diabetes

Diabetes cases are higher among male residents in Snohomish County, and cases vary by annual income and race/ethnicity. Diabetes cases decrease as annual income increases, and diabetes is most common among White non-Hispanic residents.

Death rates from diabetes began to increase for males beginning in 2008 (annual percent change (APC) = 7.8, p < 0.05). In comparison, the death rates from diabetes have not changed since 2000 for females.

Cardiovascular Disease (CVD)

Cardiovascular disease is an overall leading cause of death in Snohomish County, yet the rates vary by sex and education level. More males have CVD than females and the percentage of residents with CVD decreases as education levels increase.

Deaths due to CVD have been decreasing since 2003 for females (APC range: -6.85 to –3.89, p < 0.05), while for males...
Disparities exist in asthma prevalence and control. When compared, a greater percentage of females than males currently have asthma. More White residents and residents who are Other race/ethnicity have asthma compared to Asian and Hispanic residents.

Among adults with asthma, females are more likely to be hospitalized for care (which may indicate a struggle to control the condition) than males. However, asthma hospitalization rates have been declining for both genders since 2000 (male: APC = -3.2, p < 0.05); female: APC = -3.4, p < 0.05).
Health Care Coverage

Almost three-quarters of residents have private health care coverage offered through an employer or union or purchased on their own; 18% have coverage through the government, either Medicare or Apple Health; 4% have coverage through TRICARE, VA, or the military.

Only 1% of residents reported have no health care coverage. The large percentage of residents with some form of health care coverage is likely a result of the Patient Protection and Affordable Care Act passed by President Obama in 2010.

<table>
<thead>
<tr>
<th>Primary Source of Health Care Coverage</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through your employer or union (or another person’s employer)</td>
<td>58%</td>
</tr>
<tr>
<td>Bought on your own, or family member bought it on his/her own</td>
<td>13.3%</td>
</tr>
<tr>
<td>Medicare</td>
<td>12.5%</td>
</tr>
<tr>
<td>Medicaid/Apple Health</td>
<td>6.4%</td>
</tr>
<tr>
<td>TRICARE, VA, or the military</td>
<td>3.6%</td>
</tr>
<tr>
<td>Indian Health Service or Alaska Native Health Service</td>
<td>0.2%</td>
</tr>
<tr>
<td>Other</td>
<td>2.8%</td>
</tr>
<tr>
<td>No health care coverage</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

Source: Washington State Department of Health, Center for Health Statistics, Behavioral Risk Factor Surveillance System 2014, supported in part by Centers for Disease Control and Prevention

In the past year, 16% of adults needed to see a doctor but could not because of the cost. This varies by education level, income, and race/ethnicity.

Adults with fewer years of education or with lower income levels are more likely to not see a doctor because of cost. A larger percentage of Hispanic adults, compared to White and Asian adults, are more likely to not see a doctor because of cost.

**Mammography**

In Snohomish County, women with more years of education or higher incomes are more likely to have had a mammogram in the past 2 years compared to women with fewer years of education or lower incomes.

**Breast Cancer Mortality**

Among women in Snohomish County, breast cancer mortality rates increase with age. Generally, women between the ages of 50 and 69 years have a lower breast cancer mortality rate than women between the ages of 70 and 89 years. Looking at each age group separately, breast cancer mortality rates on average, have remained stable between 2000 and 2014.
Colorectal Cancer Screening

The U.S. Preventative Services Task Force recommends screening for colorectal cancer beginning at age 50 years and continuing until age 75 years. In Snohomish County, colorectal cancer screening varies by education- and income-levels. Residents with more years of education and higher income levels are more likely to have had a colonoscopy or sigmoidoscopy.

Note: Colorectal cancer screening includes ever having a colonoscopy or sigmoidoscopy.


Colorectal Cancer Mortality

Age-adjusted colorectal cancer mortality rates have, on average, declined between the years 2000 and 2014 for both males (APC = -2.74, p < 0.05) and females (APC = -2.18, p < 0.05). However, mortality rates continue to be higher for males compared to females.

Birth Outcomes

Infant Mortality
The infant mortality rate is the number of infant deaths for every 1,000 live births. This rate can be used as an indicator of a community’s health and well-being. Factors influencing the health of an entire population can also affect mortality rates of infants. In Snohomish County, the infant mortality rate decreased between 2000 and 2014 (APC = -2.2, p < 0.05).

Low Birth Weight
A birth weight of less than 5.5 pounds is considered low birth weight. In Snohomish County, the percentages of babies born with low birth weights to mothers living in very low income and very high income SHRAs have remained relatively stable since 2000. Babies born at low birth weights may be more at risk for many health problems early in life as well as long-term problems, such as delayed motor and social development.


Adolescent Health Outcomes

Teen Birth Rate

In Snohomish County, the birth rate among 15 to 19 year olds has significantly decreased between 2000 and 2003 (APC = -9.52, p < 0.05) and 2007 and 2014 (APC = -7.35, p < 0.05).

However, teen birth rates vary considerably based on the average median income of the SHRAs. The relationship between the teen birth rate and average median income is on a gradient; SHRAs with lower annual incomes tend to have more births to teens.

Condom Use

In Snohomish County, among sexually active teens, more males reported using a condom the last time they had sex compared to females.

Condom Use Last Time Youth Had Sexual Intercourse among Sexually Active Youth by Sex

**Binge Drinking**

In the past two weeks, 11% of high school students reported binge drinking. For boys, this means they consumed 5 or more drinks in the span of two hours, while girls consumed 4 or more drinks in the same amount of time. While binge drinking does not vary by sex in Snohomish County, it does vary by race/ethnicity. More students who identified as Hispanic, American Indian or Alaska Native, Black, or Native Hawaiian or other Pacific Islander said they engaged in binge drinking than students who identified as Asian or Asian American.

![Binge Drinking by Sex and Race/Ethnicity](image)


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**Teen Dating Violence**

In the past year, 9% of high school students reported being hit, slammed into something, or injured with an object or weapon by someone they were dating. These students are victims of teen dating violence. A similar percentage of boys and girls reported being victimized by a dating partner. More students who identified as American Indian or Alaska Native and Black were victimized compared to students who identified as Asian or Asian American, Hispanic, White, and Native Hawaiian or other Pacific Islander.

![Teen Dating Violence Victimization by Sex and Race/Ethnicity](image)

Conclusions

The burden of illness and death among Snohomish County residents is linked to income, education, race/ethnicity, and gender. Regardless of the specific mechanisms through which these factors influence health, the disparities are clear. How can Snohomish County residents, community organizations, health care providers, government agencies, and advocates use this information to improve health and reduce disparities?

There are no quick fixes to this issue. Acknowledging that social conditions greatly influence health forces us to also acknowledge that the challenge of reducing disparities is intimidating. Regardless of the challenge, the information in this report may be used to move us closer to the goal of health equity:

1. Target resources, interventions, or programs to Snohomish Health Reporting Areas or smaller communities most at risk of poor health outcomes because of social and economic conditions.

2. Public health is the responsibility of more than just the health care and public health communities. Health is affected by education, housing, employment, access to green space and other factors. Given this, multi-disciplinary teams and approaches are needed to address health and health disparities.