# ODDS AGAINST TOMORROW

## HEALTH INEQUITIES in SPOKANE COUNTY

- EDUCATION
- HOUSEHOLD INCOME
- RACE/ETHNICITY
- PLACE/NEIGHBORHOOD

SPOKANE REGIONAL HEALTH DISTRICT

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# *Life isn't just better at the top, it's longer and healthier.*

## Letter from Dr. Joel McCullough, Health Officer

What would you do if you found out that where you live predicts your life expectancy, that your health is worse if you are poorer, and that your child is more likely to die in infancy if you have less education? These problems are real. But in the United States, where disparities in health are massive, these problems have been largely unaddressed by public policy. Therefore, today in America, people of higher socioeconomic position have a greater array of life chances and more opportunities to lead a flourishing life. They also have better health.

America's public debate on "health" has mostly centered on access to and the affordability of health care, even though a large body of evidence tells us that in most cases whether or not a person gets sick has little to do with seeing a doctor. A far greater determinant is the relationship between how we live our lives and the economic, social and physical environments that surround us; some of these we certainly can influence on our own, but many are outside our individual control.

Many people tend to attribute our differences in health to variations in individual behaviors, genes or nature and are ultimately inevitable: "That's just the way things are." But that's not the way things have to be. We have to rethink the way in which health differences are perceived by considering if those differences are equitable or just.

Health equity refers to differences in a population's health that can be traced to unequal economic and social conditions that are systemic and avoidable – and thus inherently unjust and unfair. Tackling health inequity requires widening our lens to bring into view the ways in which early childhood development, jobs, working conditions, education, housing, social inclusion, and even political power, influences population health. When societal resources are distributed unequally by class and by race, population health is distributed unequally along those lines as well.

Inequities in health arise because of inequities in society. So much is determined by the conditions in which people are born, grow, live, and work. So close is the link between particular social and economic features of society and the distribution of health among the population, that the magnitude of health inequities is a good marker of progress toward creating a fairer society.

**Taking action to reduce inequities in health does not require a separate public health agenda, but action across the whole of our society.**

Recent research has revealed that some social factors are among the most important determinants of health in developed countries. These include the nature of early childhood experience, the quality of our social relationships, the amount of control we have over our lives, and our social status. These social and psychological factors loom large in developed countries because the long history of rising living standards has drastically reduced the direct effects of abject poverty. Over the last two decades, the field has morphed to bring **social determinants of health** to light.

Changes in health brought about by economic development and its ability to lift populations out of the extremes of poverty is known as **epidemiological transition.** Central to epidemiological transition is the well-known process by which the old infectious causes of death gave way to chronic diseases, like heart diseases and cancers, which appear mainly in later life. Health statuses in societies that have gone through the epidemiological transition are less responsive to the effects of further rises in material living standards. Consequently, life expectancy among the 25 or 30 richest countries is no longer related to how rich they are. Life expectancy in the United States is shorter than it is in most other developed countries—including some that are only half as rich.

Health inequity is not only about extremes of wealth and poverty. There is a continuous gradient in health status throughout society—even among the middle classes. The higher an individual's social status, the healthier they are, and the longer they live. Within societies, health is a good marker of social status. Whether we look at life expectancy or at the frequency of most causes of death and disability, health standards are highest among those nearest the top of the social ladder—whether measured by income, education, or occupation—and lower as we look at each successive step down the ladder.

One of the key determinants of adult health is the environment in which young children grow up: what a child experiences during their early years lays down a foundation for the whole of their life. A child's physical, social, and cognitive development during the early years strongly influences their school-readiness and eventual educational attainment, economic participation and health. Development begins before birth when the health of a baby is crucially affected by the health and well-being of their mother. Low birth weight in particular is associated with poorer long-term health and educational outcomes.

Socially-graded inequities are present prenatally and increase through early childhood. Maternal health, including stress, diet, drug, alcohol and tobacco use during pregnancy, has significant influence on fetal and early brain development. The biological effects of birth weight on brain development interact with other influences associated with social position to influence cognitive development.

When we consider these social determinants of health, it is no mystery why there should continue to be health inequities. Persisting differences across key societal domains provide ample proof: differences in early child development and education, employment and working conditions, housing and neighborhood conditions, standards of living, and, more generally, the freedom to participate equally in the benefits of society.

The unfair distribution of health and length of life provides compelling enough reason for action across all social determinants. However, there are other important reasons for taking action. Addressing continued inequities in early child development, in young people's educational achievement and acquisition of skills, in sustainable and healthy communities, in social and health services, and in employment and working conditions will have multiple benefits that extend beyond reductions in health inequities.

The benefits of reducing health inequities are economic as well as social. The cost of health inequities can be measured in human terms, years of life lost and years of active life lost; and in economic terms, by the cost to the economy of additional illness. If the conditions, in which people are born, grow, live, and work are favorable, and more equitably distributed, then they will have more control over their lives in ways that will influence their own health and health behaviors, and those of their families. Health and health equity may not be the aim of most social and economic policies but they are a fundamental result.

Reducing our large and persistent health inequities requires taking a broader, deeper look at how health is shaped across lifetimes and generations. Finding solutions to avoidable differences in the health of our community requires looking beyond the medical care system to acknowledge and address the many other social and economic factors that also can determine a person's health.

# Key Terms

**Epidemiological Transition -** Refers to a change in the pattern of disease in a country away from infectious diseases towards degenerative diseases. This transition occurs as a country undergoes the process of modernization or economic development. Less economically developed countries have higher rates of infectious diseases as standards of medical care are lower than that found in more economically developed countries. In more economically developed countries, more people die from degenerative diseases as infectious diseases such as cholera and typhoid are easily treated, causing more people to die from cancers as they live longer.

**Health Disparity -** Differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups.

**Health Inequity -** Concerns those differences in population health that can be traced to unequal economic and social conditions and are systemic and avoidable; thus being inherently unjust and unfair.

**Social Determinants of Health -** Factors (i.e. determinants) in our social and economic environment that research has found to negatively (or positively) affect health.

**Social Gradient -** An individual's or population group's position in society and different access to and security of resources such as education, employment and housing, as well as different levels of participation in civic society and control over life.

# Introduction

In June of 2011, the National Prevention Council released the *National Prevention Strategy: America's Plan for Better Health and Wellness (NPS).* The goal of the NPS is to increase the number of Americans who are healthy at every stage of life through efforts focused on prevention of disease and promotion of wellness. Within the report, the National Prevention Council identified four strategic directions and seven targeted priority areas necessary to build healthy communities and increase the health and well-being of all residents. One of the four strategic directions established by the NPS is the elimination of health disparities, which aligns well with Spokane Regional Health District's current initiative to focus public health practice to address the social determinants of health.

The strategic focus on health disparities is based on the understanding that many in our population are disproportionately burdened by poor health which is closely linked with factors in our social and economic environment. Health disparities linked to social, economic, and environmental disadvantages, may be considered health inequities, and adversely affect underserved populations whom have systematically experienced and endured greater obstacles in life. This report was compiled to raise awareness and understanding within our community of the differences in health outcomes evident between subpopulation groups in Spokane County, and how these outcomes are linked to our local economic and social conditions.

# Organization of Report

**This report is divided into four sections, each reflecting a social determinant of health:**


**EDUCATION**


**HOUSEHOLD INCOME**


**RACE/ETHNICITY**


**PLACE/NEIGHBORHOOD**

Subpopulation groups are identified by an individual's position in society (i.e. social gradient) for each of the four social determinants bulleted above and are the focus of a section. The position on the social gradient is examined for each data indicator contained within the section, thus demonstrating a link between differences in health observed within our population to systemic economic, social and environmental conditions.


**National Prevention Strategy.** Where appropriate, indicators were chosen and used to reflect one of the priority areas outlined within the National Prevention Strategy report:

- Tobacco Free Living
- Preventing Drug Abuse and Excessive Alcohol Use
- Healthy Eating
- Active Living
- Injury and Violence Free Living
- Reproductive and Sexual Health
- Mental and Emotional Well-Being

The NPS priority areas were spurred by the leading causes of preventable death and major illness in the United States, including those populations disproportionately and unjustly affected by disease and injury. Selected indicators in this report are cross-referenced to the NPS report for two purposes: first, to illustrate the pervasive presence of health inequities across all leading causes of preventable death and major illness, and second, to provide readers with reference to evidence-based recommendations that are most likely to reduce the burden of death and disease associated with that indicator.

Local indicator data was analyzed and compared to Washington state data; however, in some instances the available data was insufficient and the analysis could not be performed. Selected topics were mapped out at the neighborhood level for Spokane County and can be found in Section 4 – Place/Neighborhood.

**What We Heard.** Also, individual perspectives regarding barriers and social conditions affecting health are provided. The qualitative information presented comes from 61 Spokane County residents who participated in one of six focus groups. The primary purpose of the focus groups was to gather additional perspectives on factors that contribute to poor health from individuals having one of three different income levels: less than $35,000 (classified as low income), $35,000 to $75,000 (classified as middle income), and greater than $75,000 (classified as high income). Select findings and verbatim comments are summarized under the headings “What We Heard” throughout the report. Additionally, several focus group participants were asked to provide in-depth interviews. The purpose of this was to develop and highlight personal interest stories for inclusion in this report to add context and depth to quantitative findings.

The report concludes with recommendations drawn from the National Prevention Council's report and other sources. This provides general strategies to improve population health by addressing health disparities and eliminating health inequity.

 Signifies a key finding.

## JIM AND JENNY MARTIN'S STORY

When Spokane native Jim Martin was completing his military service in his 20s, he was optimistic about his prospects for a good job back in the "real" world. The military classes he took to prepare him to re-enter civilian life produced a lengthy list of jobs he'd be qualified to perform. As he began looking for jobs though, Jim discovered a big problem. He'd never "done" any of the jobs he was qualified for, for instance, as a boiler tech, when he'd never even looked at a boiler.

Now a welder in his late 30s, without any education after high school to fall back on, Jim, along with his wife Jenny, describe themselves as financially comfortable, but are hamstrung by debt. In the military, Jim made decent money and although it took him several months to locate work afterward, he and Jenny continued to live the life they'd been accustomed to. They fell into a common trap of opening several credit cards to pay off others. When asked where today's middle class went, Jenny quickly and assuredly answered, "to the credit card companies."

Jim has suffered from asthma his whole life. Two years ago, when he found himself without a job, it was not an option for him to go uninsured because of his chronic condition. Adding Jim to his wife's insurance would have consumed more than three-fourths of her paycheck each month. And even though they found an individual plan that was half the amount, the premiums still took a toll on their savings that they are still working to recover.

Now, Jim's years of hard labor are catching up to him. He suffers from a chronic bad back and knees. He watched his dad work at the same plant for 43 years, so he knew hard work was going to take its toll. He expected his body to give out; he didn't expect it to start this early. He's worried for his future, about his asthma, about his body giving out five or ten years down the road. He has concerns about how his employment affects his nutrition and well-being. Standing in the kitchen and prepping a healthy meal made with fresh produce is far from his mind at the end of the day. Again, without any education after high school to fall back on, Jim is forced to think only about today. If he can't get out of bed one day to go to work, then they'll deal with it then. Until then, his motto is "As long as I'm breathing, I'm working."

# SECTION 1: **EDUCATION**

The distribution of poor health and disease is not random. Evidence suggests that the level of education attained indirectly affects and influences a person's health and life expectancy. Educational attainment is commonly used to assess the influence of socioeconomic circumstances on health and is a strong determinant of current and future employment and income.[2] An individual's overall physical and mental health and life expectancy are directly correlated to their income, and research has shown that educational attainment is one of the strongest predictors of income. For most people, educational attainment reflects material and other resources of the family and the knowledge and skills attained by young adulthood.[2] Therefore, education captures both the long-term influence of early life circumstances and the influence of adult circumstances on adult health.

The gradient of educational attainment illustrates that people with a higher level of education are more likely to have higher paying jobs and are more likely to be employed than people with a lower level of education. Studies have shown that each additional year in school is associated with increased life expectancy and better health.[3] Research also suggests that people who complete higher levels of education have better cognitive and psychological resources, such as problem solving, practice with teamwork, dependability, structure, and routine.[4] What's more, research demonstrates less educated individuals are more likely to be employed in jobs that are low-wage and require less skill, working in conditions that are more dangerous, stressful, and offer the worker less control than that enjoyed by more highly educated individuals.[5,6,7] Furthermore, low-wage and low-skill jobs more often do not provide health insurance, making it more difficult to access preventive and immediate health care.

Conversely a person's health also affects their education. Health conditions are a common contributor to the decision to leave school. For instance, pregnancy, parental or sibling illness, and chronic conditions such as asthma, can all lead to excessive absenteeism and ultimately to dropout. As a result, individuals are less educated and in the course of their life are more likely to resign to low paying jobs.

*As an adult's level of education increases, the likelihood of living in poverty significantly decreases.*

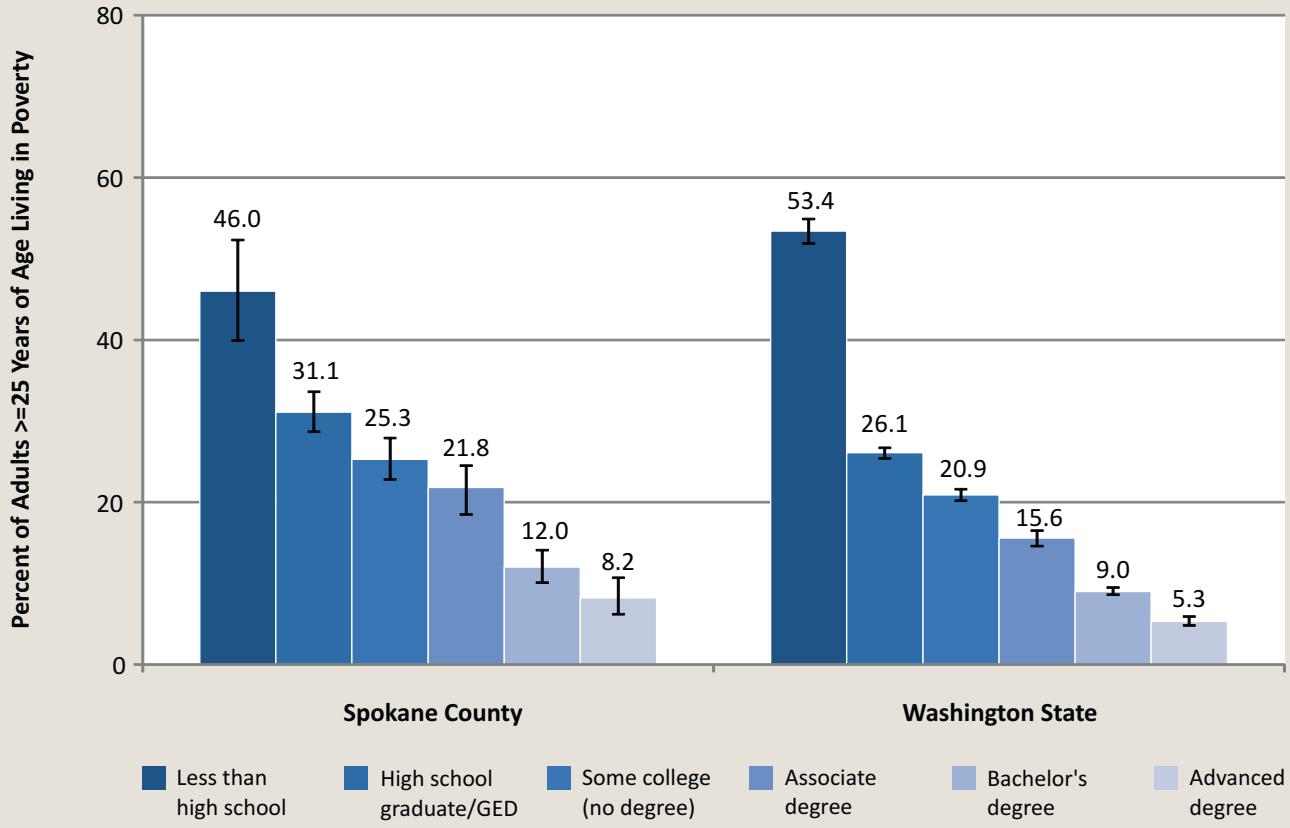



**Figure 1. Adults 25 Years of Age or Older Living in Poverty by Education, 2000 to 2008**

Approximately half of adults with less than a high school education live in poverty compared to less than 10 percent with an advanced degree in Spokane County. Moreover, residents of Spokane County with the same level of education are more likely than Washington state residents to live in poverty, with the exception of adults with less than a high school education. Adults with less than a high school education are approximately 9.0 times more likely to live in poverty compared to adults with an advanced degree in Spokane County and 21.5 times more likely in Washington state.

Data Source: Washington State Population Survey

*As the parent's level of education increases, the likelihood of their children living in poverty significantly decreases.*

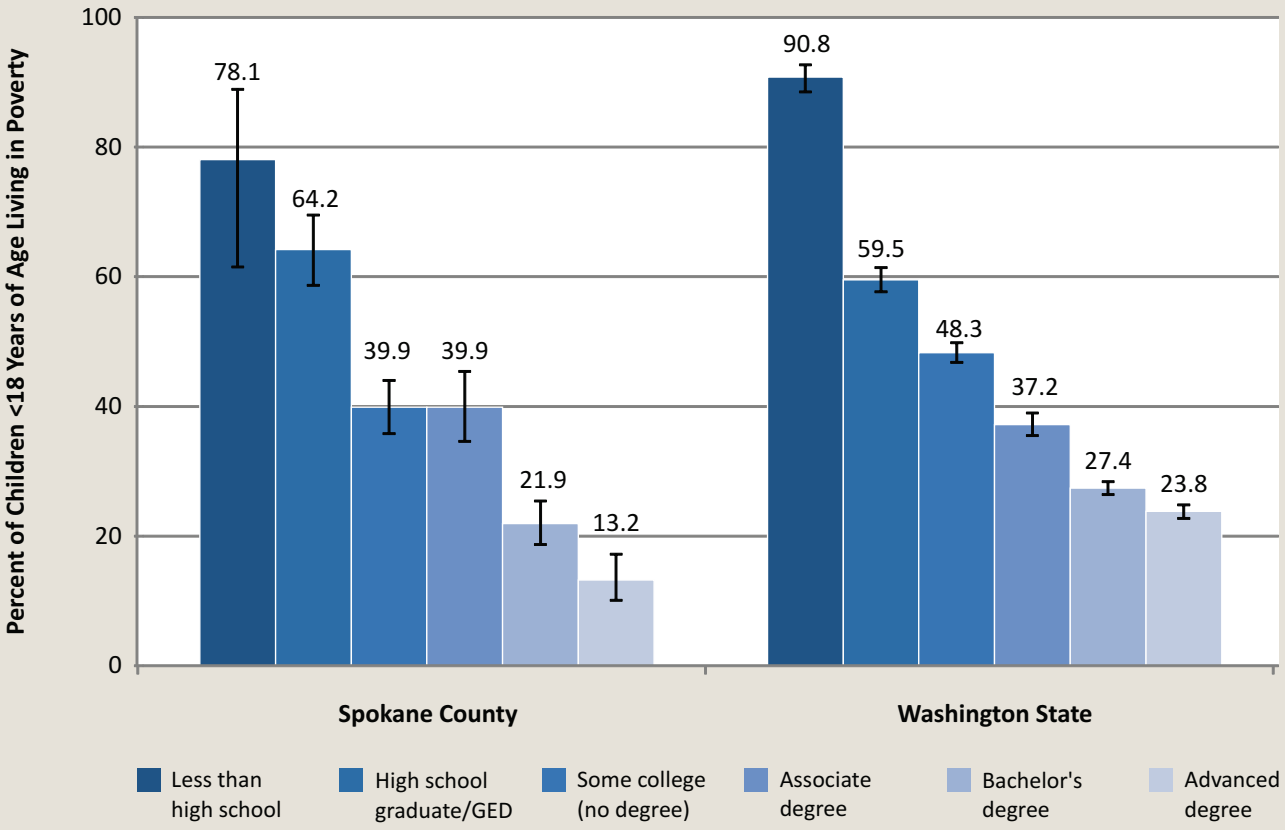



**Figure 2. Children Living in Poverty by Parent's Highest Level of Education, 2000 to 2008**

Children whose parents did not finish high school are 23.4 times more likely to live in poverty than children whose parents received an advanced degree in Spokane County and 31.6 times more likely in Washington state. The likelihood of a child living in poverty significantly decreases to 1.8 if the parent receives a bachelor's degree in Spokane County and 1.2 in Washington state when compared to children whose parents received an advanced degree.

Data Source: Washington State Population Survey

*Adults with less education are less likely to have health insurance.*

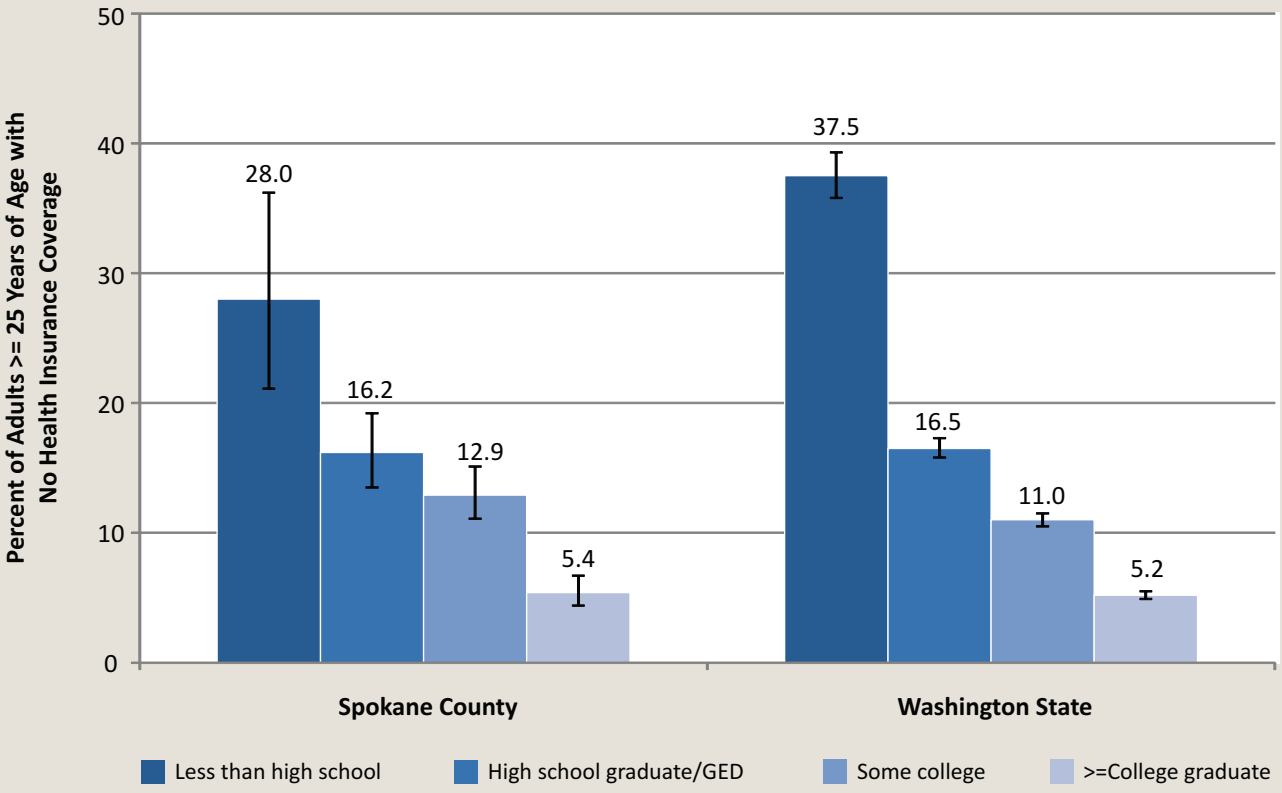



**Figure 3. Health Insurance by Education Among Adults 25 Years of Age or Older, 2005 to 2009**

Lower educational attainment corresponds to a greater likelihood of an adult not having health insurance coverage and illustrates that as the level of education increases, health insurance coverage increases for both Spokane County and Washington state. Adults with less than a high school education are 6.8 times more likely to have no health insurance coverage compared to adults with a bachelor's or advanced degree in Spokane County and 11.0 times more likely in Washington state.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

*Adults with less education are more likely to smoke.*

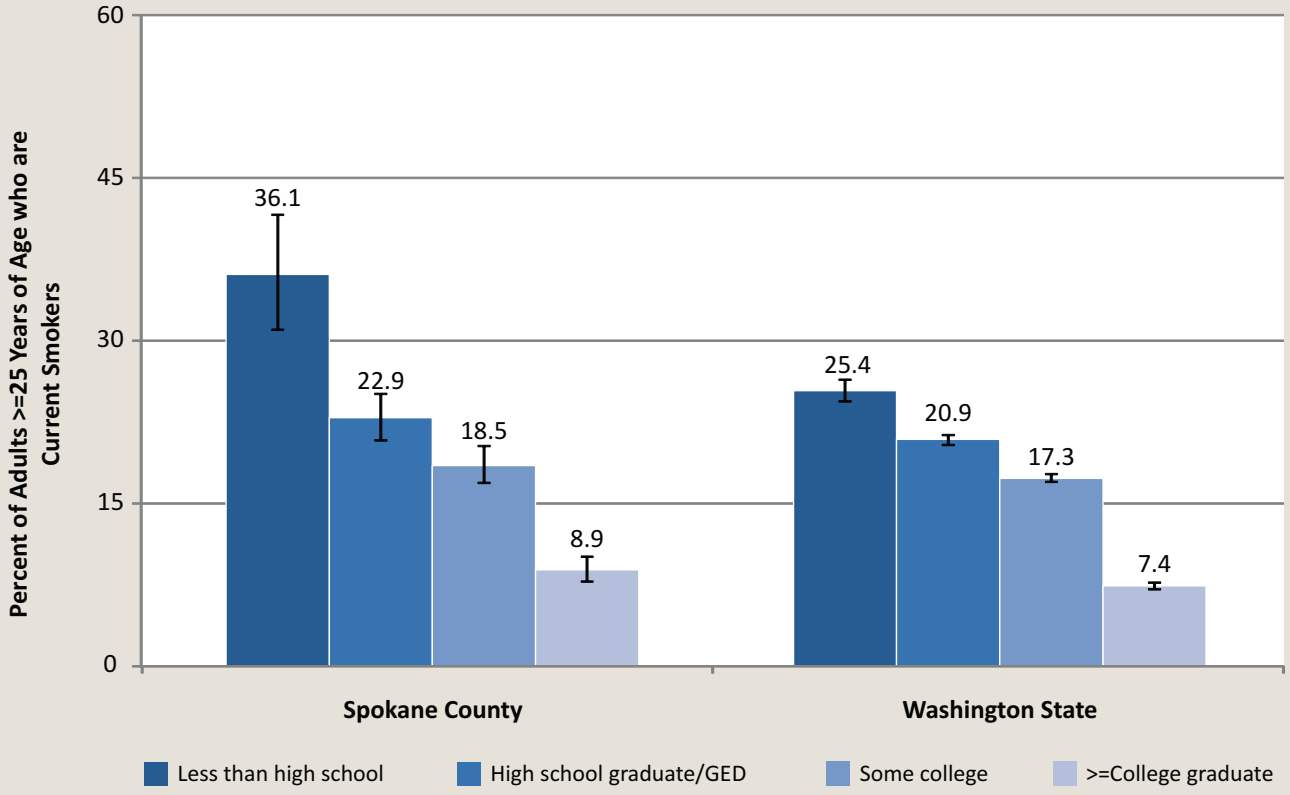



**Figure 4. Smoking by Education Among Adults 25 Years of Age or Older, 2005 to 2009**

As the level of education increases, adults are less likely to smoke in both Spokane County and Washington state. Adults with less than a high school education are 5.8 times more likely to smoke compared to adults with a bachelor's or advanced degree in Spokane County and 4.3 times more likely in Washington state.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

NPS

**National Prevention Strategy Priority: Tobacco Free Living**
Living tobacco free reduces a person's risk of developing heart disease, various cancers, chronic obstructive pulmonary disease, periodontal disease, asthma and other diseases, and of dying prematurely.

*Adults with less education are more likely to engage in binge drinking.*

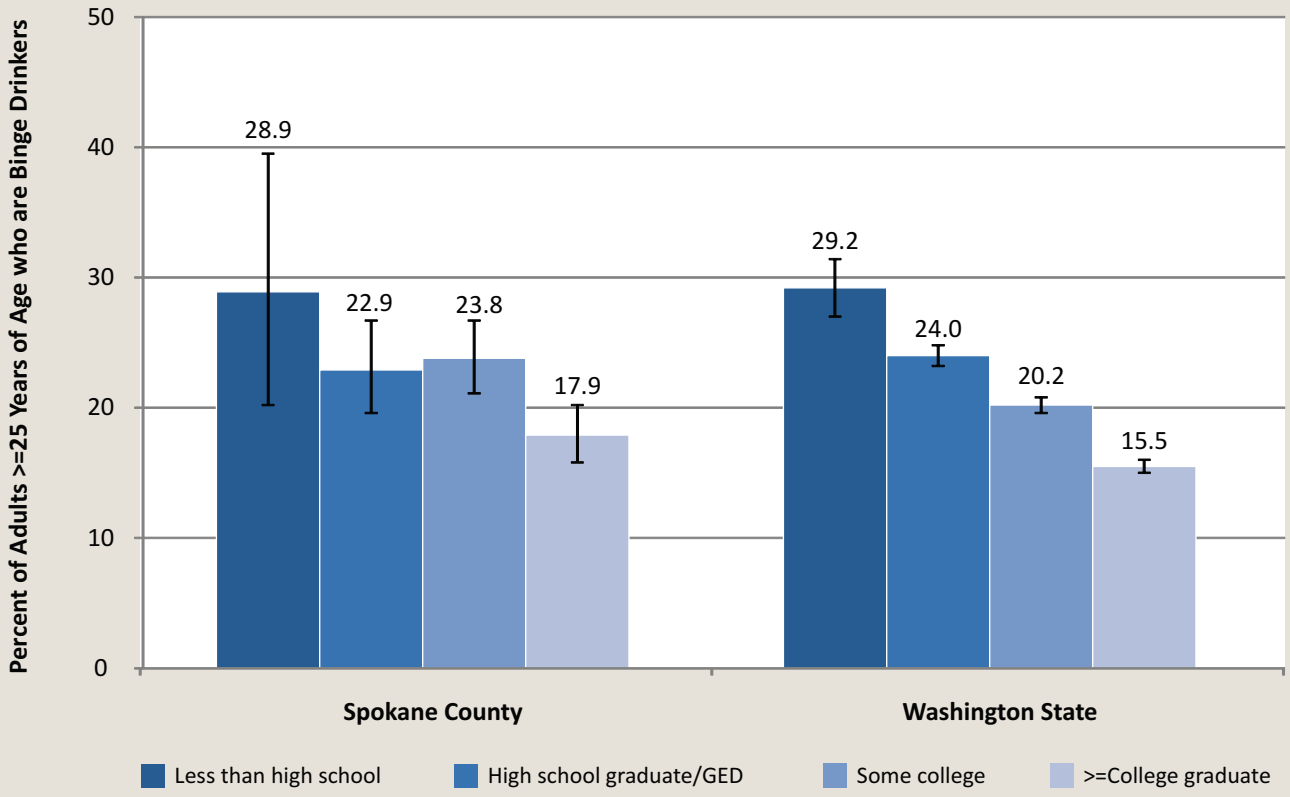



**Figure 5. Binge Drinking by Education Among Adults 25 Years of Age or Older, 2005 to 2009**

Binge drinkers were identified as adults 25 years of age or older who had five or more drinks on at least one occasion in the last 30 days. Binge drinking is associated with unintentional injuries and health problems.[8] Adults with less than a high school education are 2.0 times more likely to binge drink compared to adults with a bachelor's or advanced degree in Spokane County and 2.2 times more likely in Washington state.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

NPS

**National Prevention Strategy Priority: Preventing Drug Abuse and Excessive Alcohol Use**
Preventing drug abuse and excessive alcohol use increases people's chances of living long, healthy, and productive lives.

*Adults with less education are more likely to have had several adverse childhood experiences.*

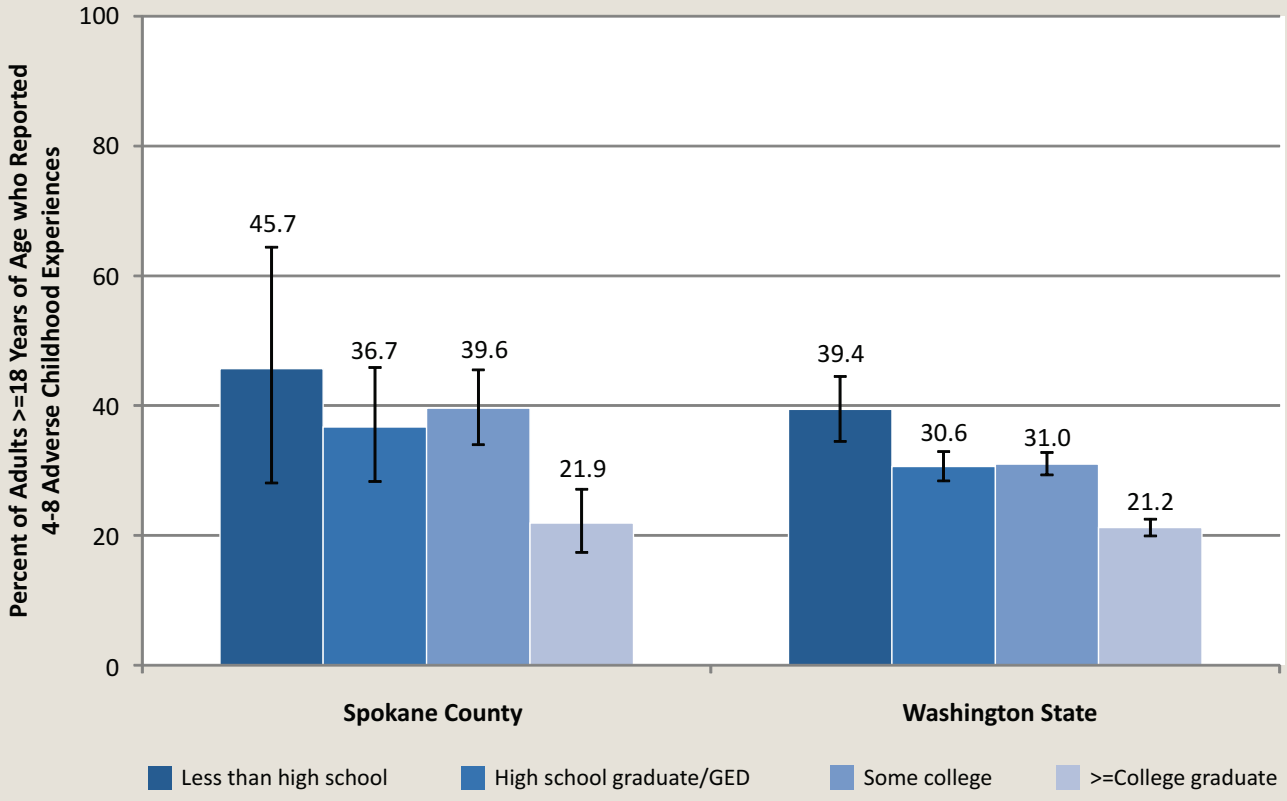



**Figure 6. Adverse Childhood Experiences by Education Among Adults 18 Years of Age or Older, 2009 to 2010**

Adults with less than a high school education are 3.0 times more likely to have 4 to 8 adverse childhood experiences (ACEs) compared to adults with a bachelor's or advanced degree in Spokane County and 2.4 times more likely in Washington state.

**ACEs** are stressful or traumatic events during childhood that can impact an adult's health. These stressors include: emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, living with a person with mental illness, living with a person who abuses drugs or alcohol, crime in the home, parental discord, and witnessing domestic violence. ACEs disrupt neurodevelopment and can have lasting effects on brain structure and function and cause a multitude of health and behavioral problems.[9] As the number of ACEs a person experiences increases, the risk for subsequent negative health outcomes also increases. ACEs are also related to risky health behaviors in childhood and adolescence.[10]

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

NPS

**National Prevention Strategy Priority: Injury & Violence Free Living**
Witnessing or being a victim of violence is linked to lifelong negative physical, emotional, and social consequences.

*Adults with less education are more likely to have their activity limited by chronic illness.*

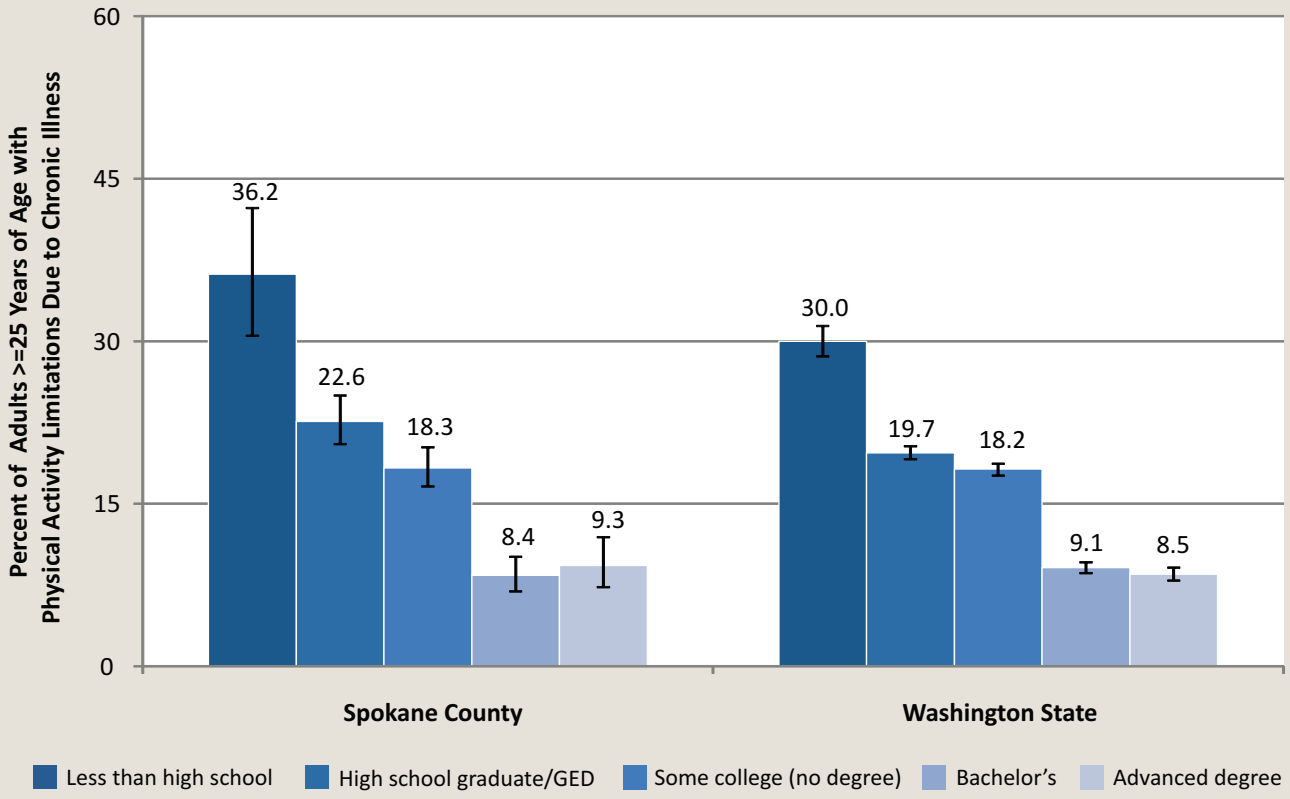



**Figure 7. Physical Activity Limitations Due to Chronic Illness by Education Among Adults 25 Years of Age or Older, 2000 to 2008**

Adults with less than a high school education are 5.5 times more likely to have physical activity limitations due to chronic illness compared to adults with an advanced degree in Spokane County and 4.6 times more likely in Washington state.

Data Source: Washington State Population Survey

*Adults with less education are more likely to have had cardiovascular disease.*

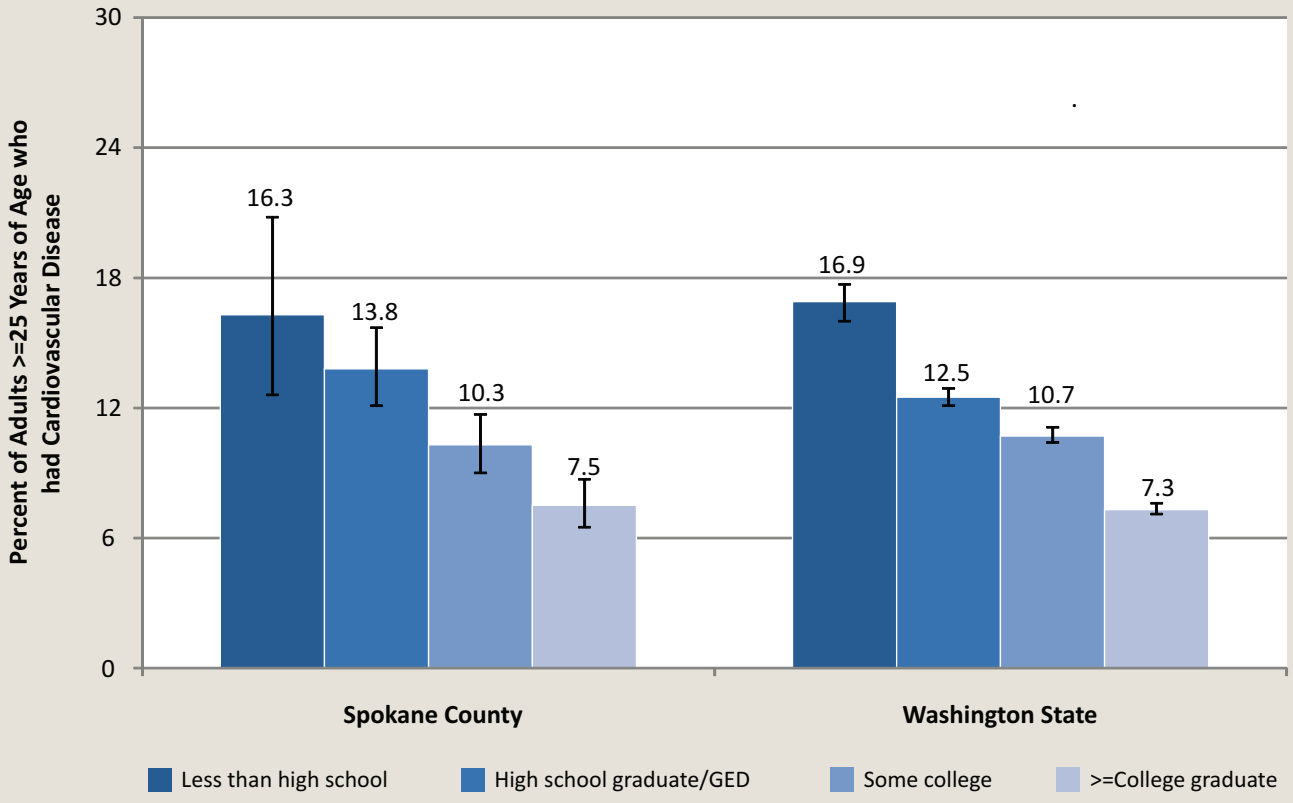



**Figure 8. Cardiovascular Disease by Education Among Adults 25 Years of Age or Older, 2005 to 2009**

Adults who did not finish high school are 2.4 times more likely to have had cardiovascular disease compared to adults with a bachelor's or advanced degree in Spokane County and 2.6 times more likely in Washington state.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

*The less education mothers have, the more likely their babies will die before their first birthday.*

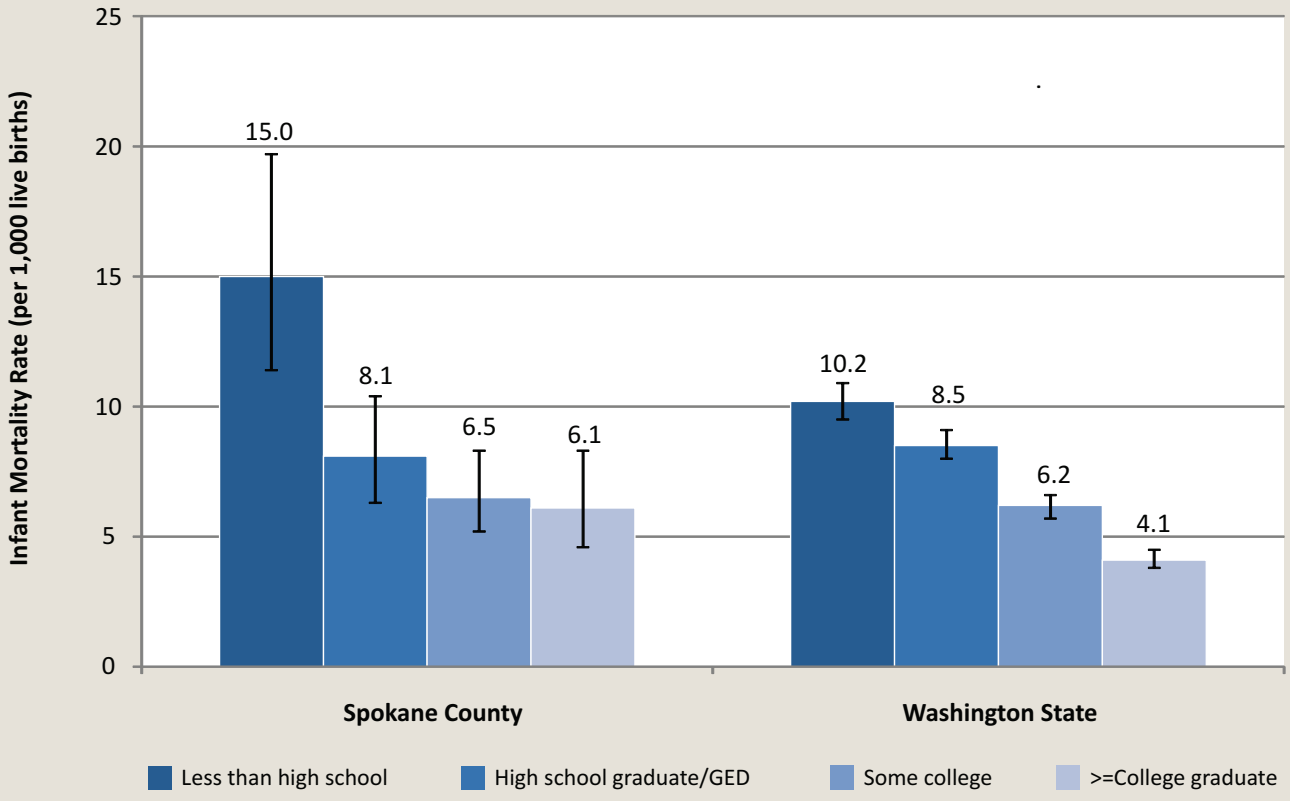



**Figure 9. Infant Mortality by Mother's Education of Women 25 Years or Older, 2003 to 2009**

Figure 9 shows the rate of infant mortality significantly decreases as the mother's level of education increases for Spokane County and Washington state.

**Babies born to mothers who do not finish high school are 2.5 times more likely to die before their first birthday as babies born to mothers with a bachelor's or advanced degree in Spokane County and Washington state.**

Data Source: Linked Birth/Death Certificate Data, Washington State Department of Health, Center for Health Statistics

# WHAT WE HEARD

When invited to discuss what could be done to improve quality of life, many focus group participants discussed the importance of jobs and education:

*"You said jobs, I say schooling to get a job. Jobs are good, but I think to get a solid job is to get an education."*

~ Focus Group Participant (income <$35,000/year)

Several focus group participants were struggling with unemployment, including chronic underemployment:

*"Being unemployed, and the perceptions people put on that, the longer you are unemployed, the heavier that seems to feel."*

~ Focus Group Participant (income <$35,000/year)


## TED PLUMB'S STORY

Ted Plumb is a 38-year-old Spokane resident whose self-doubts hinder his ability to keep a steady job. He was raised in an average household, but as a child was often down on himself and picked on by classmates. He carried many of these negative feelings into adulthood. Today, he earns less than $35,000 annually. He's also struggling with type 2 diabetes.

Since being told about his diabetes, Ted wonders how his disease is connected to his low income. If he could afford healthier foods, or if he lived in a nicer neighborhood that was easier to walk, he thinks maybe his situation would be different.

If Ted wants to go out to dinner, his diabetes dictates what he orders, but his decisions are at odds with his income. If he goes to an Italian restaurant, a big plate of pasta is the cheapest thing on the menu—it is also packed with the carbohydrates he should limit. Daily, he has to fight his tendency to eat the unhealthy stuff because it's cheaper.

What about Ted's ability to afford treatment for his diabetes? He feels fortunate that right now some grocery stores are offering the $4 meds for his diabetes. He sometimes questions if those are the best medicines for his diabetes, but it's what he can afford. When it comes to his low-cost medical plan, he feels it's pointless to research better options, or seek out specialists for his care.

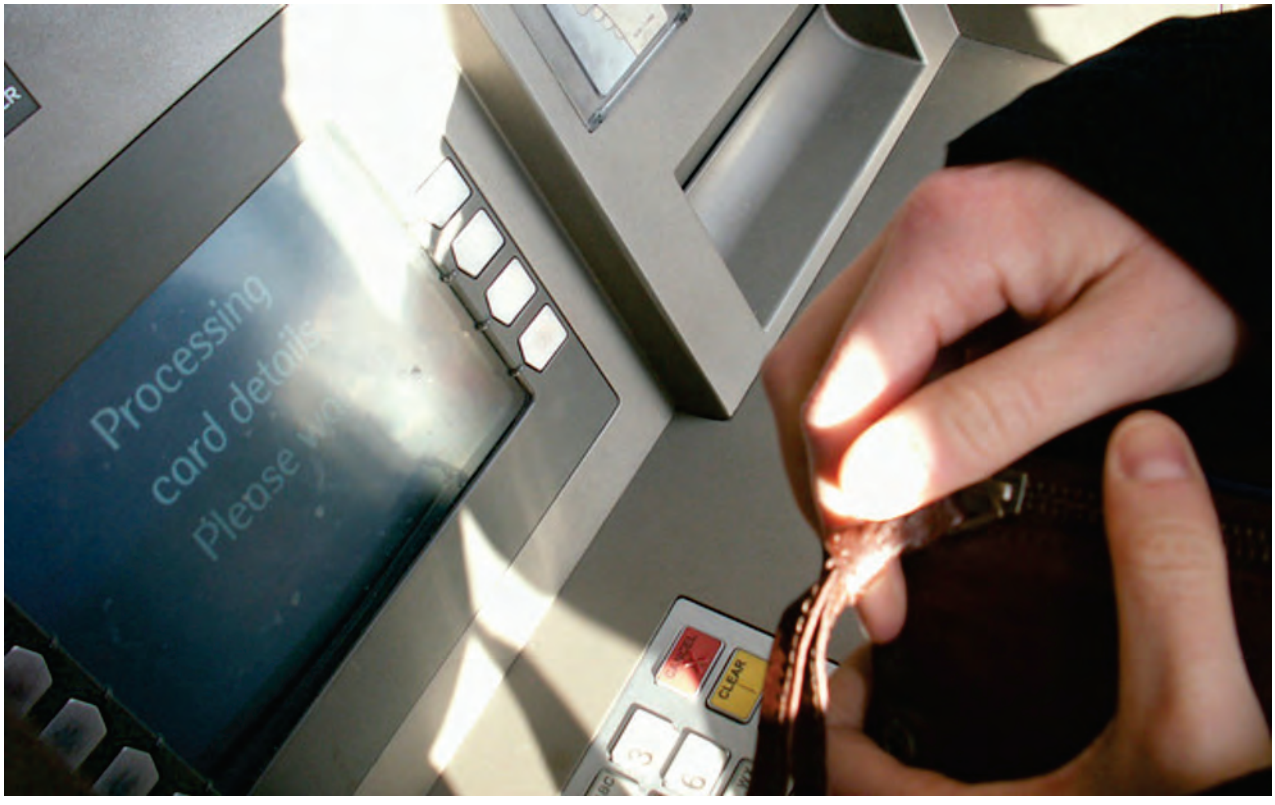
Each day though, he is learning to be positive and has found new pride in working on himself. He's found a sense of importance, which helps him to believe he is going someplace. He is trying to break free of his poverty mentality. He's got dreams to help people out. He knows he'll have to be healthy to enjoy achieving those goals.

"I want to give back. I need to be healthy. What's the point of gaining success if you can't enjoy it, if you can't lavish it on other people?"

# SECTION 2: **HOUSEHOLD INCOME**

The association and relationship between higher levels of economic wealth and optimal health, and lower levels of economic wealth and poor health, have been well documented. It has been illustrated that different levels of income have significant differences in health outcomes. Income is the indicator that most directly measures material resources and can influence health by its direct affect on living standards; specifically, access to better quality food, housing, and health care services.[11] In addition, income is used to measure an individual's socioeconomic status (SES). As a result, SES is closely tied to health outcomes as it provides access to a wide range of advantages. Such advantages include higher education, access and availability of professional occupations that offer benefits, and a better living environment.[12] This directly influences an individual's power, prestige, and is beneficial to their social connections – all of which may provide greater protection against high risk behaviors that ultimately affect a person's health.[12] With each step down the SES ladder, resources and opportunities for better health diminish.[12] Thus, health inequities are an issue of concern for both the lower and the middle classes as both groups frequently have poorer health than the most affluent.[13]

In addition, unemployment is associated with higher mortality rates, especially from cardiovascular disease and suicide. The stress of joblessness can lead to anxiety, depression, substance abuse, and poor mental health.[14,15,16] Unemployment can also affect a neighborhood's well-being.[17] As the levels of joblessness increase, sociability and collective participation and commitment in solving neighborhood problems are weakened.[17,18] Thus, when people cannot find work, they are more likely to turn to crime and street economy (e.g. selling drugs, working in commercial sex) to make money. [19,20,21]



*Incomes for the wealthiest individuals have increased...*

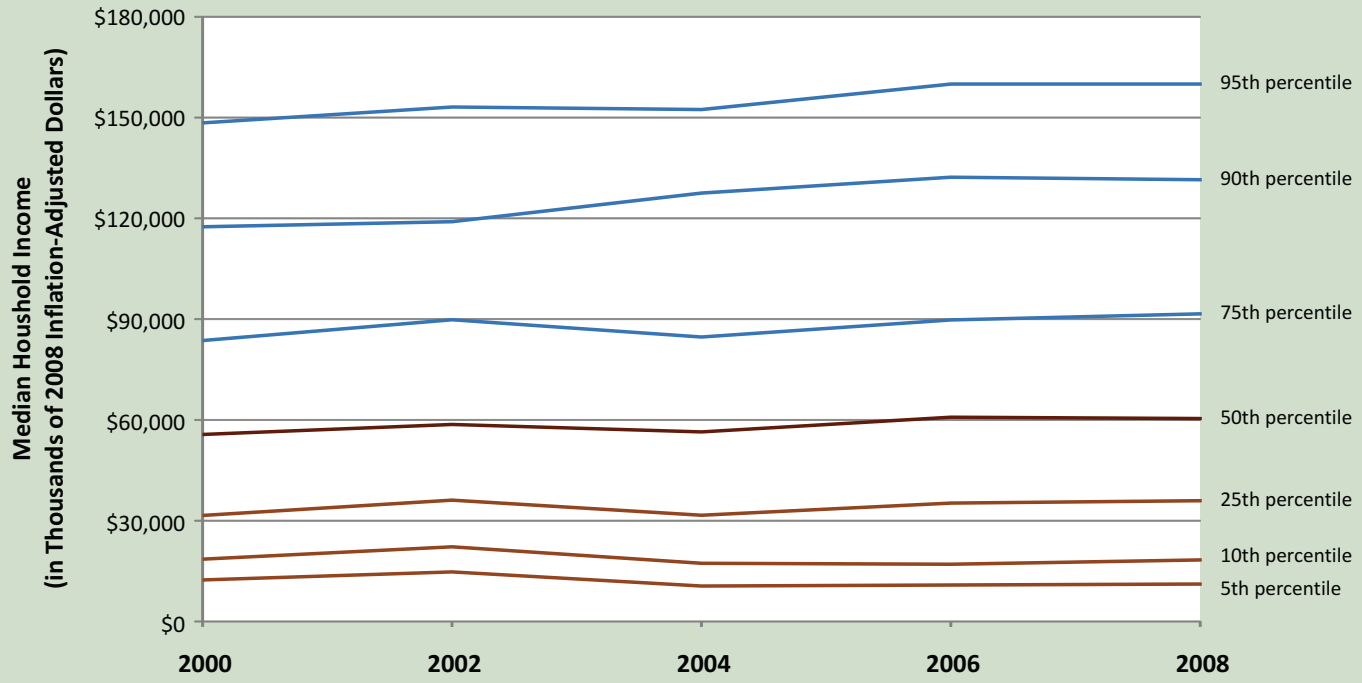



**Figure 10. Increasing Income Inequality, Spokane County, 2000 to 2008**

Data Source: Washington State Population Survey

*...while low-income individuals have seen little or no improvement.*

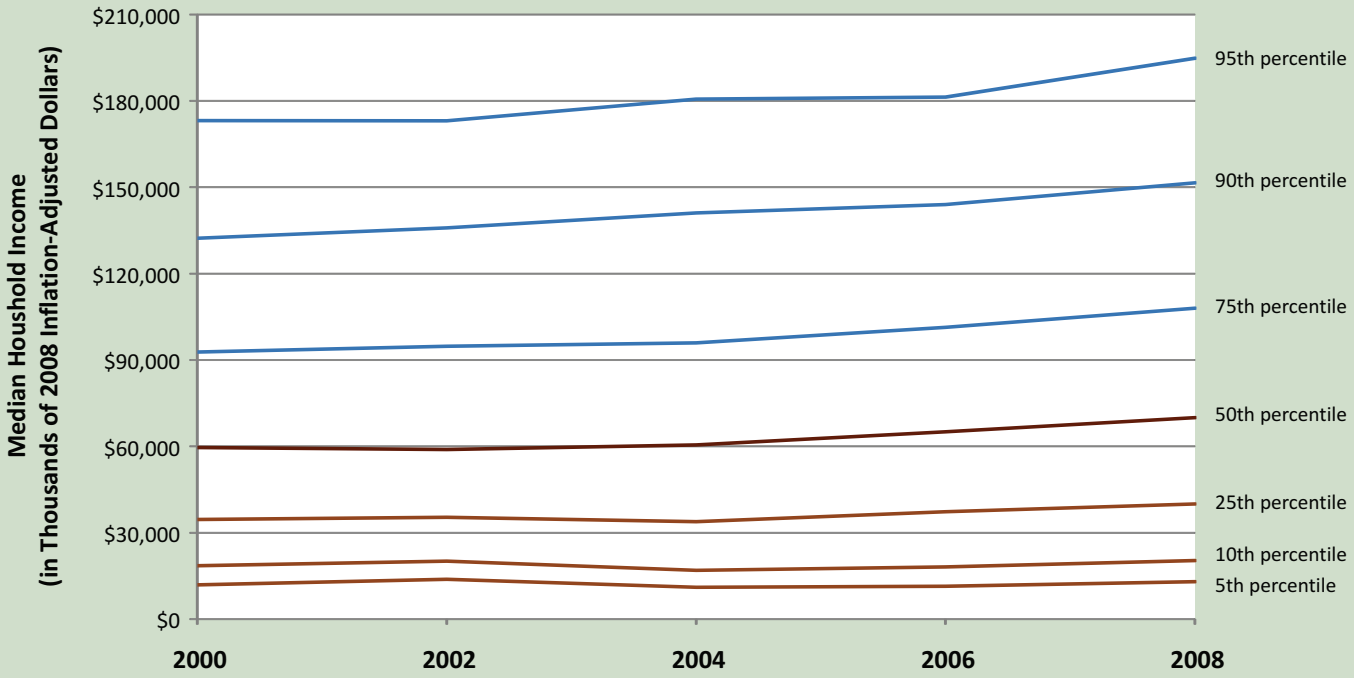



**Figure 11. Increasing Income Inequality, Washington State, 2000 to 2008**

Income inequality refers to the extent to which income is distributed in an uneven manner among a population.[22] Figures 10 and 11 illustrate the median household income for various groups (percentiles) at different levels of wealth in Spokane County and Washington state. Individuals in the upper percentiles represent the wealthiest individuals while individuals in the lower percentiles represent the poorest individuals. Incomes for the wealthiest 25 percent of individuals in Spokane County and Washington state have increased from 2000 to 2008, while the rest of the population has experienced little or no improvement in income.

Data Source: Washington State Population Survey

*The poorest individuals in Spokane County were the only ones earning less after eight years.*

**Table 1. Difference in Median Household Income, Spokane County, Washington State from 2000 to 2008**

| | | Spokane County | Washington State |
|---|---|---|---|
| High Income | 95th percentile | $11,500▲ | $21,000▲ |
| | 90th percentile | 14,000▲ | 19,200▲ |
| | 75th percentile | 8,000▲ | 15,000▲ |
| Middle Income | 50th percentile | 4,700▲ | 10,400▲ |
| | 25th percentile | 4,300▲ | 5,300▲ |
| | 10th percentile | no change | 1,800▲ |
| Low Income | 5th percentile | 1,200▼ | 1,100▲ |

**Table 1. Difference in Median Household Income (2008 Inflation-Adjusted Dollars) from 2000 to 2008**

Table 1 examines the difference in median household income for each level of wealth from 2000 to 2008 in Spokane County and Washington state. The higher percentiles represent the wealthiest and the lower percentiles represent the poorest in Spokane County and Washington state. Income increased for the wealthiest by $11,500 in Spokane County and $21,000 in Washington state; however, income decreased by $1,200 in Spokane County and increased by $1,100 in Washington state for the poorest.

Data Source: Washington State Population Survey

*Children living with a single female parent are more likely to live in poverty.*

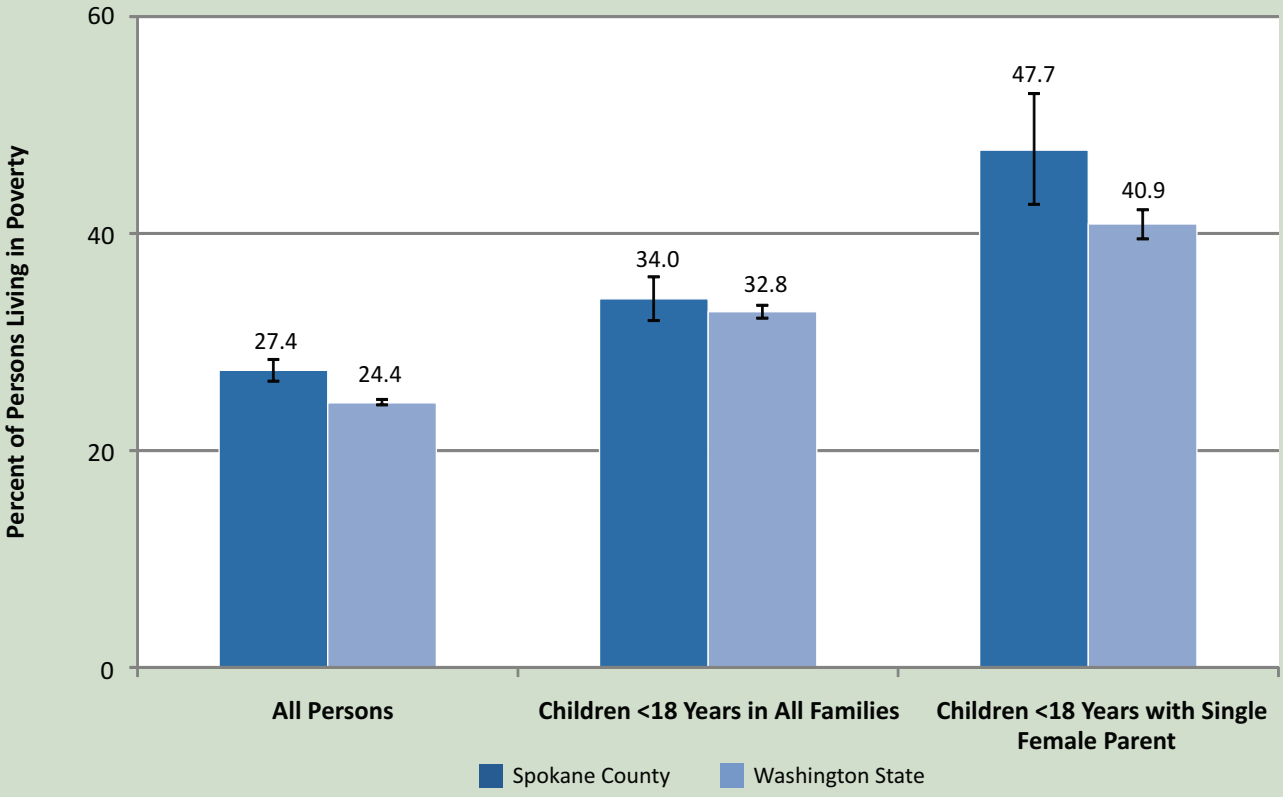



**Figure 12. Overall Poverty by Categories, 2000 to 2008**

Approximately one in four individuals in Spokane County and Washington state live in poverty. Among children less than 18 years of age, approximately one-third live in poverty in Spokane County and Washington state. The proportion increases significantly to approximately 50 percent in Spokane County and to 41 percent in Washington state if the child's parent is a single female.

Data Source: Washington State Population Survey

*The lower an adult's income, the more likely they are to be physically inactive.*

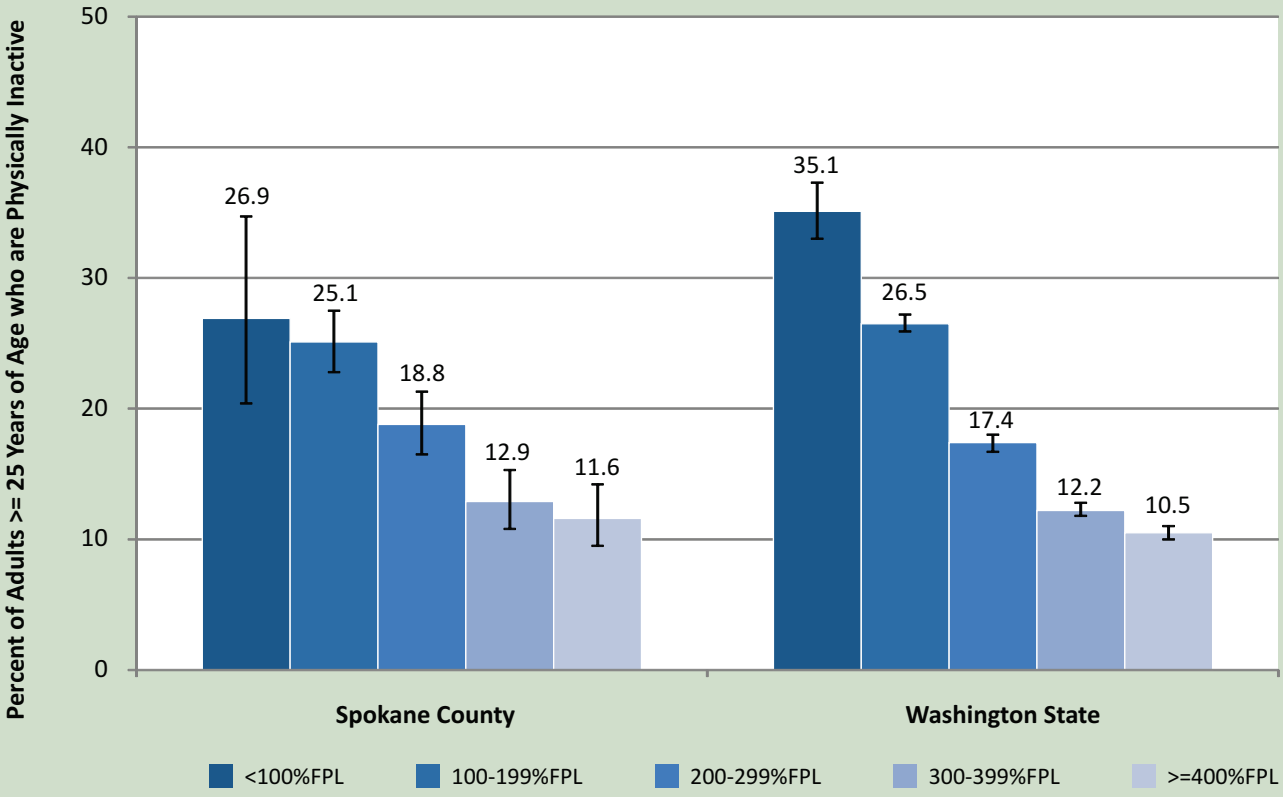



**Figure 13. Physical Activity by Household Income Among Adults 25 Years of Age or Older, 2005 to 2009**

As an adult's income level increases, the likelihood of being physically inactive decreases. Adults whose poverty level is below 100% of the Federal Poverty Level (FPL) are 2.8 times more likely to be physically inactive compared to adults whose poverty level is at or above 400% FPL in Spokane County and 4.6 times more likely in Washington State.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

*The lower an adult's income, the more likely they are to experience poor mental health.*

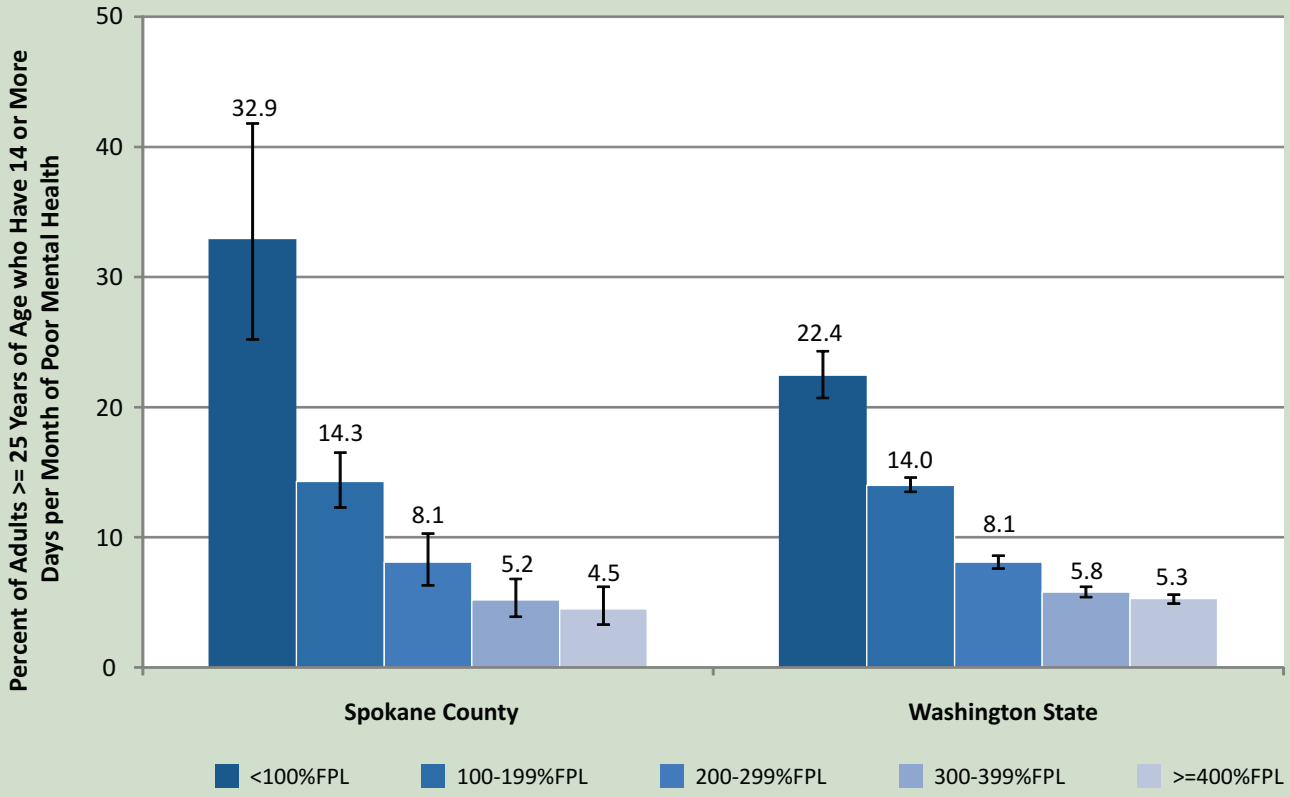



**Figure 14. Poor Mental Health by Household Income Among Adults 25 Years of Age or Older, 2005 to 2009**

As income increases, adults are less likely to experience poor mental health. Adults whose poverty level is below 100% FPL are 10.4 times more likely to have poor mental health than adults whose poverty level is at or above 400% FPL in Spokane County and 5.2 times more likely in Washington state.

**Poor mental health** was defined as adults 25 years of age or older who self-reported as not having good mental health days, which includes stress, depression, and problems with emotions, on 14 or more days in the last 30 days. Good mental health enables a person to think and act productively, to cope with adversity, and to build strong relationships. Individuals with 14 or more days of poor mental health in a month would likely benefit from intervention.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

*The lower an adult's income, the more likely they are to cut or skip meals because there was not enough money to buy food.*

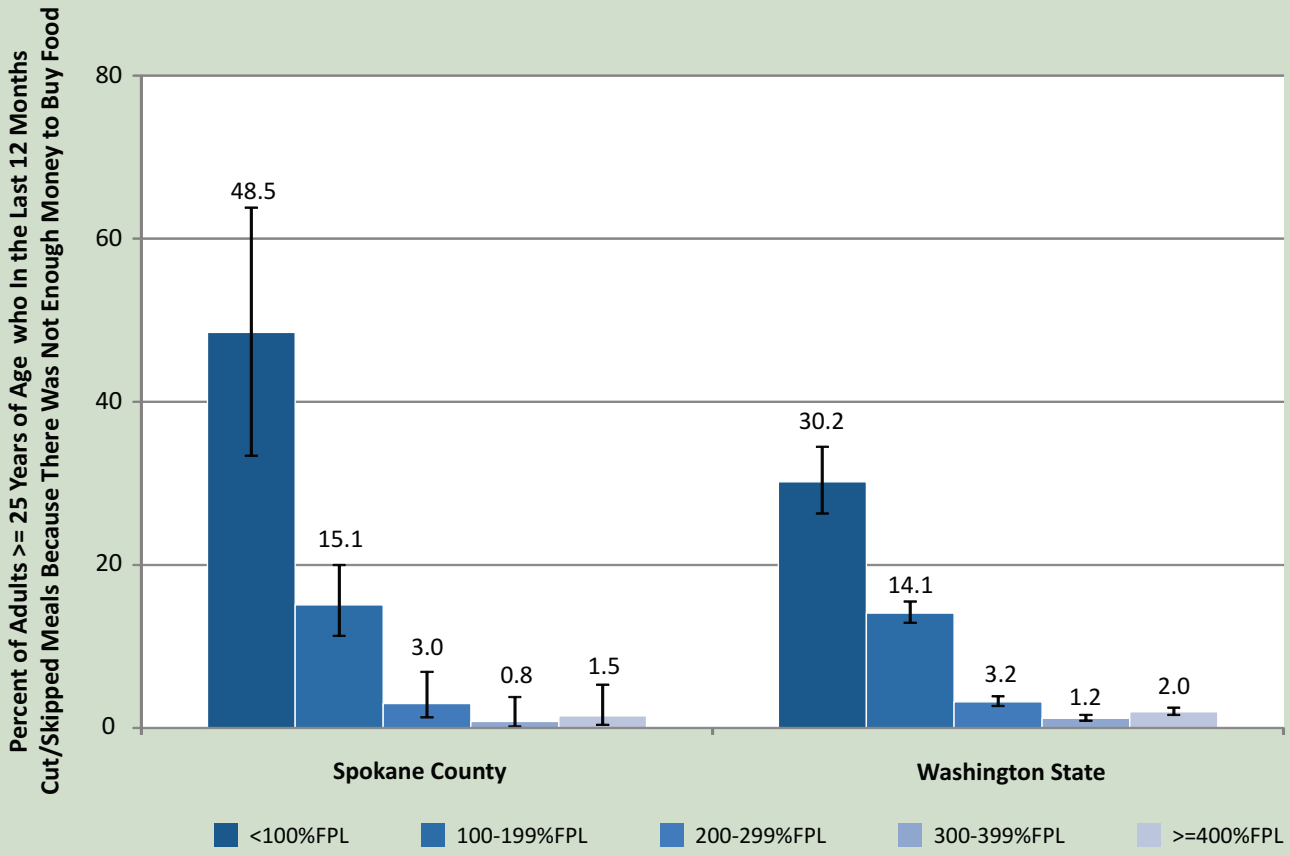



**Figure 15. Food Insecurity by Household Income Among Adults 25 Years of Age or Older, 2007**

Lower income adults are more likely to cut the size of their meals or skip meals because there was not enough money to buy food than adults in higher income groups. Adults whose poverty level is below 100% FPL are 63.0 times more likely in Spokane County and 21.4 times more likely in Washington state to cut their meal size or skip meals because there was not enough money to buy food, compared to adults whose poverty level is at or above 400% FPL.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

NPS

**National Prevention Strategy Priority: Healthy Eating**
Individuals and families that experience food insecurity may be more likely to be overweight or obese, potentially because the relative lower cost of junk foods (i.e., foods low in nutrients but high in calories) can promote over-consumption of calories.

*The lower an adult's income, the more likely they are to rate their health as fair or poor.*

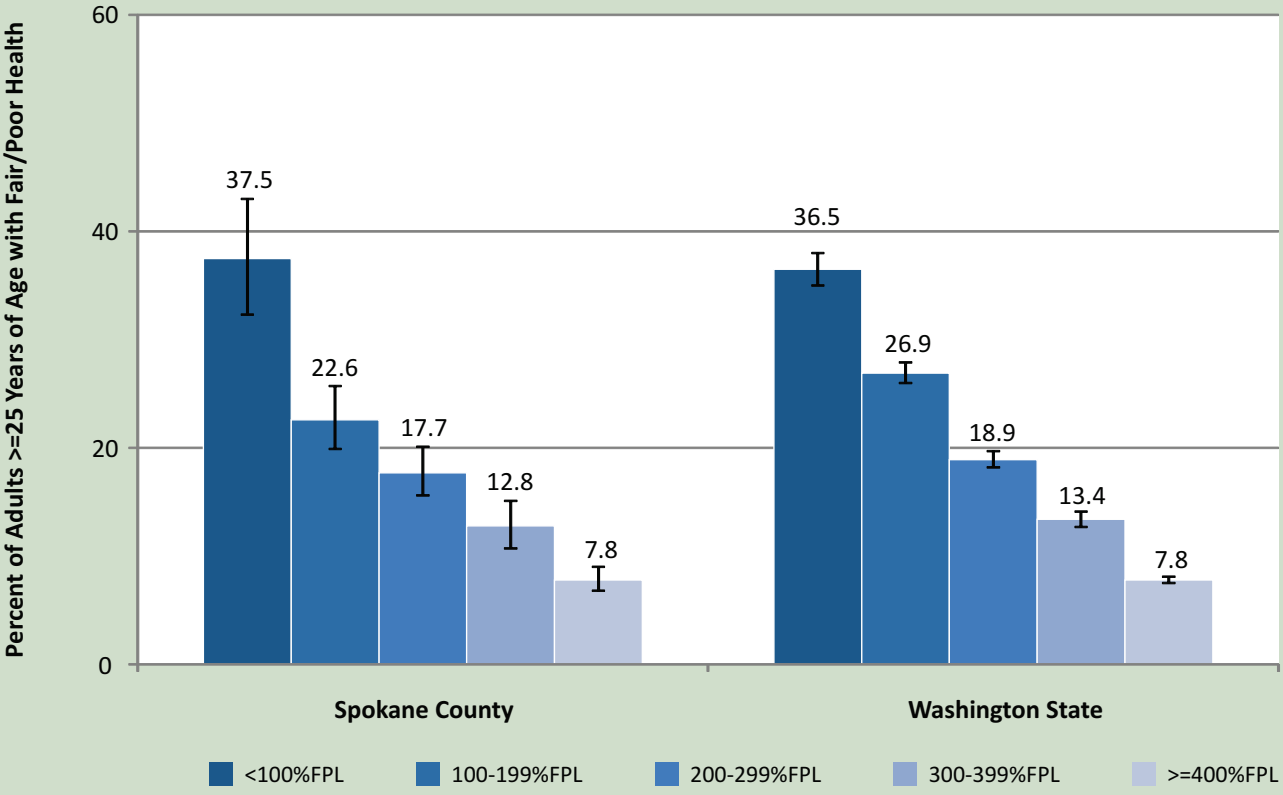



**Figure 16. General Health Status by Household Income Among Adults 25 Years of Age or Older, 2000 to 2008**

As income increases, adults who rate their health as fair or poor decreases for both Spokane County and Washington state. Adults below 100% FPL are 7.1 times more likely to be in fair or poor health compared to adults at or above 400% FPL in Spokane County and 6.8 times more likely in Washington state.

Data Source: Washington State Population Survey

*The lower an adult's income, the more likely they are to rate their health as fair or poor – regardless of race or ethnicity.*

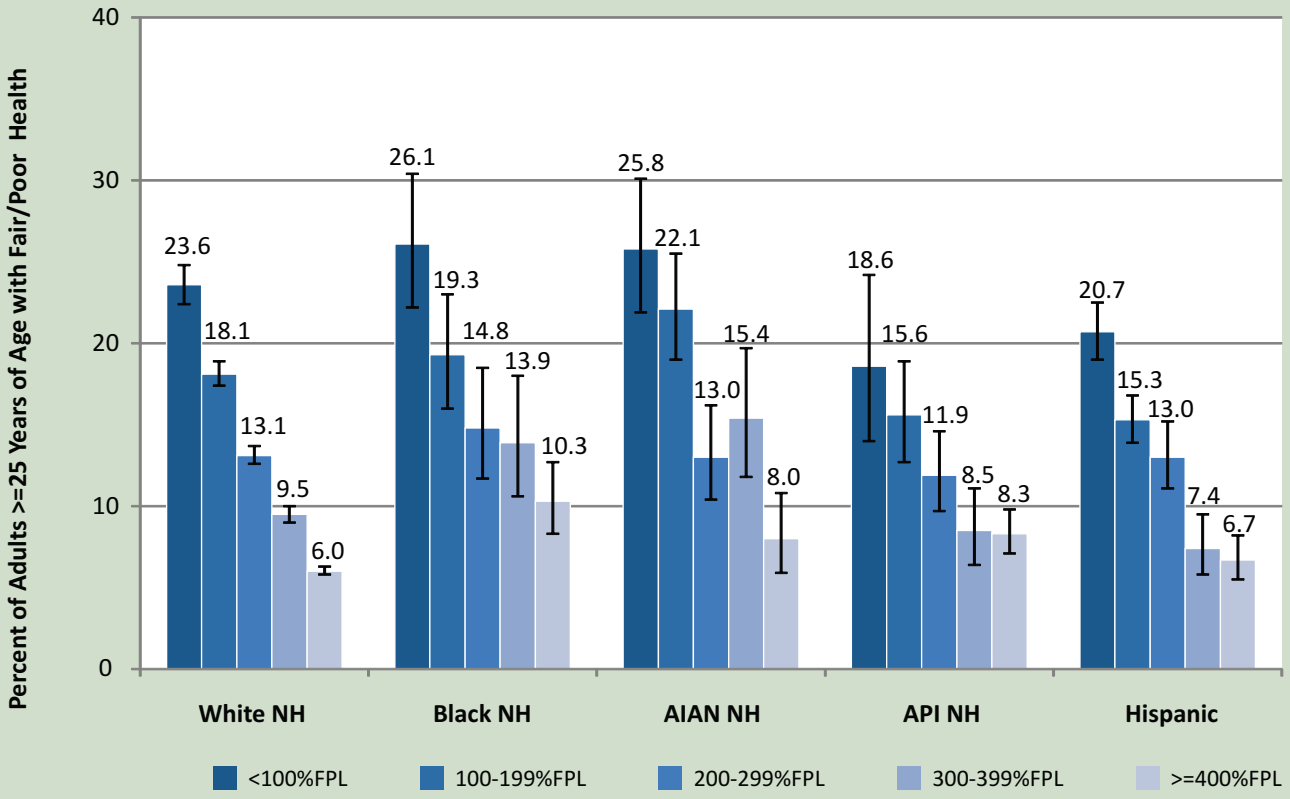



**Figure 17. General Health Status by Household Income and Race/Ethnicity for Adults 25 Years of Age or Older, Washington State, 2000 to 2008**

The difference in health status is consistent among all racial/ethnic groups in Washington state. Adults in lower income groups, regardless of race/ethnicity, are more likely to rate their health as fair or poor than adults in higher income groups.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic
Data Source: Washington State Population Survey

*The lower a parent's income, the more likely they are to rate their child's health as fair or poor.*

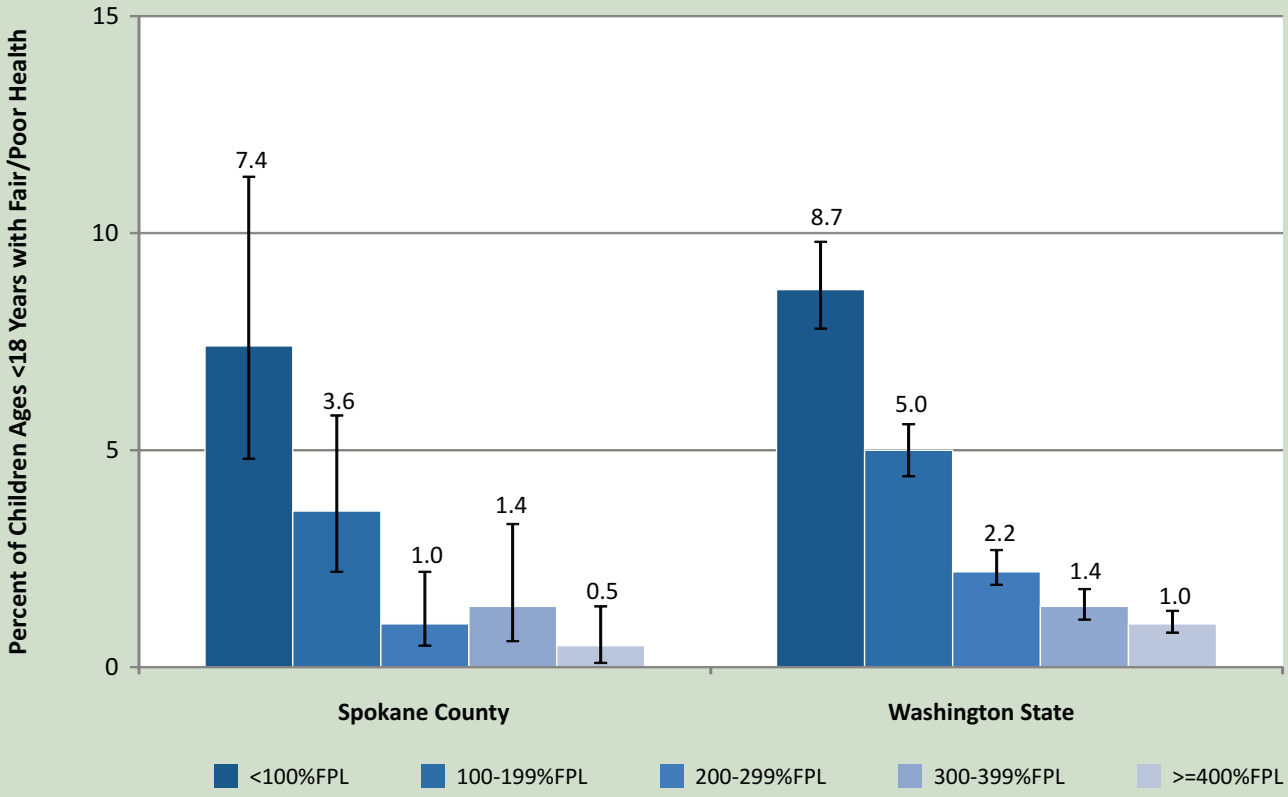



**Figure 18. Child's Health Status by Household Income, 2000 to 2008**

As household income increases, parents are less likely to rate their child's health as fair or poor for both Spokane County and Washington state. Parents below 100% FPL are 17.4 times more likely to rate their child's health as fair or poor compared to parents at or above 400% FPL in Spokane County and 8.1 times more likely in Washington state.

Data Source: Washington State Population Survey

*The lower an adult's income, the more likely they are to have their activity limited by chronic illness.*

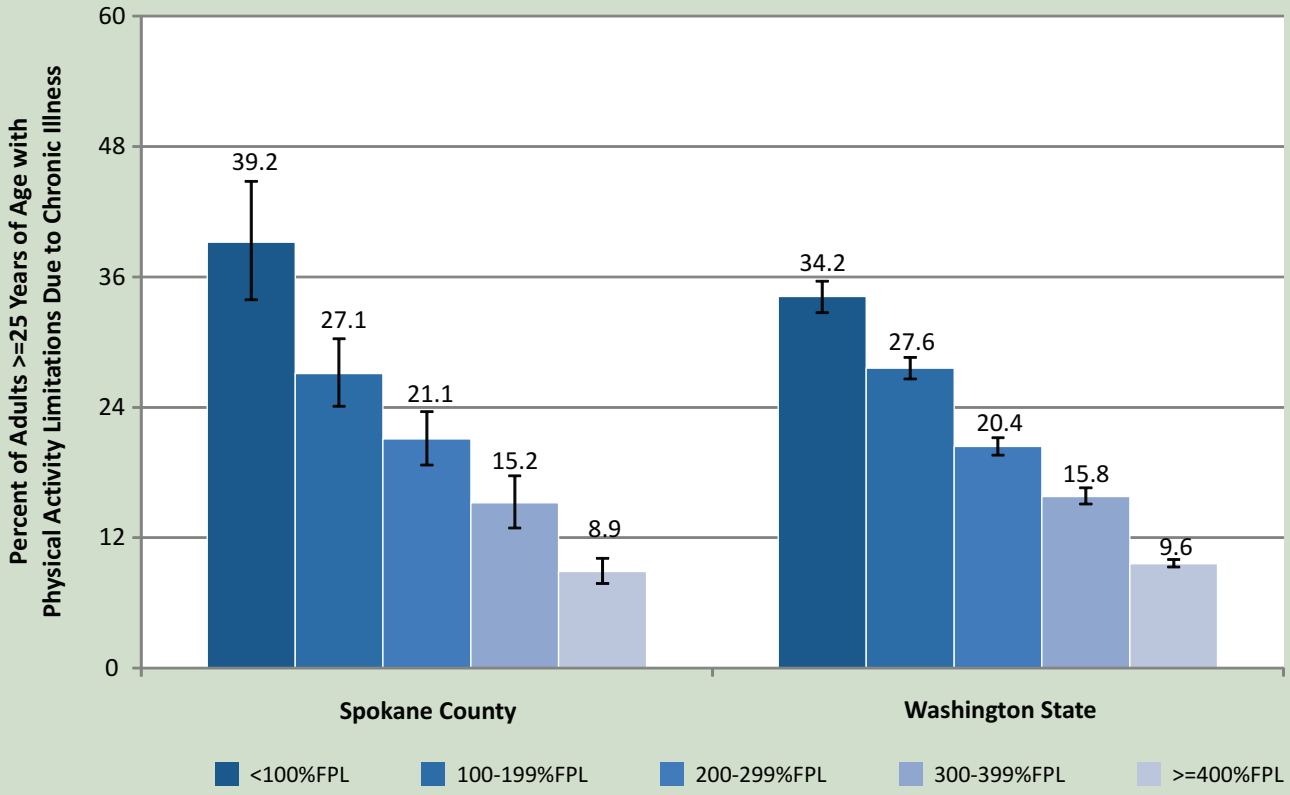



**Figure 19. Physical Activity Limitations Due to Chronic Illness among Adults 25 Years of Age or Older by Household Income, 2000 to 2008**

Lower income groups are more likely to have their activity limited by chronic illness than adults in higher income groups for Spokane County and Washington state. Adults below 100% FPL are 6.6 times more likely to have physical activity limitations due to chronic illness compared to adults at or above 400% FPL in Spokane County and 4.9 times more likely in Washington state.

Data Source: Washington State Population Survey

*The lower an adult's income, the more likely they are to have diabetes.*

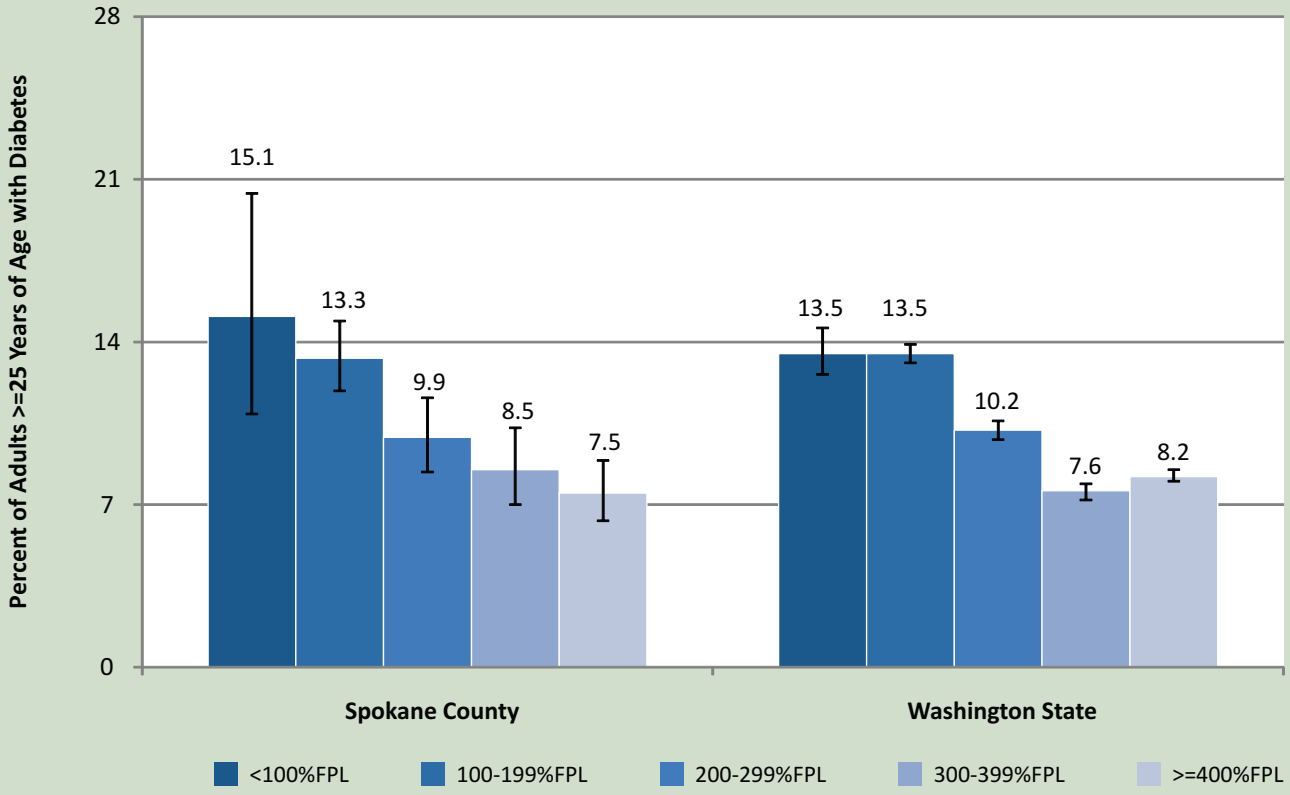



**Figure 20. Diabetes by Poverty Level Among Adults 25 Years of Age or Older, 2005 to 2009**

Diabetes significantly decreases as income increases in Spokane County and Washington state. Adults whose poverty level is below 100% FPL are 2.2 times more likely to have diabetes compared to adults at or above 400% FPL in Spokane County and 1.7 times in Washington state.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

*The lower an adult's income, the more likely they are to be obese.*

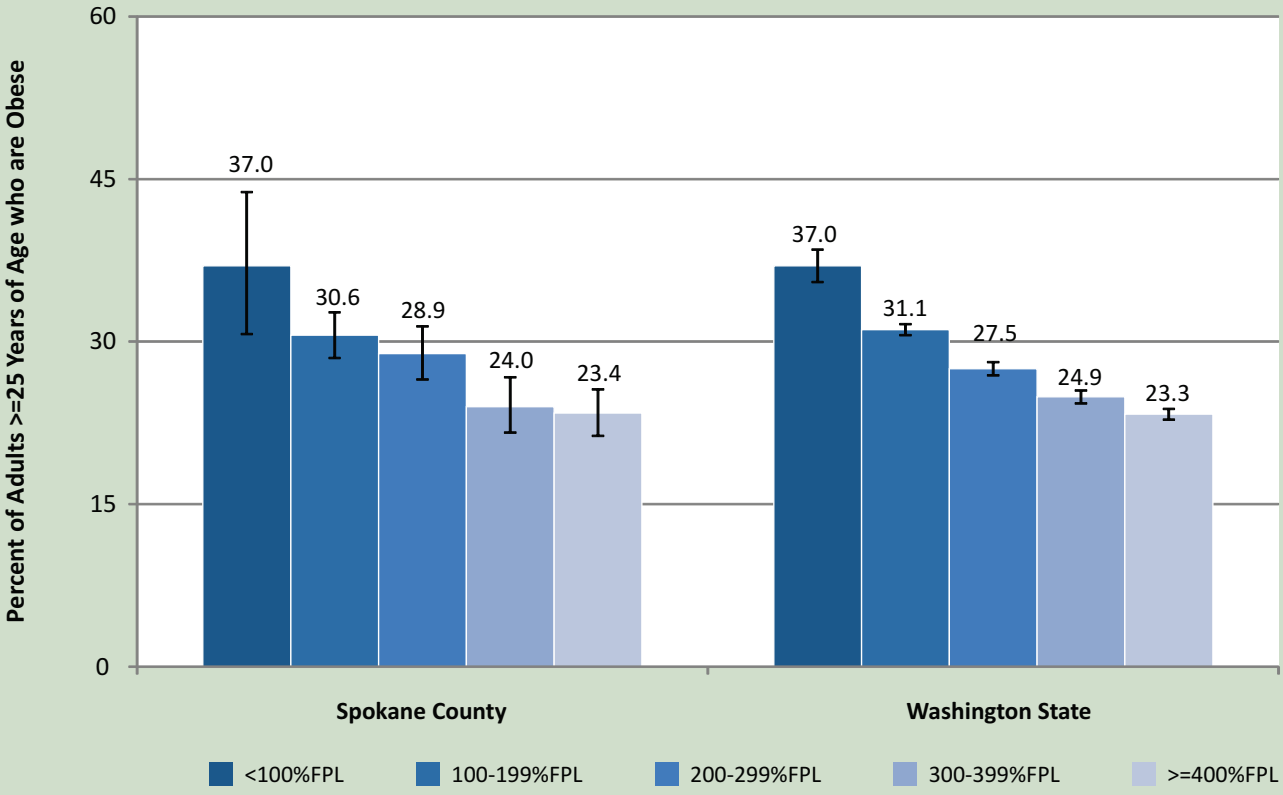



**Figure 21. Obesity by Poverty Level Among Adults 25 Years of Age or Older, 2005 to 2009**

Obesity significantly decreases as income increases in Spokane County and Washington state. Adults whose poverty level is below 100% FPL are 2.0 times more likely to be obese compared to adults at or above 400% FPL in Spokane County and Washington state.

**Obesity** is defined as having a Body Mass Index (BMI) of 30 or higher. BMI is based on height and weight and is calculated as: BMI = (weight in pounds/height in inches$^2$) X 703.

Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

# WHAT WE HEARD

*"If the kids need something and I can't afford it, it tears me up."*

~ Focus Group Participant (income <$35,000/year)

Health care insurance was frequently stated as the greatest health care need among focus group participants; dental insurance was commonly cited as a need among low-income participants.

*"I'm the person, or me and my 20- year-old, are the people in the house with no medical insurance, so we're on the hope and prayer plan that nothing goes wrong...$500 a month is not feasible to take out of an income."*

~ Focus Group Participant (income $35-75,000/year)

Focus group participants were asked about their perceptions of stereotypes that others may have of people from their socioeconomic level. One participant from the low-income group stated,

*"I think the biggest stereotype is that we don't try. I think that's a problem. People are at this bracket for whatever reason, but I certainly don't think it's for lack of trying."*

~ Focus Group Participant (income <$35,000/year)

When discussing perceptions of stereotypes, one participant stated,

*"They [individuals with higher income] may not be aware of how responsible and loving parents we are, that we prioritize in the same way they do."*

~ Focus Group Participant (income <$35,000/year)

*"...I stress a lot about money. I'm a single mom. I work a lot. I just work all the time. I wish I could give more to my kids. Spend more time with them."*

~ Focus Group Participant (income <$35,000/year)

Poor nutrition, including overconsumption of processed and fast foods, was frequently mentioned among participants from all income groups as a reason for not being as healthy as possible.

*"I counted how many fast food restaurants are between the airport and my house, and you can probably back me up on this. There's 14 fast food restaurants...It's a lot easier to either grab it going or grab it coming home."*

~ Focus Group Participant (income >$75,000/year)

## THE GARDNER FAMILY'S STORY

Twenty-two years ago, after having their third biological child, Michelle Gardner and her husband Steve decided to expand their family by adopting a girl from China. The experience was so gratifying, they went on to adopt 11 more children from various countries, some as far away as Russia and Ethiopia.

Although not as overt as the discrimination some of the children would have faced in their native countries, the children each have their own stories of discrimination and social exclusion specific to Spokane. And although most of them are now in good health, research tells us their past and present experiences may affect their well-being in many ways.

Andrew (16), Philip (14) and Nathaniel (12), three of the six Gardner children from Ethiopia, were passing out flyers for a community dance at a neighborhood convenience store last year when they were promptly asked to leave because they were making customers uncomfortable. In fourth grade, Nathaniel was referred to as a "nigger" by a classmate (the child was expelled). The Gardner's cars and house have been egged repeatedly.

Andrew's superior running abilities (he's currently ranked seventh in the nation for long-distance running) are often attributed to his heritage and not his dedication. Truth be told, nine years of survival in his village, including watching his 1-year-old sister Tseynesh die of an obstruction in her esophagus, is a big part of his motivation. Andrew goes much deeper with his running than for enjoyment. He wants to do something big with his life and he sees running as a catalyst to doing something great.

This early in their lives, it is hard for the Gardner children to assess how these experiences will shape opportunities and their health later in life. Michelle is thankful that Spokane can offer more options for her children than their native countries, but like any mother, she doesn't want anything to stand in the way of her children's dreams, especially not the color of their skin.

# SECTION 3: **RACE/ETHNICITY**

Health disparities are also evident between races and ethnic groups with some differences due to health inequities from racism, discrimination, and social exclusion. Racism can decrease access to better education and income; develop segregation into environments having more pollution, crime, and poor quality housing; and create chronic stress that undermines mental and physical health in many ways.[23] Evidence indicates that belonging to a particular racial or ethnic group can itself represent different social experiences, causing additional anxiety and stress.[24,25]

Studies have documented that subtle or overt racial/ethnic biases create stress for individuals.[26,27,28] People may not have experienced major incidents of overt racism, prejudice, or bias themselves, but are very aware of unfair treatment toward other racial/ethnic groups.[29] As a result, both personal experiences of racism, prejudice, or biases endured by racial and ethnic minorities can influence and shape economic and social opportunities and access to resources for an individual, impacting their health over their lifetime and across generations.

Continual, ongoing stress has been found to have major adverse health affects through multiple physiological mechanisms; resulting in increased risk of heart disease, stroke, diabetes, low birth weight or premature birth, and other serious conditions.[29,30,31,32,33]

In the end, racial and ethnic minorities are more likely than non-Hispanic whites to be poor, unemployed, and engage in high risk behaviors. Hispanics, blacks, American Indians/Alaska Natives, Pacific Islanders, and some Asian sub-groups are less likely than non-Hispanic whites to graduate from high school.[34,35] Consequently, adverse events attributed to racism, prejudice and biases ultimately impact an individual's mental and physical well-being.

*Although racial/ethnic minorities had the largest growth, they only constitute 10 percent of the population.*

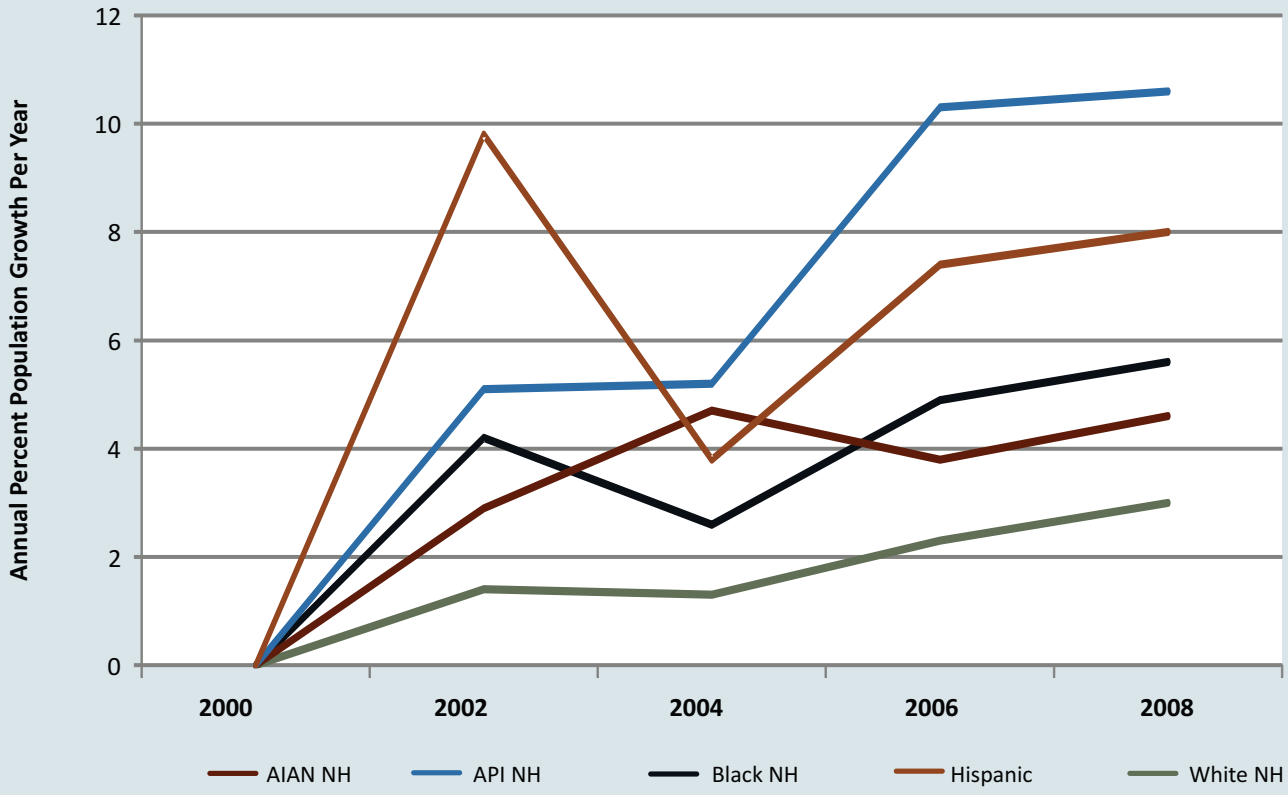



**Figure 22. Population Growth of Racial and Ethnic Groups, Spokane County 2000 to 2008**

Figure 22 illustrates the annual growth for each racial/ethnic group in Spokane County. It also demonstrates that API NHs had the largest overall growth in population from 2000 to 2008, an increase of approximately 35 percent; Hispanics had an overall growth of 32 percent; black NHs had an overall growth of 18 percent; AIAN NHs had an overall growth of approximately 17 percent; and white NHs had the smallest overall growth in population, an increase of 10 percent. Despite the small growth in population, white NHs still constitute 90 percent of the entire population in Spokane County.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic

Data Source: CHAT Population Estimates for Public Health Assessment, Washington State Department of Health and Krupski Consulting

*Higher proportions of American Indians/Alaska Natives, blacks, and Hispanics live in poverty.*

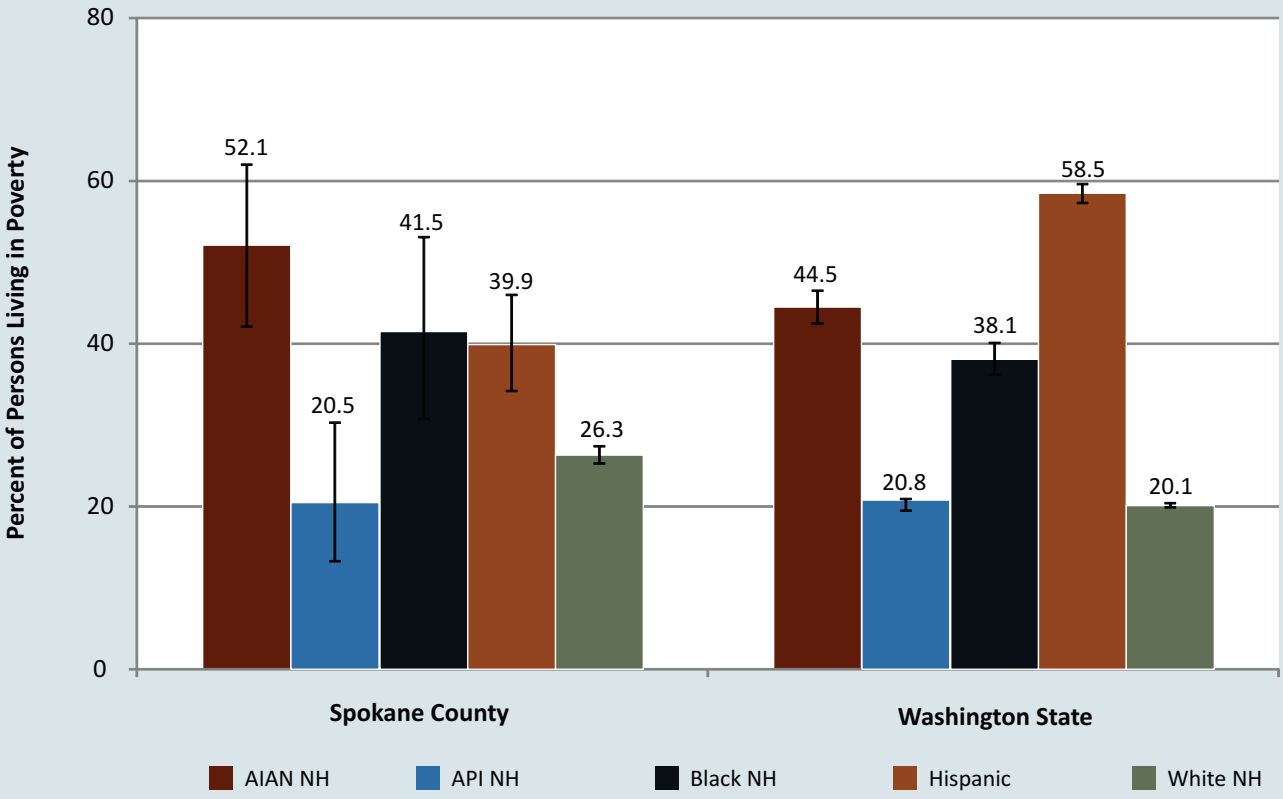



**Figure 23. Racial/Ethnic Differences in Overall Poverty, 2000 to 2008**

Disparities among racial/ethnic groups living in poverty exist both in Spokane County and Washington state. AIAN NHs are the largest racial/ethnic group living in poverty in Spokane County, with just over half of all individuals; however in Washington state the largest racial/ethnic group living in poverty is Hispanics, approximately 60 percent.

In Spokane County, black NHs and Hispanics are 2.0 times more likely to live in poverty while AIAN NHs are 3.0 times more likely than white NHs. In Washington state, Hispanics are 5.6 times more likely to live in poverty than white NHs, while black NHs are 2.5 times more likely and AIAN NHs are 3.2 times more likely.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic
Data Source: Washington State Population Survey

*Higher proportions of American Indian/Alaska Native, black, and Hispanic children live in poverty.*

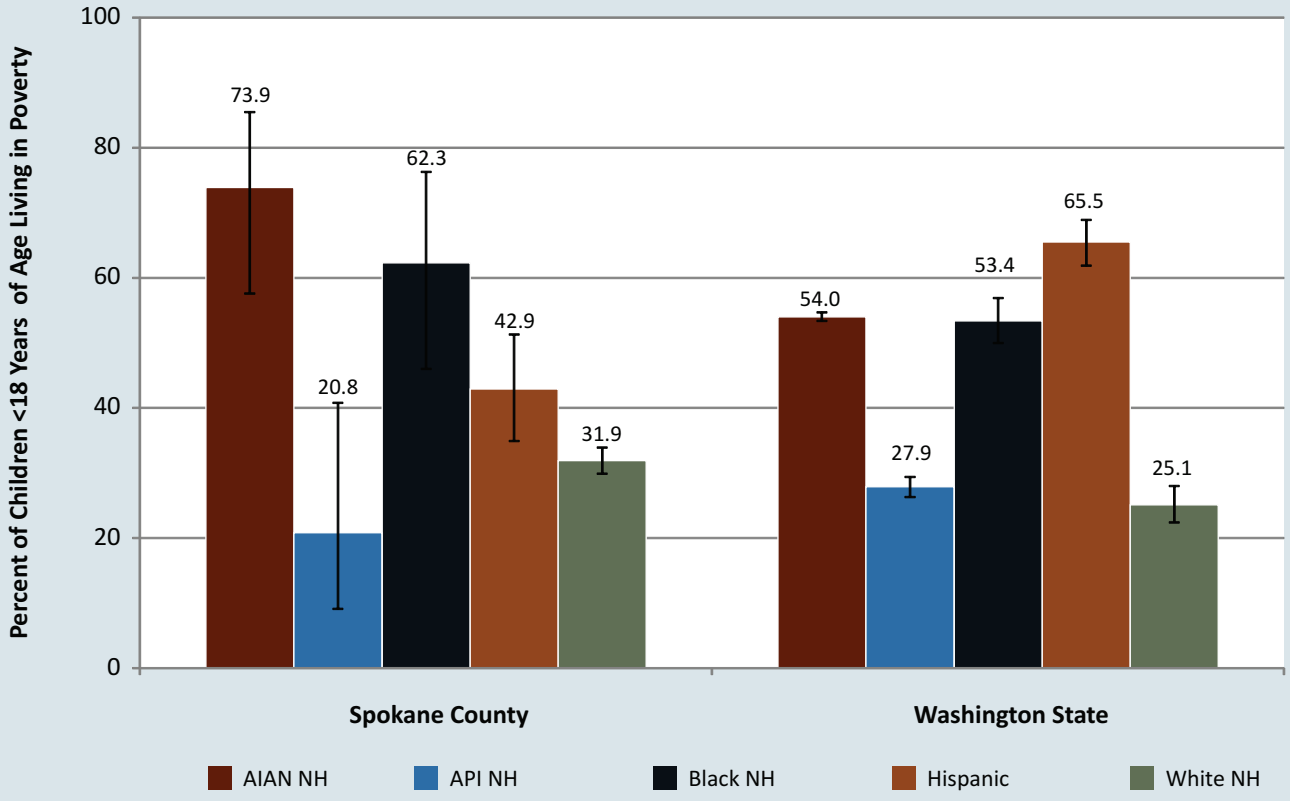



**Figure 24. Racial/Ethnic Differences in Poverty Among Children Less Than 18 Years of Age, 2000 to 2008**

Figure 24 illustrates the racial/ethnic inequity among children living in poverty in Spokane County and Washington state; ethnic minority children are more likely to be living in poverty than white NHs with the exception of API NHs.

In Spokane County, approximately 75 percent of AIAN NH children, approximately 62 percent of black NH children, and 43 percent of Hispanic children live in poverty. AIAN NH children are 6.0 times more likely to be living in poverty than white NH children, black NH children are 3.5 times more likely, and Hispanic children are 1.6 times more likely.

In Washington state, 66 percent of Hispanic children, 53 percent of black NH children, and 54 percent of AIAN NH children live in poverty. Hispanic children are 5.6 times more likely to be living in poverty than white NH children, black NH children are 3.4 times more likely, and AIAN are 3.5 times more likely.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic
Data Source: Washington State Population Survey

*New HIV infection occurs more frequently among American Indians/Alaska Natives, blacks and Hispanics.*

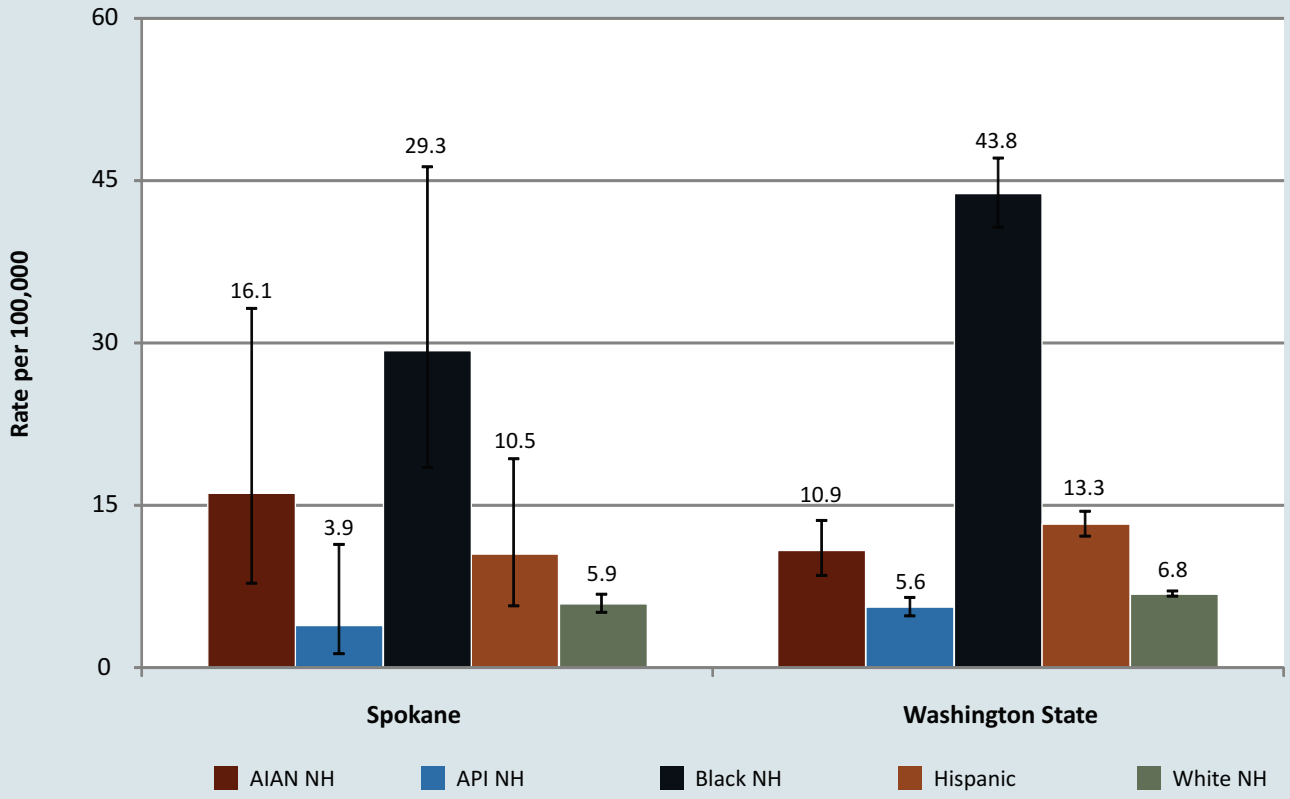



**Figure 25. New HIV Diagnosis Rates (Incidence) by Race/Ethnicity, 2002 to 2008**

Figure 25 shows in Spokane County, black NHs are 5.7 times more likely to become infected with HIV than white NHs, while AIAN NHs are 3.2 times more likely and Hispanics are 2.1 times more likely. In Washington state, black NHs are 6.4 times more likely to become infected with HIV, AIAN NHs are 1.6 times more likely, and Hispanics are 2.0 times more likely than white NHs, whereas API NHs are 25 percent less likely to become infected with HIV.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic
Data Source: Washington State HIV Surveillance Report

*Food insecurity is experienced more frequently among American Indians/Alaska Natives, blacks and Hispanics.*

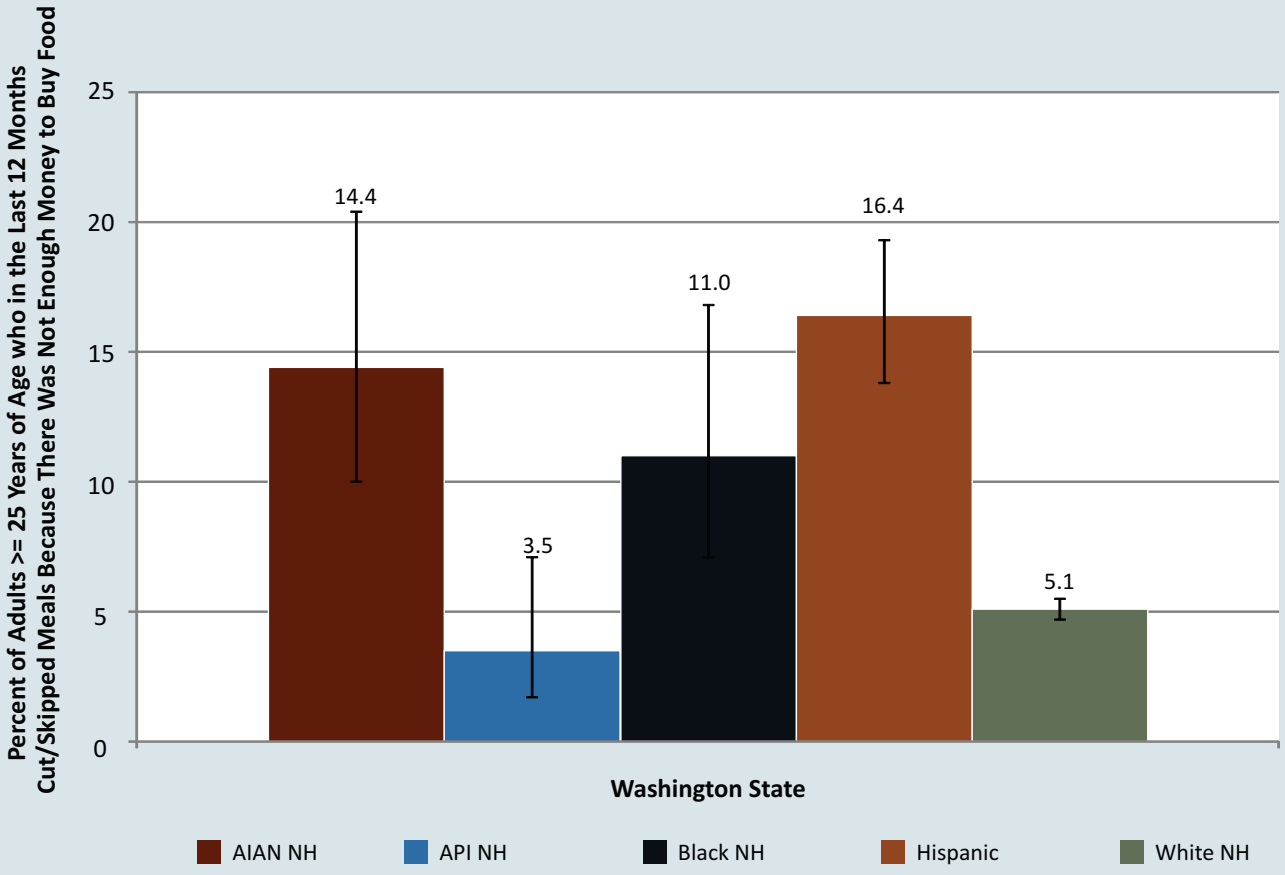



**Figure 26. Food Insecurity by Race/Ethnicity Among Adults 25 Years of Age or Older, Washington State, 2007**

Ethnic minorities in Washington state, with the exception of API NH, are more likely than white NHs to cut the size of their meals or skip meals because there was not enough money for food. Hispanics are approximately 4.0 times more likely than white NHs to cut or skip a meal because there was not enough money for food, black NHs are 2.3 times more likely, and AIAN NHs are 3.2 times more likely.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

*Racial/ethnic minorities are less likely to report receiving needed social and emotional support.*

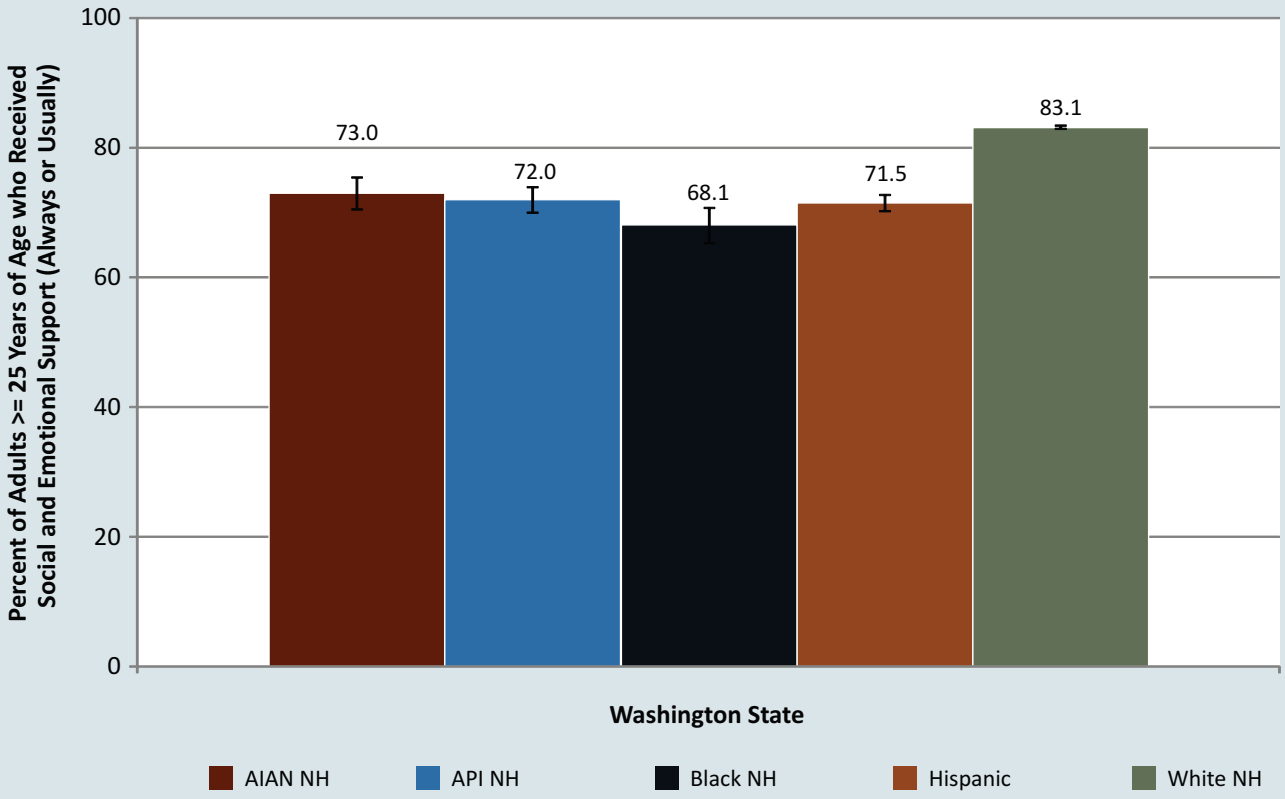



**Figure 27. Needed Social and Emotional Support by Race/Ethnicity Among Adults 25 Years of Age or Older, Washington State, 2005 to 2009**

Ethnic minorities in Washington state are less likely to report receiving needed social and emotional support. Black NHs are 2.3 times less likely than white NHs to receive needed social and emotional support, while AIAN NHs, API NHs, and Hispanics are approximately 2.0 times less likely than white NHs.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

NPS

**National Prevention Strategy Priority: Mental and Emotional Well-Being –** Positive mental and emotional well-being depends on many factors, including quality relationships with family and friends, employment in a positive workplace environment, the ability to participate and contribute to the community, and the ability to access appropriate mental health services when needed.

*Mortality rate is highest among American Indians/Alaska Natives.*

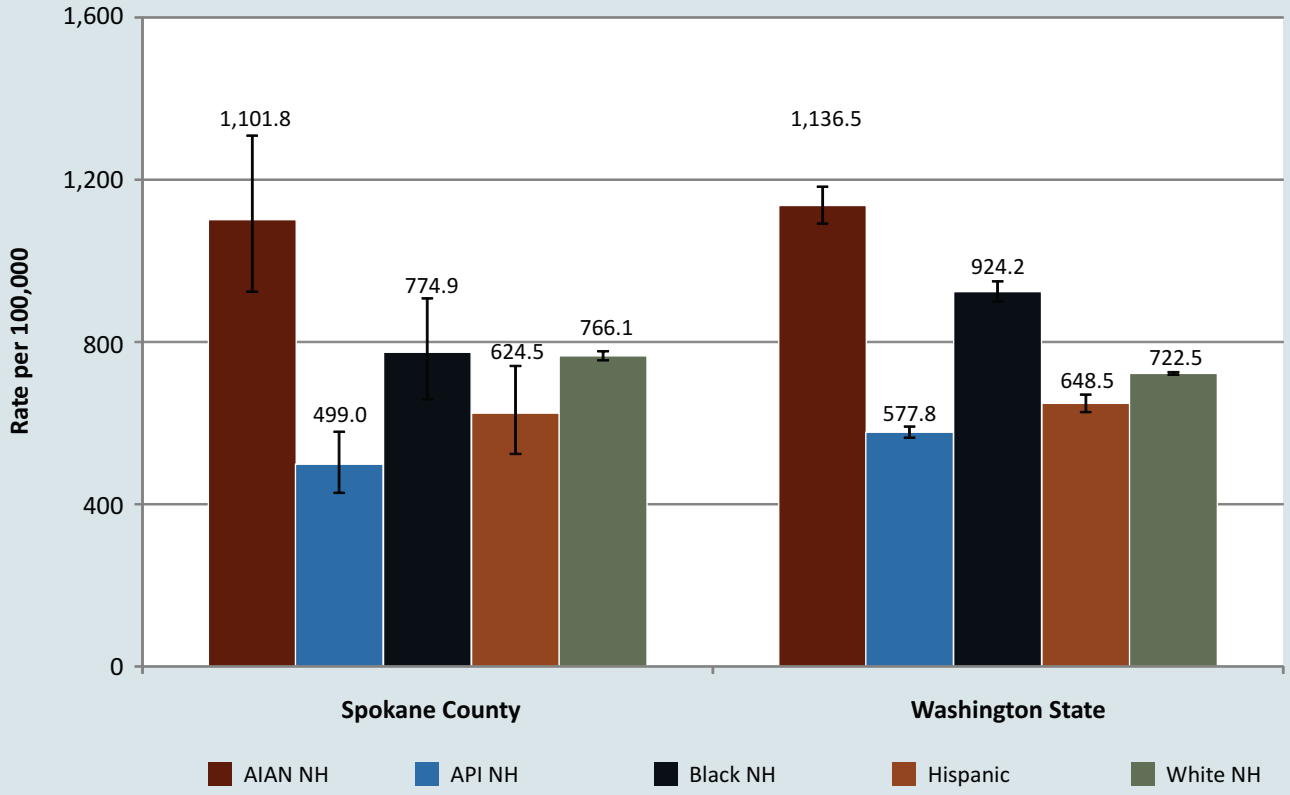



**Figure 28. Age-Adjusted Mortality Rate by Race/Ethnicity, 2005 to 2009**

Figure 28 illustrates the inequity in mortality rates among the different racial/ethnic groups in Spokane County and Washington state. AIAN NHs have the highest mortality rate among all racial/ethnic groups. The mortality rate is 1.4 times higher than white NHs in Spokane County and 1.6 times higher in Washington state. Black NHs in Washington state have a mortality rate that is 1.3 times higher than white NHs.

Elevated mortality rates may suggest adverse environmental conditions are impacting a particular population, or a disease situation or some other stressor is affecting the population.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic
Data Source: Death Certificate Data, Washington State Department of Health, Center for Health Statistics

*Non-Hispanic whites are living longer than any other racial/ethnic group.*

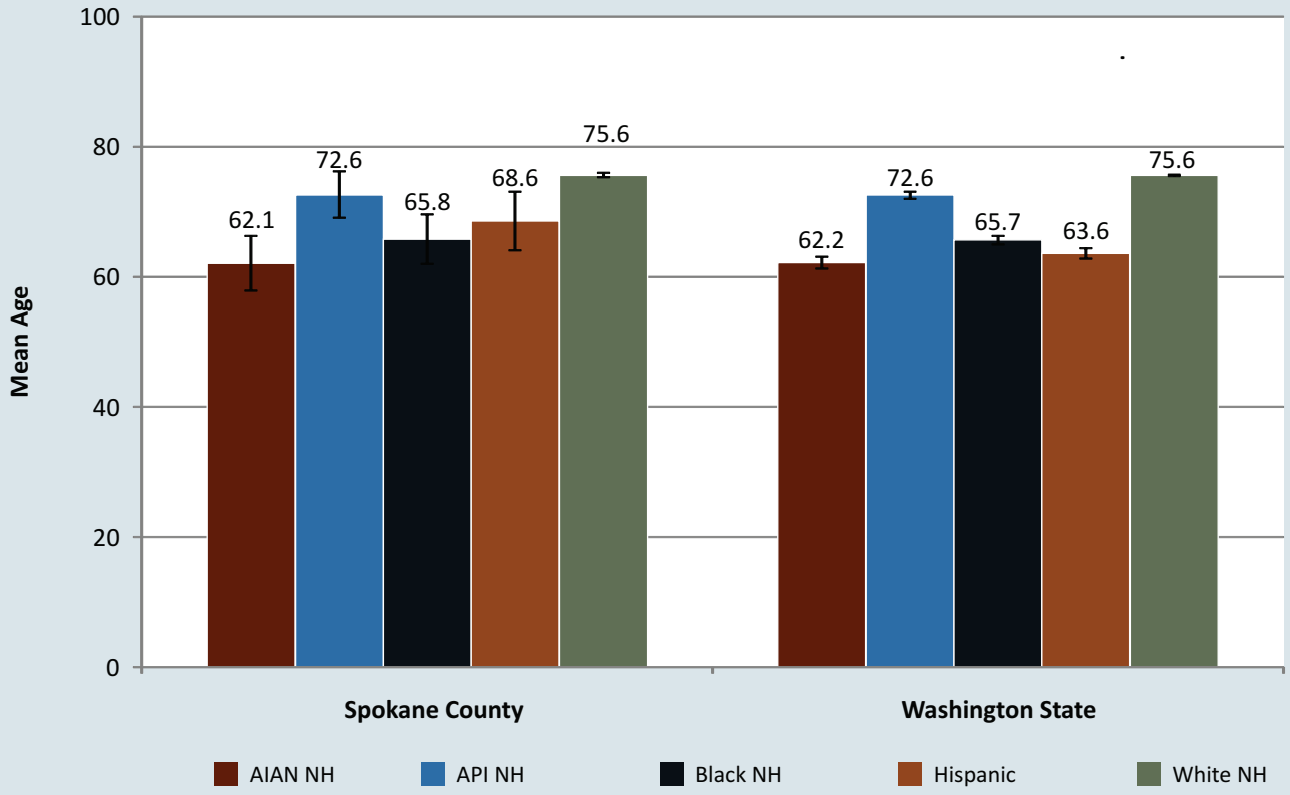



**Figure 29. Mean Age of Death by Race/Ethnicity for Adults 25 Years of Age or Older, 2008 to 2009**

The overall mean age of death for adults 25 years of age or older in Spokane County is 75.4 years; similar to Washington state at 74.9 years.

**In Spokane County and Washington state, white NHs have the highest mean age of death at 75.6, while AIAN NHs have the lowest mean age of death at just over 62 years; a difference of 13.5 years.**

In Spokane County, white NH adults 25 years of age or older are living on average approximately 10 years longer than black NH adults and seven years longer than Hispanic adults. In Washington state, white NH adults 25 years of age or older are living on average approximately 10 years longer than black NH adults, 12 years longer than Hispanic adults, and three years longer than API NH adults.

AIAN=American Indian/Alaska Native, API=Asian Pacific Islander, NH=Non-Hispanic

Data Source: Death Certificate Data, Washington State Department of Health, Center for Health Statistics

| Spokane County | | | Washington State | | |
|---|---|---|---|---|---|
| **AIAN NH** | | | | | |
| **Rank** | **Cause of Death** | **Rate** | **Rank** | **Cause of Death** | **Rate** |
| 1 | Malignant neoplasms | 257.2 | 1 | Diseases of the heart~ | 236.7 |
| 2 | Diseases of the heart~ | 137.2 | 2 | Malignant neoplasms | 216.3 |
| 3 | Unintentional injury^ | 97.7 | 3 | Unintentional injury^ | 102.5 |
| 4 | Chronic lower resp. diseases* | 75.7 | 4 | Diabetes mellitus | 65.9 |
| 5 | Alzheimer's disease | 64.8 | 5 | Chronic lower resp. diseases* | 62.8 |
| **API NH** | | | | | |
| **Rank** | **Cause of Death** | **Rate** | **Rank** | **Cause of Death** | **Rate** |
| 1 | Malignant neoplasms | 108.6 | 1 | Malignant neoplasms | 149.1 |
| 2 | Diseases of the heart~ | 102.2 | 2 | Diseases of the heart~ | 123.6 |
| 3 | Cerebrovascular diseases (stroke) | 63.2 | 3 | Cerebrovascular diseases (stroke) | 52.7 |
| 4 | Diabetes mellitus | 40.1 | 4 | Diabetes mellitus | 29.2 |
| 5 | Unintentional injury^ | 32.6 | 5 | Alzheimer's disease | 23.2 |
| **Black NH** | | | | | |
| **Rank** | **Cause of Death** | **Rate** | **Rank** | **Cause of Death** | **Rate** |
| 1 | Diseases of the heart~ | 185.5 | 1 | Malignant neoplasms | 220.8 |
| 2 | Malignant neoplasms | 154.4 | 2 | Diseases of the heart~ | 209.2 |
| 3 | Diabetes mellitus | 93.3 | 3 | Diabetes mellitus | 59.0 |
| 4 | Cerebrovascular diseases (stroke) | 63.8 | 4 | Cerebrovascular diseases (stroke) | 57.8 |
| 5 | Unintentional injury^ | 33.8 | 5 | Alzheimer's disease | 46.2 |
| **Hispanic** | | | | | |
| **Rank** | **Cause of Death** | **Rate** | **Rank** | **Cause of Death** | **Rate** |
| 1 | Malignant neoplasms | 132.7 | 1 | Diseases of the heart~ | 147.2 |
| 2 | Diseases of the heart~ | 87.6 | 2 | Malignant neoplasms | 138.5 |
| 3 | Diabetes mellitus | 49.2 | 3 | Diabetes mellitus | 46.0 |
| 4 | Alzheimer's disease | 40.9 | 4 | Unintentional injury^ | 36.6 |
| 5 | Unintentional injury^ | 31.6 | 5 | Alzheimer's disease | 27.8 |
| **White NH** | | | | | |
| **Rank** | **Cause of Death** | **Rate** | **Rank** | **Cause of Death** | **Rate** |
| 1 | Malignant neoplasms | 184.4 | 1 | Malignant neoplasms | 178.5 |
| 2 | Diseases of the heart~ | 156.5 | 2 | Diseases of the heart~ | 163.9 |
| 3 | Chronic lower resp. diseases* | 53.9 | 3 | Chronic lower resp. diseases* | 45.7 |
| 4 | Unintentional injury^ | 53.1 | 4 | Alzheimer's disease | 41.6 |
| 5 | Cerebrovascular diseases (stroke) | 45.8 | 5 | Cerebrovascular diseases (stroke) | 40.7 |

^ Includes: Traffic accidents (includes motorist, pedestrian, cyclist), firearm, poisoning, falls, drowning, fire/burns.
~ Includes: Coronary heart disease, hypertensive heart disease, and heart failure.
* Includes: Bronchitis (chronic or unspecified), emphysema, and asthma.

### Table 2. Leading Causes of Mortality per 100,000 (Age-Adjusted) by Race/Ethnicity, 2005 to 2009

Table 2 compares the top five leading causes of mortality by race/ethnicity and illustrates the inequity among race/ethnicity in Spokane County and Washington state. In Spokane County, black NHs have the highest mortality rate for diseases of the heart, diabetes, and cerebrovascular diseases. The rate of mortality among black NHs for diseases of the heart is 1.2 times higher compared to white NHs, 3.6 times higher for diabetes, and 1.4 times higher for cerebrovascular diseases. The mortality rate for malignant neoplasms, unintentional injuries , chronic lower respiratory diseases, and Alzheimer's disease is highest among AIAN NHs in Spokane County. The mortality rate for cancer is 1.4 times higher than white NHs, 1.8 times higher for unintentional injury, 1.4 times higher for chronic lower respiratory diseases, and 1.8 times higher for Alzheimer's disease.

In Washington state, black NHs have the highest mortality rate for malignant neoplasms, cerebrovascular diseases, and Alzheimer's disease. The rate of mortality for neoplasms is 1.2 times higher for black NHs compared to white NHs, and 1.4 times higher for cerebrovascular diseases. AIAN NHs have the highest mortality rates for diseases of the heart, unintentional injuries, diabetes, and chronic lower respiratory diseases. The mortality rate for AIAN NHs is 1.4 times higher for diseases of the heart compared to white NHs, 2.6 times higher for unintentional injuries, 2.9 times higher for diabetes, and 1.4 times higher for chronic lower respiratory diseases.

Data Source: Death Certificate Data, Washington State Department of Health, Center for Health Statistics

# WHAT WE HEARD

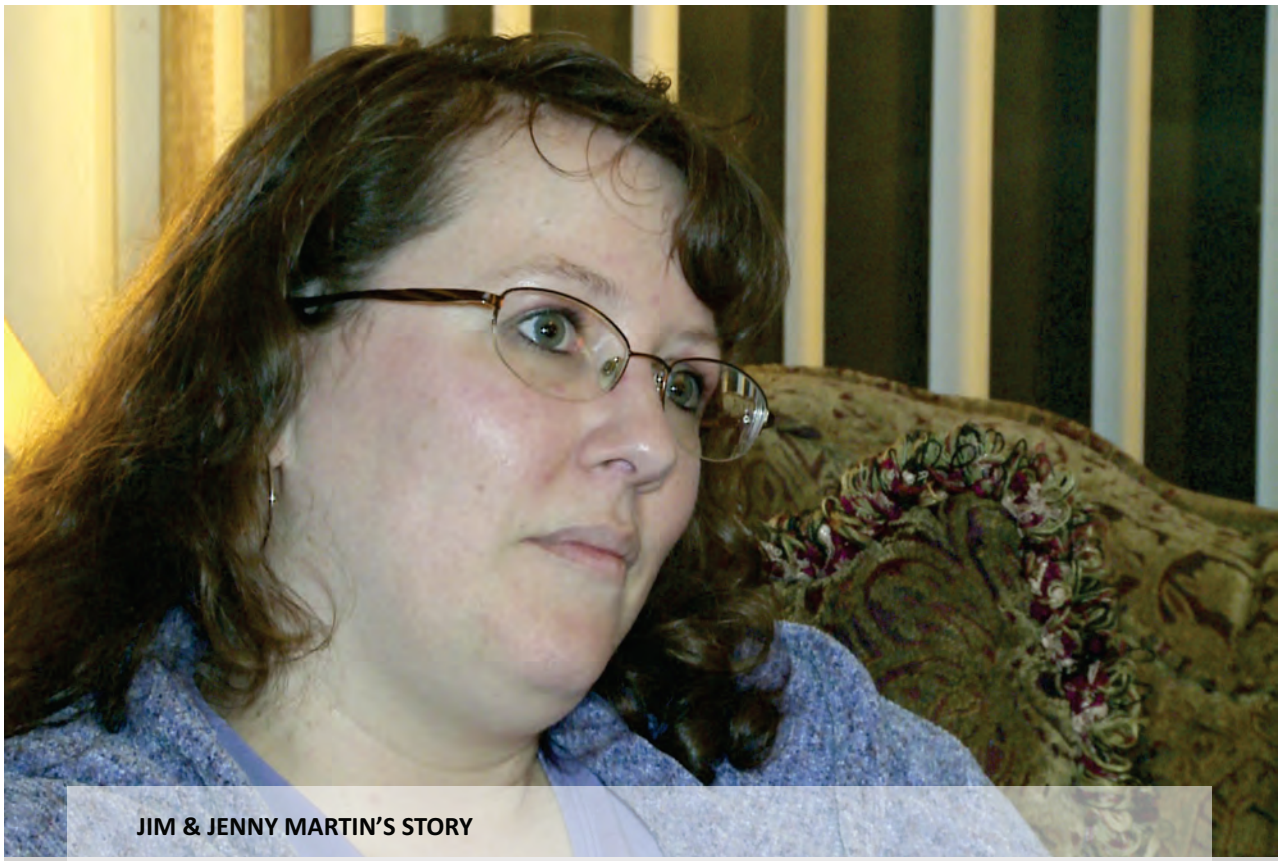
Though race and ethnicity wasn't specifically discussed, several focus group participants reflected on the impact of their race on their quality of life.

*"I'm always the first to say that I was born a white, American male. I am at the top of the food chain as far as economic opportunities. I don't think it gets any easier."*

~Focus Group Participant (income >$75,000/year)

*"Actually, I deal with it [stereotypes with regard to socioeconomic status]. Like I said, my dad's an immigrant, and he has certain views about blacks in America. So he often tells me that if I don't do everything the way he did it, the way he wants me to do it, that I'll end up like a typical black American."*

~ Focus Group Participant (income $35-75,000/year)



## JIM & JENNY MARTIN'S STORY

Jenny knows she doesn't feel as healthy as she'd like to. She also knows it's because she needs to exercise more. Jim and Jenny used to live in a rural neighborhood where she would go on long walks and rarely encounter traffic. Unfortunately, Jim's asthma was aggravated by dust and mold in their older mobile home. They needed a house in their price range that would offer four solid walls to better keep out asthma triggers.

Their new house is on a poorly lit secondary arterial with unaccommodating sidewalks and few destinations nearby to walk to. A mile away there is a school with no playground equipment, trees or places to sit. The closest park is six miles away. There is however a plethora of fast food restaurants nearby. Further concerning, there are no bicycle lanes and kids in her neighborhood don't wear helmets or protective gear.

"They jam in houses and it doesn't make for a neighborhood. Our house is just a house on a lot. We don't know our neighbors."

# SECTION 4: **PLACE/NEIGHBORHOOD**

Elements and characteristics of a neighborhood affect and influence a person's health; where an individual lives does matter. Neighborhoods are where poverty, race/ethnicity, and other social factors converge with the physical environment to produce the overall conditions that shape our health. Having access to recreational facilities, grocery stores with fresh produce and healthy food, a safe environment, clean air, clean water, quality and affordable housing, and good schools promotes a healthy lifestyle that can result in longevity.[36] Differences between economically advantaged and disadvantaged neighborhoods are easy to identify. Higher income neighborhoods are equipped with amenities that promote health among their residents.[36] These include parks and playgrounds that afford opportunities for exercise, buildings in good repair, safe streets that enable people to walk with ease, and well-stocked libraries.[36]

Conversely, lower income neighborhoods are riddled with conditions that tend to make children and adults unhealthy; crumbling buildings, inadequate recreational facilities, stores that do not stock affordable healthy food, as well as depressed social conditions which include high levels of unemployment, unsafe streets, drugs, and poverty.[36,37,38] These neighborhoods have a disproportionate number of racial/ethnic minorities, where there often is a higher concentration of retail outlets that specialize in alcohol, tobacco, and fast foods; a relative absence of stores that sell fresh produce at reasonable prices; no open space; limited public transportation; housing adjacent to freeways or other sources of toxic exposures; and socially segregated housing that contributes to higher rates of community violence. These conditions constitute risk factors for heart disease, cancer, stroke, diabetes, asthma, alcohol and drug abuse, and homicide.[39] Thus, improving the social and physical environments of our neighborhoods so that every individual can have equal access to a healthy environment is one of the most important steps that can be taken to improve the health of all residents of Spokane County.

*One in three residents identified illegal drug use as a problem in their neighborhood.*

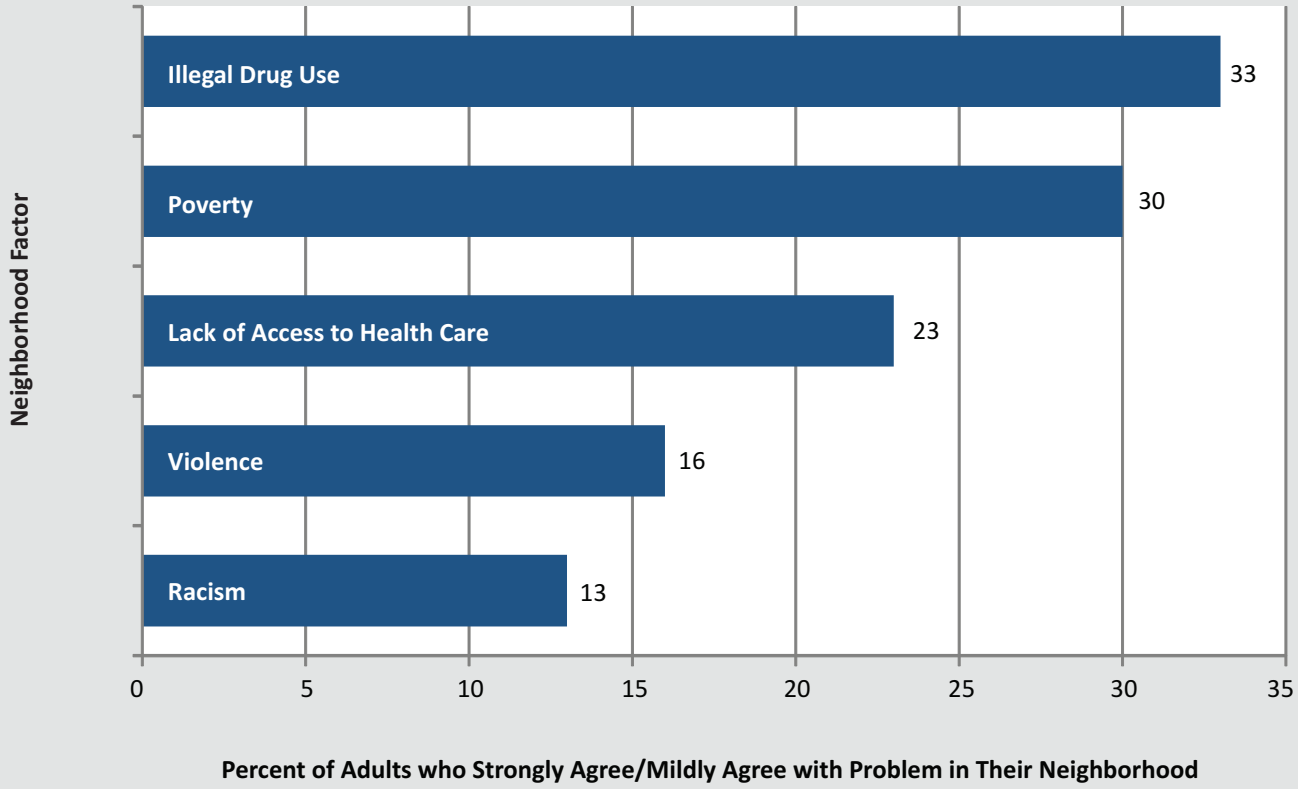



**Figure 30. Perceptions about Problems in Neighborhood, Spokane County, 2010**

A sample of Spokane County residents were surveyed to identify the degree to which each of five community factors was a problem in their neighborhood. The factors were: illegal drug use, poverty, lack of access to health care, violence, and racism. Figure 30 shows the proportion of respondents who strongly or mildly agreed that there was a problem with the identified issue in their neighborhood. Among all neighborhood factors that were assessed, residents identified illegal drug use as the most common; one in three Spokane County residents cited this as a problem in their neighborhood.

Data Source: Strategic Research Associates, November Omnibus Survey Health Inequity Questions, 2010

| Rank | Neighborhood | Percent | Lower CI | Upper CI |
|---|---|---|---|---|
| 1 | West Central | 41.24^* | 36.59 | 46.32 |
| 2 | Riverside (downtown) | 40.80^* | 32.45 | 50.64 |
| 3 | Browne's Addition | 36.36^* | 27.75 | 46.81 |
| 4 | Hillyard | 33.39^* | 28.83 | 38.46 |
| 5 | Logan | 32.36^* | 28.14 | 37.04 |
| 6 | Chief Garry Park | 31.25^* | 26.85 | 36.16 |
| 7 | East Central | 28.77^* | 25.65 | 32.16 |
| 8 | Whitman | 28.74^* | 22.53 | 36.14 |
| 9 | Emerson/Garfield | 28.24^* | 24.38 | 32.52 |
| 10 | West Valley | 26.33^* | 23.32 | 29.61 |
| 11 | Nevada/Lidgerwood | 24.60^* | 22.50 | 26.84 |
| 12 | Bemiss | 24.16^* | 20.82 | 27.88 |
| 13 | Edgecliff | 22.85^* | 19.72 | 26.33 |
| 14 | North Hill | 22.03^* | 19.22 | 25.14 |
| 15 | Cliff/Cannon | 21.08* | 17.60 | 25.05 |
| 16 | East Valley | 20.28* | 17.58 | 23.28 |
| 17 | West Hills | 20.14* | 13.39 | 29.11 |
| 18 | Millwood | 19.81* | 12.26 | 30.28 |
| 19 | Chattaroy/Deer Park | 19.52* | 16.12 | 23.44 |
| 20 | Latah Valley | 19.18* | 10.48 | 32.18 |
| 21 | University | 18.67* | 16.04 | 21.61 |
| | **SPOKANE COUNTY** | **18.20*** | **17.72** | **18.69** |
| 22 | Greenacres | 16.92* | 13.59 | 20.82 |
| 23 | Opportunity | 15.68* | 13.16 | 18.53 |
| 24 | Minnehaha | 15.18* | 10.51 | 21.21 |
| 25 | Northwest | 14.24*+ | 12.40 | 16.67 |
| 26 | Mead/Green Bluff/Mt. Spokane | 13.48*+ | 11.68 | 15.47 |
| 27 | West Plains | 13.48*+ | 11.61 | 15.56 |
| 28 | Cheney/Medical Lake | 12.30*+ | 10.58 | 14.22 |
| 29 | Lincoln Heights | 12.18+ | 10.11 | 14.54 |
| 30 | 9 Mile/Colbert | 11.79+ | 10.02 | 13.78 |
| | **WASHINGTON STATE** | **10.13+** | **10.03** | **10.22** |
| 31 | Newman Lake/Upriver | 9.86+ | 7.61 | 12.57 |
| 32 | Rockwood | 8.43+ | 5.28 | 12.76 |
| 33 | Balboa/S. Indian Trail | 8.28+ | 4.41 | 14.16 |
| 34 | Otis Orchard/Liberty Lake | 7.78+> | 6.54 | 9.20 |
| 35 | South Palouse | 7.37+> | 5.52 | 9.64 |
| 36 | North Indian Trail | 6.83+> | 4.54 | 9.87 |
| 37 | Comstock | 5.65+> | 3.40 | 8.83 |
| 38 | Southgate | 4.73+> | 3.06 | 6.99 |
| 39 | 5 Mile | 4.66+> | 2.48 | 7.97 |
| 40 | Manito | 4.00+> | 2.07 | 6.99 |

^ Significantly higher than Spokane County * Significantly higher than Washington state
+ Significantly lower than Spokane County > Significantly lower than Washington state

### Table 3. Maternal Smoking, Spokane County Neighborhoods, 2005-2009

Table 3 illustrates the ranking of maternal smoking among all neighborhoods in Spokane County.

**West Central has the highest maternal smoking rate compared to any other neighborhood in Spokane County. Its rate is 10.3 times higher than Manito, the neighborhood with the lowest maternal smoking rate.**

In addition, pregnant women in West Central are 17 times more likely to smoke than pregnant women in Manito, 3.2 times more likely than pregnant women from Spokane County, and 6.2 times more likely than pregnant women from Washington state. Table 4 also reveals 14 neighborhoods as having significantly higher maternal smoking rates than Spokane County, and 28 neighborhoods as having significantly higher maternal smoking rates than Washington state.

Data Source: Community Health Assessment Tool (CHAT), Office of Financial management, Washington State Department of Health, Birth Certificates

| Rank | Neighborhood | Percent | Lower CI | Upper CI |
|---|---|---|---|---|
| 1 | West Central | 17.22^* | 14.27 | 20.61 |
| 2 | Logan | 15.95^* | 13.03 | 19.33 |
| 3 | Chief Garry Park | 15.28^* | 12.25 | 18.82 |
| 4 | East Central | 14.90^* | 12.68 | 17.39 |
| 5 | Riverside (downtown) | 14.43^* | 9.66 | 20.72 |
| 6 | Hillyard | 12.87^* | 10.11 | 16.16 |
| 7 | Nevada/Lidgerwood | 11.79^* | 10.35 | 13.37 |
| 8 | Emerson/Garfield | 11.76^* | 9.33 | 14.64 |
| 9 | Browne's Addition | 11.52 | 6.93 | 17.98 |
| 10 | Whitman | 11.42 | 7.65 | 16.40 |
| 11 | Bemiss | 10.47* | 8.31 | 13.01 |
| 12 | West Valley | 10.42* | 8.56 | 12.56 |
| 13 | North Hill | 10.17* | 8.29 | 12.35 |
| 14 | Minnehaha | 9.82 | 6.16 | 14.87 |
| 15 | Greenacres | 9.70 | 7.22 | 12.75 |
| 16 | University | 9.65 | 7.79 | 11.82 |
| 17 | Edgecliff | 9.45 | 7.48 | 11.78 |
| 18 | Chattaroy/Deer Park | 9.34 | 7.03 | 12.15 |
| 19 | East Valley | 8.84 | 7.09 | 10.89 |
| | **SPOKANE COUNTY** | **8.73*** | **8.39** | **9.07** |
| 20 | West Hills | 8.63 | 4.46 | 15.08 |
| 21 | Mead/Green Bluff/Mt. Spokane | 8.41 | 7.00 | 10.01 |
| 22 | Latah Valley | 8.22 | 3.02 | 17.89 |
| | **WASHINGTON STATE** | **8.19+** | **8.11** | **8.28** |
| 23 | Cliff/Cannon | 8.01 | 5.92 | 10.59 |
| 24 | Opportunity | 7.89 | 6.14 | 9.99 |
| 25 | Northwest | 7.45 | 6.14 | 8.96 |
| 26 | 9 Mile/Colbert | 7.24 | 5.87 | 8.83 |
| 27 | Millwood | 6.60 | 2.66 | 13.61 |
| 28 | Cheney/Medical Lake | 6.25+> | 5.04 | 7.66 |
| 29 | West Plains | 6.01+> | 4.79 | 7.46 |
| 30 | Lincoln Heights | 5.69+> | 4.31 | 7.37 |
| 31 | Otis Orchard/Liberty Lake | 5.57+> | 4.52 | 6.79 |
| 32 | Newman Lake/Upriver | 5.46+> | 3.83 | 7.56 |
| 33 | Southgate | 5.10+> | 3.36 | 7.43 |
| 34 | North Indian Trail | 4.63+> | 2.79 | 7.24 |
| 35 | Rockwood | 4.60+> | 2.38 | 8.03 |
| 36 | Balboa/S. Indian Trail | 4.46 | 1.79 | 9.19 |
| 37 | South Palouse | 4.31+> | 2.93 | 6.12 |
| 38 | Comstock | 2.38+> | 1.03 | 4.69 |
| 39 | Manito | 1.33+> | 0.36 | 3.41 |
| 40 | 5 Mile | 0.71+> | 0.09 | 2.58 |

^ Significantly higher than Spokane County * Significantly higher than Washington state
+ Significantly lower than Spokane County > Significantly lower than Washington state

### Table 4. Teenage Pregnancy (15-19 Years of Age), Spokane County Neighborhoods, 2005-2009

Table 4 illustrates the ranking of teenage pregnancy among all neighborhoods in Spokane County. Specifically, the data shows West Central as having the highest proportion of teenage pregnancies for all births compared to any other neighborhood in Spokane County. The rate of teenage pregnancy in West Central is 24.3 times higher than 5 Mile, the neighborhood with the lowest teenage pregnancy rate.

In addition, female teenagers in West Central are 35.3 times more likely to become pregnant than female teenagers in 5 Mile, 3.3 times more likely to become pregnant than female teenagers from Spokane County, and 3.1 times more likely to become pregnant than female teenagers from Washington state. Table 5 also reveals eight neighborhoods as having significantly higher teenage pregnancy rates than Spokane County, and 11 neighborhoods as having significantly higher teenage pregnancy rates than Washington state.

Data Source: Death Certificates, Washington State Department of Health, Center for Statistics

| Rank | Neighborhood | Age-Adjusted Rate | Lower CI | Upper CI |
|---|---|---|---|---|
| 1 | Riverside (downtown) | 1,364.1^* | 1,254.0 | 1,489.6 |
| 2 | East Central | 1,102.3^* | 1,039.7 | 1,168.1 |
| 3 | Emerson/Garfield | 1,071.1^* | 996.9 | 1,149.8 |
| 4 | Hillyard | 1,026.7^* | 946.2 | 1,112.4 |
| 5 | Nevada/Lidgerwood | 1,026.1^* | 985.5 | 1,068.1 |
| 6 | Edgecliff | 969.7^* | 915.3 | 1,026.7 |
| 7 | Chief Garry Park | 966.7^* | 868.3 | 1,073.6 |
| 8 | West Central | 944.3^* | 871.6 | 1,021.7 |
| 9 | Whitman | 914.5* | 789.0 | 1,055.5 |
| 10 | Chattaroy/Deer Park | 871.9^* | 812.5 | 934.8 |
| 11 | Cliff/Cannon | 868.1^* | 813.9 | 926.0 |
| 12 | Mead/Green Bluff/Mt. Spokane | 860.0^* | 824.0 | 897.3 |
| 13 | Logan | 840.2* | 783.4 | 900.7 |
| 14 | Bemiss | 817.2* | 754.0 | 884.6 |
| 15 | West Hills | 803.9 | 697.9 | 925.4 |
| 16 | Opportunity | 802.2* | 760.4 | 846.1 |
| 17 | Millwood | 796.2 | 678.6 | 933.8 |
| 18 | Minnehaha | 792.8 | 676.1 | 925.3 |
| | **SPOKANE COUNTY** | **790.1*** | **782.0** | **798.2** |
| 19 | University | 784.4 | 744.0 | 826.6 |
| 20 | Greenacres | 769.8 | 709.1 | 834.6 |
| 21 | East Valley | 759.1 | 714.3 | 806.4 |
| 22 | West Valley | 757.9 | 714.6 | 803.4 |
| 23 | Cheney/Medical Lake | 757.3 | 719.0 | 797.3 |
| 24 | 9 Mile/Colbert | 754.0 | 720.2 | 789.2 |
| 25 | West Plains | 752.9 | 690.1 | 820.5 |
| | **WASHINGTON STATE** | **751.6** | **749.4** | **753.8** |
| 26 | North Indian Trail | 748.2 | 687.4 | 813.4 |
| 27 | South Palouse | 732.1+ | 692.5 | 774.1 |
| 28 | Northwest | 731.0+ | 699.7 | 763.6 |
| 29 | Otis Orchard/Liberty Lake | 721.0+ | 687.3 | 755.9 |
| 30 | Latah Valley | 716.1 | 623.2 | 837.3 |
| 31 | Browne's Addition | 710.5 | 620.8 | 815.7 |
| 32 | Balboa/S. Indian Trail | 708.8+ | 644.8 | 780.9 |
| 33 | Newman Lake/Upriver | 706.6+ | 647.2 | 770.5 |
| 34 | North Hill | 683.7+> | 641.7 | 728.1 |
| 35 | Lincoln Heights | 677.6+> | 643.2 | 713.8 |
| 36 | Manito | 661.8+> | 591.1 | 739.6 |
| 37 | Comstock | 594.0+> | 544.5 | 648.0 |
| 38 | 5 Mile | 570.0+> | 465.8 | 695.7 |
| 39 | Rockwood | 559.3+> | 494.7 | 631.0 |
| 40 | Southgate | 520.1+> | 476.6 | 566.8 |

^ Significantly higher than Spokane County * Significantly higher than Washington state
+ Significantly lower than Spokane County > Significantly lower than Washington state

**Table 5. Overall Age-Adjusted Mortality Rate (per 100,000), Spokane County Neighborhoods, 2000 to 2009**

Elevated mortality rates may suggest adverse environmental conditions impacting a particular population, a disease situation, or some other stressor affecting the population.

Table 5 illustrates that among all 40 neighborhoods in Spokane County, Riverside has the highest overall age-adjusted mortality rate (1,364.1/100,000) and Southgate has the lowest (520.1/100,000). Specifically, the data shows that the age-adjusted mortality rate is 2.6 times greater in Riverside (a low-income neighborhood) compared to Southgate (an affluent neighborhood). Also, Table 6 shows the age-adjusted mortality rate for Riverside is 1.8 times greater than Spokane County and Washington state. In addition, Table 6 reveals 11 neighborhoods having significantly higher age-adjusted mortality rates than Spokane County, and 15 neighborhoods having significantly higher age-adjusted mortality rates than Washington state.

Data Source: Death Certificates, Washington State Department of Health, Center for Statistics

## Table 6. Top 10 Causes of Mortality (Age-Adjusted Rate per 100,000) in Spokane County with Top Five Neighborhoods, 2000 to 2009

| | ❶ Major cardiovascular disease | ❷ Malignant neoplasms | ❸ Chronic lower respiratory diseases | ❹ Unintentional injury | ❺ Alzheimer's disease |
|---|---|---|---|---|---|
| **Spokane County rate** | 255.8 | 188.1 | 54.6 | 49.1 | 35.2 |
| **Washington state rate** | 249.2 | 183.5 | 45.6 | 38.1 | 39.3 |
| **1st highest rate Neighborhood/Rate** | Riverside (downtown)^* 374.7 | Chief Garry Park^* 271.9 | Riverside (downtown)^* 104.4 | Riverside (downtown)^* 164.3 | N. Indian Trail^* 69.5 |
| **2nd highest rate Neighborhood/Rate** | Hillyard^* 372.1 | Whitman^* 267.9 | Hillyard^* 96.7 | West Hills^* 110.2 | Emerson/Garfield^* 68.3 |
| **3rd highest rate Neighborhood/Rate** | Nevada/Lidgerwood^* 351.3 | Minnehaha^* 263.8 | East Central^* 86.0 | East Central^* 85.5 | South Palouse^* 62.2 |
| **4th highest rate Neighborhood/Rate** | East Central^* 330.7 | East Central^* 228.3 | Bemiss^* 83.1 | West Central^* 84.6 | Manito* 50.1 |
| **5th highest rate Neighborhood/Rate** | Edgecliff* 323.5 | Edgecliff^* 228.1 | Emerson/Garfield^* 79.5 | Hillyard* 70.6 | Mead/Green Bluff^* 49.4 |

| | ❻ Diabetes mellitus | ❼ Suicide | ❽ Influenza and pneumonia | ❾ Chronic liver disease and cirrhosis | ❿ Parkinson's disease |
|---|---|---|---|---|---|
| **Spokane County rate** | 26.3 | 15.7 | 14.5 | 10.3 | 7.9 |
| **Washington state rate** | 24.7 | 12.8 | 14.1 | 9.3 | 8.1 |
| **1st highest rate Neighborhood/Rate** | Emerson/Garfield^* 59.3 | Riverside (downtown)^* 46.4 | Emerson/Garfield^* 34.4 | Riverside (downtown)^* 44.7 | N. Indian Trail^* 17.0 |
| **2nd highest rate Neighborhood/Rate** | Whitman^* 56.7 | Cliff/Cannon^* 28.6 | West Central* 24.0 | West Hills* 27.0 | Emerson/Garfield* 16.6 |
| **3rd highest rate Neighborhood/Rate** | Nevada/Lidgerwood^* 52.4 | Hillyard^* 26.5 | Edgecliff^* 23.8 | East Central^* 24.6 | Cliff/Cannon 11.9 |
| **4th highest rate Neighborhood/Rate** | Chattaroy/Deer Park^* 48.6 | Brown's Edition* 25.5 | University^* 23.2 | Browne's Edition 21.8 | Minnehaha 10.9 |
| **5th highest rate Neighborhood/Rate** | Chief Garry Park 38.7 | Logan* 25.2 | Chief Garry Park 22.0 | Hillyard* 20.7 | South Palouse 10.7 |

^ Significantly higher than Spokane County * Significantly higher than Washington state

Data Source: Death Certificate Data, Washington State Department of Health, Center for Health Statistics

Table 6 identifies the top 10 causes of mortality and shows the top five neighborhoods in Spokane County with the highest mortality rate for each cause. Among the top 10 causes of mortality, four neighborhoods were identified as consistently having higher mortality rates for the top 10 causes and having significantly higher mortality rates than Spokane County and Washington state. They include: Riverside, Emerson/Garfield, Hillyard, and East Central.

Spokane's Riverside neighborhood had the highest mortality rates for five of the top 10 mortalities. They include: major cardiovascular disease, chronic lower respiratory diseases, unintentional injuries, suicide, and chronic liver disease and cirrhosis. The Emerson/Garfield neighborhood had the highest mortality rate for two of the top 10 causes of mortality, diabetes and influenza/pneumonia. In addition, the Emerson/Garfield neighborhood had the second highest mortality rate for Alzheimer's and Parkinson's, and the fifth highest for chronic lower respiratory diseases. The Hillyard neighborhood had the second highest mortality rate for major cardiovascular disease and for chronic lower respiratory diseases, the third highest morality rate for suicide, and the fifth highest morality rate for unintentional injuries and chronic liver disease and cirrhosis. Finally, the East Central neighborhood had the third highest mortality rate for chronic respiratory diseases, unintentional injuries, and chronic liver disease and cirrhosis. In addition, East Central had the fourth highest mortality rate for major cardiovascular disease and cancers.

| Life Expectancy | 1990-1999 | Rank | 2000-2009 | Life Expectancy |
|---|---|---|---|---|
| **77.55** | **WA STATE** | | **WA STATE** | **79.19** |
| 81.84 | San Juan | 1 | San Juan | 83.23 |
| 79.82 | Whitman | 2 | Whitman | 81.30 |
| 79.09 | Island | 3 | King | 80.84 |
| 78.59 | Whatcom | 4 | Garfield | 80.56 |
| 78.48 | Kittitas | 5 | Kittitas | 80.49 |
| 78.40 | Douglas | 6 | Island | 80.16 |
| 78.25 | Jefferson | 7 | Chelan | 80.04 |
| 78.24 | Lincoln | 8 | Franklin | 79.76 |
| 78.15 | King | 9 | Whatcom | 79.70 |
| 78.08 | Thurston | 10 | Douglas | 79.66 |
| 78.01 | Benton | 11 | Jefferson | 79.42 |
| 77.98 | Chelan | 12 | Walla Walla | 79.40 |
| 77.91 | Walla Walla | 13 | Lincoln | 79.19 |
| 77.89 | Skagit | 14 | Asotin | 79.16 |
| 77.86 | Kitsap | 15 | Snohomish | 79.11 |
| 77.85 | Snohomish | 16 | Skagit | 79.04 |
| 77.84 | Wahkiakum | 17 | Thurston | 78.95 |
| **77.35** | **SPOKANE** | **18** | Adams | 78.94 |
| 77.30 | Columbia | 19 | Benton | 78.92 |
| 77.26 | Adams | 20 | Clark | 78.86 |
| 77.23 | Clark | 21 | Klickitat | 78.62 |
| 77.15 | Clallam | 22 | Kitsap | 78.50 |
| 77.04 | Skamania | 23 | Grant | 78.41 |
| 76.86 | Yakima | **24** | **SPOKANE** | **78.41** |
| 76.49 | Garfield | 25 | Skamania | 78.23 |
| 76.44 | Grant | 26 | Yakima | 78.09 |
| 76.40 | Franklin | 27 | Columbia | 78.05 |
| 76.38 | Pierce | 28 | Pierce | 77.87 |
| 76.37 | Stevens | 29 | Clallam | 77.86 |
| 76.36 | Klickitat | 30 | Lewis | 77.51 |
| 76.22 | Asotin | 31 | Okanogan | 76.98 |
| 76.22 | Okanogan | 32 | Mason | 76.74 |
| 76.06 | Pacific | 33 | Cowlitz | 76.48 |
| 76.04 | Cowlitz | 34 | Stevens | 76.42 |
| 75.92 | Lewis | 35 | Wahkiakum | 76.26 |
| 75.75 | Mason | 36 | Pacific | 76.02 |
| 75.72 | Pend Oreille | 37 | Grays Harbor | 75.96 |
| 74.88 | Grays Harbor | 38 | Pend Oreille | 75.65 |
| 72.19 | Ferry | 39 | Ferry | 74.65 |

### Table 7. Life Expectancy, Washington State and County Comparison, 1990 to 1999 vs 2000 to 2009

Life expectancy is defined as the average number of years an individual at a given age is expected to live if current mortality rates continue to apply. For the purpose of this report, life expectancy at birth was calculated for infants who were born during the specified aggregated years.[40] The formula used to compute life expectancy for newborns incorporates infant mortality into its calculation.

Table 7 shows a life expectancy of 77.4 years for Spokane County residents in the '90s. During the most recent decade the life expectancy of Spokane County has increased by one year to 78.4. Despite this increase in life expectancy for Spokane County, the overall ranking within the state among the counties has dropped from 18th to 24th. In addition, the gap in life expectancy between Washington state and Spokane County has increased from 0.2 years in the '90s to 0.8 years in the last decade.

Data Source: Community Health Assessment Tool (CHAT), Office of Financial Management, Washington State Department of Health

| Life Expectancy | 1990-1999 | Rank | 2000-2009 | Life Expectancy |
|---|---|---|---|---|
| **77.55** | **WA STATE** | | **WA STATE** | **79.19** |
| **77.35** | **SPOKANE COUNTY** | | **SPOKANE COUNTY** | **78.41** |
| 82.39 | South Palouse | 1 | Southgate | 84.03 |
| 81.29 | Comstock | 2 | Rockwood | 82.79 |
| 81.19 | Southgate | 3 | 5 Mile | 82.32 |
| 81.11 | North Indian Trail | 4 | Comstock | 82.20 |
| 80.82 | Cheney/Medical Lake | 5 | Balboa/S. Indian Trail | 81.13 |
| 80.73 | 5 Mile | 6 | Manito | 80.82 |
| 80.07 | Balboa/S. Indian Trail | 7 | Newman Lake/Upriver | 80.72 |
| 80.06 | Rockwood | 8 | Lincoln Heights | 80.55 |
| 79.64 | Newman Lake/Upriver | 9 | North Hill | 80.54 |
| 79.58 | Latah Valley | 10 | North Indian Trail | 80.49 |
| 79.47 | 9 Mile/Colbert | 11 | Otis Orchard/Liberty Lake | 80.25 |
| 79.45 | Manito | 12 | 9 Mile/Colbert | 79.78 |
| 79.21 | Mead/Green Bluff/ Mt. Spokane | 13 | South Palouse | 79.62 |
| 79.11 | West Hills | 14 | Northwest | 79.58 |
| 78.95 | Lincoln Heights | 15 | Browne's Addition | 79.27 |
| 78.94 | West Plains | 16 | Cheney/Medical Lake | 79.27 |
| 78.81 | Northwest | 17 | West Plains | 79.19 |
| 78.52 | Minnehaha | 18 | Latah Valley | 79.17 |
| 78.41 | Chattaroy/Deer Park | 19 | Opportunity | 79.09 |
| 78.3 | University | 20 | University | 79.03 |
| 78.16 | Opportunity | 21 | West Valley | 79.01 |
| 78.12 | Otis Orchard/Liberty Lake | 22 | East Valley | 78.71 |
| 78.07 | West Valley | 23 | Greenacres | 78.23 |
| 77.95 | Millwood | 24 | Minnehaha | 77.98 |
| 77.92 | East Valley | 25 | Millwood | 77.67 |
| 77.47 | Greenacres | 26 | Mead/Green Bluff/Mt. Spokane | 77.49 |
| 76.79 | North Hill | 27 | Chattaroy/Deer Park | 77.20 |
| 75.91 | Nevada/Lidgerwood | 28 | Logan | 77.11 |
| 75.28 | Cliff/Cannon | 29 | Bemiss | 76.96 |
| 75.27 | Logan | 30 | West Hills | 76.72 |
| 75.27 | Whitman | 31 | Cliff/Cannon | 76.51 |
| 75.07 | Edgecliff | 32 | Whitman | 76.48 |
| 74.38 | Bemiss | 33 | Edgecliff | 75.62 |
| 74.20 | Chief Garry Park | 34 | Nevada/Lidgerwood | 74.51 |
| 74.10 | West Central | 35 | West Central | 74.49 |
| 73.57 | Hillyard | 36 | Emerson Garfield | 74.32 |
| 73.32 | Browne's Addition | 37 | Chief Garry Park | 73.78 |
| 73.24 | Emerson Garfield | 38 | Hillyard | 73.62 |
| 72.39 | East Central | 39 | East Central | 72.92 |
| 65.38 | Riverside (downtown) | 40 | Riverside (downtown) | 66.17 |

**Table 8. Life Expectancy, Spokane County Neighborhood Comparison, 1990 to 1999 vs 2000 to 2009**

Table 8 illustrates the gap in life expectancy between neighborhoods in Spokane County.

**The gap in life expectancy for the last decade is approximately 18 years between the neighborhood with the highest life expectancy, Southgate (84.03), and the neighborhood with the lowest life expectancy, Riverside (66.17).**

Although life expectancy has increased overall in Spokane County between the last two decades, the gap among the neighborhoods with the highest life expectancy and lowest life expectancy has widened by approximately one year.

Data Source: Community Health Assessment Tool (CHAT), Office of Financial Management, Washington State Department of Health

| Female | | | Male | |
|---|---|---|---|---|
| Life Expectancy | 2000-2009 | Rank | 2000-2009 | Life Expectancy |
| **81.46** | **WASHINGTON STATE** | | **WASHINGTON STATE** | **76.84** |
| **80.71** | **SPOKANE COUNTY** | | **SPOKANE COUNTY** | **75.94** |
| 86.49 | Browne's Addition | 1 | Southgate | 82.34 |
| 85.30 | Southgate | 2 | Rockwood | 81.28 |
| 85.03 | 5 Mile | 3 | Manito | 79.77 |
| 84.47 | Comstock | 4 | Comstock | 79.66 |
| 83.97 | Rockwood | 5 | 5 Mile | 79.60 |
| 83.37 | North Hill | 6 | Balboa/S. Indian Trail | 79.27 |
| 83.21 | Lincoln Heights | 7 | Newman Lake/Upriver | 78.82 |
| 83.00 | North Indian Trail | 8 | Otis Orchard/Liberty Lake | 78.65 |
| 82.82 | Balboa/S. Indian Trail | 9 | 9 Mile/Colbert | 77.96 |
| 82.70 | Newman Lake/Upriver | 10 | University | 77.83 |
| 81.98 | Millwood | 11 | North Indian Trail | 77.78 |
| 81.97 | West Valley | 12 | South Palouse | 77.77 |
| 81.73 | Otis Orchard/Liberty Lake | 13 | Cheney/Medical Lake | 77.54 |
| 81.61 | West Plains | 14 | North Hill | 77.39 |
| 81.54 | Manito | 15 | Northwest | 77.38 |
| 81.51 | South Palouse | 16 | Lincoln Heights | 77.30 |
| 81.50 | 9 Mile/Colbert | 17 | Latah Valley | 77.26 |
| 81.45 | Northwest | 18 | Opportunity | 77.23 |
| 81.35 | Bemiss | 19 | West Plains | 77.14 |
| 81.21 | Latah Valley | 20 | East Valley | 75.80 |
| 81.09 | Greenacres | 21 | Mead/Green Bluff/Mt. Spokane | 75.68 |
| 81.02 | East Valley | 22 | Chattaroy/Deer Park | 75.37 |
| 80.97 | Cheney/Medical Lake | 23 | West Valley | 75.29 |
| 80.75 | Logan | 24 | Greenacres | 75.12 |
| 80.58 | Opportunity | 25 | Minnehaha | 74.87 |
| 80.20 | Minnehaha | 26 | Millwood | 73.71 |
| 80.08 | University | 27 | Whitman | 73.41 |
| 79.91 | West Hills | 28 | Edgecliff | 73.37 |
| 79.37 | Whitman | 29 | Logan | 72.98 |
| 79.34 | Cliff/Cannon | 30 | Browne's Addition | 72.86 |
| 79.18 | Mead/Green Bluff/ Mt. Spokane | 31 | Cliff/Cannon | 72.82 |
| 78.97 | Chattaroy/Deer Park | 32 | Nevada/Lidgerwood | 72.31 |
| 78.02 | West Central | 33 | West Hills | 72.28 |
| 77.92 | Edgecliff | 34 | Bemiss | 72.03 |
| 77.77 | East Central | 35 | Emerson Garfield | 71.36 |
| 77.21 | Chief Garry Park | 36 | West Central | 70.87 |
| 77.04 | Emerson Garfield | 37 | Hillyard | 70.82 |
| 76.30 | Hillyard | 38 | Chief Garry Park | 70.55 |
| 76.28 | Nevada/Lidgerwood | 39 | East Central | 68.76 |
| 67.79 | Riverside (downtown) | 40 | Riverside (downtown) | 65.65 |

### Table 9. Life Expectancy by Gender, Spokane County Neighborhood Comparison, 2000 to 2009

Table 9 illustrates the gap in life expectancy by gender between neighborhoods in Spokane County. The table identifies that Riverside has the lowest life expectancy for both males and females among all neighborhoods in Spokane County. In addition, life expectancy is approximately five years greater among females compared to males in Spokane County and Washington state, and females have a greater life expectancy in all neighborhoods in Spokane County. Table 10 further illustrates the gap in life expectancy among females in Spokane County is approximately 19 years between the neighborhood with the highest life expectancy, Browne's Addition (86.49), and the neighborhood with the lowest life expectancy, Riverside (67.79). Among males in Spokane County, the gap in life expectancy is approximately 17 years between the neighborhood with the highest life expectancy, Southgate (82.34), and the neighborhood with the lowest life expectancy, Riverside (65.65). Among all neighborhoods, Browne's Addition has the largest gap in life expectancy between genders; approximately 14 years.

Data Source: Community Health Assessment Tool (CHAT), Office of Financial Management, Washington State Department of Health

# WHAT WE HEARD

*"My neighborhood is better than it was when I was a kid. It's been about six months since we've had a shooting within 5 blocks of my house. That's a good distance between shootings. I remember being 2-3 years old watching out my window, watching people shoot at each other."*

~ Focus Group Participant (income <$35,000/year)

Walking was frequently cited among focus group participants as a means to alleviate stress. As a means to improve quality of life, one resident suggested the need for development of walkable neighborhoods:

*"The neighborhood is not aesthetically walkable. It's technically walkable, but there's nothing to walk to. You still see neighborhoods being developed without sidewalks. They've got curly-ques and cul-de-sacs and you walk in a circle. There's no destination. There are no neighborhoods like on the South Hill where you've got shops to go to. "*

~ Focus Group Participant (income $35-75,000/year)

When asked what changes could be made to their neighborhoods that could contribute positively to health, several focus group participants suggested the need to develop a sense of community.

*"It doesn't really matter if the houses are poor, if they could just block off some of these streets and make it a community feel. To have some cul-de-sacs with pockets of safety."*

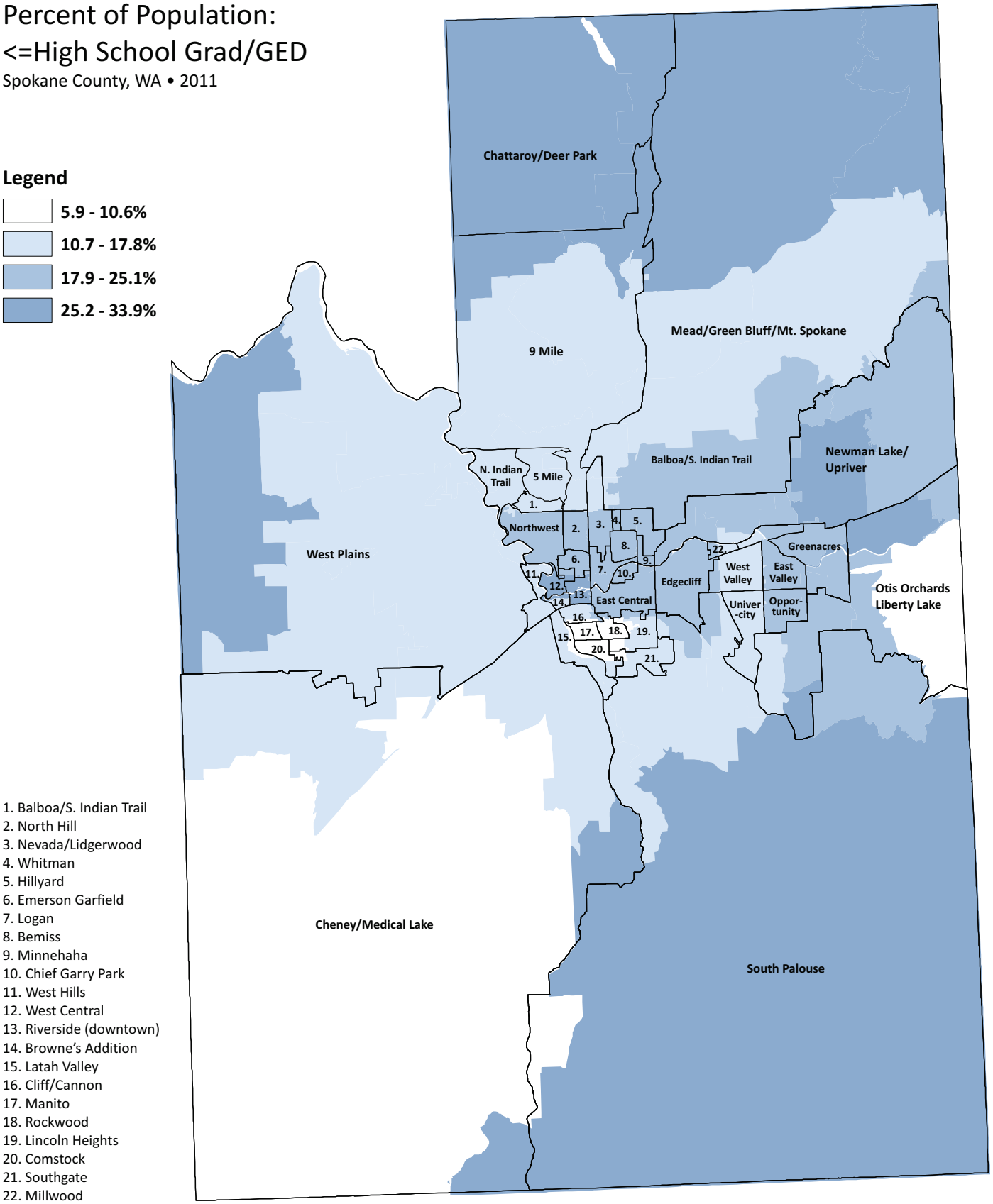
~ Focus Group Participant (income <$35,000/year)

*"I would love it if there were more places in walking distances, closer. I live in the Shadle area...it would be great to have little shops, grocery, bakery and that type of thing that are within walking distance of anywhere in that whole area."*

~ Focus Group Participant (income $35-75,000/year)

# Percent of Population: <=High School Grad/GED

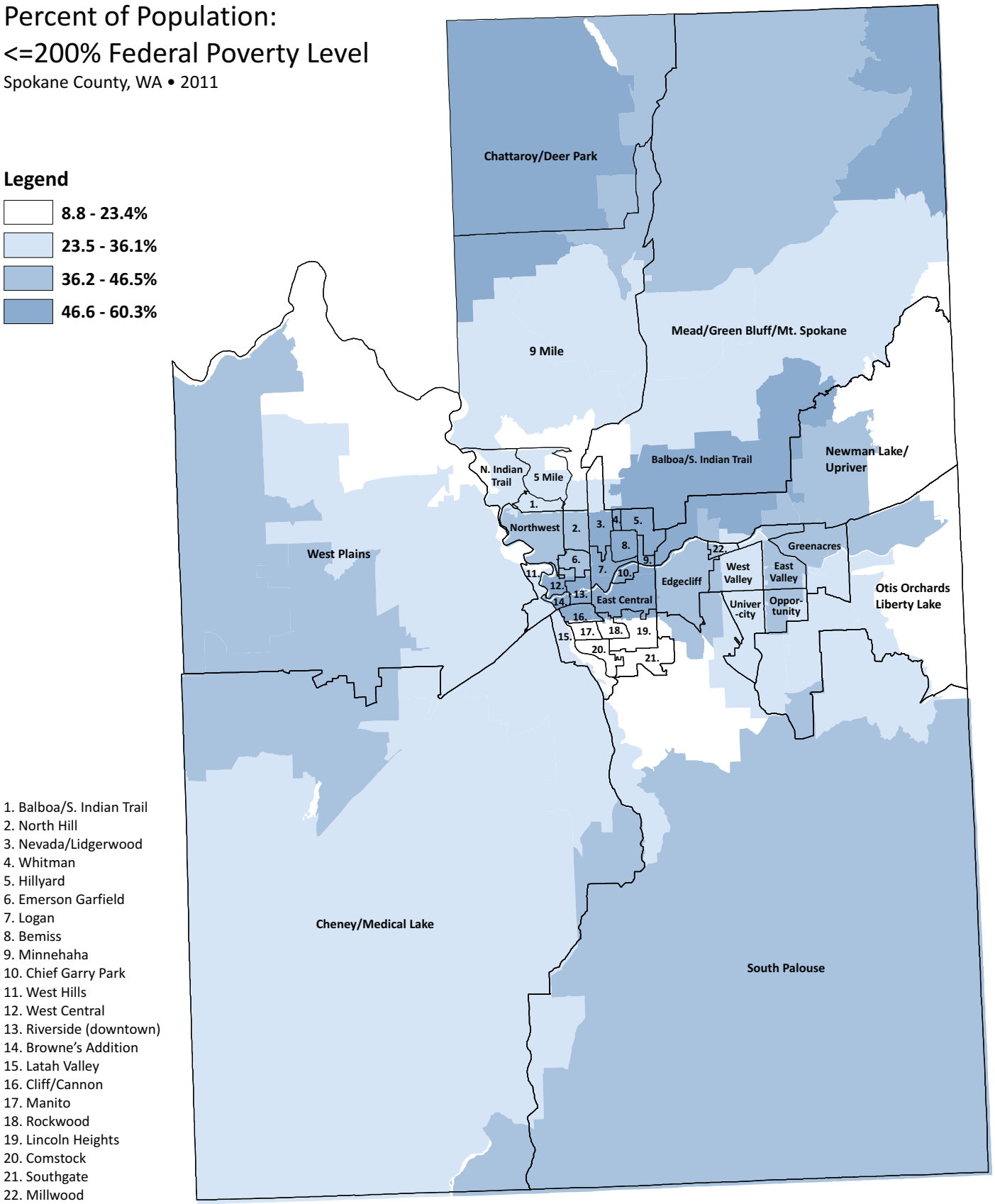
Spokane County, WA • 2011




Data Source: Behavioral Risk Factor Surveillance System (BRFSS) 2005 to 2009

# Percent of Population: <=200% Federal Poverty Level

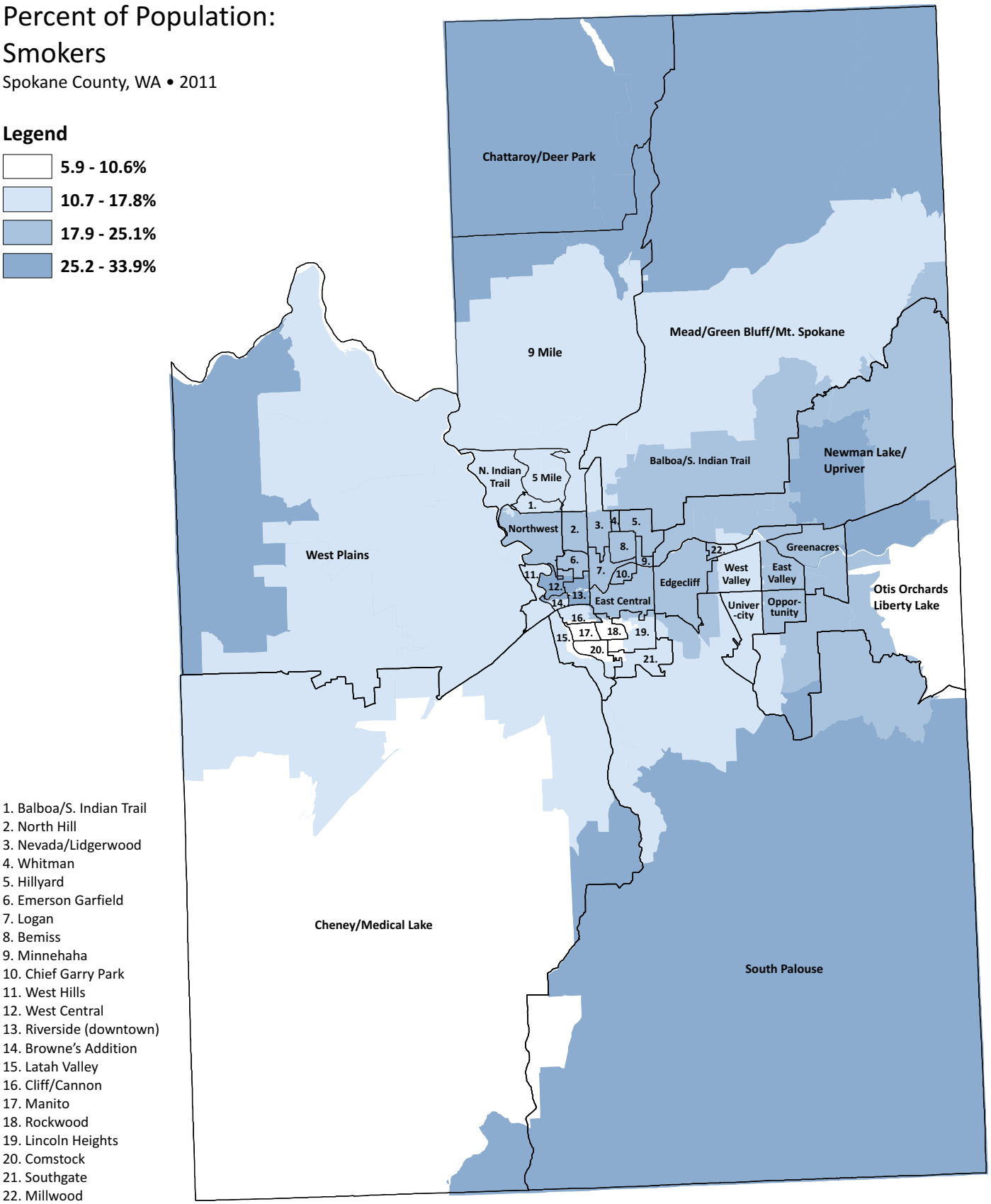
Spokane County, WA • 2011




Data Source: Behavioral Risk Factor Surveillance System (BRFSS) 2005 to 2009

# Percent of Population: Smokers

Spokane County, WA • 2011



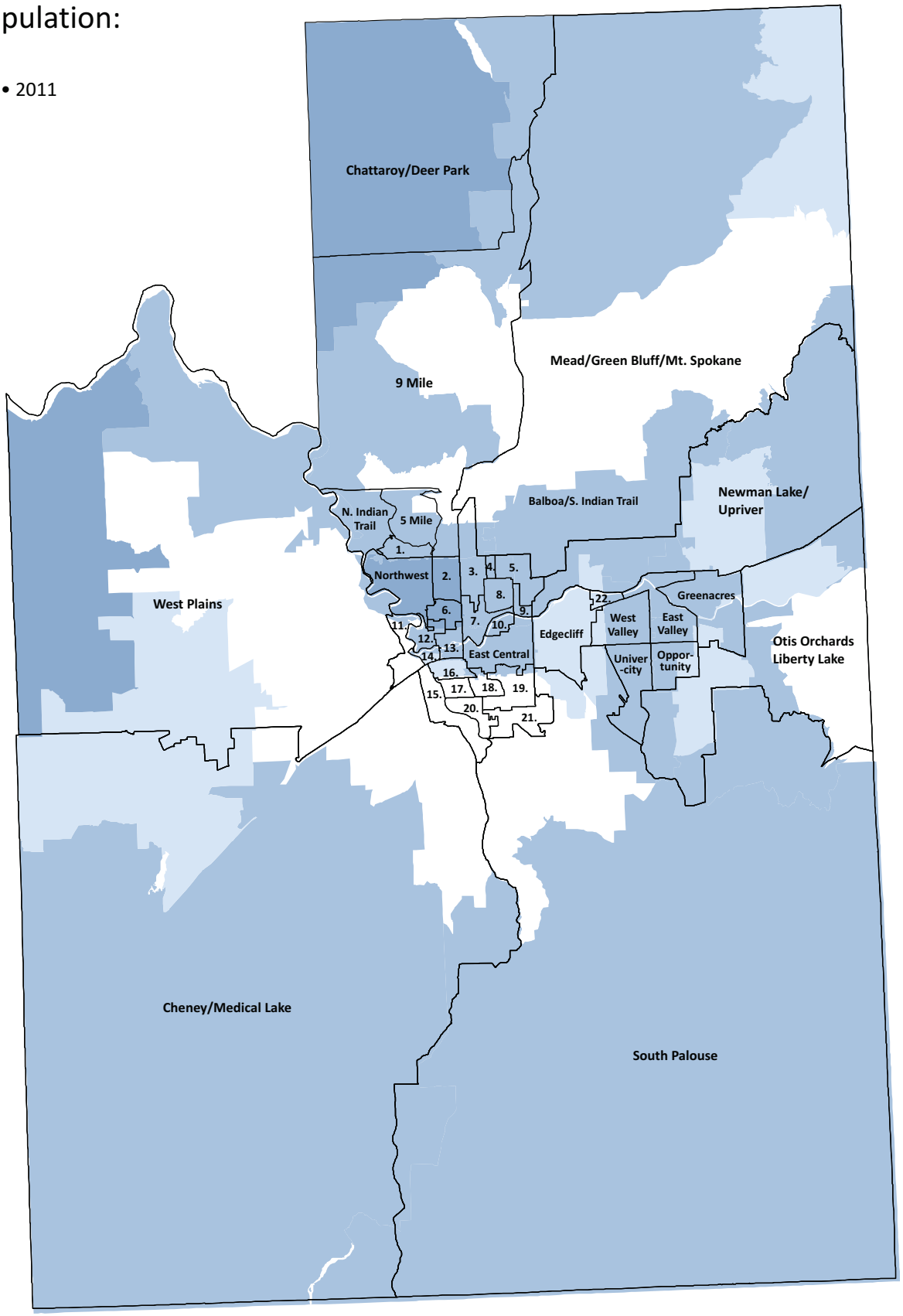

Data Source: Behavioral Risk Factor Surveillance System (BRFSS) 2005 to 2009

# Percent of Population: Obese

Spokane County, WA • 2011

**Legend**

- **16.1 - 21.4%**
- **21.5 - 27.5%**
- **27.6 - 33.3%**
- **33.4 - 41.4%**

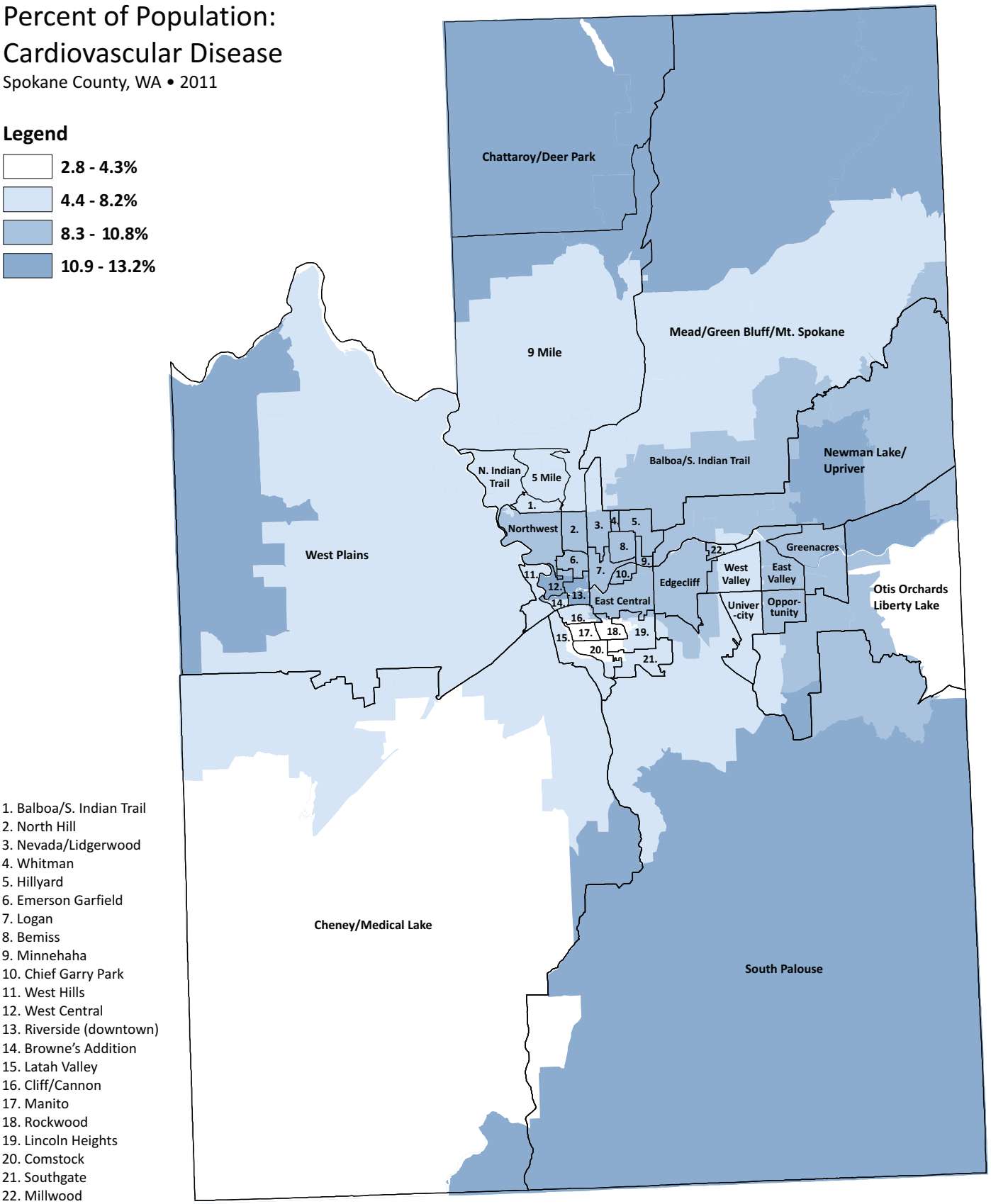



1. Balboa/S. Indian Trail
2. North Hill
3. Nevada/Lidgerwood
4. Whitman
5. Hillyard
6. Emerson Garfield
7. Logan
8. Bemiss
9. Minnehaha
10. Chief Garry Park
11. West Hills
12. West Central
13. Riverside (downtown)
14. Browne's Addition
15. Latah Valley
16. Cliff/Cannon
17. Manito
18. Rockwood
19. Lincoln Heights
20. Comstock
21. Southgate
22. Millwood

Data Source: Behavioral Risk Factor Surveillance System (BRFSS) 2005 to 2009

# Percent of Population: Cardiovascular Disease

Spokane County, WA • 2011



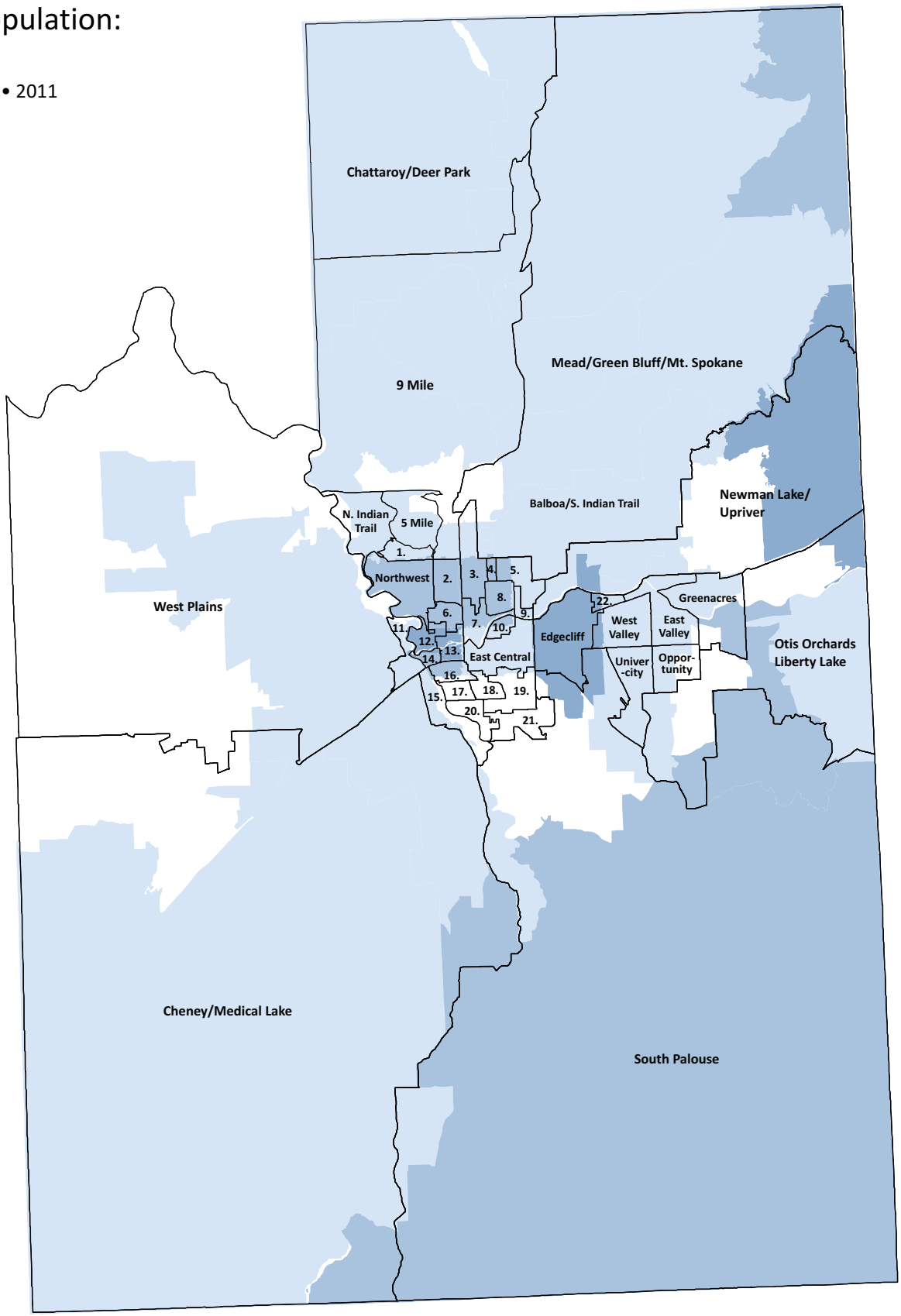

Data Source: Behavioral Risk Factor Surveillance System (BRFSS) 2005 to 2009

# Percent of Population: Diabetes

Spokane County, WA • 2011

**Legend**

- **3.0 - 6.7%**
- **6.8 - 9.1%**
- **9.2 - 11.6%**
- **11.7 - 19.2%**




1. Balboa/S. Indian Trail
2. North Hill
3. Nevada/Lidgerwood
4. Whitman
5. Hillyard
6. Emerson Garfield
7. Logan
8. Bemiss
9. Minnehaha
10. Chief Garry Park
11. West Hills
12. West Central
13. Riverside (downtown)
14. Browne's Addition
15. Latah Valley
16. Cliff/Cannon
17. Manito
18. Rockwood
19. Lincoln Heights
20. Comstock
21. Southgate
22. Millwood

Data Source: Behavioral Risk Factor Surveillance System (BRFSS) 2005 to 2009

# Conclusion

Spokane has a long history of working on improving conditions to make our area a vital, thriving community. This report unveils health inequities among our citizens due to less education and income, race or ethnicity, and place of residence. The differences in health continue to widen between underserved and affluent populations. It's easier to see the stark differences in health between the two extremes in a social gradient, e.g. between the rich and the poor, less educated and more educated. But inequities in health also exist for the middle class; we all occupy a place on the social gradient.

Thus, elimination of health inequities is a goal worthy of ALL OF US, and is essential for a healthy community. Closing the gap on health inequities requires participation of all residents and partners in Spokane County and a commitment to all that we have equal rights to live a long and healthy life.

## What are public health's plans to address health inequities?

Our first and primary focus will be to create an awareness of health inequities in Spokane County and the impact health inequities has on the public's health. We will advocate that policy makers and organizational leaders consider this information when making decisions that could impact health inequities. We will continue to get involved in community initiatives that address health inequities in Spokane County, like the Priority Spokane (priorityspokane.ewu.edu) effort that is currently focused on raising the level of educational attainment with the Spokane Public Schools. We will expand our partnerships to include a broader perspective when working on community issues, such as involving housing, transportation, employment, education, non-profit, and faith-based organizations. We will support programs, like Neighborhoods Matter, that work with citizens to improve their community's safety and health. Many of our programs work to prevent health issues that impact educational attainment and employment, like drug use, food insecurity, and child abuse. Our Community Health Assessment, Planning, and Evaluation program will continue to assess the health issues in our community to understand whether we are making progress to reduce or eliminate health inequities.

Current health policy focuses most attention on access to health care, while the Centers for Disease Control and Prevention estimates that only 10% of premature mortality is due to inadequate health care. As a community, more attention could be devoted to policies impacting environmental, social, and economic conditions – social policy is health policy. Research is building around effective interventions. We would like to develop a policy menu with strategies that a broad array of groups could use to help us reduce health inequities. In general, policies that can have an impact on reducing health inequities include those that promote economic development and reduce poverty; promote child and youth development and education, infancy through college; and promote healthier homes, neighborhoods, schools, and workplaces.

**Education:**
If educational attainment is raised, the benefit will include better jobs and higher income, resulting in better health. Individuals will also have a higher level of health literacy to lower risk behaviors. Three strategies cited by multiple resources include:

1. Providing access to high quality early childhood education for all children, including programs like HeadStart.
2. Increasing high school graduation rates through school, home, and community evidence-based approaches.
3. Reducing financial barriers that prevent students from attending college.

**Employment and Income:**
If employment attainment and stability is addressed, the benefit will be reduced stress from economic uncertainty. Raising the level of income for households provides access to resources. Workforce development strategies include:

1. Increasing high school graduation rates and providing opportunities for higher education.
2. Providing adequate income supports for young families.
3. Providing new or enhanced skills training to assist with job placement and advancement.

**Race and Ethnicity:**
If discrimination and segregation is reduced, the benefit will be a community that supports and embraces all of its citizens, resulting in long-term, improved health. Strategies include:

1. Increasing diversity in communities through zoning and land use laws that promote integration.
2. Addressing discrimination within organizations providing services.
3. Increasing minority representation on governing boards to assist in decision-making that supports all people.

**Neighborhoods:**
If health conscious zoning; affordable, safe, and quality housing; and neighborhood safety are considered, the benefit will be healthier and safer communities. Strategies include:

1. Understanding the policy making process and advocating for a "health in all policies" standard.
2. Focusing on communities and neighborhoods at greatest risk for poor health outcomes and high-risk behaviors and improving the social and physical conditions there.
3. Participating in community efforts and joining forces with other neighborhoods and organizations to address health inequities.

### What could your organization do to address health inequities?

We are willing to present this information to your organization and research evidence-based strategies for your organization to consider in your strategic planning. Please call us and set up a meeting – (509) 323-2853.

Addressing health inequities—the social determinants themselves—is not just a public health agenda, it's all of our agenda. Spokane benefits when everyone has the opportunity to live a long, healthy, and productive life. The information presented in this report indicates much room for improvement. Can Spokane do better than this?

Tell us your thoughts. Email adominguez@spokanecounty.org.

## Educational and Strategic Resources

**For more detailed information regarding recommendations and evidence-based interventions for reducing health inequities, go to:**

- National Prevention Strategy. Report from the National Prevention Council, June 2011. **www.healthcare.gov/prevention/nphpphc/strategy/index.html**
- Unnatural Causes. **www.unnaturalcauses.org/**
- Overcoming Obstacles to Health, Report From the Robert Wood Johnson Foundation to the Commission to Build a Healthier America. **www.rwjf.org/files/research/obstaclestohealth.pdf**
- Reaching for a Healthier Life, Facts on Socioeconomic Status and Health in the US. **www.macses.ucsf.edu/downloads/Reaching_for_a_Healthier_Life.pdf**
- Life and Death from Unnatural Causes, Health and Social Inequity in Alameda County. **www.acphd.org/media/53628/unnatcs2008.pdf**
- Advancing Health Inequity: "A Guide of Next Steps for Action" For Individuals, Groups, Organizations, Businesses, Governments, and More… 2008, Office of Minority Health and Public Health Policy, Virginia Department of Health. **www.vdh.state.va.us/healthpolicy/healthequity/unnaturalcauses/documents/Next-Steps-for-Action.pdf**
- Health Inequities in the Bay Area. **www.barhii.org/press/download/barhii_report08.pdf**

Six focus groups were conducted and facilitated by Robinson Research to further understand barriers and social conditions affecting health and quality of life. Focus groups were separated into three categories based on the participants' total annual household income: less than $35,000 (classified as low income), $35,000 to $75,000 (classified as middle income), and greater than $75,000 (classified as high income). A total of 61 individuals who reside in Spokane County participated in the focus groups. Participant responses were analyzed to identify themes from across and within the three income groups.

**1) Are you generally satisfied or dissatisfied with the quality of your life?**

There were few who considered themselves primarily dissatisfied with their lives. Those with household incomes at or above $35,000 considered themselves satisfied and included qualifications in their descriptions of their happiness compared to those with household incomes below $35,000.

**2) What factors affect your quality of life?**

Dissatisfaction was most commonly related to unemployment, underemployment or related financial difficulty. Failure to be completely satisfied due to financial constraints was more prevalent among those in the low-income groups, but there were several such comments in the middle and upper income groups. Medical problems, particularly those affecting dependent children, were commonly cited detractors from quality of life, as good health was a commonly mentioned positive contributor.

Those in the middle and higher income groups typically perceived their health to be better than did those in the lower income groups. Limited access to affordable medical and dental care was mentioned often in the lowest and middle income groups. In the lowest income group, there were mentions of health problems affecting employment opportunities. Those in the middle and upper income groups cited having married well, more often than did those in the lowest income group. Participants in the middle and upper income groups mentioned being satisfied with their jobs more than those in the lowest income groups. All income groups included descriptions of the strains of providing care for an elderly parent or other loved one. Throughout the groups, having good family and friends was a repeated factor that contributed to an individual’s well-being. Mentions of religious faith were present across all groups.

**3) How is your quality of life different from your parents' quality of life at your age?**

There was a wide variation among the ages of respondents, therefore their parents ranged from adults in their mid-forties to some indelibly marked by experiencing the Great Depression. Throughout the groups, the most commonly cited difference was that most participants' parents were in a partnership that allowed for a stay-at-home mom. Those who believed their day-to-day lives to be easier than that of their parents was greater than those who believed that their parents had an easier existence. However, themes within several focus groups included the perception that current generations had more educational opportunities and greater material wealth; the latter wasn't necessarily perceived as a positive difference. There were some comments suggesting the belief that life was safer from violent crimes in years past.

**4) What are the major sources of stress in your life?**

The most commonly mentioned sources of stress were financial, most typically (among the lower income groups) pertaining to paying monthly bills. As the incomes of participants increased, financial stress more often took the shape of fear of risky investments and having assets eroded by external forces such as deficit spending, stock market, real estate, etc. Males admitted to stress less and blamed it on someone else. Females were more inclined to worry and to blame stress on themselves. Throughout the sessions were comments suggesting stress about uncertainty of future events.

While health issues were common in all groups, limited access to health care was mostly found among those with lower incomes. A notable exception was limited health care access due to insurance by Medicare and great difficulty finding a doctor that accepts new Medicare patients.

Children were often mentioned as sources of stress, either because of health issues, being difficult to live with, or various other prodigal behaviors. Participants also often mentioned stress from being in the middle of caring for aging parents or knowing that as their parents age, they will inevitably get sick and their health will decline. Even those not directly involved in care were often stressed by observing a decline in their parents' health.

Living up to expectations of family members, community, employers, and work peers, as well as having inadequate time to allocate toward those expectations were mentioned as sources of stress across all income strata, but were rarely mentioned by older participants.

**5) How do you alleviate or mitigate stressors in your life?**

Walking was by far the predominant activity, followed by other various forms of exercise, talking with friends/family and activities involving dogs. Generally, participants relieved stress by finding things they could control. Participants looked for non-judgmental aspects of their lives (specific friends and family members, pets, comfortable places) to relieve stress. Lower income respondents were more likely to use people to reduce stress, while more affluent individuals mentioned stress-reducing activities.

**6) What affects the stability of your household?**

Most descriptions of factors leading to instability were external and out of the control of the participant. The most acute example of household instability was impending eviction from the family home, as it was deeded to the state to secure long-term care.

**7) What prevents you from being as healthy as you can be?**

The lower income groups tended to cite external factors, while the higher income groups tended to see themselves as more responsible for their overall health. Commonly cited factors included:

- Obesity
- Immobility due to illness, accident or obesity
- Not having a regular doctor, preventive care and check-ups
- Fear or distrust of medical interventions
- Cost of insurance, health care and prescriptions
- Lack of exercise
- Allocating limited finances to other priorities
- Inability to get health care insurance
- Unhealthy eating – including consumption of fast foods, processed foods with additives, genetic engineering
- High insurance deductibles

**8) What changes in your neighborhood would contribute positively to your health?**

Not all participants believed that change in their neighborhood could improve their health. A recurring theme was the need/desire to develop community, including inclusion of common areas or community centers. Some participants described how they had already moved to an area that was particularly conducive to good health. There were some comments suggesting that participants' neighborhoods were not safe for outdoor recreation. Unsafe conditions could include crimes against persons, remote areas where one could get injured and not be found, road traffic and buckled sidewalks posing a trip hazard.

**9) What changes in your life could help you be as healthy as you can be?**

Following are examples of mentions:

- Making time to exercise
- Come back out of retirement
- Choose friends with healthy lifestyles
- Shopping more carefully
- Walking to the grocery store
- Avoiding too much computer time
- Getting more sleep
- Working fewer hours
- Stop smoking
- More consistent meal scheduling

**10) How would you describe your neighborhood?**

There were many comments about the degree to which neighbors knew and interacted with each other. Generally, it appeared that cohesiveness of neighborhood was usually perceived as a positive characteristic, but some participants clearly preferred minimal interaction with their neighbors. The groups were held in mid-December, following a noteworthy snowfall, therefore, many of the comments included descriptions of the degree to which neighbors helped each other with snow blowing and shoveling.

**11) What are the greatest health care needs of you and your family?**

There were far more comments about health care insurance coverage (and lack thereof) than any other topic. Lack of access to dental care was extraordinarily prevalent in the lowest income subset. Those in the lowest income subset described higher levels of desperation than did their more affluent counterparts.

**12) What are the stereotypes people have of individuals at your level on the socioeconomic scale?**

Those in the lowest income groups typically felt looked down upon and judged unfairly. Those in the middle income groups typically saw themselves as solid citizens and assumed that those less affluent would consider them quite fortunate. Some of those in the highest income groups believed that those less affluent would perceive them as wealthier than necessary and that they should share more of their wealth.

**13) What could be done to make a difference in the things we've discussed?**

Increasing access to health insurance was common across income groups. There were a couple themes identified within focus groups, including:

- Increasing access to affordable educational opportunities
- Developing sense of community

## Table 10: Self-Reported Focus Group's Demographic Information, Spokane County

| Demographic Information | Overall | Lower Income Group | Middle Income Group | Higher Income Group |
|---|---|---|---|---|
| **Gender** | | | | |
| Male | 39.3% | 44.4% | 38.1% | 36.4% |
| Female | 60.7% | 55.6% | 61.9% | 63.6% |
| **Average Age** | 45.2 | 38.3 | 47.4 | 48.6 |
| **Race/Ethnicity** | | | | |
| White | 89.0% | 88.9 | 90.5% | 90.9% |
| Black | 1.6% | 0.0% | 0.0% | 4.5% |
| American Indian/Alaska Native | 3.3% | 11.1% | 0.0% | 0.0% |
| Asian Pacific Islander | 4.9% | 0.0% | 9.5% | 4.5% |
| Hispanic/Latino | 1.6% | 5.6% | 0.0% | 0.0% |
| **Proportion of People in Household** | | | | |
| Adults | | | | |
| 1 Adult | 29.5% | 61.1% | 4.8% | 27.3% |
| 2 Adults | 55.7% | 33.3% | 71.4% | 59.1% |
| 3 Adults | 9.8% | 5.6% | 19.0% | 4.5% |
| 4 Adults | 4.9% | 0.0% | 4.8% | 9.1% |
| Children | | | | |
| 0 Children | 55.8% | 55.6% | 52.3% | 59.1% |
| 1 Child | 18.0% | 27.8% | 19.0% | 9.1% |
| 2 Children | 13.1% | 5.6% | 14.3% | 18.2% |
| 3 Children | 4.9% | 5.6% | 4.8% | 4.5% |
| 4 or more Children | 8.2% | 5.6% | 9.6% | 13.5% |
| **Highest Level of Education** | | | | |
| High school graduate/GED or less | 6.6% | 5.6% | 4.8% | 9.1% |
| Some college | 34.4% | 27.8% | 38.1% | 36.4% |
| Associates degree (2 years) | 14.8% | 22.2% | 9.5% | 13.6% |
| Bachelors degree | 23.0% | 16.7% | 33.3% | 18.2% |
| Post graduate | 21.3% | 27.8% | 14.3% | 22.7% |
| **Marital Status** | | | | |
| Never married | 23.0% | 50.0% | 14.3% | 9.1% |
| Married | 47.5% | 22.2% | 81.0% | 36.4% |
| Divorced | 23.0% | 22.2% | 4.0% | 40.9% |
| Separated | 3.3% | 0.0% | 0.0% | 9.1% |
| Widowed | 3.3% | 5.6% | 0.0% | 4.5% |
| **Average Gross Annual Income** | $51,741 | $26,387 | $52,053 | $72,682 |
| **Generations** | | | | |
| Recent immigrant | 3.3% | 0.0% | 9.5% | 0.0% |
| First generation | 3.3% | 6.3% | 0.0% | 4.5% |
| Second generation | 9.8% | 12.5% | 19.0% | 0.0% |
| Third generation | 21.3% | 18.8% | 33.3% | 13.6% |
| Fourth or greater generation | 59.0% | 62.5% | 38.1% | 81.8% |
| **No Health Care Insurance** | 21.3% | 44.4% | 5.0% | 18.2% |
| **Overall Physical Health Fair/Poor** | 8.2% | 11.1% | 9.5% | 4.5% |
| **Overall Mental Health Fair/Poor** | 1.6% | 0.0% | 0.0% | 4.5% |
| **Dissatisfied/Very Dissatisfied with Life** | 1.6% | 0.0% | 4.8% | 0.0% |
| **Rarely/Never Receive Social/Emotional Support** | 9.8% | 11.1% | 10.0% | 9.0% |

## Inclusion Criteria for Selected Indicators

A literature search was conducted to identify important measures related to health inequity specific to Spokane County for different socioeconomic levels. A list of health inequity indicators were compiled from the analysis of other reports and presented to Spokane Regional Health District's Goal 4 Strategic Planning Group. Some indicators were specifically chosen to reflect one of the priority areas outlined with the National Prevention Strategy report, thus illustrating the pervasive presence of disparities across all leading causes of preventable death and major illness. Final selection of indicators was primarily determined by availability of reliable population-based data at the county level and in some instances sub-county level for the specified socioeconomic gradient.

## Data Sources

**Washington State Population Survey –** Is funded from the Washington State legislature and was conducted by the Gilmore Research Group on behalf of the Office of Financial Management, Washington State. The self-reported survey provides social, demographic, and economic information about Washington State residents biennially for each of 10 regions. Spokane County is identified as Region 7. Responses to the survey are obtained from telephone interviews representative of the state population as a whole. A stratified sample by region is selected from all households in the state of Washington with an activated telephone line, either listed or unlisted. Households are selected in each of the regions using random digit dialing (RDD) technique. For the purpose of this report, multiple years of data were aggregated from 2000 to 2008 to provide a more accurate description of the interested health outcome for the desired risk factor.

**Behavioral Risk Factor Surveillance Survey (BRFSS) -** Is a state-based system of self-reported telephone health surveys that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury in adults. BRFSS is used by all states, the District of Columbia, and three territories, through funds disbursed by the Centers for Disease Control and Prevention (CDC) and supplemented by Washington State Department of Health program funds. The BRFSS questionnaire contains a set of core questions used by all states and an additional set of questions sponsored by each state. Participants are drawn from a sample of telephone numbers from all possible area codes and three digit prefixes assigned to a state. In Washington State, a disproportionate stratified random sampling (DSS) method is used. Washington State uses a computer-assisted telephone interviewing (CATI) software program to interview participants. Once a household is selected, one adult (aged 18 or older) is randomly selected to be interviewed from each selected household. Interviews are conducted seven days a week during both the daytime and evening. For the purpose of this report, multiple years of data for some indicators were aggregated from 2005 to 2009 to provide a more accurate description of the interested health outcome for the desired risk factor.

**Birth Certificates –** The Washington State Department of Health, Center for Health Statistics collects data on each birth in the state of Washington. Information is gathered about the mother, the father, the pregnancy, and the child regarding risk factors and outcomes on the pregnancy and on socioeconomic factors. The information is collected in hospitals and birth centers from worksheets completed by parents or medical staff, from medical charts, or by a combination of these sources. Midwives and family members who deliver a baby complete the birth certificate and collect the information from a parent or from their records. The data that is collected is used by data analysts, policy makers, health care providers, and others to help improve the health of women, infants, and children. For the purpose of this report, multiple years of data were aggregated from 2003 to 2009 to provide a more accurate description of the interested health outcome for the desired risk factor.

**Death Certificates –** The Washington State Department of Health, Center for Health Statistics collects data on each death in the state of Washington. Information includes cause of death and demographic factors. Funeral directors collect information about the decedent from an informant (usually a family member or close personal friend of the decedent). Cause-of-death information is generally provided by a certifying physician, medical examiner, or coroner. The data that is collected is used by data analysts to evaluate mortality in the state of Washington. For the purpose of this report, multiple years of data were aggregated to provide a more accurate description of the interested health outcome for the desired risk factor.

**The Community Health Assessment Tool (CHAT) –** CHAT is a repository containing a variety of data collections gathered and maintained by the Washington State Department of Health in separate, uncoordinated databases. Data collected and maintained by CHAT are standardized and stored in a CHAT data repository which can be queried. A statistical analysis is performed on the data output to identify and determine meaningful relationships and trends regarding risk factors and health outcomes. For the purpose of this report, multiple years of data were aggregated to provide a more accurate description of the interested health outcome for the desired risk factor.

**Washington State HIV Surveillance Report –** The Washington State Department of Health, Infectious Disease Assessment Unit conducts disease surveillance, data collection, data entry, and data analysis of HIV/AIDS for the state of Washington. The quarterly report produced by the department gathers and relays information regarding the incidence and prevalence of HIV/AIDS in Washington State, the risk factors associated with the infection of HIV, and demographic information on individuals infected with HIV. Data are used to support HIV prevention and care resources, to conduct program planning and evaluation, and to educate the public about the HIV epidemic in Washington State. For the purpose of this report, multiple years of data were aggregated from 2002 to 2008 to provide a more accurate description of the interested health outcome for the desired risk factor.

**Strategic Research Associates, Omnibus Survey –** A telephone survey was conducted by Strategic Research Associates under contract with the Spokane Regional Health District in 2010. The survey objectives were to measure the perceptions of Spokane County residents regarding health-related inequities. Households were randomly selected using a form of random digit dialing; 404 adults, 18 years of age and older who presently reside in Spokane County were interviewed. This provided coverage of both listed and unlisted landline numbers. Data was weighted to match the proportion of all adults living in Spokane County. Each participant in the sample was assigned a weight representing the relative contribution of that individual's data to the final results.

## Methods: Quantitative Data Analysis

Confidence intervals were used to show the differences in the outcomes for specific indicators displayed in bar graphs and in tables. Confidence intervals are ranges of numbers used to assess the accuracy of a point estimate and measure the variability in the data. The point estimate may be a rate, such as a death rate or a hospitalization rate, or a frequency, such as the percent of individuals who are overweight. The confidence intervals account for the uncertainty that arises from the natural variation inherent in the world around us. Confidence intervals also account for the difference between a sample from a population and the population itself. For the analysis of this report, confidence intervals were calculated at the 95 percent confidence level. This means that 95 times out of 100 the confidence interval captures the true value for the population. Significant testing between or within groups was determined by using a chi-square or logistic regression test with a probability level (p-value) of 0.05 used as the criterion to establish a statistically significant difference in the results.

Odds ratios were calculated for some indicators and defined as the ratio of the odds of an event occurring in one group to the odds of it occurring in another group. The odds ratio specifies the likelihood or probability of a condition or event for one group compared to another group. An odds ratio of 1 indicates that the condition or event under study is equally likely to occur in both groups. An odds ratio greater than 1 indicates that the condition or event is more likely to occur in the first group than the second group. An odds ratio less than 1 indicates that the condition or event is less likely to occur in the first group than the second group.

For the purpose of this report, poverty was defined at 200% Federal Poverty Level (FPL) using the Federal Registrar's 2008 Percent of Poverty Guidelines. For a family of four (two adults and two children) at 200% FPL, the gross annual household income equates to $42,000.

Household income was calculated based on the total income in that household and determined as a percent of FPL. The number of members in a household and the total income in that household was used to determine a household poverty level. When a poverty level was determined for a household, all individuals in that household were given the same poverty level.

Racial/ethnic data was categorized into one of five groups: white non-Hispanic, black non-Hispanic, American Indian/Alaska Native non-Hispanic, Asian Pacific Islander non-Hispanic, or Hispanic. Race/ethnicity data was self-identified by survey participant and best describes the participant.

Neighborhoods were organized using the boundaries identified by the City of Spokane by the use of block groups.

Quantitative data regarding topics in this report were analyzed using Stata version 11 or EpiInfo version 4.4.3.

## Methods: Qualitative Data Analysis

Six focus groups were conducted and facilitated by Robinson Research under contract with the Spokane Regional Health District in 2010. Recruiting was conducted by Robinson Research personnel. Fifteen candidates were recruited for each group, in anticipation of eight to twelve showing. Participants received a cash honorarium of $50.00 at the completion of the group. Focus groups were separated into three categories based on the participant's total annual household income: less than $35,000 (classified as low income), $35,000 to $75,000 (classified as middle income), and greater than $75,000 (classified as high income). Two focus groups were identified for each category. A total of 61 individuals who reside in Spokane County participated in the focus groups, with 18 residents participating in the low income group, 21 residents participating in the middle income group, and 22 residents participating in the high income group. Participants represented various demographics of the population and an attempt was made to include individuals from all geographic locations in Spokane County. Each focus group was scheduled for 2.5 hours with a total of 13 questions asked. The groups were facilitated by William D. (Bill) Robinson, CEO of Robinson Research.

All questions were asked in the same manner for all groups. The focus groups were confidential sessions and were videotaped with the knowledge of the participant. In addition, each participant was asked to complete a survey with 16 questions. The purpose of the survey was to collect descriptive quantitative data showing demographic features and to provide information on the participant's individual health for each income group. (See Appendix A, Table 11)

Quotes were pulled from the transcripts. The transcripts may vary slightly from the audio recordings which may have been modified for the purpose of providing clarification by adding references to context, eliminating redundant statements and sequencing comments to better fit the topics to which they pertained.

Per established business contract, Robinson Research secured permission from each focus group participant to publish input and verbatim responses. SRHD staff culled potential personal interest stories from individuals' testimonies contained within the focus group transcripts and final Robinson Research report. To preserve focus group confidentiality, Robinson Research was asked to follow up with identified focus group participants and gauge interest in participating in subsequent key-informant interviews. Ten focus group participants agreed to be contacted by SRHD staff. SRHD's Public Information Officer (PIO) contacted five of those individuals, all of whom agreed to participate in final interviews and have their testimonies included in the health equity report. The PIO conducted the interviews and each was documented by the SRHD Video Production Specialist using audio or video recording equipment. Still photography was also used.

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