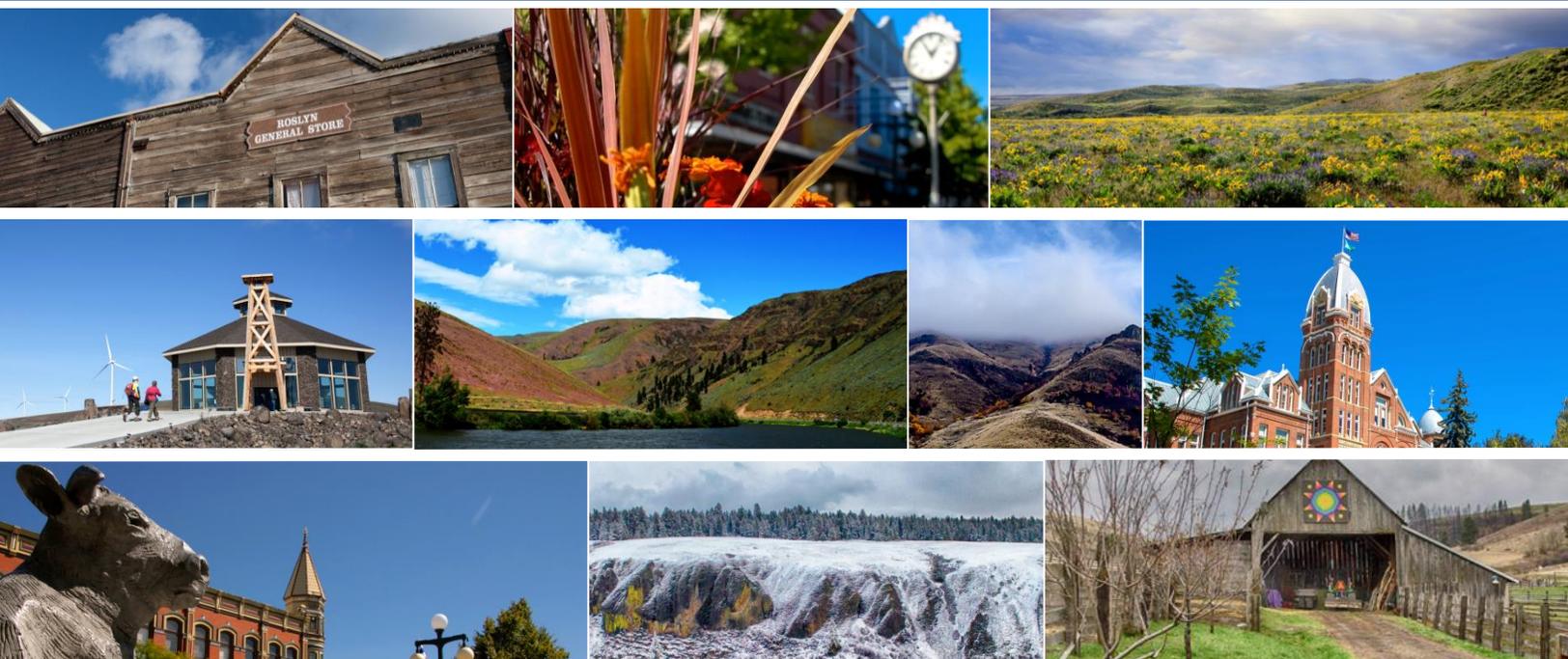


The Health of Kittitas County

A profile of health, well-being and quality of life in our community



APRIL 2018



Acknowledgements

The Kittitas County Public Health Department (KCPHD) would like to thank the following individuals and agencies for their assistance with the community health assessment process:



The Kittitas County Health Network

The Network, along with KCPHD, provided partial funding for the facilitation and creation of the community health assessment and community health improvement plan.

Additional Resource sponsors:



Thank you to Kittitas Valley Healthcare, Kittitas Valley Fire and Rescue, Central Washington University and Community Health of Central Washington for providing the additional resources of meeting space, meeting materials and staff time to the Community Health Assessment (CHA) and the Community Health Improvement Plan (CHIP) effort.

The Residents of Kittitas County

We would also like to thank the members of the Kittitas County community that took the time to answer our survey questions both in person and on-line. Your feedback was essential to the CHA-CHIP process.

Special thanks to Jim Armstrong and Kittitas County Chamber of Commerce for providing the photos of Kittitas County used in the cover design and in the body of the report.

Authored by: Amy Fuller, BS, MPH, KCPHD Assessment Coordinator

Edited by: Robin Read, BA, MPH, KCPHD Public Health Administrator

Amy Diaz, BS, MS, KVH Data Analyst

Table of Contents

- Executive Summary** i-iv
- What is a community health assessment?** 1
- Who participated in the community health assessment?** 2
- What is our vision of health and what do we value most?** 3
 - Community Health Vision 3
 - Community Health Values 3
- Who is Kittitas County?** 4
 - Geography 4
 - Climate 5
 - Population 6
 - Rural Character 6
 - Age 7
 - Income 8
 - Employment 9
 - Gender 10
 - Race and Ethnicity 10
- How healthy are we?** 12
 - Leading Causes of Death 14
 - Leading Causes of Hospitalization 15
 - Health Factors 5
 - Health Behaviors 21
 - Clinical Care 30
 - Social and Economic Factors 34
 - Physical Environment 40
- Who in our community experiences poorer health?** 43
- What are our community assets?** 46
 - What makes a healthy community? 46
 - What makes Kittitas County a healthy place to live? 47
- What are the most important health issues for community members?** 49
 - Health Issues and Problems 49

2018 | The Health of Kittitas County

Risky Behaviors 50

Stress..... 51

How is quality of life perceived in our community? 53

 What is important for quality of life? 53

 How satisfied are we with our quality of life? 54

 What would improve quality of life? 54

What is going on in the community that affects health and quality of life? 55

 Built Environment..... 55

 Social and Economic Factors 55

 Health Care 56

 Population..... 56

 Behavioral Health 57

 Chronic Disease..... 57

 Climate Change and Environmental Hazards 57

How well does our local public health system work? 58

 Local Public Health System Assessment Results..... 59-60

What are our primary areas of community health improvement? 61

 Strategic Issues 62

Appendix A. Assessment Methods 63

 Community Health Status Assessment 63

 Community Themes and Strengths Assessment..... 63

 Local Public Health System Assessment 65

 Forces of Change Assessment..... 65

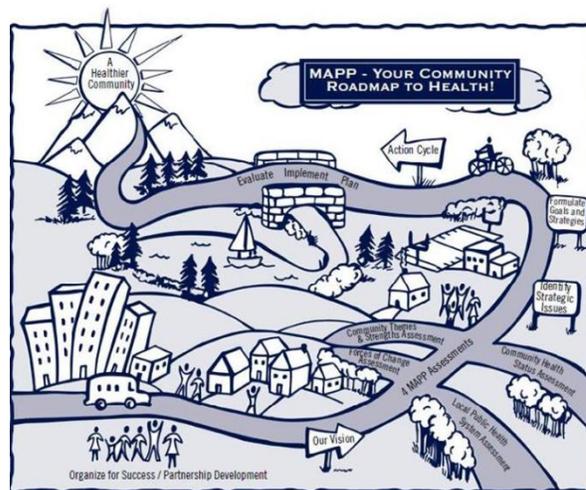
Citations..... 66-71

Contact Info Back Cover Page

2017-18 Community Health Assessment Executive Summary

Background

The Kittitas County Health Network (KCHN) is a collaboration of community partners focused on transforming local health care by implementing a collective approach to improving health in Kittitas County. In 2017, KCHN partnered with the Kittitas County Public Health Department (KCPHD) to conduct a county wide community health assessment (CHA) that will ultimately result in a community health improvement plan (CHIP).



The MAPP Framework

KCHN and KCPHD chose the Mobilizing for Action through Planning and Partnerships (MAPP) framework to guide the CHA process. The MAPP framework is an evidence-based community-driven planning tool for improving community health. This tool is used by local public health leaders to help communities apply strategic thinking to prioritization of public health issues and the identification of resources needed to address them. It was used previously by KCPHD in the 2012 CHA-CHIP process. In June of 2017, KCPHD convened the CHA-CHIP work group. Thirty-two individuals were recruited to ensure a broad representation of community interests and viewpoints within the local public health system. The group created a vision and a set of community values to guide the community health assessment and strategic planning work. Four sub-committees were formed to facilitate and oversee the four assessments outlined in the MAPP process. Monthly work group and sub-committee meetings were held regularly over a six month period to complete the community health assessment activities. The data from the four assessments was compiled and analyzed over a three month period. The end result is a comprehensive picture of our community's most pressing health needs and the resources we have to meet those challenges.

The 4 MAPP Assessments: Summary of Results

1. The Community Themes and Strengths Assessment

The Community Themes and Strengths Assessment (CTSA) was comprised of a community-wide online survey and several polls conducted on-site at agencies and community events.

"How is quality of life perceived in our community?"

- Overall, a large majority of residents (70%) reported being satisfied with the quality of life in Kittitas County. However, residents with lower income levels were less likely to report being satisfied than those with higher income levels.

- *According to many community members, more activities for all age groups, more affordable housing, increased health care services, and increased access to retail services would improve the quality of life in Kittitas County.*

"What is important to our community?"

- *Although this question was asked in different ways of different populations, some clear themes for most Kittitas County residents are concerns about mental health and substance abuse, chronic disease, housing, and poverty.*
- *Residents who participated in the online and in-person surveys felt that alcohol and drug abuse are the most common health risk related behaviors in our community, followed by poor eating habits and being overweight.*
- *Money, work, and health concerns are the primary contributors to stress among most residents of Kittitas County. CWU students also report school being a high contributor of stress.*

"What assets do we have that can be used to improve community health?"

- *Residents describe Kittitas County as being a safe community, a good place to raise children with abundant outdoor recreational opportunities.*
- *Community partners and residents identified a strong willingness to collaborate and supportive community networks as strengths of Kittitas County.*

2. The Community Health Status Assessment

The Community Health Status Assessment collects available data on the disease and death rates in our county as well as health risk behaviors, the physical environment, social economic factors, and clinical care. The data was collected to create a snapshot of health in our county.

"What does the health status of our community look like?"

- *Vital records data show Kittitas County residents are living longer overall and have a life expectancy of 82 years (from birth).*
- *Death certificate data shows higher rates of mortality than the state in the areas of cardiovascular disease, malignant neoplasms (cancers, tumors), accidents and suicide.*
- *Hospitalization data shows higher rates of hospitalization than that stage for injury and poisoning, diseases of the musculoskeletal system, respiratory diseases and neoplasms.*
- *People are not getting enough required cancer screenings but the rates of diabetes monitoring are better than the state and nation. Kittitas County residents are active compared to the state and nation but a large percentage (40%) of our county is overweight or obese.*
- *In our physical environment, recreation access is good but days, however, extended periods of drought are becoming more common.*
- *There are food access issues for those with lower incomes and the number of fast food establishments per capita is inordinately high.*
- *The indicators for socio-economic factors show that our high school graduation rate is high and steady (82%) and unemployment rates are low.*
- *Kittitas County ranks second worst in the state for severe housing problems.*
- *We have a large percentage of families with young children in poverty and there is a large gap in income equality, however, community data may be influence by university*

presence in the census calculations.

- *There are significant shortages in primary care providers, mental health providers and dentists in Kittitas County. The ratio of residents to providers is twice that of the state.*

3. The Forces of Change Assessment

"What is occurring now or might occur in the future that affects the health of our community or the local public health system?"

The Forces of Change Assessment uses a brainstorming method conducted with local public health system members to identify factors, trends and events that impact the residents and healthcare system of Kittitas County.

- ***The biggest factors*** impacting Kittitas County's health are being a rural area with healthcare and mental health provider shortages, having a large older adult population, a large university student population, a significant amount of families in poverty, and lower median per capita and household incomes.
- ***Current trend data*** shows rapid population growth, a decline in unemployment but increase in wage gaps, increasing number of children in poverty, increasing rates of chronic disease, increase in mental health and substance abuse related issues (especially alcohol and opiates). There has been an increase in the insured population; however, there is also an overall increase in preventable hospital stays. The increase in wildfires and drought also may compromise the livability of the area.
- ***Events*** are significant national, state and local one-time occurrences that can shape the trajectory of Kittitas County and where resources are allocated. The events in the past five years that are noted to have had major impacts on the community are wildfires, closure of Kittitas Valley Rehab, the sale of Shady Acres mobile home park, legalization of marijuana, changes in hospital administration and change in national healthcare policy.

"What specific threats or opportunities are generated by these occurrences?"

- ***Opportunities*** currently available to combat these issues are new collaborative health agency partnerships, the newly designated 1% tax fund dedicated to building affordable housing for vulnerable populations, changes in Medicaid funding and support from regional health initiatives, as well as city and county governments awareness of issues and willingness to collaborate on solutions.
- ***Threats*** to progress are the speed of change outpacing solutions, the lack of financial support to address social-economic factors related to health, and an overwhelmed healthcare system that cannot meet the rising tide of patients.

4. The Local Public Health System Assessment

"What are the components, activities, competencies, and capacities of our local public health system?" and ***"How are the Essential Services being provided to our community?"***

The Local Public Health System Assessment is a questionnaire tool designed to identify strengths and weaknesses of the local public health system. The CHA-CHIP work group worked collectively to complete the tool. The LPHSA tool is a report card of how well the entire local public health system (public health, hospital, law enforcement, government, non-profits, etc.) works together to meet the health needs of its community.

- *Overall, Kittitas County LPHS scored the equivalent of a B- in system function and service delivery. The LPHS is maintaining essential service delivery at an adequate level but there is plenty of room for improvement.*
- *Areas of priority that need to be developed (lowest score but high importance) are improving current health information sharing technology, mobilizing partnerships, increasing personal health services, assuring linkage to health services, and evaluating the quality of services.*

In Summary:

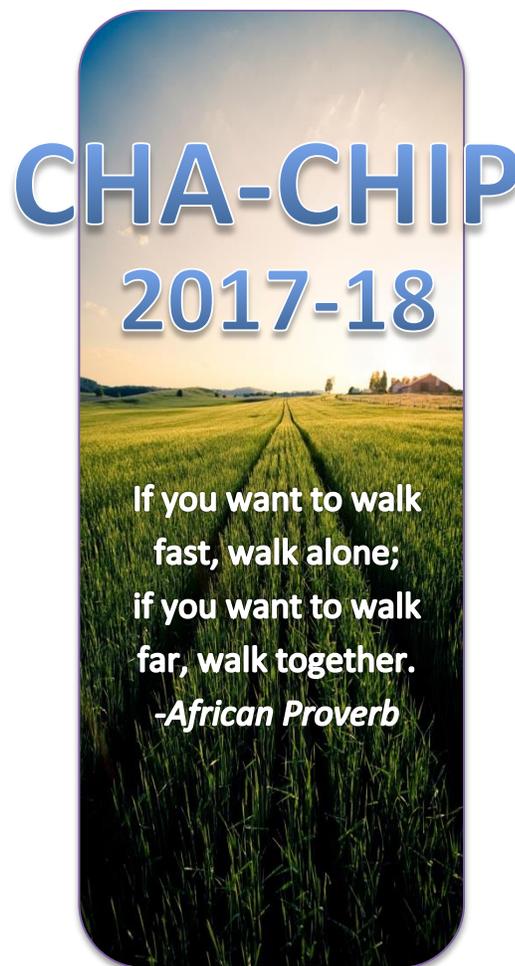
Kittitas County is a safe and close-knit community that is loved by many of its residents. However, the quality of life here is different for individuals in lower income brackets. Rapid population increase, income inequity, health and mental health provider shortages are large drivers in the poor health outcomes of the county. Resident and community partner concerns regarding healthcare access, housing, mental health, substance abuse, obesity and poverty are validated by data. The Kittitas County local public health system needs to strengthen linkages to services, evaluation of services and community partnerships in order to get ahead of healthcare access issues, and meet the unique needs of a rural community.

Who participated in the Community Health Assessment?

The community health assessment is the result of the hard work and input from several sources including public health department staff, community partners, and Kittitas County residents. The CHA-CHIP work group is considered a part of the Kittitas County Health Network organizational structure.

CHA-CHIP Work Group Participants

Jim Armstrong	<i>Chamber of Commerce</i>
Tishra Beeson	<i>CWU Public Health</i>
Emily Brown	<i>Merit Resources</i>
Michelle Cawley	<i>Community Health of Central WA</i>
Dawn Brumfield	<i>ASPEN</i>
Steve Chrisman	<i>CWU Paramedicine</i>
Amy Diaz	<i>Kittitas Valley Healthcare</i>
Rich Elliott	<i>Kittitas Valley Fire & Rescue</i>
Sandra Freitas	<i>HopeSource</i>
Deb Gauck	<i>Community Member, Business Owner</i>
Pat Gigstead	<i>Kittitas County Probation Services</i>
Sue Gunn	<i>Comprehensive Healthcare</i>
David Hurn	<i>City of Ellensburg, Youth Center</i>
Adrienne Jensen	<i>HopeSource</i>
Kasey Knutson	<i>Kittitas County Public Health Department</i>
Harry Kramer	<i>Comprehensive Healthcare</i>
Norah Lagos	<i>Community Health of Central WA</i>
Tristen Lamb	<i>Kittitas County Public Health Department</i>
Chelsey Loeffers	<i>Kittitas County Public Health Department</i>
John Littel	<i>Kittitas County Housing Authority</i>
Andrew Lyons	<i>HopeSource</i>
Kevin Martin	<i>Kittitas Valley Healthcare</i>
Lisa Martin	<i>Valley Psychological Services</i>
Audelia Martinez	<i>Bright Beginnings for Kittitas County</i>
Teague McKamey	<i>Aging & Long Term Care</i>
Keith Monosky	<i>CWU Community Paramedicine</i>
Clayton Myers	<i>Kittitas County Sheriff's Office</i>
Laura Osiadacz	<i>Kittitas County Commissioner</i>
Becky Pearson	<i>CWU Public Health</i>
John Raymond	<i>HopeSource</i>
Ann Riley	<i>Kittitas County Community Network</i>
Angela San Filippo	<i>City of Ellensburg</i>
Allie Sheldon	<i>Community Health of Central WA</i>
Bruce Tabb	<i>Elmview Disability Resources, Mayor of Ellensburg</i>
Dede Utley	<i>Kittitas Valley Healthcare—Emergency Department</i>
Joaquin Vidrio-Ruiz	<i>Community Health of Central WA</i>
Kevin Walsh	<i>Community Health of Central WA</i>



What is our vision of health and what do we value most?

Community Health Vision and Values

Vision and values statements provide focus, purpose, and direction to the MAPP process so that participants collectively achieve a shared vision for the future. A shared community vision provides an overarching goal for the community—a statement of what the ideal future looks like. Values are the fundamental principles and beliefs that provide a framework for the community-driven planning process. The CHA-CHIP work group spent several sessions coming to consensus on a vision and a set of community values to guide the community health assessment and strategic planning work.



Vision

“All people in Kittitas County are supported in achieving health and wellbeing.”

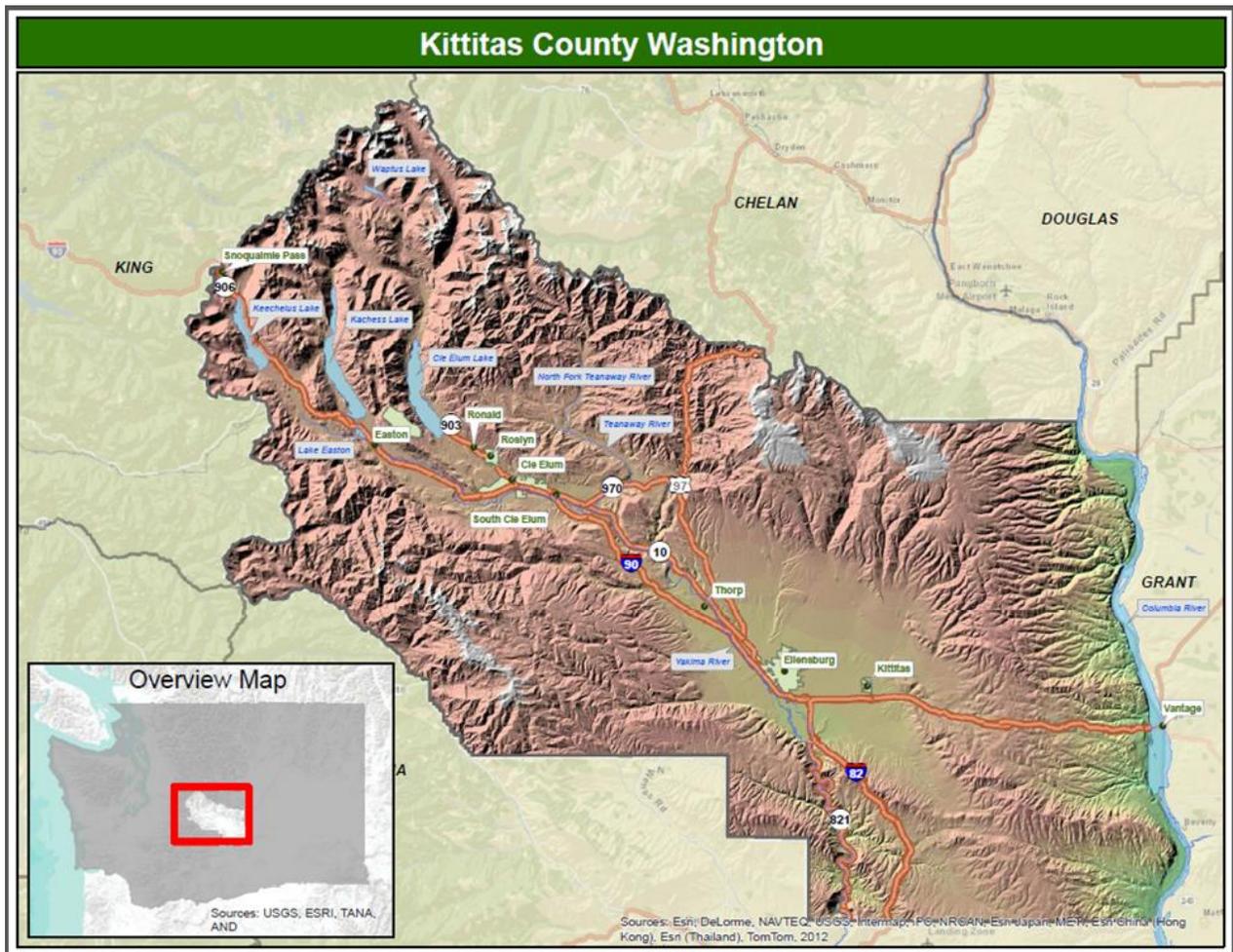
Values

- **Equity:**
All people have the resources and opportunities they need to lead a healthy life.
- **Engagement:**
All people are invested in the health of the community and participate in their own health outcomes.
- **Empowerment:**
All people have accurate and current information regarding individual and community health allowing them to make informed decisions.
- **Safety:**
All members of the community feel neither fear nor threat to their personal well-being.
- **Collaboration:**
All people make Kittitas County safe and healthy by working together to coordinate services.
- **Sustainability:**
Policies, programs and services are designed to create long term solutions for health.
- **Growth:**
Resources that support healthy choices are consistently provided throughout the lifespan of all people.
- **Prevention:**
All people have access to the resources they need to prevent injury and disease.
- **Connection:**
All people recognize the relationship between social determinants of health, and environmental, mental and physical health.
- **Exploration:**
All people continuously look for ways to improve what isn't working in our health system while maintaining what is.

Who is Kittitas County?

Geography

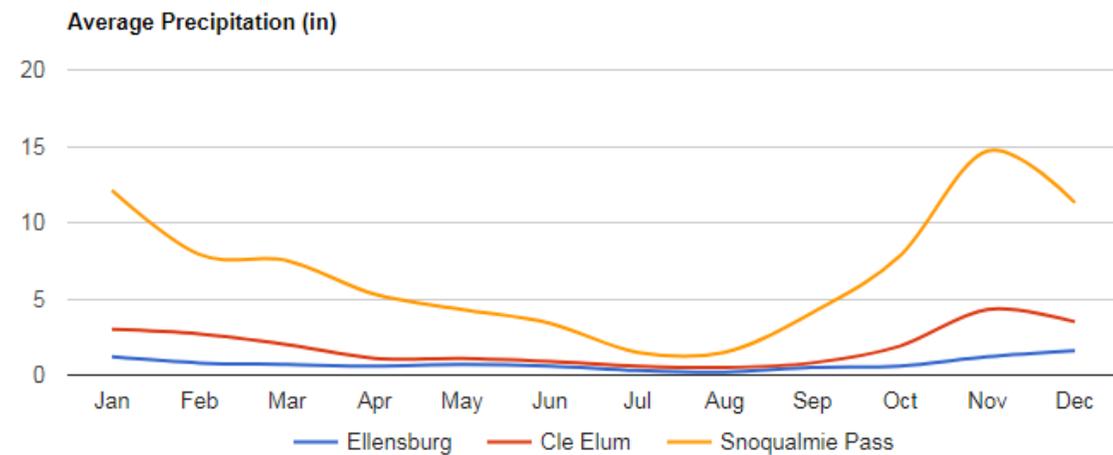
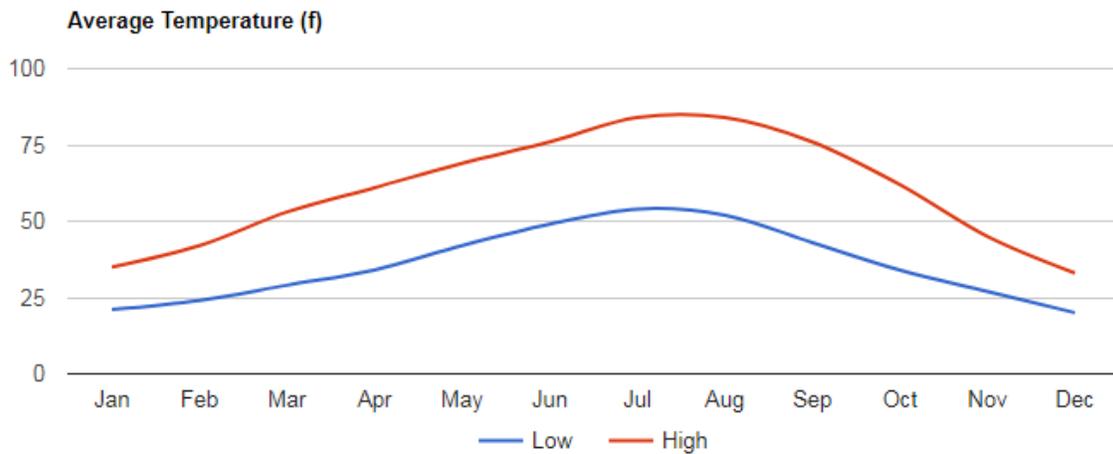
Kittitas County is 2,297 square miles¹ and is located in the central region of Washington State. The upper county contains large portions of the Cascade mountain ranges and several lakes. The lower county contains a large valley area made up of rolling hills and grasslands that support the county's hay industry. The Yakima River flows through the middle of the county and the Columbia River borders it to the east. Adjacent counties include King to the West, Chelan-Douglas to the North, Grant to East, and Yakima to the South. Interstate 90 runs midway through the entire county connecting the major cities of Seattle and Spokane.



Climate

Kittitas County has an agreeable climate with an average of 201 sunny days per year along with 91 days of measurable precipitation.² County residents enjoy all four seasons with temperatures reaching their lowest in January and highest in July or August. In the summer, Kittitas County is prone to extremely long bouts of low moisture and high temperature weather than can lead to periods of drought and an increased probability of wildfire.³ Overall, however, the climate supports long growing seasons⁴ and a multitude of outdoor activities.

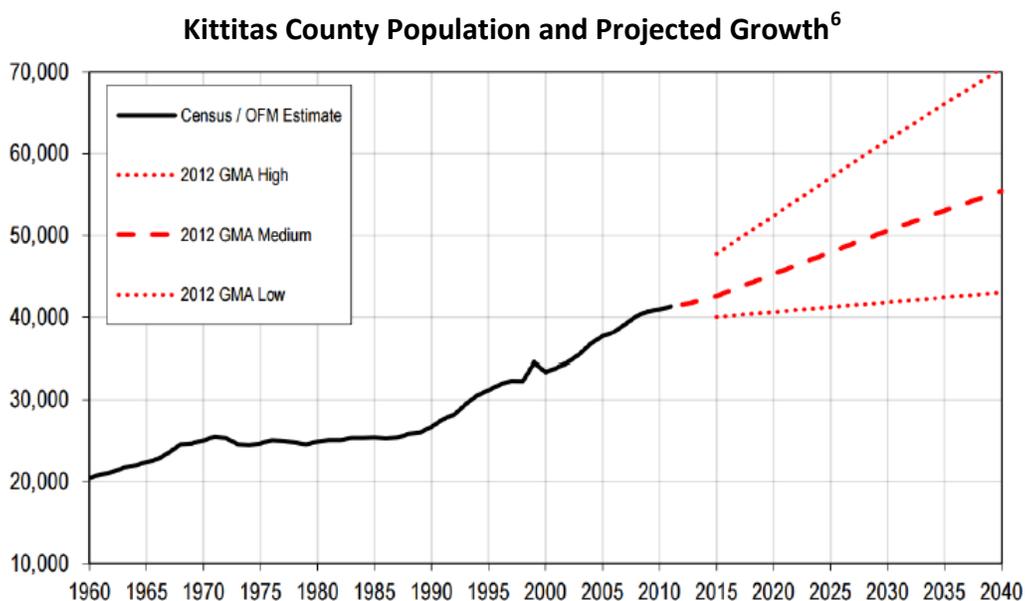
Kittias County Average Temps and Precipitation



Source: <https://www.co.kittitas.wa.us/about/climate.aspx>

Population

The United States Census Bureau 2016 estimates show that Kittitas County is home to approximately 42,670 residents and growing fast. According to the U.S. Decennial Census, the county's population grew by 7,553 persons between 2000 and 2010, an overall change of 22.64%.¹ The Washington State Office of Financial Management (OFM) created a projection model that predicts the Kittitas County population will grow at an average rate of 2.13% annually between the years of 2015 and 2037.⁵ A population projection memo by BERK Consulting suggests that Kittitas County may see large increases in population due to three major factors: 1) emergence as a retirement destination 2) increased student enrollment at Central Washington University and 3) transportation improvements allowing easier passage to King County. However, it is also noted that this positive growth trend may be countered by negative trends such as the lack of job growth, water right restrictions and an increase in climate change related events such as wildfires.⁶ This is an important trend to monitor as significant shifts in population over time can have large impacts on the availability of healthcare providers and the utilization of community resources.⁷

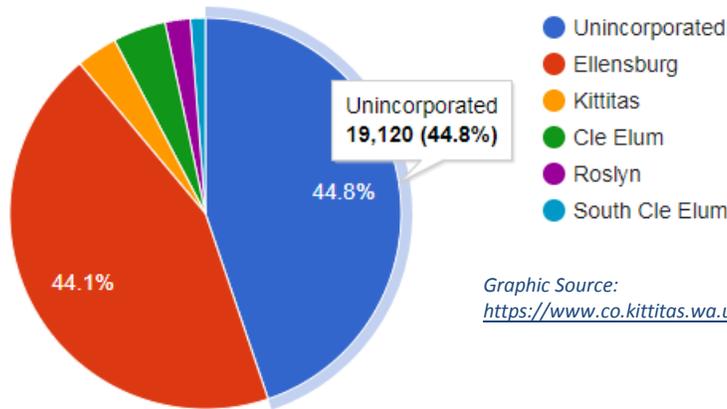


Graphic Source: BERK (2016) <https://www.co.kittitas.wa.us/uploads/cds/comp-plan/twenty-year/Population%20Projection%20Memo.pdf>

Rural Character

Kittitas County is considered a rural county by the U.S. Census definition. "Rural" is defined as any population, housing, or territory outside urban areas.⁸ In Kittitas County, we have one urban cluster, an area containing at least 2,500 and less than 50,000 people, in the county seat of Ellensburg. A little less than half the population lives in unincorporated areas (not governed locally but instead by county government).⁹ Unincorporated Kittitas County includes the communities of Vantage, Thorp, Ronald, Easton, Liberty and Snoqualmie Pass. A recent report on Health Status and Healthcare Access of Farm and Rural Populations states that both farm and rural populations experience lower access to healthcare along the dimensions of affordability, proximity, and quality, compared with their nonfarm and urban counterparts.¹⁰

Kittitas County Population Estimates⁹

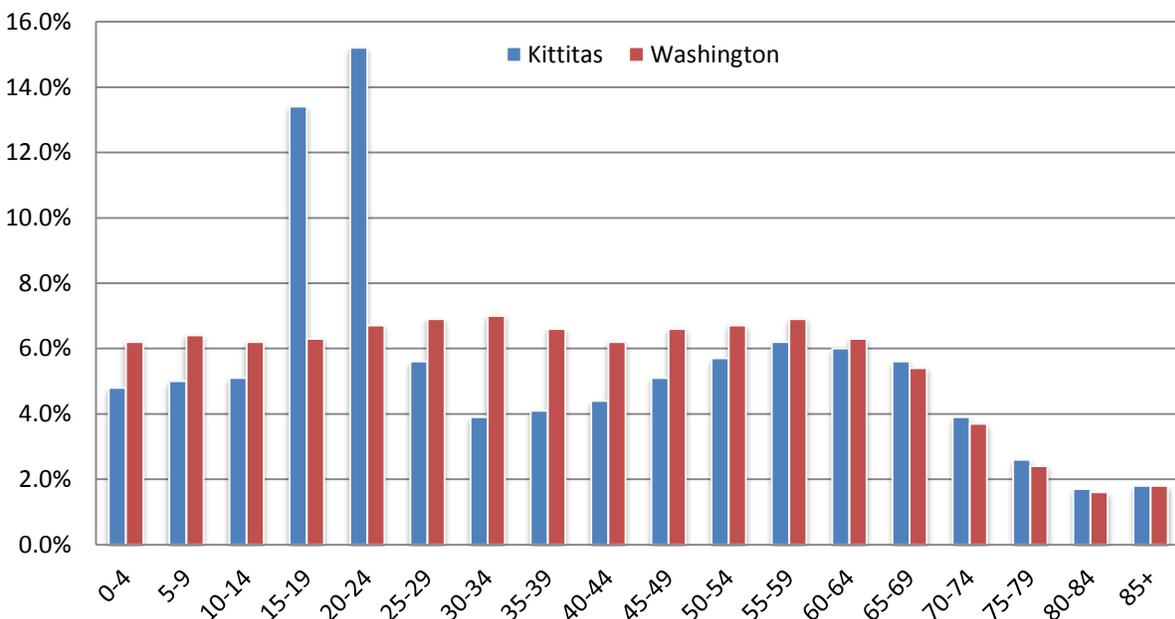


Graphic Source:
<https://www.co.kittitas.wa.us/about/population.aspx>

Age

Kittitas County is a “young” county with a median age of 32.4 (±.8).¹¹ Children, adolescents and young adults make up roughly 41% of the population. However, Kittitas County has a larger percentage of 18-24 year olds than the state¹¹ due to the presence of the Central Washington University student population. In Fall 2017, there were 13,710 undergraduate and graduate students enrolled at the Ellensburg campus.¹² It is also important to note that adults 55 and older make up over one-fourth of the population. The aging “baby boomer” generation (persons born between 1946 and 1964) is expected to increase the senior population exponentially in the next few decades, greatly impacting impact health care needs of the community.¹³

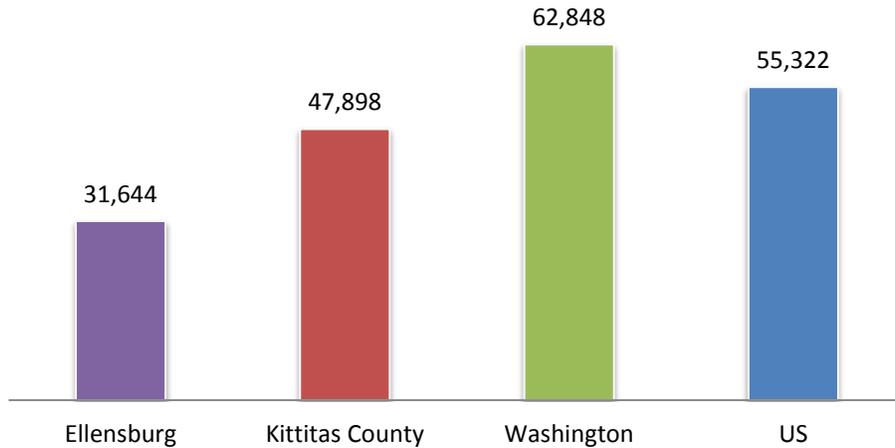
Age Distribution: Kittitas County vs. Washington State¹¹



Income

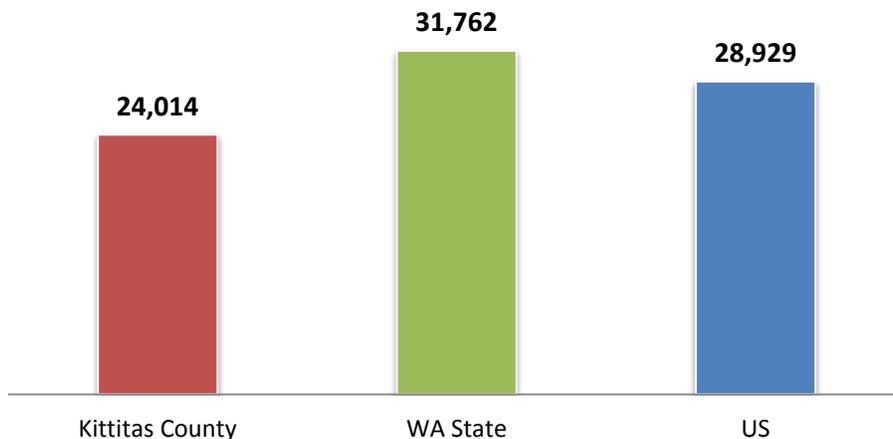
Median family income is based on the latest 5-year American Community Survey estimates. The census defines a household as any housing unit in which the householder is living with one or more individuals related to him or her by birth, marriage, or adoption.¹⁴

Median Household Income: Ellensburg, Kittitas County, WA State and the U.S.¹¹



The per capita income in this report area is the average (mean) income computed for every individual in Kittitas County. This includes all reported income from wages and salaries as well as income from self-employment, interest or dividends, public assistance, retirement, and other sources.¹⁵ The per capita income for Kittitas County is \$24,014.00.¹ It should be noted that Central Washington student income data is factored into the averages and therefore may skew resident data towards lower than actual numbers.

Per Capita Income: Kittitas County¹¹



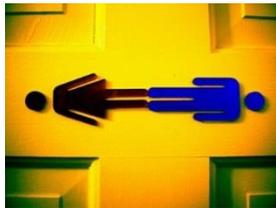
Employment

In 2016, the largest employers in Kittitas County were state government and local government, providing a total of 39.0 percent of total covered wages in Kittitas County.¹⁶ The Employment Security department of Washington State predicts a 1.4% average annual nonfarm job growth rate for the county from 2015-2025.¹⁷ As of 2016, there were a total of 20,121 civilian over the age of 16 employed in Kittitas County. The largest category of jobs held in Kittitas County fall under the category of sales, office and administrative support.¹⁸

Kittitas County Paid Jobs by Occupation Type (Residents >16 Years and Older)¹⁹



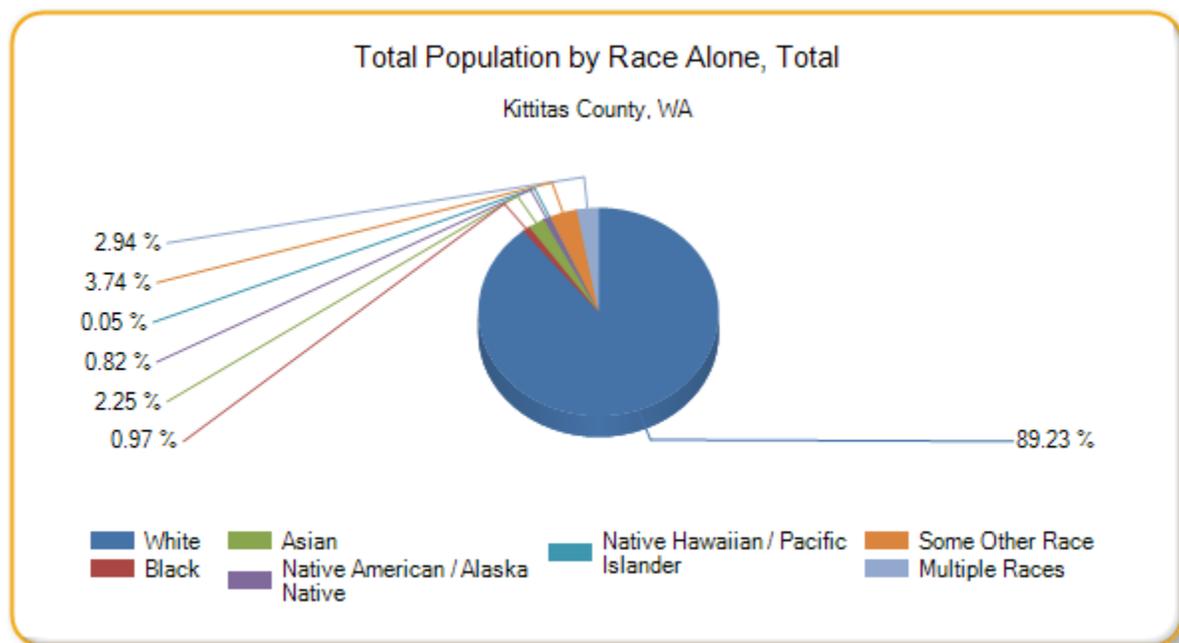
Gender



The gender profile of the Kittitas County population mirrors that of the state and the nation. Kittitas County is split evenly (50% and 50%) between those who identify as male and those who identify as female.¹ Health issues related to chronic disease can vary greatly between men and women. These differences in healthcare needs should be considered when developing strategies to address population healthcare issues such as access to preventative care. The census does not collect information on non-binary (transgender) individuals and therefore we are unable to adequately report representation in the Kittitas County population (see section on *Health Equity*, p.49).

Race and Ethnicity

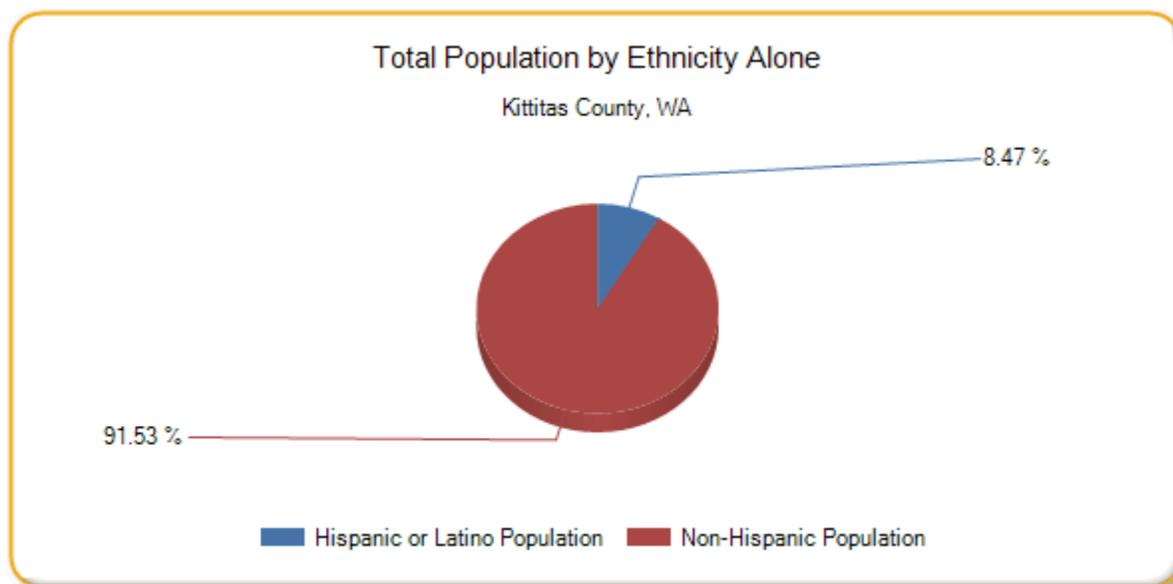
The U.S. Census Bureau considers race and ethnicity to be two different categories. Race is defined as “as a person’s self-identification with one or more social groups.”¹⁹ In the 2010 census, an individual could report as White, Black or African American, Asian, Native American/Alaska Native, Native Hawaiian/Pacific Islander, or some other race. Survey respondents could also report as multiple races.



Data Source: 2016 American Community Survey, 5-year population estimate
Graphics created by Community Commons®

2018 | The Health of Kittitas County

Ethnicity determines whether a person is of Hispanic origin or not. Hispanics may report as any race. Therefore, population by ethnicity is broken out into sub-categories, Hispanic or Latino and Not Hispanic or Latino. The Kittitas County population is predominately Caucasian with 89% of county residents identifying as White. The largest non-white group is the Hispanic population, which makes up approximately 8.5% of the population, followed by individuals who identify as multiracial or some other race (6%), Asian (2%), Black (1%) or Native Hawaiian/Pacific islander (.05%).¹



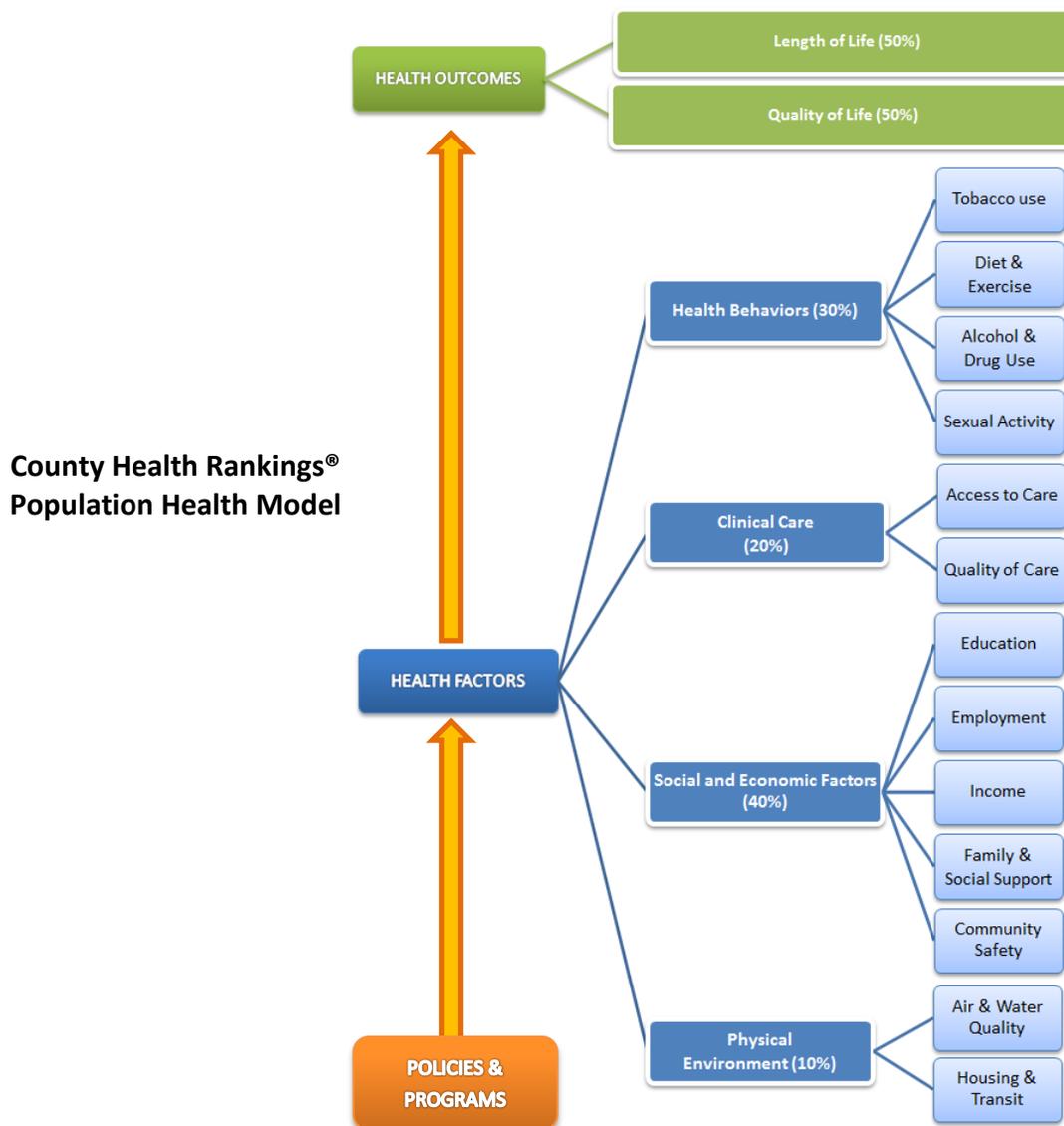
Data Source: 2016 American Community Survey, 5-year population estimate
Graphics created by Community Commons®

In Summary

Kittitas County is a predominately rural county with a small number of urban clusters that make up the majority of the county's population. The population is seen as young; however, this is skewed by the large percentage of Central Washington University students that are counted in the census. The county follows state and national numbers in reporting an almost equal composition of male and female residents. The county is not racially diverse, reporting an almost 90% white population; however, the presence of the university and expected population boom may change this. Rapid population growth may also present challenges to the rural county's existing health care system. The area presents as economically depressed, however, the university presence may skew census data in this area as well. According to labor statistics, small but steady non-farm job growth is projected for the next few decades. Overall, Kittitas County is a dynamic community that is on a trajectory for growth in several areas but may have to strengthen health system infrastructure to prepare for changes.

How healthy are we?

This Community Health Status Assessment (CHSA) collects data to answer the question of overall resident health status. The University of Wisconsin Population Health Institute’s County Health Rankings and Roadmaps® defines **Health Outcomes** (the green boxes below) as the current picture of the of a community’s overall health. Health outcomes are indicators that can tell us if people are dying too early, what they are dying from and the diseases that are most prevalent in a community. **Health Factors** (the blue boxes below) are the things that contribute to the improvement or worsening of those health outcomes. Health factors are also the issues that the community can work on changing through programs and policies to help improve the future health of all residents. Certain factors contribute more to the overall health outcomes in a community than others. For example, in the County Health Rankings® model, socio-economic status contributes 40% to overall health outcomes whereas the physical environment contributes 10%.²⁰ This section will highlight the health outcomes for Kittitas County residents and health factors that contribute to them.

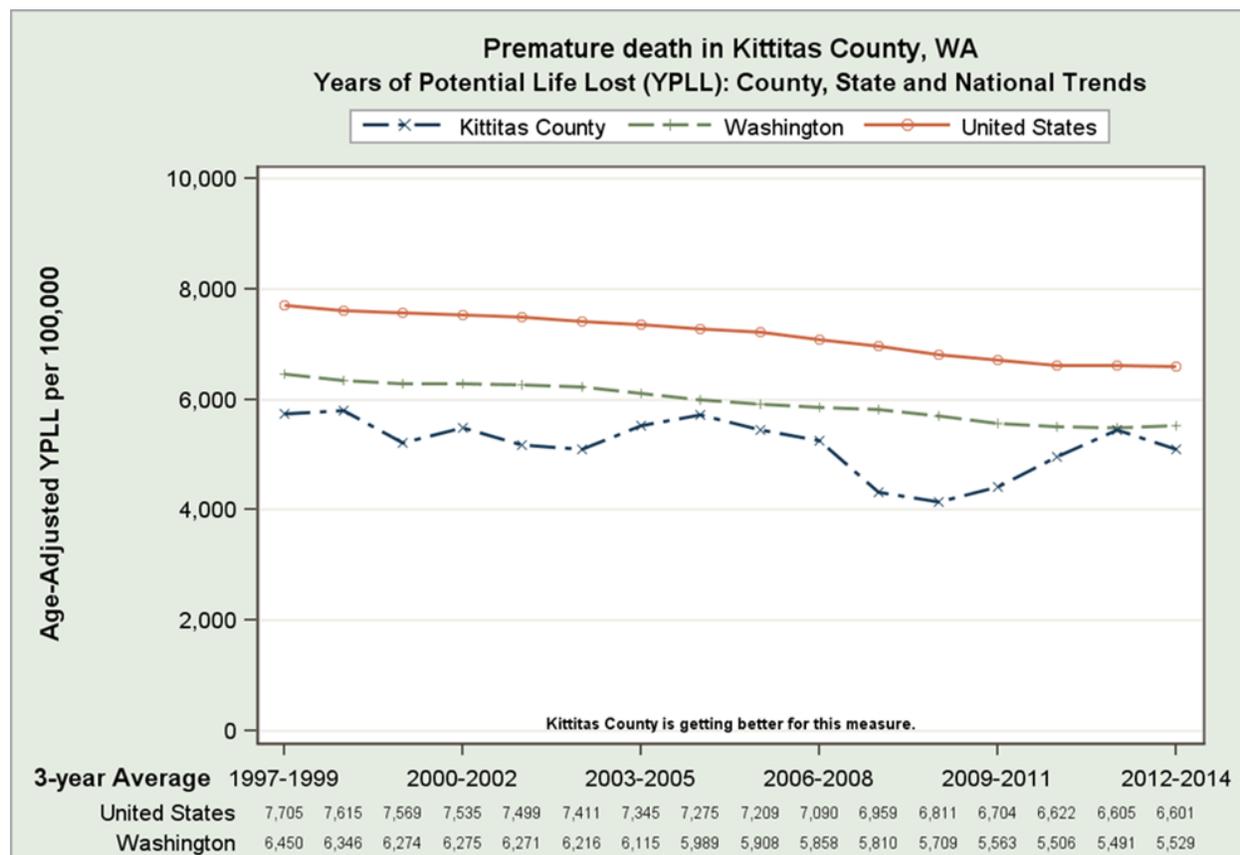


Mortality

Mortality is the technical term for the rate of death within a certain population. Mortality indicators look at how early people are dying and what they are dying from.

Premature Death

The premature death indicator for Kittitas County is created by calculating the years of potential life lost before age 75 (YPLL-75). Each death before the age of 75 contributes years to the total. This indicator focuses on deaths that could have been prevented -instead of overall deaths- so that communities can see if people are dying before the average life expectancy of 75 years. The chart below, generated by County Health Rankings®, shows Kittitas County is getting better for this measure and is better than the state and nation.²¹



Graphic Source: County Health Rankings and Roadmaps®
<http://www.countyhealthrankings.org/app/washington/2018/rankings/kittitas/county/outcomes/overall/snapshot>

Infant Mortality

Infant mortality measures the number of deaths among children less than one year of age per 1,000 live births. This indicator represents the health of the most vulnerable age group (those under 365 days old). This measure also contributes to the years of potential life lost (YPLL) rate in a county. **Kittitas County has one of the lowest infant mortality rates in the state at 4.11 infant deaths per 1,000 live births.**^{21,22}



Life Expectancy

In 2016, the average life expectancy for an individual born in Kittitas County was approximately 82 years.²³ This is two years higher than the state of Washington and 4 years higher than the national average.^{23,24}

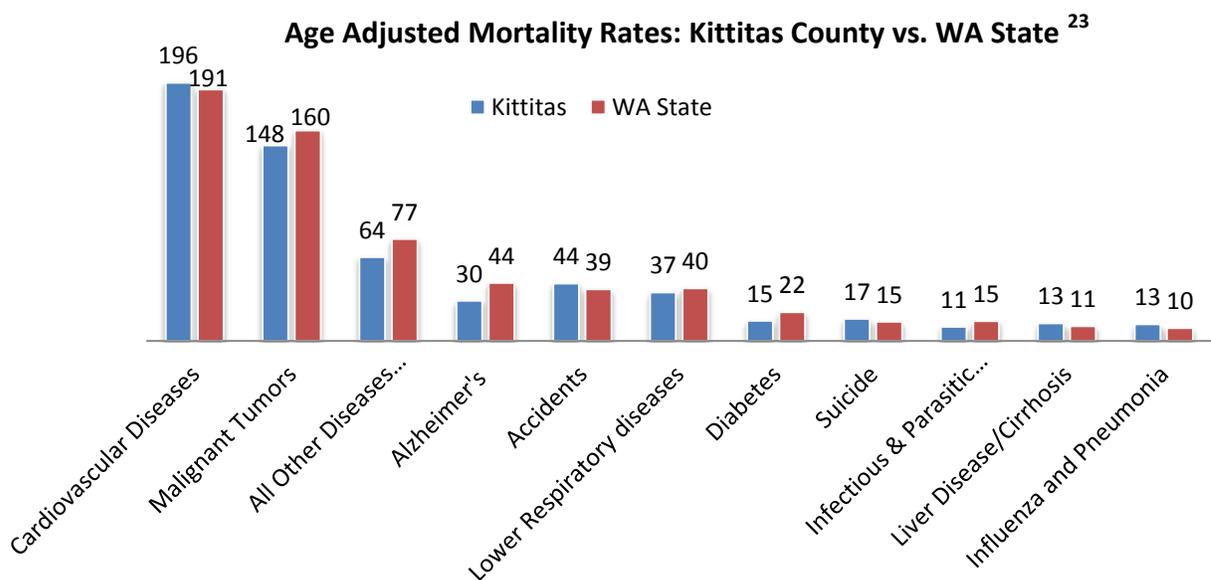


Leading Causes of Death

The overall age-adjusted* mortality rate for the county is 637.01 deaths per 100,000 people (lower than the state at 685.70).²³ The leading causes of death or mortality (age-adjusted) between the years of 2010-2016 are listed below.

1. Major **cardiovascular disease** (hypertension, atherosclerosis, cerebrovascular diseases)
2. **Malignant neoplasms** (cancers, tumors)
3. All other diseases
4. **Accidents** (transport and non-transportation related)
5. Chronic **lower respiratory diseases** (bronchitis, emphysema, asthma)
6. **Alzheimer’s** disease
7. Intentional self-harm (**suicide**)
8. **Diabetes** mellitus
9. **Influenza and pneumonia**
10. Chronic **liver disease** and cirrhosis

Mortality rates for malignant neoplasms, all other diseases and Alzheimer’s disease are significantly lower than the state. Mortality rates for major cardiovascular disease, accidents, suicide, chronic liver disease and influenza/pneumonia are significantly higher (statistically) than the state. Due to small numbers, mortality rates cannot be broken out by age group.



*Age adjusting rates is a statistical method used to make fairer comparisons between groups with different age distributions.

Morbidity

Morbidity is the term used to describe rates of disease within a population. However, in this case, it can also reflect the overall experience of health by individuals in a set population or community of people. In this assessment, morbidity outcomes are health-related indicators that look at several areas including physical, reproductive and emotional health.

Leading Causes of Hospitalization

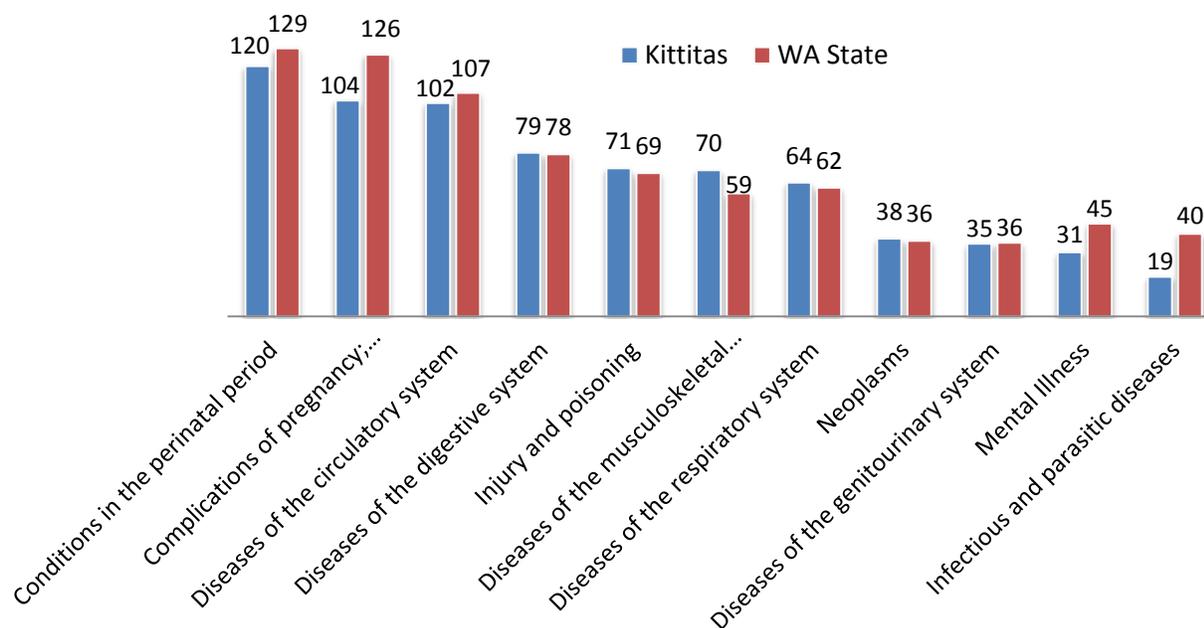
The leading causes of hospitalization (age-adjusted) residents are listed below. The most recent data was available for a combined six year period from 2010-2015.²⁵

1. Conditions originating in the **perinatal** period (newborns)
2. Complications of **pregnancy, childbirth and postpartum**
3. Diseases of the **circulatory** system
4. Diseases of the **digestive** system
5. **Injury** and poisoning (includes drug and alcohol poisoning)
6. Diseases of the **musculoskeletal** system and connective tissue
7. Diseases of the **respiratory** system
8. **Neoplasms** (benign tumors, cancers)
9. Diseases of the **genitourinary** system
10. **Mental illness** (mood, depression, and bipolar disorders)



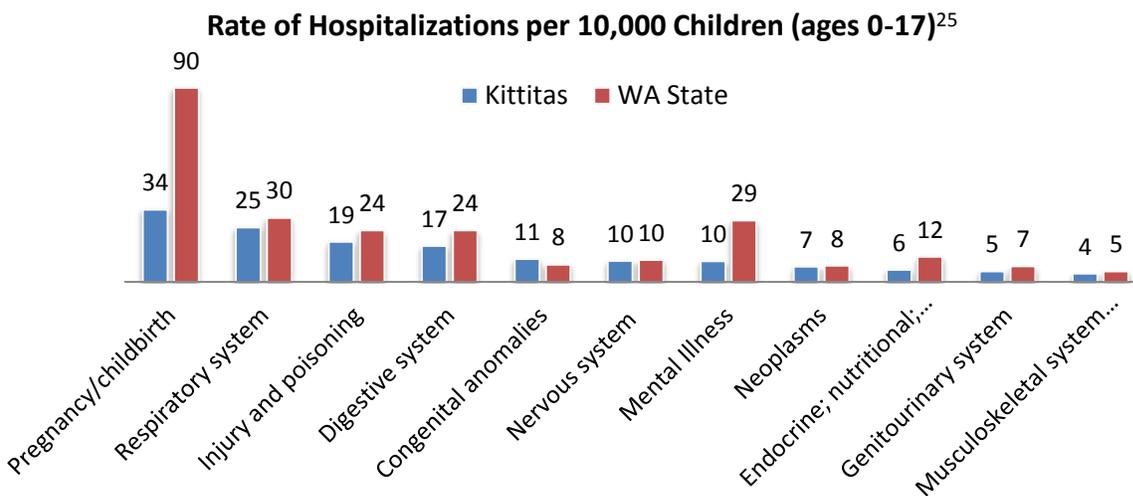
The leading causes of hospitalization for all Kittitas County residents are similar to the state with some notable exceptions. Hospitalization rates for musculoskeletal issues in Kittitas County are significantly higher than the state. Hospitalization rates for infectious and parasitic disease and mental illness are significantly lower than the state.²⁵

Age Adjusted Hospitalization Rates: County vs. State²⁵



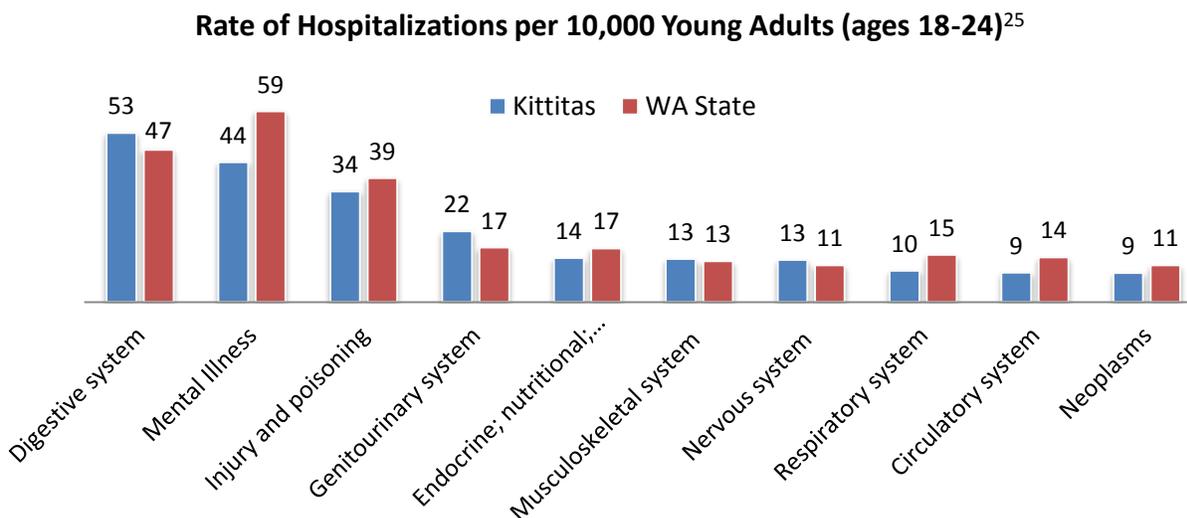
Hospitalization Rates: Children

Complications of pregnancy and childbirth are the leading causes of hospitalization among children 0 to 17 in Kittitas County. However, this rate is roughly one third that of the state’s rate. In children older than infants, the leading causes of hospitalization are diseases of the respiratory system, injury and poisoning followed by diseases of the digestive system. Kittitas County is significantly lower than the state in all three of these areas.²⁵



Hospitalization Rates: Young Adults

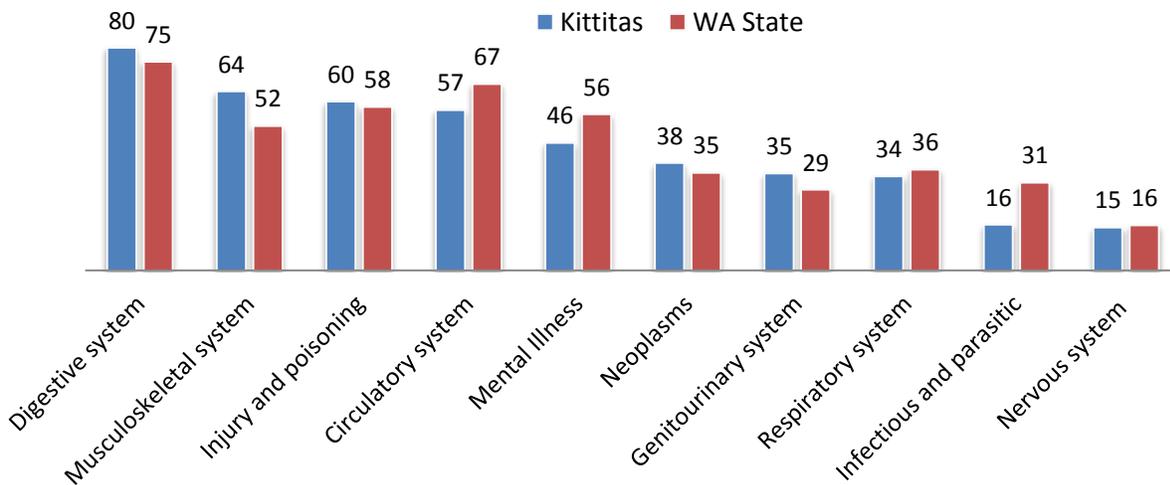
Diseases of the digestive system, mental illness, injury and poisoning are the leading causes for hospitalization in Kittitas County among young adults ages 18 to 24, not including hospitalizations for pregnancy and childbirth. Kittitas County has significantly higher rates of hospitalization than the state in diseases of the digestive system and the genitourinary system, and significantly lower in rates of hospitalization for mental illness, injury and poisoning*, diseases of the respiratory and circulatory system. In the past five years, mental illness has moved from third to second leading cause of hospitalization in young adults.²⁵



Hospitalization Rates: Adults

Diseases of the digestive system, musculoskeletal system, injury and poisoning are the leading causes of hospitalization in Kittitas County among adults ages 25-64, not including hospitalizations for pregnancy and childbirth. These rates are concerning as they are all significantly higher than the state rates. In the past five years, diseases of the circulatory system have moved from first to fourth leading cause of hospitalization in Kittitas County adults.²⁵

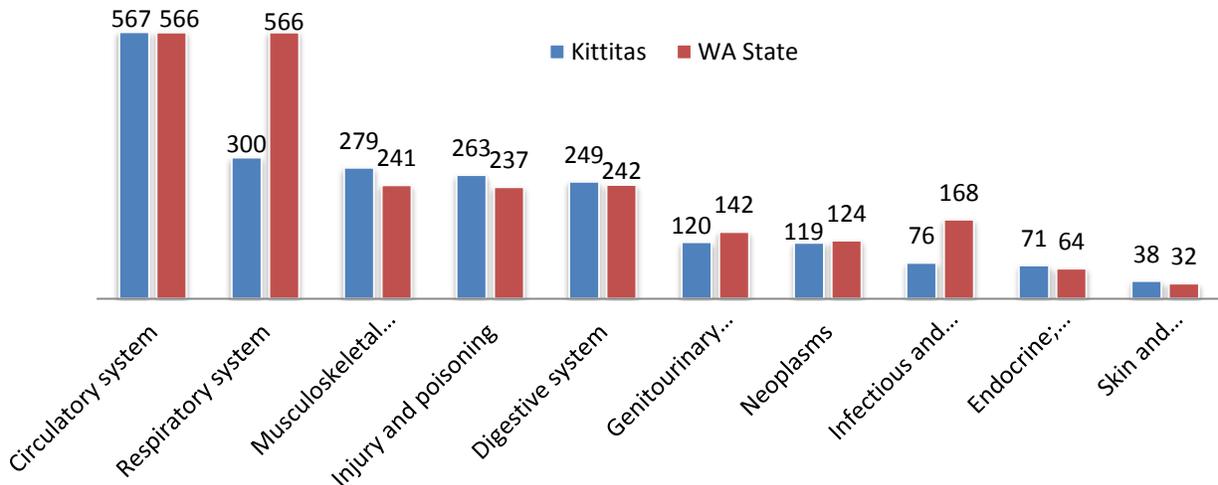
Rate of Hospitalizations per 10,000 Adults (ages 25-64)²⁵



Hospitalization Rates: Older Adults

Diseases of the circulatory, respiratory and musculoskeletal systems are the leading causes of hospitalization in Kittitas County adults ages 65 and over. However, rates of hospitalization for respiratory illness are significantly lower than the state by almost half, as are rates of hospitalization for infectious and parasitic diseases. However, in the past five years, respiratory disease has moved from fourth to second leading cause of hospitalization in older Kittitas County adults. Rates of hospitalization for musculoskeletal system diseases, injuries/poisonings, and digestive system diseases are slightly higher than the state.²⁵

Rate of Hospitalizations per 10,000 Older Adults (ages 65 and over)²⁵



Reproductive Health

Inadequate Prenatal Care

Inadequate prenatal care is the percentage of women who made less than eighty percent of expected prenatal visits. The Kotelchuck Index, also called the Adequacy of Prenatal Care Utilization (APNCU) Index, uses two elements from birth certificate data to calculate percent of prenatal care usage: 1) when prenatal care began and 2) the number of prenatal visits from when prenatal care began until the baby was delivered.²⁶ **In 2016, 22% of pregnant women in Kittitas County had inadequate prenatal care.**²⁷



Pregnancy Rate

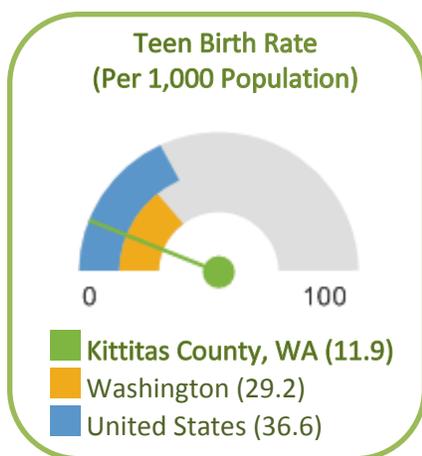
The pregnancy rate is the number of births per 1000 women aged fifteen to forty-four years. **In 2016, the pregnancy rate for Kittitas County is approximately 50 births per 1,000 women ages fifteen to forty-four.** This rate is lower than the state's rate of 77.²⁷

Birth Rate

The birth rate is the number of live births per thousand of population per year. **In Kittitas County, the birth rate for 2016 was 9 per 1,000 population members.** This is lower than the state and national average of 12.²⁷

Low Birth Weight

This indicator measures percentage of live births where the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.). Low-birth weight babies are at risk for higher incidence of chronic health issues as well as premature death. A higher incidence of low birth weight babies also indicates the presence of environmental risk factors that are impacting the mother's quality of life such as low access to care, social and economic stressors and health risk behaviors.²⁸ **Kittitas County is in the 10th percentile of the top U.S. performers in this area with only 6% of babies being born with a low birth weight.**²¹



Teen Birth Rate

The teen birth rate is the number of births per 1,000 females fifteen to nineteen years of age. Pregnant teens are more likely to have complication with labor and delivery, as well as developmental delays for children and poor socio-economic outcomes for the family.²⁹ The most recent teen birth rate data shows approximately 8 births per 1,000 Kittitas County teens. **Kittitas County ranks second among Washington state counties for low teen birth rates and above the 10th percentile of top U.S. performers in this area.**²¹

General Health

Adults with Poor or Fair Health

The Centers for Disease Control and Prevention (CDC) conducts a nationally administered survey called the Behavioral Risk Factor Surveillance System Survey (BRFSS).³⁰ This indicator is based on Kittitas County resident responses to the survey question: “In general, would you say that your health is excellent, very good, good, fair, or poor?” **Approximately 13 % of Kittitas County adult respondents rated their general health as “fair” or “poor”.** The range of results in all Washington state counties was between 11-24%.²¹



Poor Physical Health Days (Adults)



This indicator is based on Kittitas County resident responses to the survey question: “Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?” On average, **Kittitas County adult respondents said that they were physically unhealthy 3.7 days out of the past thirty.** The range of results for all Washington state counties was between 3.0 to 4.9 days.²¹

Mental Health

Poor Mental Health Days (Adults)

This indicator is based on responses to the BRFSS question: “Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” **Kittitas County’s adult respondents reported that their mental was “not good” an average of 3.8 days of the past thirty.** The range of results in all Washington state counties was between 3.2 to 4.6 days.²¹

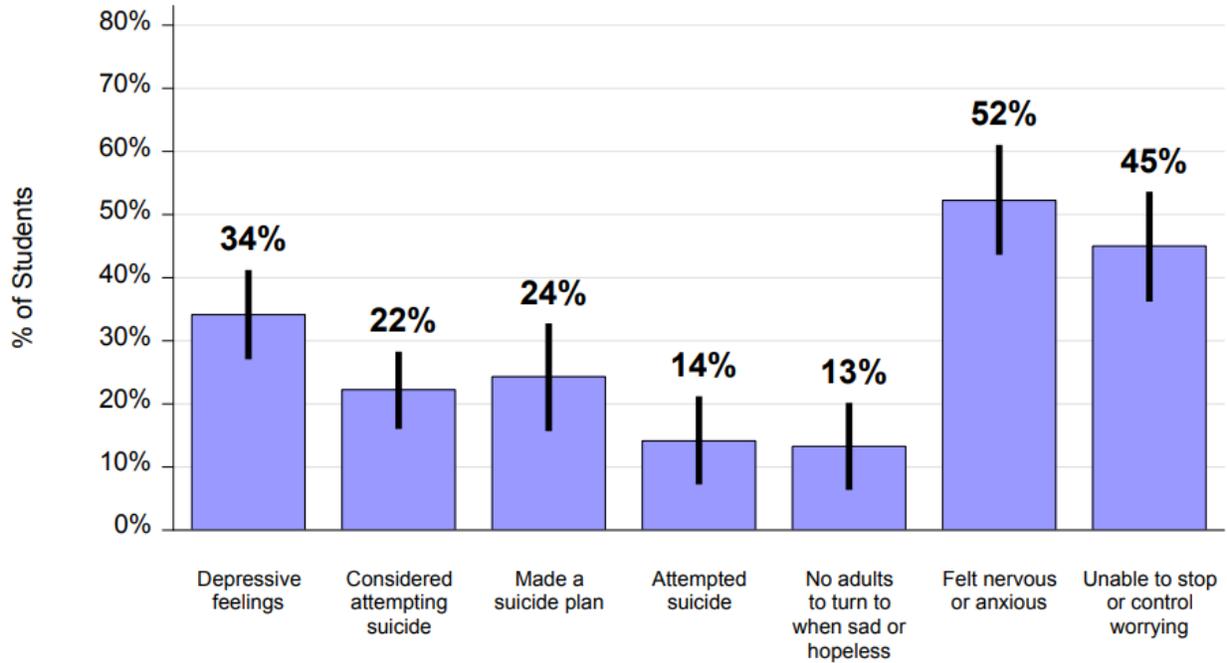


Mental Health Profile (Youth)

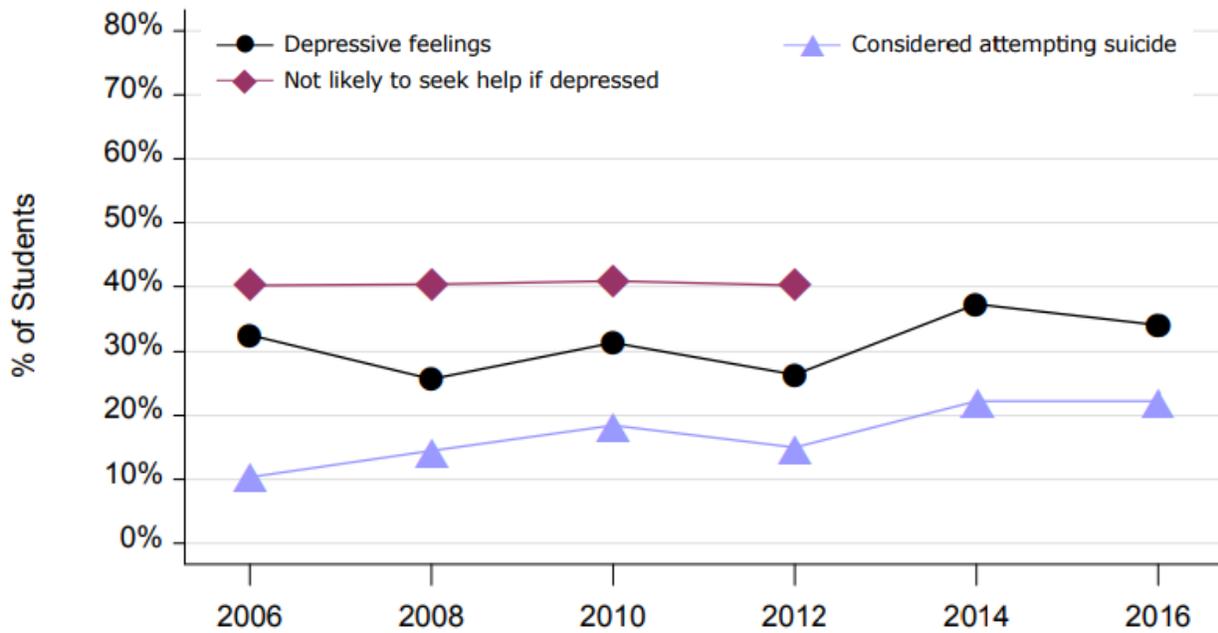


The Healthy Youth Survey has been administered to Washington State’s 6th, 8th, 10th, and 12th graders every even year since 2006. In 2016, almost one third (32%) of Kittitas County 10th graders reported feeling depressed for 2 weeks or more.³¹ Almost one fourth (24%) reported having made a suicide plan. Over half (52%) of 10th grade students reported feeling anxious and almost half (45%) reported being unable to stop or control worrying.³¹ **The percentage of Kittitas County 10th graders reporting that they have thought about attempting suicide has increased steadily since 2006.**³¹

Depressive Feelings and Suicide, Kittitas County, Grade 10 (2016)*



Depressive Feelings and Suicide Trends, Kittitas County, Grade 10 (2016)*



*Graphics source: Healthy Youth Survey Fact Sheets <https://www.askhys.net/FactSheets>

Health Behaviors

Health behaviors can contribute to the presence or absence of chronic disease. These indicators help to identify the degree to which Kittitas County residents are engaging in behaviors that can be either harmful or helpful to the community’s health outcomes. The four categories of indicators are tobacco use, diet and exercise, alcohol and drug use and sexual activity.

Tobacco Use

This indicator is important because tobacco use is linked to extremely high rates of chronic disease. Smoking increases the risk of coronary heart disease or stroke by 2-4 times and the risk of lung cancer by 25 times. Smoking is also linked to diminished overall health, increased absenteeism from work, and increased health care utilization and cost.³²

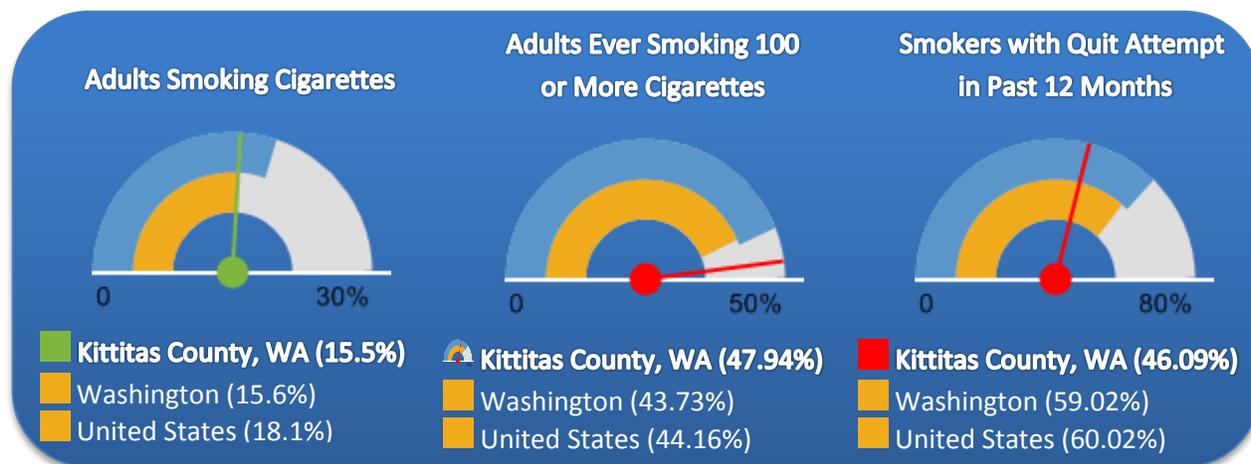
Smoking during Pregnancy

From 1999-2010, Kittitas County had consistently higher rates of mothers who smoke while pregnant.³³ The 2010-2016 cumulative data shows no exception to this trend. Kittitas County had a significantly higher rate of **13.53% of mothers smoking during pregnancy** compared to Washington State’s 10.13%.²⁷



Adult Tobacco Use

An estimated **15.3% of Kittitas County adults (age 18 or older) self-report currently smoking cigarettes** some days or every day, which is on par with the state’s reported numbers. In Kittitas County, 48% of adults report ever smoking 100 or more cigarettes and 46% of adult smokers in the report area attempted to quit smoking for at least 1 day in the past year, which is worse than the state and the nation.³⁴

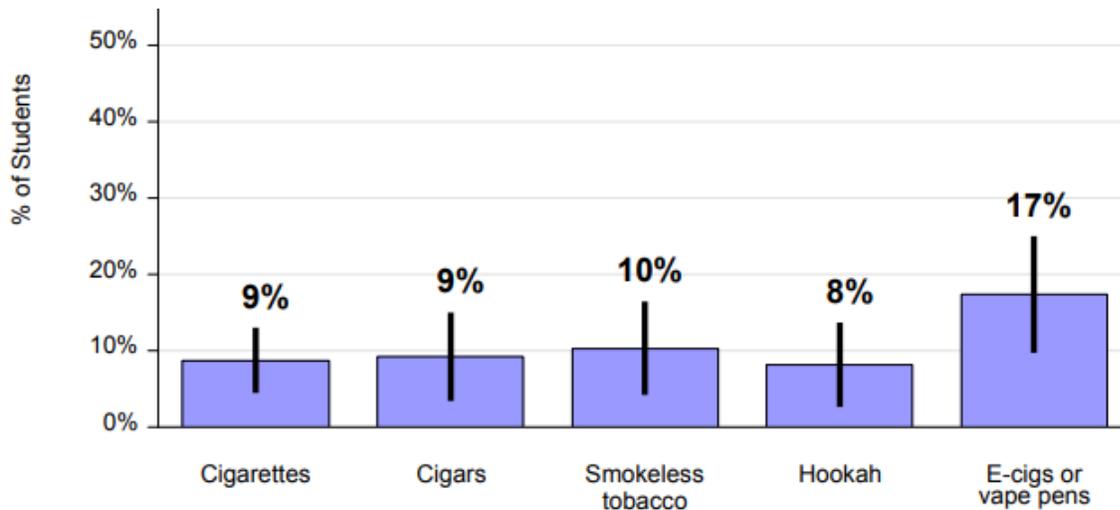


Data Source: 2016 Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
 Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

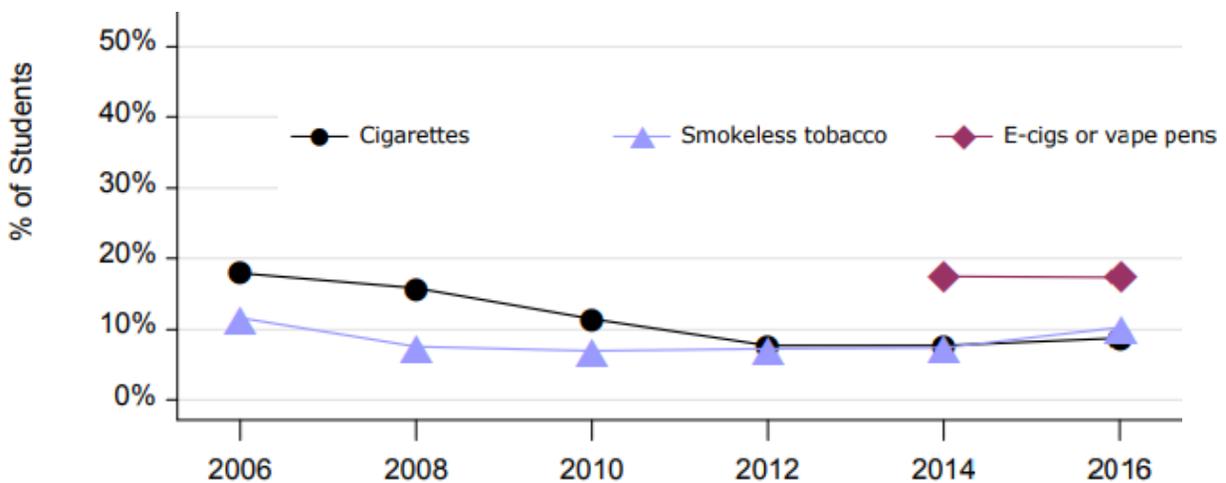
Youth Tobacco Use

Tobacco use in adolescence is a strong predictor of tobacco use in adulthood.³⁵ The 2016 Healthy Youth Survey reports that 9% of Kittitas County’s 10th graders are currently smoking cigarettes. This is higher than the state’s 10th grade report of 6%. In addition, **17% of 10th graders report smoking E-cigs or vape-pens.**³¹ Trend analysis shows that reported smoking in 10th graders declined significantly from 2006 to 2012. However, since that time, reported use of cigarettes appears to be on the rise again.³¹

Current (past 30-day) Tobacco Use: Kittitas County, Grade 10 (2016)*



Current (past 30-day) Tobacco Use Trends: Kittitas County, Grade 10 (2016)*



Graphics source: Healthy Youth Survey Fact Sheets <https://www.askhys.net/FactSheets>

Diet & Exercise

These indicators are important because a nutritious diet can reduce major risk factors for chronic disease such as obesity, high blood pressure, diabetes, and high cholesterol.³⁶ Regular physical activity reduces rates of obesity and serious diseases, helps people maintain a healthy body weight and improve quality of life.³⁷

Fruit & Vegetable Consumption (Adult)



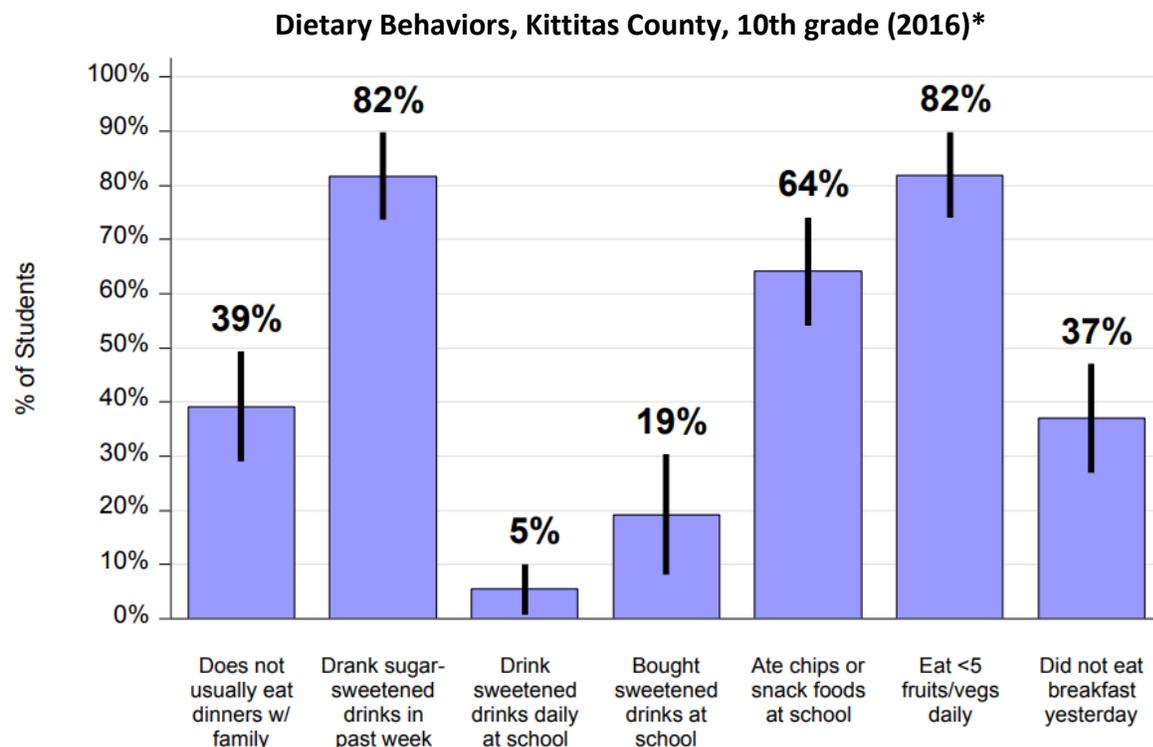
The U.S. Department of Agriculture and U.S. Department of Health and Human Services recommend that adults have five servings of fruit and vegetables on a daily basis.³⁶ **In Kittitas County, 74.7 percent of adults over the age of 18 report consuming less than 5 servings of fruits and vegetables each day.**³⁴

Dietary Behaviors (Youth)

Poor nutrition has the potential to affect the growth, development, health status and academic achievement of children and adolescents.³⁶ **In 2016, 82% of Kittitas County 10th graders reported eating less than 5 servings of fruits or vegetables a day and drinking sweetened beverages in the past week.**³¹



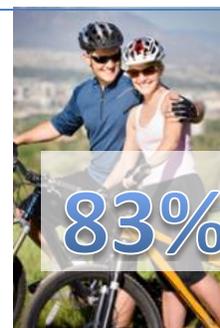
Almost 40 percent reported not usually eating dinner with their families or eating breakfast yesterday. More teens reported eating chips or snack foods at school (64%) than buying or drinking sweetened drinks (19% and 5%, respectively).³¹



*Graphics source: Healthy Youth Survey Fact Sheets <https://www.askhys.net/FactSheets>

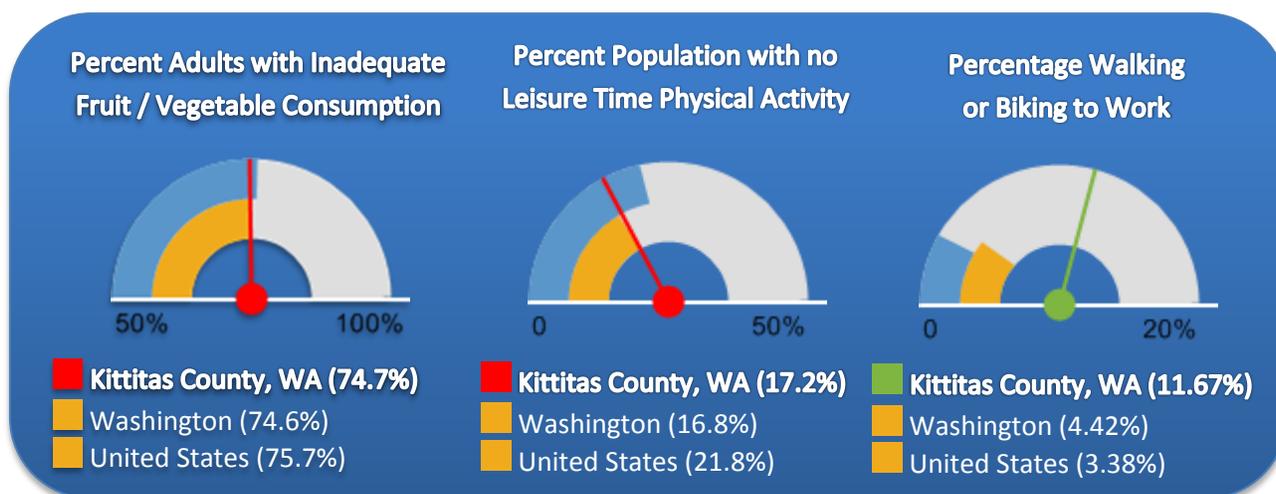
Physical Inactivity (Adult)

In Kittitas County, 17.2% of adults aged 20 and older self-reported no leisure time for activity, based on the BRFSS question: "During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?"³⁴ The percentage is slightly more than the state and less than the nation. However, the flip side of this indicator is that over two thirds (82.8%) of Kittitas County residents *are* finding time for physical activity outside of work.



Walk or Bike to Work (Adult)

This indicator reports that almost 12% of Kittitas County adults commute to work by walking or riding a bicycle. Kittitas County adults report walking or biking to work almost three times as often as the state and four times as often as the nation.³⁴



Data Source: 2016 Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
 Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Physical Activity (Youth)



The Centers for Disease Control and Prevention recommends that children and adolescents participate in at least 60 minutes of physical activity daily, and muscle strengthening 3 days a week.³⁷ In 2016, approximately 68% of Kittitas County 10th graders did not meet physical activity recommendations of 60 minutes per day.³¹ This number is lower than the state's tenth graders, 78 % of which report meeting the minimum activity level. In 2016, 58% of Kittitas County 10th graders had three or more hours of screen time daily.³¹

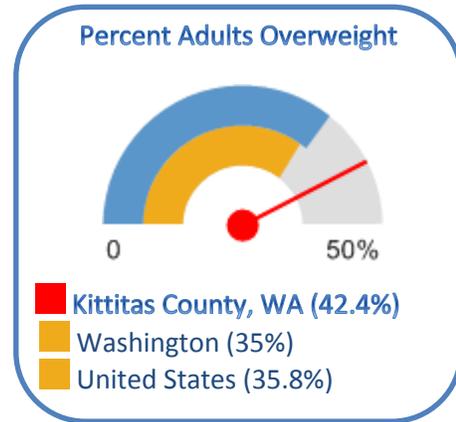
Obesity (Adult)



Obesity is a preventable condition that is one of the most costly in terms of its contribution to chronic disease and negative impacts on overall quality of life.³⁸ In Kittitas County, 28.9% of adults aged 20

and older self-report that they have a Body Mass Index (BMI) greater than 30.0 (obese) and 42.4% of adults aged 18 and older self-report that they have a Body Mass Index (BMI) between 25.0 and 30.0 (overweight).³⁴

Trend data shows that Kittitas County adults are consistently getting worse in this area over time.²¹

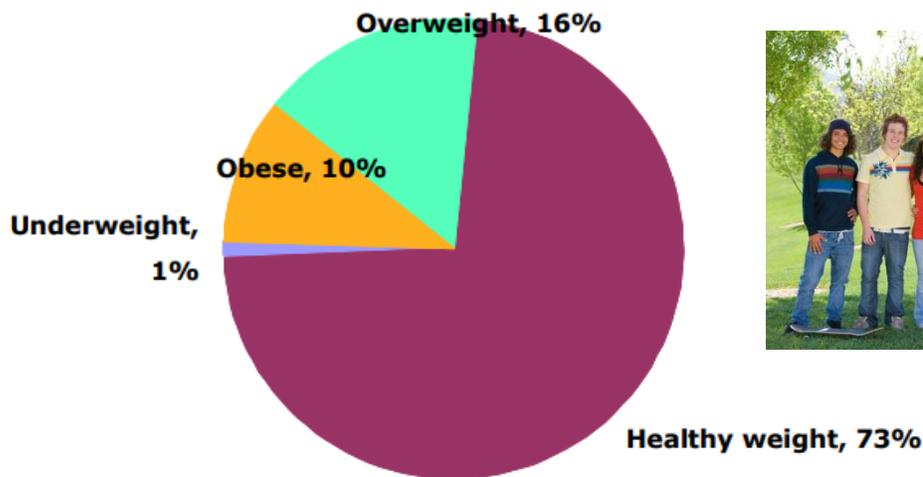


Data Source: 2016 CDC BRFSS
Graphic Source: Community Commons® (2017)

Obese and Overweight (Youth)

In Kittitas County, 10% of all 10th graders were obese and 16% were overweight.³¹ One in four Kittitas County 10th grade students reports a BMI that categorizes them as an unhealthy weight. Trend data shows the amount of 10th grade students reporting as obese or overweight has increased significantly in the past five years.³¹

Weight Distribution, Kittitas County, Grade 10 (2016)*



- Obese (10%)
- Overweight (16%)
- Healthy weight (73%)
- Underweight (1%)

*Note: Prior to 2014, 3 weight categories (obese, overweight, and not overweight) were used. From 2014, these 4 weight categories (obese, overweight, healthy weight, underweight) will be used.

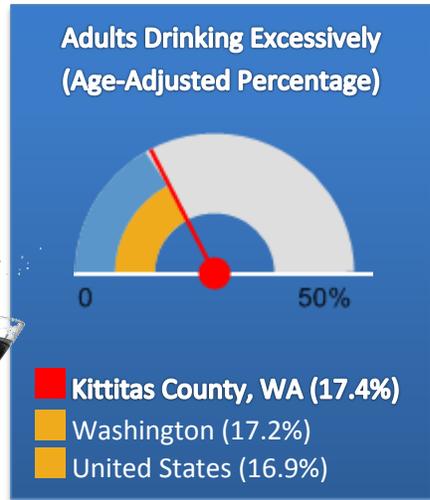
*Graphics source: Healthy Youth Survey Fact Sheets <https://www.askhys.net/FactSheets>

Alcohol & Drug Use

Alcohol and drug use are important determinants of future health due to the significant amount of chronic disease linked to substance abuse.³⁹ Prolonged substance use can also be a sign of untreated mental and behavioral health needs.⁴⁰

Binge Drinking (Adult)

This indicator reports **17.4% of Kittitas County adults aged 18 and older self-report heavy alcohol consumption** (defined as more than two drinks per day on average for men and one drink per day on average for women).³⁴ This indicator is relevant because current drinking behaviors may lead to significant health issues, such as cirrhosis and cancers. Excessive alcohol intake can also be linked to higher rates of accidents, domestic abuse and sexual assault, all of which can have negative impacts on a community's health outcomes.⁴¹

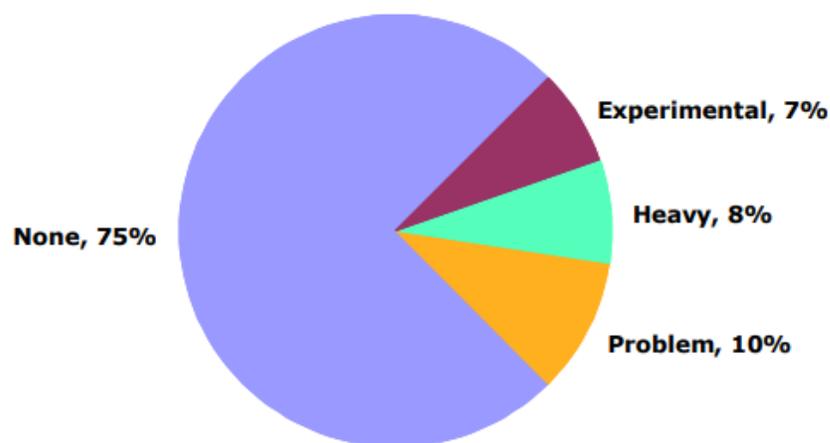


Data Source: 2016 CDC BRFSS
Graphic Source: Community Commons® (2017)

Alcohol Use (Youth)

Alcohol use in youth can be a precursor to unhealthy substance abuse patterns in the future.⁴² **Approximately one in five (18%) Kittitas County tenth graders report engaging in heavy or problem drinking behavior.**³¹ However, binge drinking overall has decreased considerably since 2006 (see *Youth Substance Use*, p.28).³¹

Levels of Alcohol Use, Kittitas County, Grade 10 (2016)*



- None: no drinking in the past 30 days (75%)
- Experimental: 1-2 days drinking, and no binge drinking (7%)
- Heavy: 3-5 days drinking, and/or one binge (8%)
- Problem: 6+ days drinking, and/or 2+ binges (10%)

*Graphics source: Healthy Youth Survey Fact Sheets <https://www.askhys.net/FactSheets>

Alcohol-Impaired Driving Deaths

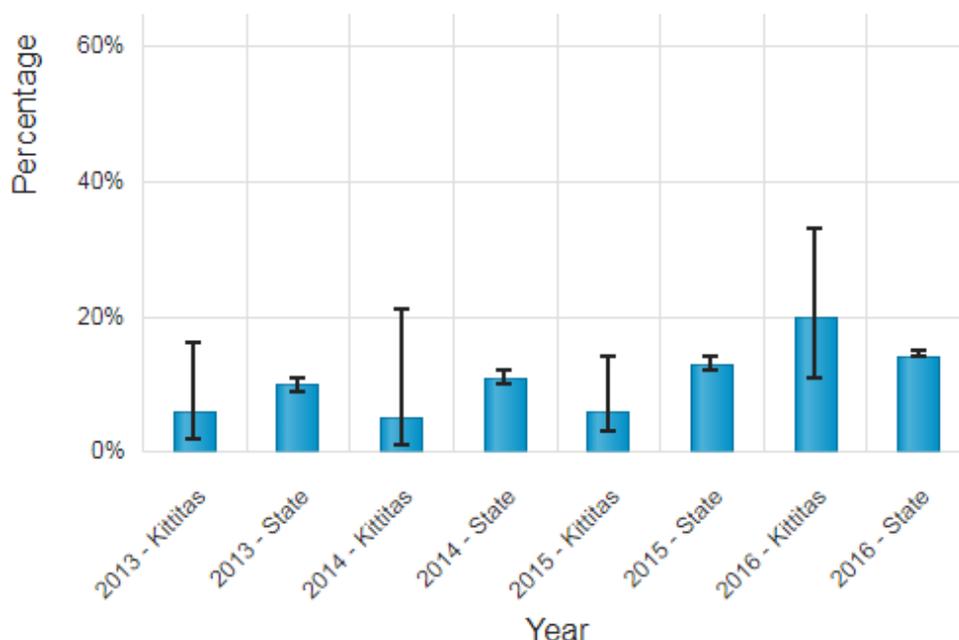
Alcohol-Impaired driving deaths is the percentage of motor vehicle crash deaths with alcohol involvement. This measure can be an indicator of substance abuse as the majority of alcohol related accidents are caused by binge/heavy drinkers.⁴³ **In 2016, about one in four (26%) of Kittitas County driving deaths involved an alcohol impaired driver.**²¹



Marijuana Use (Adult)

In 2016, 20% of Kittitas County adults self-reported that they used marijuana in some form within the past 30 days.⁴⁴ This number is much higher than previous years; however, this may be due to the modification of the CDC's BRFSS collection methods in 2016.⁴⁵

BRFSS Results: Marijuana Use in the past 30 days⁴⁴



Drug Overdose Deaths (Adult)



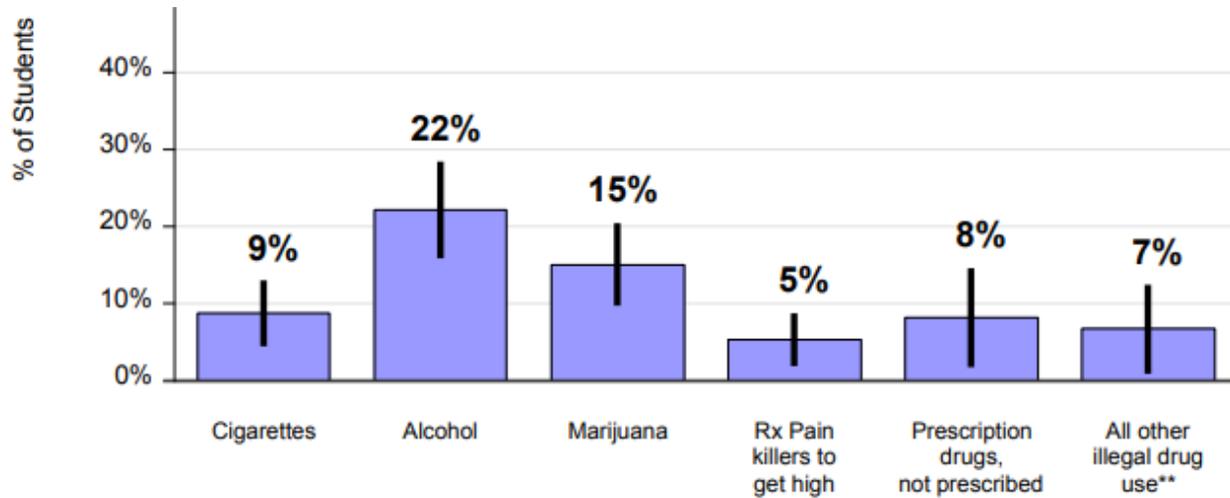
Drug overdose deaths are a largely preventable cause of premature death in a population. Prescription drug abuse-particularly opiates-has reached epidemic levels within the United States.⁴⁶ The indicator for drug misuse in a population is the number of drug poisoning deaths per 100,000 population. There were

11 total deaths due to drug overdose in Kittitas County (combined years 2014-16) including all prescription and intravenous drug use.²¹ The mortality rate due to all drug overdoses is 8 per 100,000.²¹ In 2016, the mortality rate for opiate overdose is less than 1.6 per 100,000.⁴⁷ **Kittitas County has the fifth lowest rate of death due to drug poisoning in the state, tied with Whatcom and Chelan counties.**²¹ The minimum-maximum range of drug overdose death rates in all Washington counties is 7 to 23 per 100,000 people. The highest rates in the state are in Pacific and Grays Harbor Counties.²¹

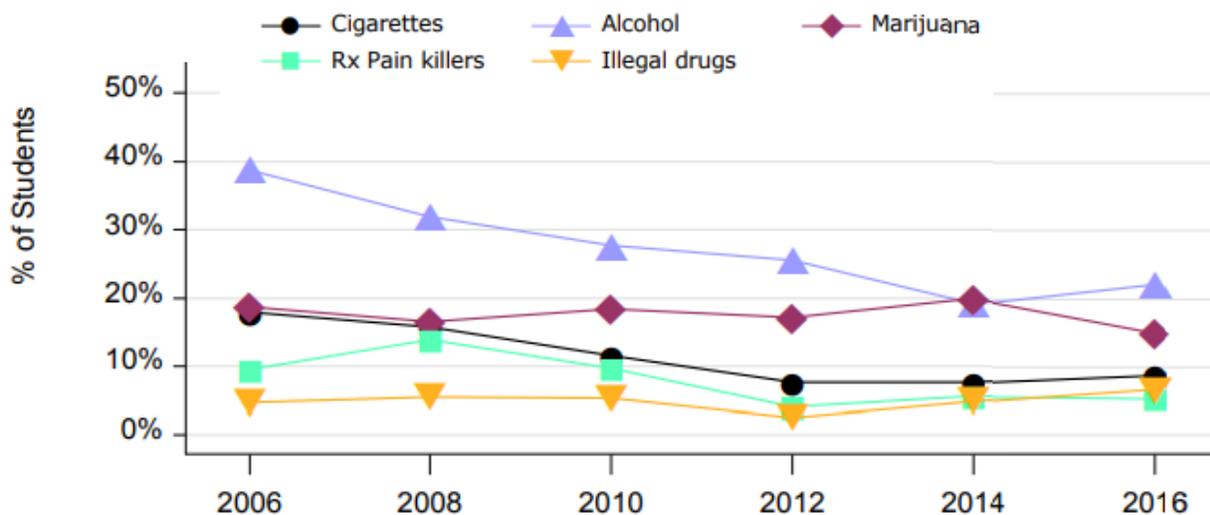
Substance Use (Youth)

According to Healthy Youth Survey responses in 2016, alcohol and marijuana were the substance most likely to be used in the past 30 days by Kittitas County 10th graders. Overall, there has been a significant decline in substance use by Kittitas County 10th graders, including prescription pain killers and other illegal drugs.³¹

Current (past 30-day) Substance Use, Kittitas County, Grade 10 (2016)*



Current (past 30-day) Substance Use Trends, Grade 10 (2016)*



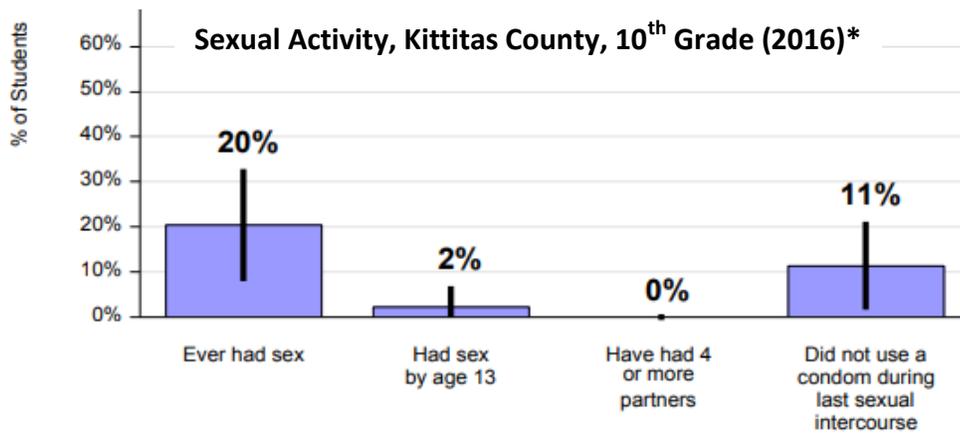
*Graphics source: Healthy Youth Survey Fact Sheets <https://www.askhys.net/FactSheets>

Sexual Activity

Sexually transmitted infections (STIs) and unplanned pregnancies, often the result of risky sexual behavior, can have lasting effects on health and well-being, especially for adolescents.⁴⁸

Sexual Activity (Youth)

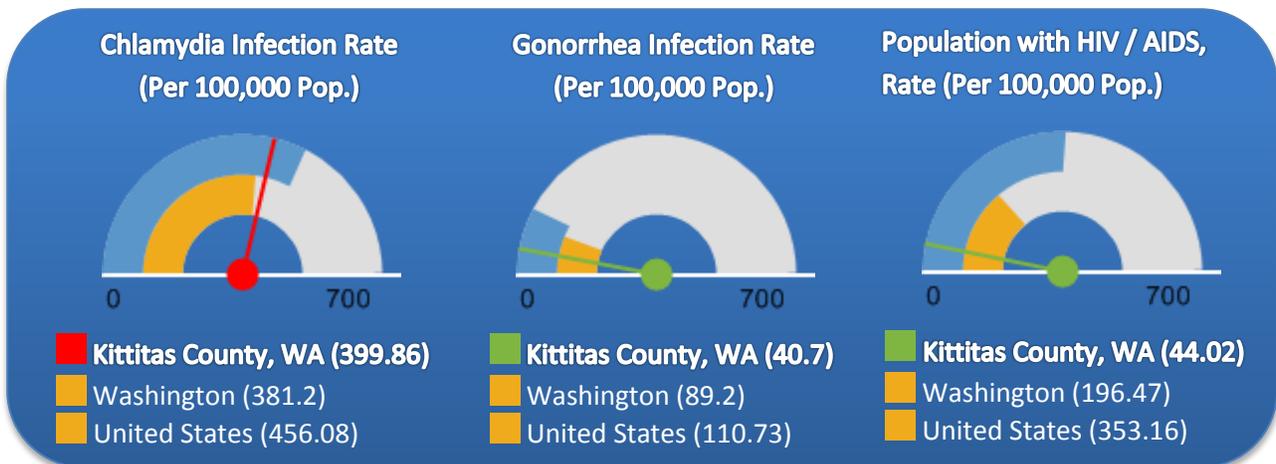
Healthy Youth Survey responses show that one in five Kittitas County tenth graders (20%) has had sex and slightly less than half of those students used a condom during their last sexual encounter.³¹ A very small percentage of students (2%) reported having sex by age 13 and zero students reported having more than 4 partners.³¹



*Graphics source: Healthy Youth Survey Fact Sheets <https://www.askhys.net/FactSheets>

Sexually Transmitted Diseases

These indicators report incidence rate of chlamydia, gonorrhea and HIV cases per 100,000 persons. These indicators are relevant because they can be a measure of poor health status and demonstrate the prevalence of unsafe sex practices. **Kittitas County has 8th highest rate of newly diagnosed Chlamydia cases in the state.**²¹ Trend data shows that over the past ten years Kittitas County has been getting worse for this measure.³⁴



Data Source: 2014 Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Clinical Care

Clinical care indicators are broken into two categories: Access to Care and Quality of Care. These indicators tell us how well a community is meeting the healthcare needs of its residents by providing timely care and preventing disease and injury. These indicators can also highlight a lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services.^{21,34}

Access to Care

The U.S. Department of Health and Human Services defines “Access to Care” as “the timely use of personal health services to achieve the best health outcomes.”⁴⁹ Measures of this concept include provider to resident ratios and insurance availability. Monitoring these indicators is important because lack of insurance and providers can result in less preventative care, chronic disease and behavioral health management services.

Access to Providers

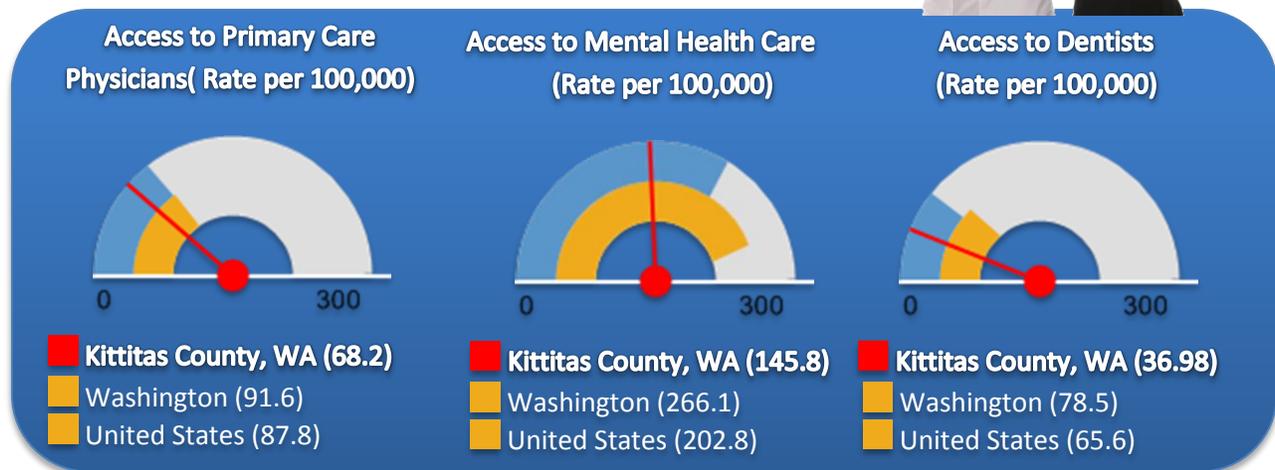
Kittitas County is currently experiencing a shortage of providers for primary, mental and dental healthcare.

The ratio of Kittitas County residents to primary care physicians is 1570:1. This is higher than the state’s ratio of 1190:1.²¹

The ratio of residents to mental health providers is 710:1.

That is more than twice as many residents per mental health provider as the state ratio of 360:1.²¹

The ratio of residents to dentists is 2,700:1. Again, this is nearly twice the state ratio of 1250:1.²¹

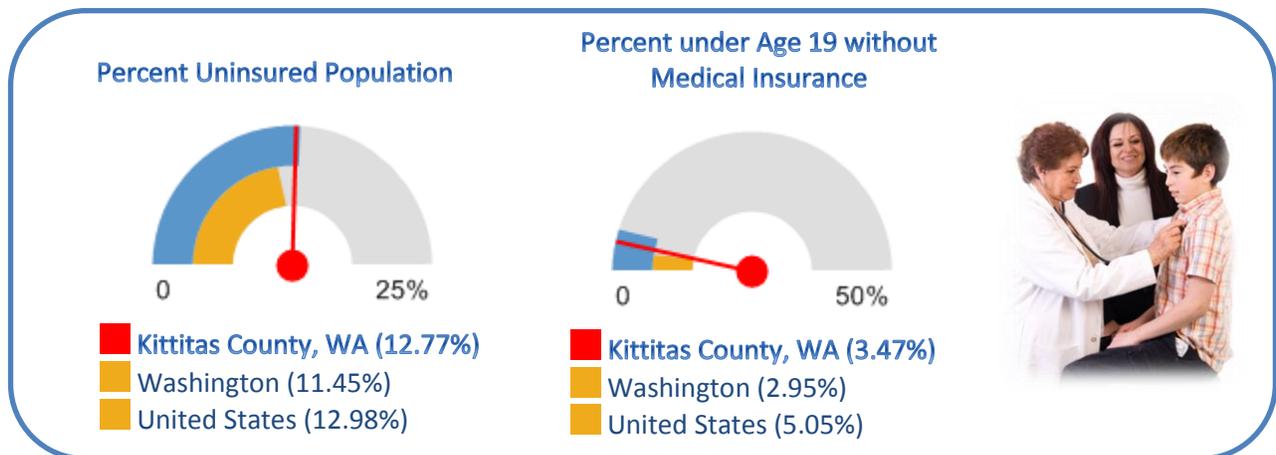


Data Source: US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File. 2015.
 Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Lack of Insurance

Lack of insurance is a primary factor in the lack of healthcare access. People are far less likely to receive needed healthcare services or engage in preventive medicine without insurance.⁵⁰

Approximately 13% of Kittitas County residents are currently uninsured.³⁴ This number is slightly above the state, however, slightly below the national number. **Kittitas County also has a higher percentage of children under age 19 without medical insurance than the state.**³⁴



Data Source: US Census Bureau, Small Area Health Insurance Estimates. 2015.

Indicator Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Quality of Care

The World Health Organization (WHO) defines “Quality of Care” as “the extent to which health care services provided to individuals and patient populations improve desired health outcomes.” In order to achieve this, health care must be “safe, effective, timely, efficient, equitable and people-centered.”⁵¹ Indicators for quality of care in a population are focused on preventive care such as vaccinations, cancer screenings, diabetes monitoring and preventable hospital stays.

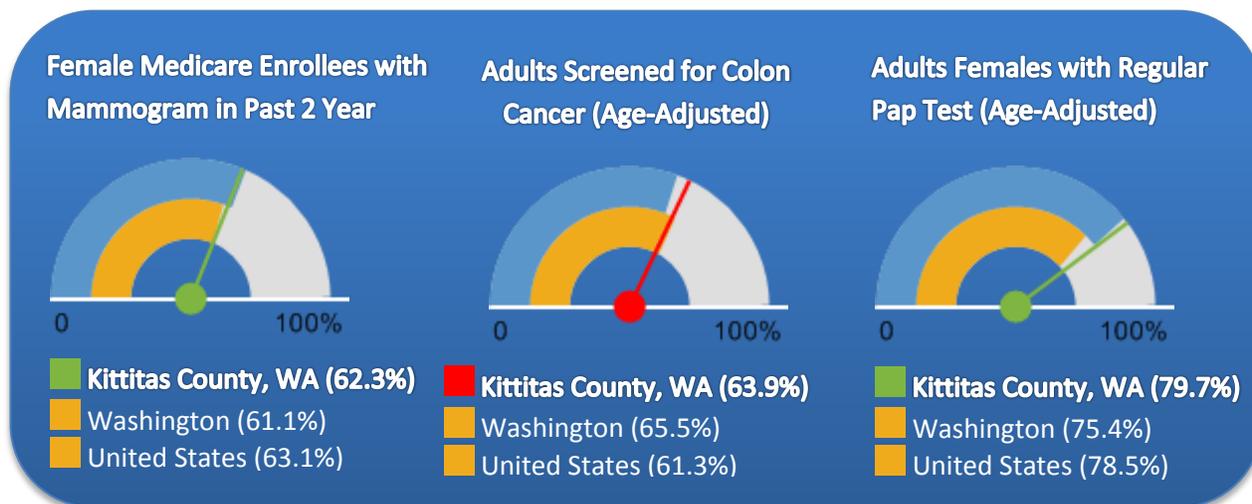
Vaccinations



Vaccinations provide a key defense against serious diseases that can spread rapidly through a population. The indicators for this measure look at the Kittitas County children and older adults. **In 2016, 21% of Kittitas County kindergarteners had not completed required vaccinations** at time of enrollment as compared to 17% percent of WA state kindergarteners.⁵² **Approximately 70.6 percent of Kittitas County adults over 65 years of age reported receiving pneumonia vaccinations,** less than the state (72%) but higher than the nation (67.5%).³⁴

Cancer Screenings

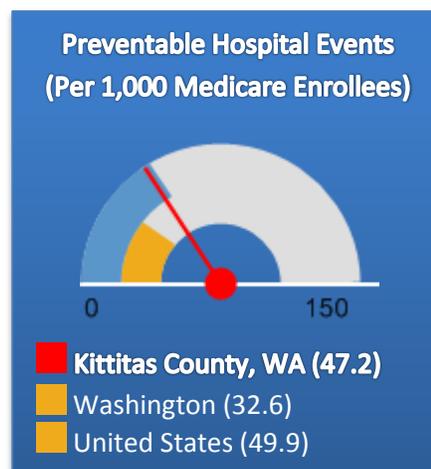
Evidence suggests that early screening tests, such as mammographies and colonoscopies, can reduce cancer related mortality.⁵³ **Approximately 62% of Kittitas County female Medicare enrollees age 67-69 received one or more mammograms in the past two years and 64 % of Kittitas county adults were screened for colon cancer.** Roughly 80 % of Kittitas County adult females reported getting a regular Pap test.³⁴



Data Source: 2016 Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
 Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Preventable Hospital Events

This indicator reports the percentage of Medicare patients who were discharged from a hospital stay related to “ambulatory care sensitive” (ACS) conditions. ACS conditions are primarily found in the older adult population and are deemed preventable through care coordination and community outreach services.⁵⁴ Conditions include pneumonia, dehydration, asthma, diabetes, and other conditions which might have been prevented if adequate primary care resources were available and accessed by those patients. These conditions are important to track as they can be linked to return on investment through reduced hospital admissions.⁵⁵ **According to the most recent report data, Kittitas County Medicare enrollees have a rate of 47.2 preventable hospital stays per 1,000 Medicare enrollees.** This is significantly higher than the state rate but similar to the nation.³⁴



Diabetes Monitoring

This measure captures the percentage of Medicare patients with diabetes who have had a hemoglobin A1c (hA1c) test, a blood test which measures blood sugar levels. This test must be administered by a healthcare professional to be counted. **In the past year, 90.2 % of Kittitas County Medicare enrollees with diabetes have had an annual exam (which includes the hA1c test).**³⁴



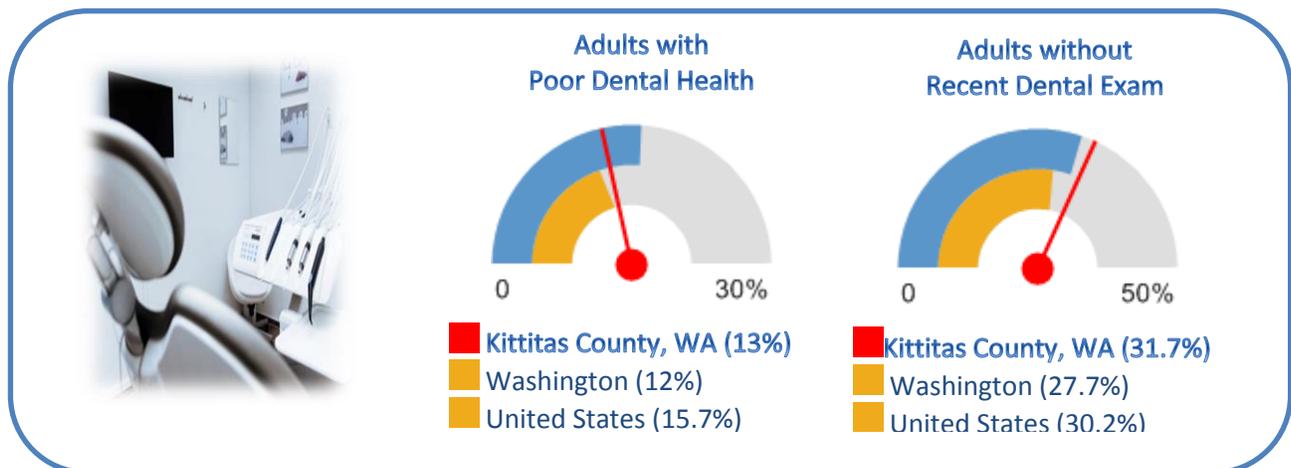
HIV Screenings



This indicator reports the percentage of adults age 18-70 who self-report that they have never been screened for HIV. **According to 2016 BRFSS survey data, 73.6% of Kittitas County adults have not been screened for HIV.**³⁵ Kittitas County is approximately ten percentage points higher than the state and the nation for this measure.³⁴

Dental Care Utilization

Utilization of dental services can be an indication of barriers to health in a community. This indicator reports the percentage of adults aged 18 and older who self-report that they have not visited a dentist, dental hygienist or dental clinic within the past year. **Approximately one third (32.7%) of Kittitas County adults age 18 and older have not received dental services in the past year and 13% report that six or more of their permanent teeth have been removed due to tooth decay, gum disease, or infection.**³⁴ In contrast, only 9% of Kittitas County tenth graders have not received dental services in the past year.³¹



Data Source: 2016 Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
 Indicator Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Social and Economic Indicators

Social and economic determinants of health are the indicators most strongly associated with poor health outcomes. These indicators are also the biggest predictors of future health outcomes. The categories of social and economic indicators are Education, Employment, Income, Family and Social Support and Community Safety.

Education

Higher rates of education are linked to higher incomes, better employment options, and increased social opportunities. More education is also linked to lower rates of premature death, smoking, obesity and inactivity.⁵⁶

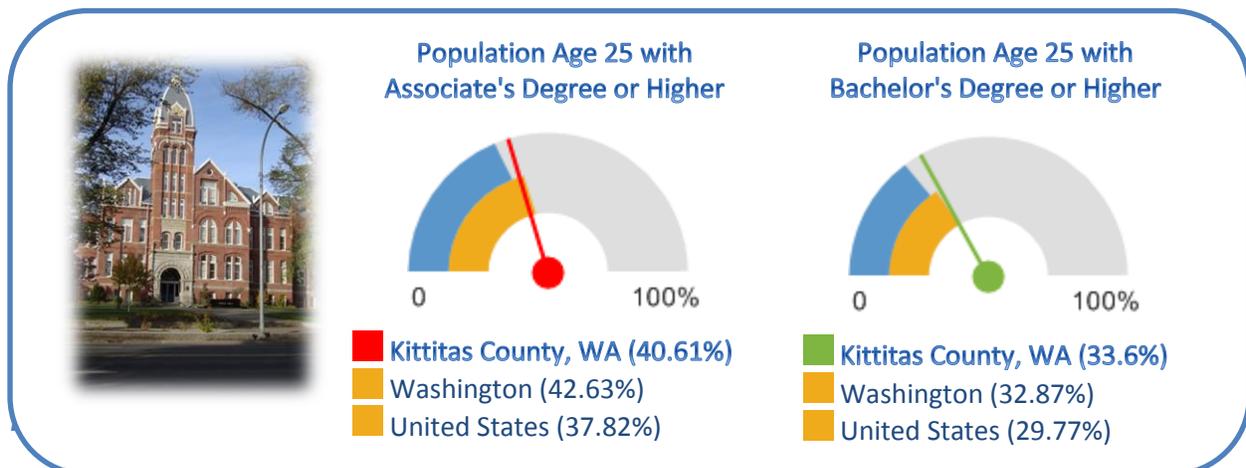
High School Graduation

Current research shows that individuals who graduate high school are more likely to be employed, less likely to live in poverty and less likely to commit crime.⁵⁷ **The most recent graduation rate data for Kittitas County show that 81.3% of students are receiving their high school diploma within four years.**³⁴ Trend data show that Kittitas County graduation rates have been consistent since 2010.²¹ This is on par with the state and national high school graduation rate trends.²¹



Higher Education

The more years of formal education an individual has correlates strongly with improved work and economic opportunities, reduced psychosocial stress, and healthier lifestyles.⁵⁸ **In Kittitas County, 40.61% of the population aged 25 and older have an Associate's level degree or higher and 33.6% of have a Bachelor's level degree or higher.**³⁴ Kittitas County residents without a high school diploma make approximately \$32,000 less per year than residents with a bachelor's level education.⁵⁹



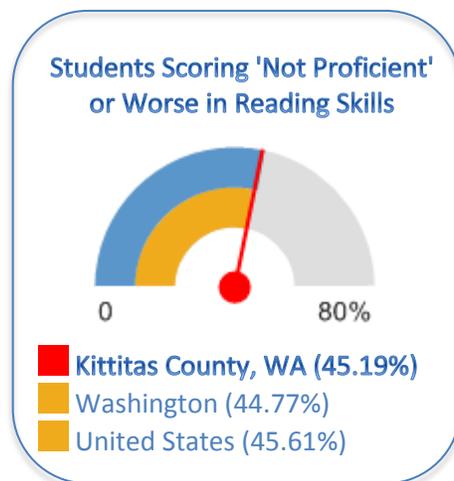
Data Source: US Census Bureau, American Community Survey, 2011-15

Indicator Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Student Reading Proficiency (4th grade)



This indicator reports the percentage of children in grade 4 whose reading skills tested below the "proficient" level for the English Language Arts portion of the state-specific standardized test. The inability to read English well is linked to poverty, unemployment, and barriers to healthcare access, provider communications, and health literacy/education.⁶⁰ **In Kittitas County, almost half (45.19%) of fourth grade students scored as “not proficient” or worse in reading skills.** This is on par with the state and the nation.³⁴



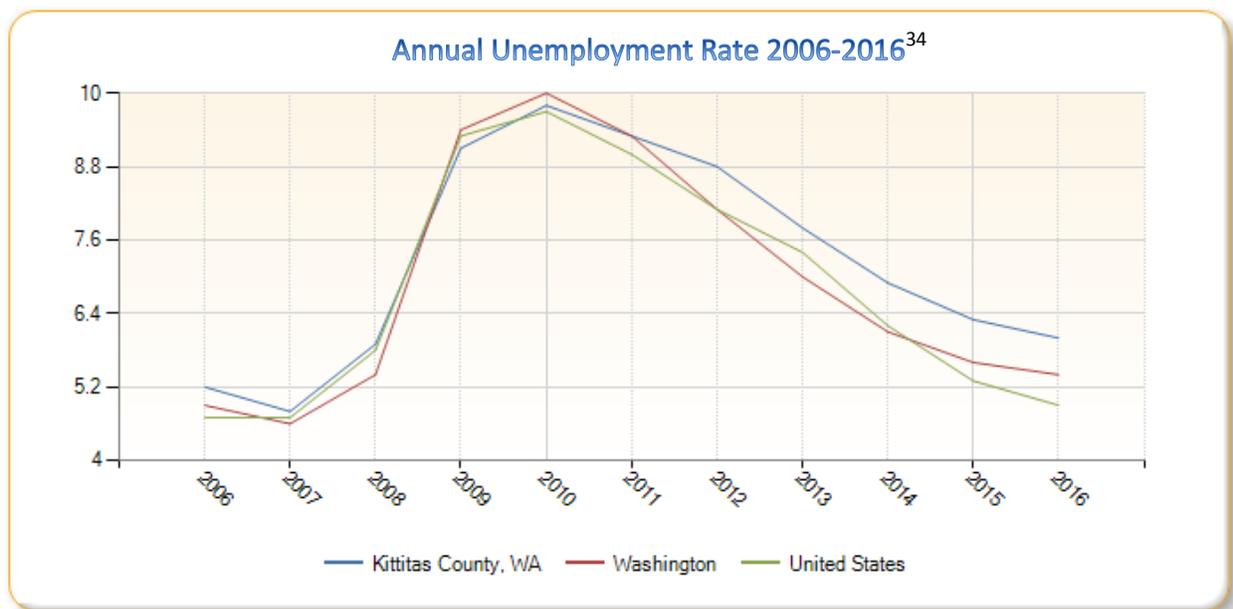
Data Source: US Department of Education, EDFacts. 2014-15.
Indicator Graphic Source: Community Commons® (2017)

Employment

Employment is a primary driver of improved health outcomes for a community. Unemployed individuals are 54% more likely to be in poor or fair health than individuals who are employed, and are more likely to suffer from increased stress, high blood pressure, heart disease, and depression.^{61,62}

Unemployment

This indicator is the percentage of the civilian labor force, age 16 and older, that is unemployed but seeking work. **In Kittitas County, the current unemployment rate is 6.1%, the lowest rate since 2010.**³⁴ The figure below shows that Kittitas County has also had a higher unemployment rate than the state and the nation since 2012.



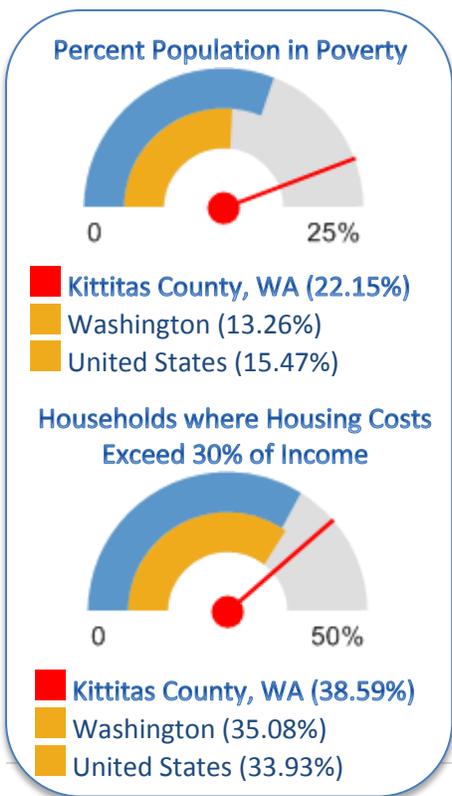
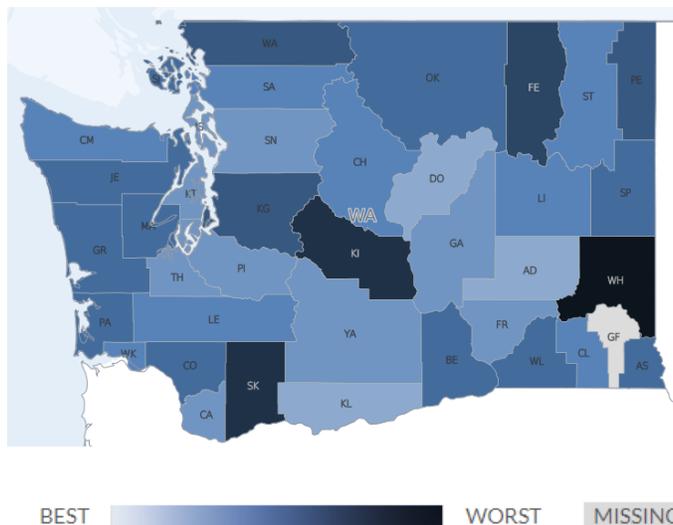
Data Source: US Department of Labor, Bureau of Labor Statistics, 2017
Graphic Source: Community Commons® (2017)

Income

There is a direct correlation between income and health outcomes. Income can be generated from a variety of sources; however, the more income an individual makes the better an individual's health outcomes are likely to be. The same applies to families, where higher incomes lead to safer neighborhoods, better education and improved healthcare access.⁶³

Income Inequality

The income inequality measure is the ratio of highest household incomes at the 80th percentile (only 20% make more than they do) and households at the 20th percentile (only 20% make less than they do). A higher inequality ratio indicates greater division between the top and bottom ends of the income spectrum. As of 2015, Kittitas County had an inequality score of 5.2.²¹ The map shown here is from the County Health Rankings® website and shows **Kittitas County ranked second worst in the state for income inequality, tied with Skamania County and behind Whitman County.**²¹ However, the presence of university students may have an impact on this measure.^{64,65}



Poverty

The US Census Bureau determines who is in poverty by comparing a set of money income thresholds (lowest amount of income an individual can survive on) to overall family size and composition. This measure does not vary by geographic area but is adjusted for inflation. **In Kittitas County, 22% of residents are living in household with income below the federal poverty line.**³⁴

Housing Cost Burden (30%)

This indicator reports the percentage of the households where housing costs exceed 30% of total household income. **In Kittitas County, approximately 39% of households have housing costs that amount to over 30% percent of the household's income.** Kittitas County ranks third worst in the state for this measure.³⁴

Data Source: US Census, American Community Survey 2011-15
Indicator Graphic Source: Community Commons® (2017)

Family & Social Support

The concept of “Social Capital” is defined as “the networks of relationships among people who live and work in a particular society, enabling that society to function effectively.”⁶⁶ In other words, social capital measures how much an individual can count on their family, friends and community to support them in getting their needs met. Indicators in this section measure social capital in the areas of child and family support, pro-social engagement and community safety.

Licensed Childcare

Many families with young children count on childcare facilities to provide care while they earn money to support the household. In Kittitas County, there is a significant shortage of childcare slots for children under six years of age. From 2012 to 2017, seven of the thirty-two licensed childcare facilities in Kittitas County were closed permanently.⁶⁷ This led to a 20% drop in available childcare slots.

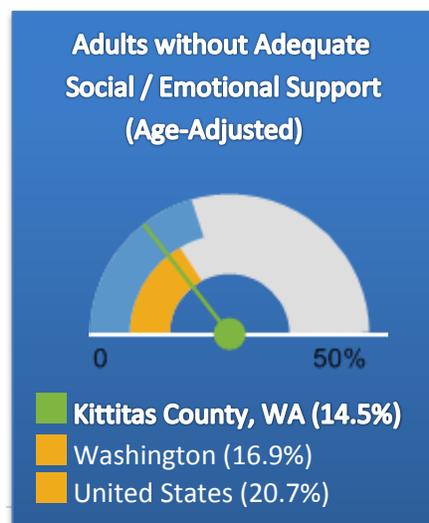


Based on 2017 census estimates, there are currently 2,408 children under six years old that may be eligible for childcare. According to Washington State Department of Learning registry there are currently 25 licensed providers with a total of 652 childcare slots in Kittitas County.⁶⁸ **This makes the current ratio of Kittitas County children 0-5 years of age to licensed childcare slots approximately 4:1.** This ratio is even higher for families who are low-income and depend on subsidized childcare as only two of the 25 providers in Kittitas County will accept child care subsidies to pay for a slot.⁶⁸



Prosocial Community Involvement

Research has found that there are several indicators that can be used to predict the likelihood of youth substance abuse as well as their resiliency to the potential impacts of engaging in risky behaviors. These indicators are known as protective factors.⁶⁹ One of the protective factors examined by the Healthy Youth Survey is prosocial community involvement. **In 2016, 76% of Kittitas County 10th graders took part in opportunities for pro-social community involvement such as sports teams, clubs and recreation.**³¹



Social and Emotional Support

Social isolation can be defined as the lack of social capital. It is becoming a public health epidemic in itself, especially among older adults, with an increasing lack of social support being linked to poor health outcomes.⁷⁰ According to the 2016 BRFSS survey, **16% of Kittitas County adults aged 18 and older self-reported that they receive insufficient social and emotional support all or most of the time.**³⁴

*Data Source: 2016 Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System
Indicator Graphic Source: Community Commons® (2017)*

Social Associations



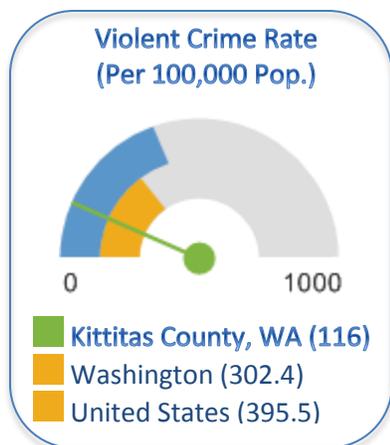
Social Associations is the number of associations per 10,000 population. Associations include membership organizations such as civic organizations, bowling centers, golf clubs, fitness centers, sports organizations, religious organizations, political organizations, labor organizations, business organizations, and professional organizations. **The rate of social and civic associations in Kittitas County is 9.2 per 10,000 people.**²¹ The range in Washington State for this measure is 5.2 to 19.5 with Kittitas County on the lower end of this spectrum. Counties with similar rates are Benton, Walla Walla and King.²¹

Community Safety

Community safety is a measure of both person on person violence and the rate of unintentional injury. High rates of homicide, sexual assault, domestic violence and child abuse are directly linked to shorter lives and a higher probability of health risk behaviors such as substance abuse and smoking.⁷¹ In 2015, accidental injury was the 4th leading cause of death in the United States.⁷² Many of these accidents, such as drowning, poisoning and those involving motor vehicles, are preventable.

Injury Hospitalizations

Injury hospitalization rates are defined by the number of hospital admissions from intentional and unintentional injuries per 10,000 population. Injury mechanisms include motor vehicle accidents, firearms, falls, suffocation, drowning, fire, cuts, machinery, poisoning, and the natural environment. **The age adjusted rate of injury hospitalizations in Kittitas County for the years of 2011-2015 is 70.44 hospitalizations per 10,000 people as compared to the state rate of 67.70 per 10,000 people.**²⁵ Accidental injury -including overdose from alcohol and drug poisoning-is the 3rd leading cause of hospitalization for children, young adults and adults in Kittitas County.²⁵



Violent Crime

Violent crime is the number of violent crimes reported per 100,000 population. Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, rape, robbery, and aggravated assault. According to most recent data collected by the FBI, Kittitas County's rate for violent crime is 116 offenses per 100,000 population, which is significantly lower than the state and national average.³⁴ **Trend data shows that violent crime incidence in Kittitas County has been decreasing over time.**²¹

Data Source: Federal Bureau of Investigation, FBI Uniform Crime Reports. 2012-14.

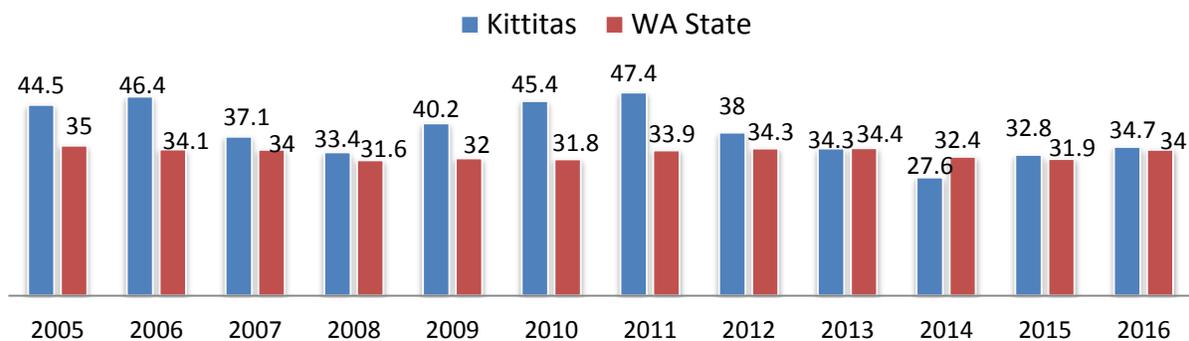
Indicator Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Child Abuse & Neglect

This measure captures the children (ages birth-17) identified as victims in referrals to Child Protective Services that were accepted for further action, per 1,000 children. A "referral" is a report of suspected negligent treatment, physical abuse, sexual abuse, or other maltreatment of a child. Child abuse referrals are made by mandated reporters, such as doctors, nurses, psychologists, pharmacists, teachers, child care providers, and social service counselors. In 2016, the rate of accepted abuse referrals in Kittitas County is 35.7 per 1,000 children (ages 0-17).⁷³ Over the past decade, rates of child abuse and neglect cases in Kittitas County have lowered and are now almost equal to the state.



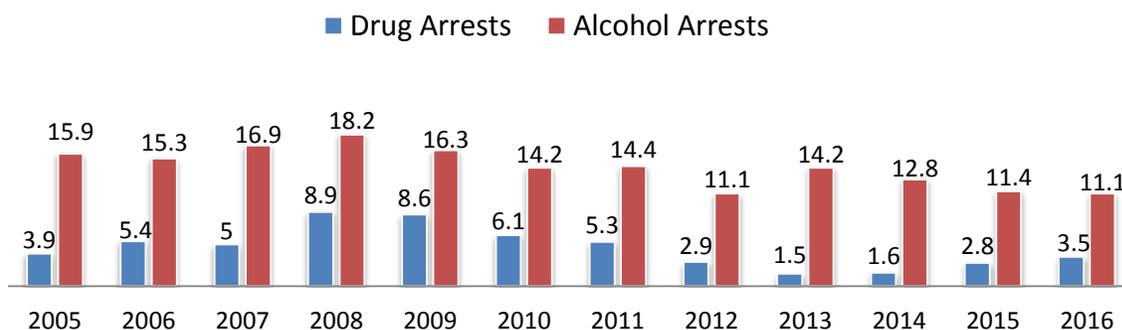
Child Abuse & Neglect Rates (per 1,000 children ages 0-17)⁷³



Drug & Alcohol Related Arrests (Adults)

The drug law violation arrests include all crimes involving sale, manufacturing, and possession of drugs. Alcohol violations include all crimes involving driving under the influence, liquor law violations, and drunkenness per 1,000 adults. In 2016, the rates of drug and alcohol arrest were 3.5 and 11.1, respectively, per 1,000 people.⁷³ Rates for both drug and alcohol related arrests in Kittitas County have been decreasing over the past decade.

Kittitas County Drug and Alcohol Arrest Rates⁷³



Physical Environment

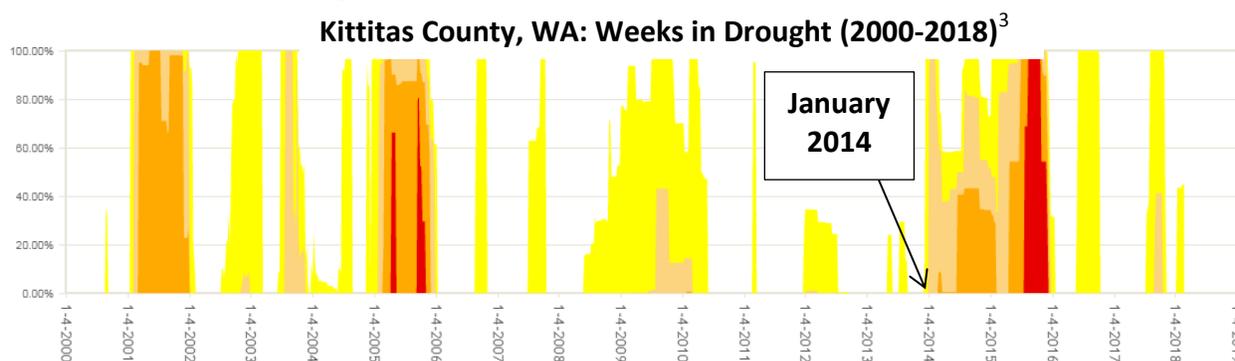
Physical environment indicators are broken into two categories: the built environment and environmental health indicators. The environmental health indicators look at environmental factors that need to be regulated and monitored for public safety including air and water quality, and food safety. The built environment indicators include man-made aspects of a community that can impact quality of life and health outcomes such as housing, food access, transit and recreation access.

Environmental Quality

The natural elements of a community that are monitored for pollution are air and water. Air pollution is linked to increased incidence of respiratory illness and mortality related to lung diseases.⁷⁴ Water that is not properly decontaminated can lead to poisoning, gastro-intestinal illnesses, eye infections, increased cancer risk, and many other health problems.⁷⁵

Climate (Drought)

According to the United States Drought Monitor, Kittitas County has been experiencing more frequent and severe periods of drought since 2014.³ Below is a time series image from the U.S Drought Monitor website that shows Kittitas County weeks with severe drought as orange and weeks with extreme drought as red.



Graphic Source: US Drought Monitors: <http://droughtmonitor.unl.edu/Data/Timeseries.aspx>

Air Quality

Particulate matter measuring more than 2.5 microns in diameter (PM2.5) can harm the lungs and is unsafe to breathe. PM2.5 can be found in fire smoke, auto exhaust and industrial pollution.⁷⁶ **According to the CDC's National Environmental Public Health Tracking Network, the average daily density of PM2.5 In Kittitas County air is 6.8 micrograms per cubic meter.²¹ The range of averages for all Washington State counties is 5.2 to 9.1.²¹**



Water Quality

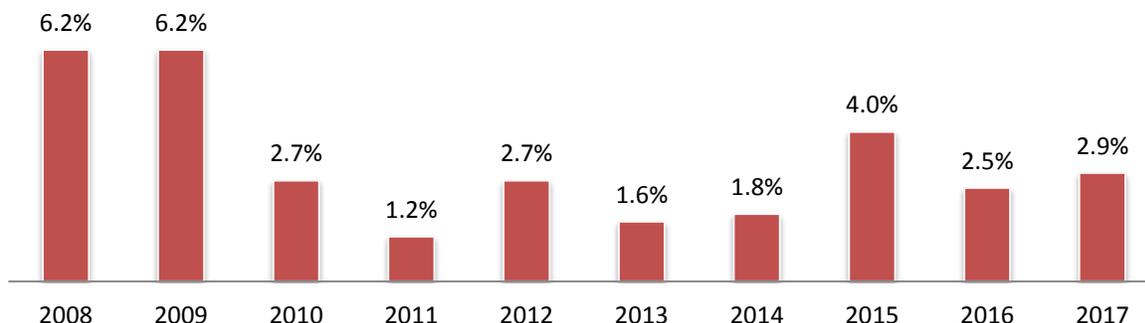
The water quality indicator measures the presence of drinking water violations in the county, such as exceeding maximum contaminant or residual disinfectant levels and treatment technique violations.⁷⁷ **In 2016, there were no health-based drinking water violations in any community water system in Kittitas County.²¹**

Food Safety

The food safety measure is the percentage of routine food establishment inspections that had a significant amount of food safety violations (over 30 points). In 2017, 2.9% of routine food establishment inspections found significant food safety violations.⁷⁸ Overall, annual food inspection violations have decreased in the past decade.



Percent of Routine Food Inspections with Significant Violations⁷⁸



Built Environment

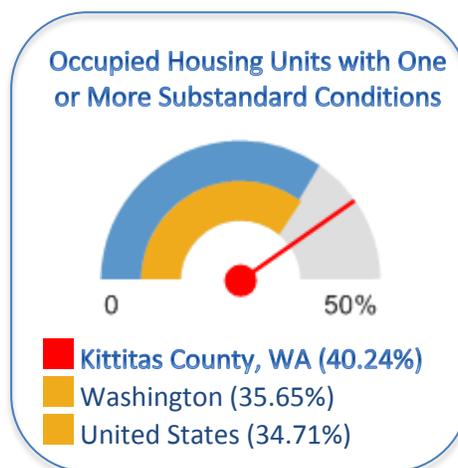
Built environment is the structural and physical elements of a community that can impact the way residents work and live. Elements of the built environment include houses, buildings, streets, sidewalks, bike paths and open spaces like parks and soccer fields. The quality of the built environment can support or detract from the ability to lead a healthier lifestyle.⁷⁹

Housing

The severe housing problems indicator is the percentage of households with at least one or more of the following housing problems:

- Housing unit lacks complete kitchen facilities;
- Housing unit lacks complete plumbing facilities;
- Household is severely overcrowded; or
- Household is severely cost burdened.

Severe overcrowding is defined as more than 1.5 persons per room. Severe cost burden is defined as monthly housing costs (including utilities) that exceed 50% of monthly income.^{21,34} In Kittitas County, 40% of occupied housing units meet the severe housing problem criteria.³⁴



Data Source: US Census Bureau, ACS Data 2011-15
Indicator Graphic Source: Community Commons® (2017)



Transit

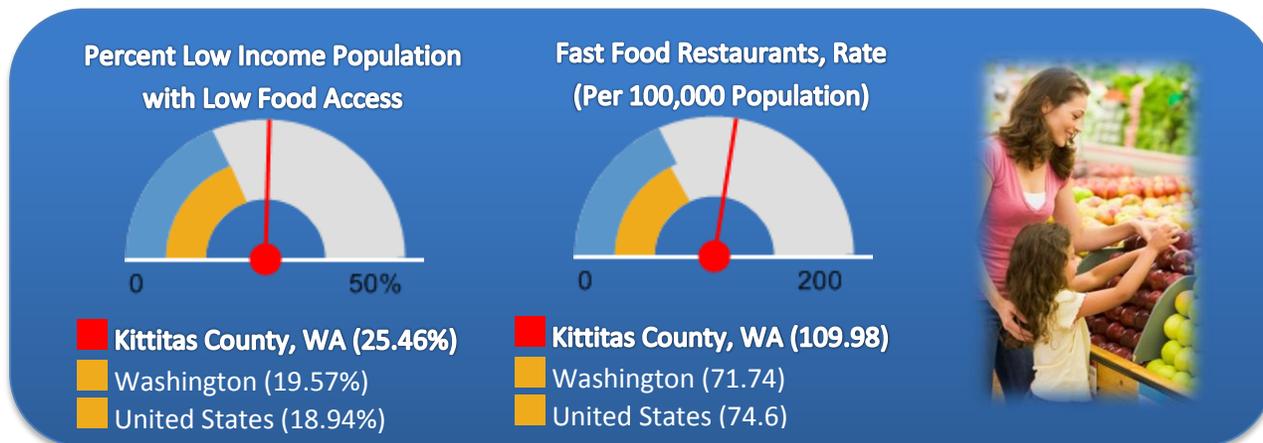


24%²¹

Research shows that the more time people spend in a car, the higher the risk of certain chronic diseases such as obesity and high blood pressure.⁸⁰ Also, increased time in the car can mean decreased time spent exercising. **According to recent census estimates, 24% of Kittitas County commuters spend 30 minutes or more behind the wheel on their way to work.**²¹

Food Access

The food environment index ranges from 0 (worst) to 10 (best) and equally weights two indicators of the food environment: 1) The percentage of the population that is low income and does not live close to a grocery store. 2) The percentage of the population who did not have access to a reliable source of food during the past year. **In 2017, Kittitas County scored 5.2 out of 10 on the Food Environment Index.**²¹ Kittitas County also has a high ratio of fast food restaurants to residents with a rate of 109.98 restaurants per 100,000 population.³⁴ These unhealthy options are frequent food sources for low income families and students (both high school and college).



Data Source: US Department of Agriculture, Economic Research Service, USDA - Food Access Research Atlas. 2015.
Indicator Graphic Source: Community Commons® (2017) <https://assessment.communitycommons.org/CHNA>

Recreation Access



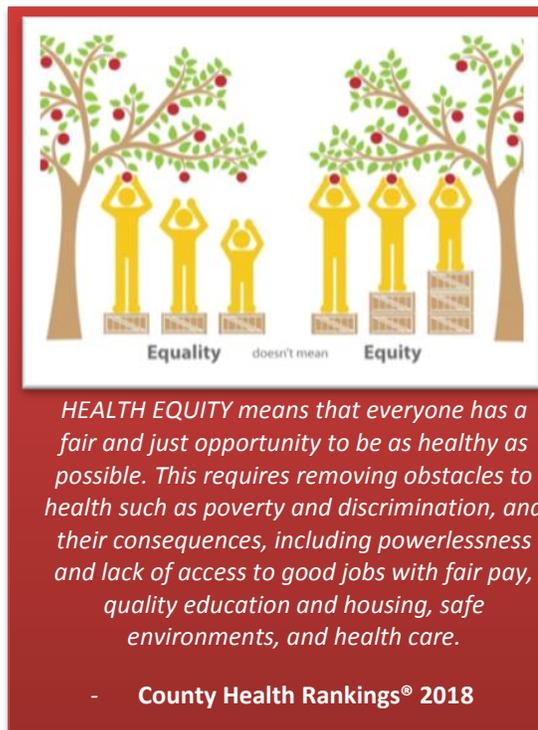
72%

This indicator measures the percentage of individuals in a county who live reasonably close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities. Parks include local, state, and national parks. Recreational facilities include gyms, community centers, YMCAs, dance studios and pools. **In Kittitas County, 72% of individuals are within reasonable distance of a location designated for recreation.**²¹

Who in our community experiences poorer health?

Health Equity

When it comes to health, equality and equity are not the same thing. In other words, giving everyone the same thing (services, programs, education) does not mean everyone will have the same health outcomes. Different individuals need different supports to achieve the same goal. Race or ethnicity, sex, gender identity, age, disability, socioeconomic status, and geographic location all contribute to an individual's ability to achieve health. County health data can help to identify these health inequities in a community by highlighting the differences in health outcomes for certain groups within a population. These differences can reflect gaps in healthcare access, education and other resources. In Kittitas County, there are several groups who may experience poorer health outcomes and should be factored into community health planning.



Hispanic Population

Hispanic residents are the largest racial and ethnic minority in Kittitas County making up 8.5% of the entire population.¹ There are some concerning disparities that indicate gaps in resources, healthcare access and education:

- In 2016, 35% of Hispanic individuals in Kittitas County did not have a high school diploma or equivalent as compared to 8% of White individuals.⁸¹
- In 2016, 15% of Hispanic families in Kittitas County were living below the federal poverty level as opposed to 9.2% of White families.⁸² For families with single mothers as the head of household, 73.5% of Hispanic households were below the poverty level as compared to 39.7% of white households.⁸²
- For the years of 2010-2015, the rate of cancer incidence in the Hispanic population was approximately 74 individuals per 10,000 versus the incidence in the White population of 40 individuals per 10,000.⁸³
- In 2015, the rate for teen births by Hispanic females is 19 per 1,000 females (age 15-19), almost three times that of Non-Hispanic White teen births (7).²¹
- Language can be a significant barrier to health, however, only a small percentage (1.39%) of Hispanic residents in Kittitas County are currently living with a head of household that is a non- or limited English speaker.³⁴



Single Parent Families

Children in single-parent households are the percentage of children in family households where the household is headed by a single parent (male or female head of household with no spouse present). **In Kittitas County, 25% percent of households are single parent households.**^{21,34} Children of single parents are more likely to develop issues with substance abuse, mental health and chronic disease.⁸⁴ Single parents are also prone to increased risk of mortality and disease.^{85,86} However, poor health outcomes for both single parents and their children can be mediated by high levels of community and family support.⁸⁷



Medicare Population

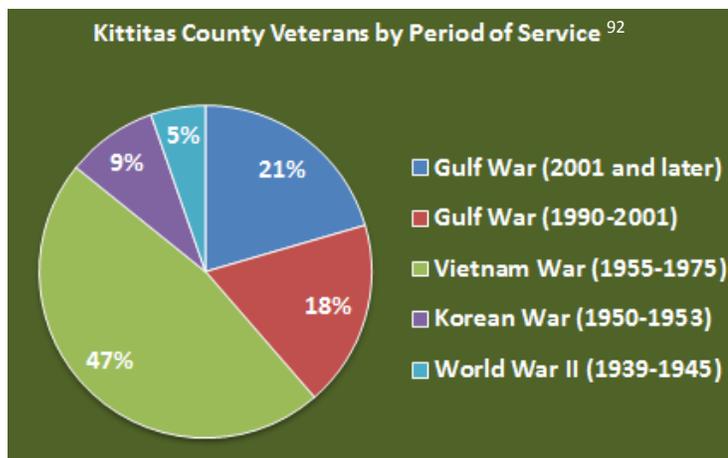
14%



In Kittitas County, Medicare eligible residents (age 65 and older) make up 14% of the population.³⁴ Rates of injury and diseases are much higher for members of the Medicare population. Medicare patients tend to be the most costly because of an increase in age-related illness and injury.⁸⁸ **Medicare recipients in Kittitas County have lower rates of diabetes, depression and high blood pressure than the state.**³⁵ Recent trend data shows health care costs (reimbursement for Medicare services per enrollee) have been increasing in Kittitas County.²¹

Veterans

Military personnel returning from deployment are often faced with a multitude of physical and mental health issues. Veterans have higher rates of musculoskeletal injury, mental health issues, traumatic brain injury and exposure to infectious disease.^{89,90} Veterans also have high rates of Post-Traumatic Stress Disorder (PTSD), which is linked to an increase in additional medical issues.⁹¹ **In Kittitas County, veterans make up 9.6% of the civilian population over 18 years of age.**⁹² The majority of veterans residing in Kittitas County served in either the Vietnam War or the Gulf War (or both).



Children in Poverty

Growing up on poverty can have long lasting negative effects on a child's health outcomes as an adult including higher rates of mortality and disease.^{93,94} **In Kittitas County, 17% or 1,290 children aged 0-17 are living in households with income below the Federal Poverty Level (FPL).**²¹ Typically, children of Non-white families have higher rates of living in poverty, however in Kittitas County the percentage of children living in poverty is very similar between white and non-white families (17% and 16% respectively).²¹



Population with a Disability



The Americans with Disabilities Act defines a person with a disability as “a person who has a physical or mental impairment that substantially limits one or more major life activity.”⁹⁵ It is important to understand the needs of individuals with additional barriers when addressing healthcare needs of a community. Individuals who require specific assistance needs require more tailored health supports than other resident groups. **In Kittitas County, approximately 13% of the civilian, non-institutionalized population has a disability.**³⁴ This measure is similar to state and national percentages.³⁴

LGBTQ Population

Lesbian/Gay/Bisexual/Transsexual/Queer individuals in rural areas are at risk for health issues related to discrimination, including higher rates of stress-related conditions such as heart disease and obesity. They are also at an increased risk for substance abuse and suicide. They may also face a lack of providers with backgrounds to address specialized issues relating to gender identity.^{96,97} **According to 2016 Healthy Youth Survey results, 17% of Kittitas County students do not identify as themselves as heterosexual.**³¹



Disconnected Youth

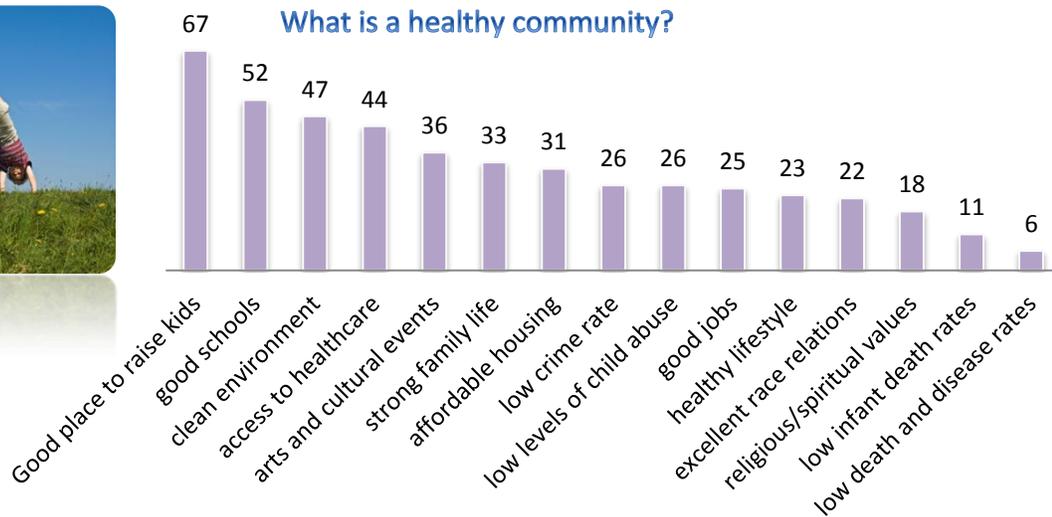


The disconnected youth indicator is the percentage of teens and young adults ages 16-24 who are neither working nor in school. Disconnection in youth is linked to higher outcomes of depression, anxiety and poor physical health.⁹⁸ Studies also show an association with disconnection and increased smoking, violent behavior and substance abuse.⁹⁹ **Kittitas County is ranked second best in the state for low percentage of disconnected youth (9%).**²¹

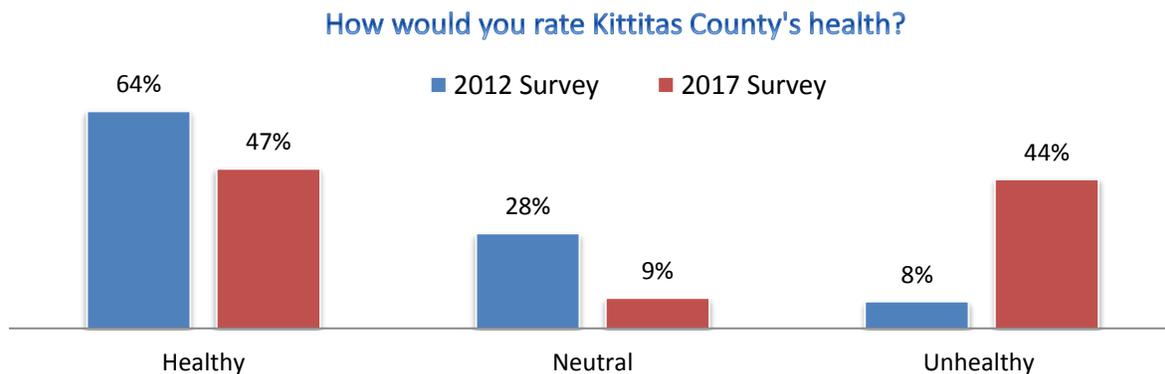
What are our community assets?

Definition of a Healthy Community

According to polled community members, the definition of a healthy community is a good place to raise children, good schools, a clean environment, access to healthcare, and arts and cultural events. These are important health factors that can be influenced by policy or systems change.

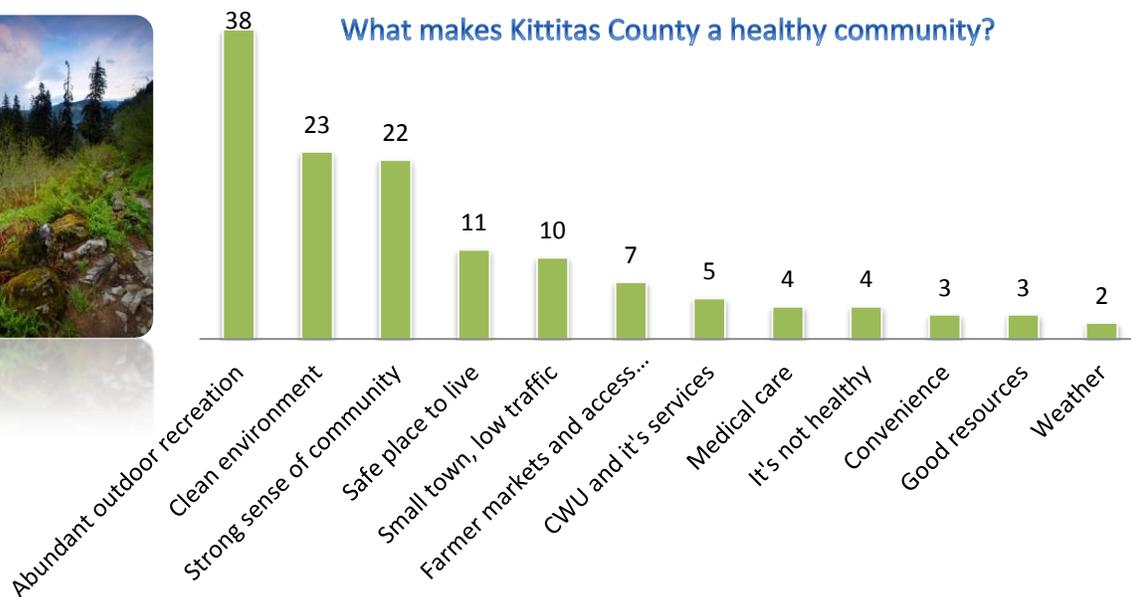


Nearly half of participants in the community health survey (47%) think that the Kittitas County community is a healthy community. The rest either think it is unhealthy (9%) or are neutral (44%). Participants with lower income levels (less than \$50K) were less likely to think the community is healthy compared to participants with higher income levels (greater than \$50K.) When the survey was administered in 2012, 64% of respondents rated the community as healthy, 8% unhealthy and 28% neutral.



Abundant Outdoor Recreation

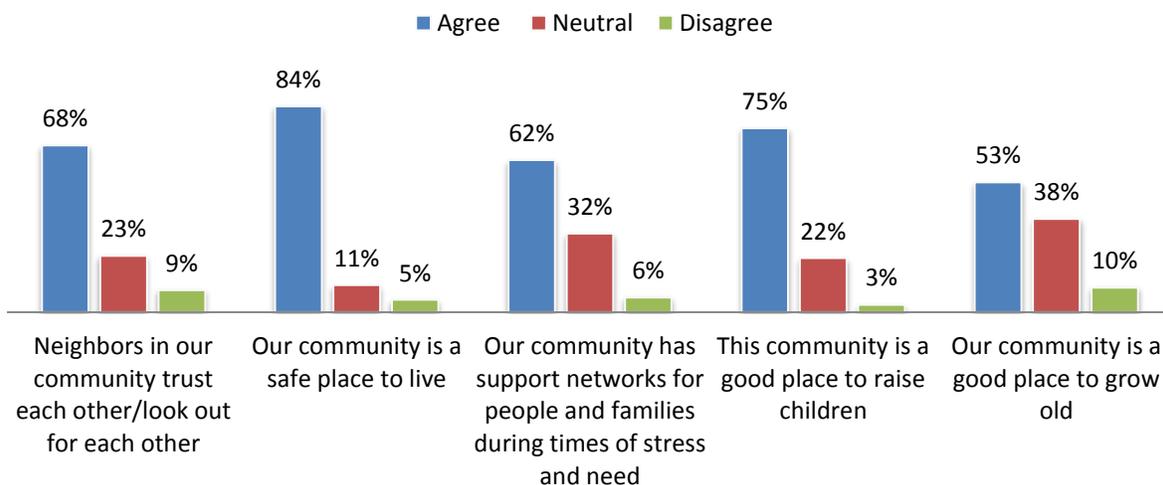
The majority of polled residents cited abundant outdoor recreation, a clean environment and a strong sense of community as contributors to the health of Kittitas County. These sentiments are echoed in the online survey data as well.



Community Safety and Social Support

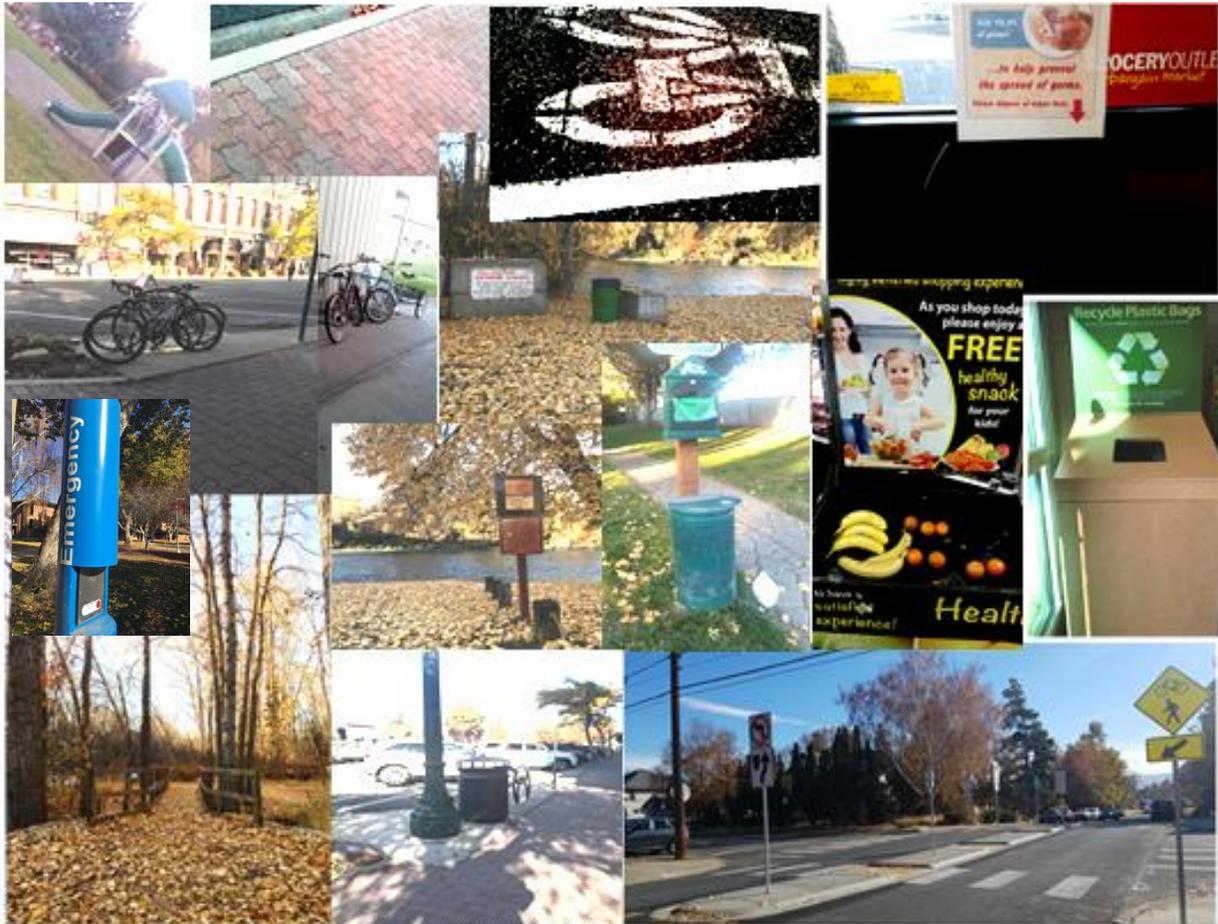
In the online survey responses, most respondents (84%) agreed that the Kittitas County community is safe place to live. Roughly two thirds of respondents agreed Kittitas County neighbors trust one another and can rely on each other for support in times of stress and need. Three fourths of survey respondents (75%) agree that Kittitas County is a good place to raise children. A little over half (53%) agree that Kittitas County is a good place to grow old.

Online Survey Responses: Social Support and Safety



CWU Photovoice Project: Community Health Assets

Several CWU Photovoice Projects supported the results of abundant outdoor recreation and a clean environment. Students noted community assets such as Irene Rinehart Park, bike racks and bike lanes in Ellensburg, playgrounds at local parks, the walkability of downtown Ellensburg, all of which support recreation and physical activity. Abundant waste containers and clean sidewalks were also noted as part of the clean living environment.

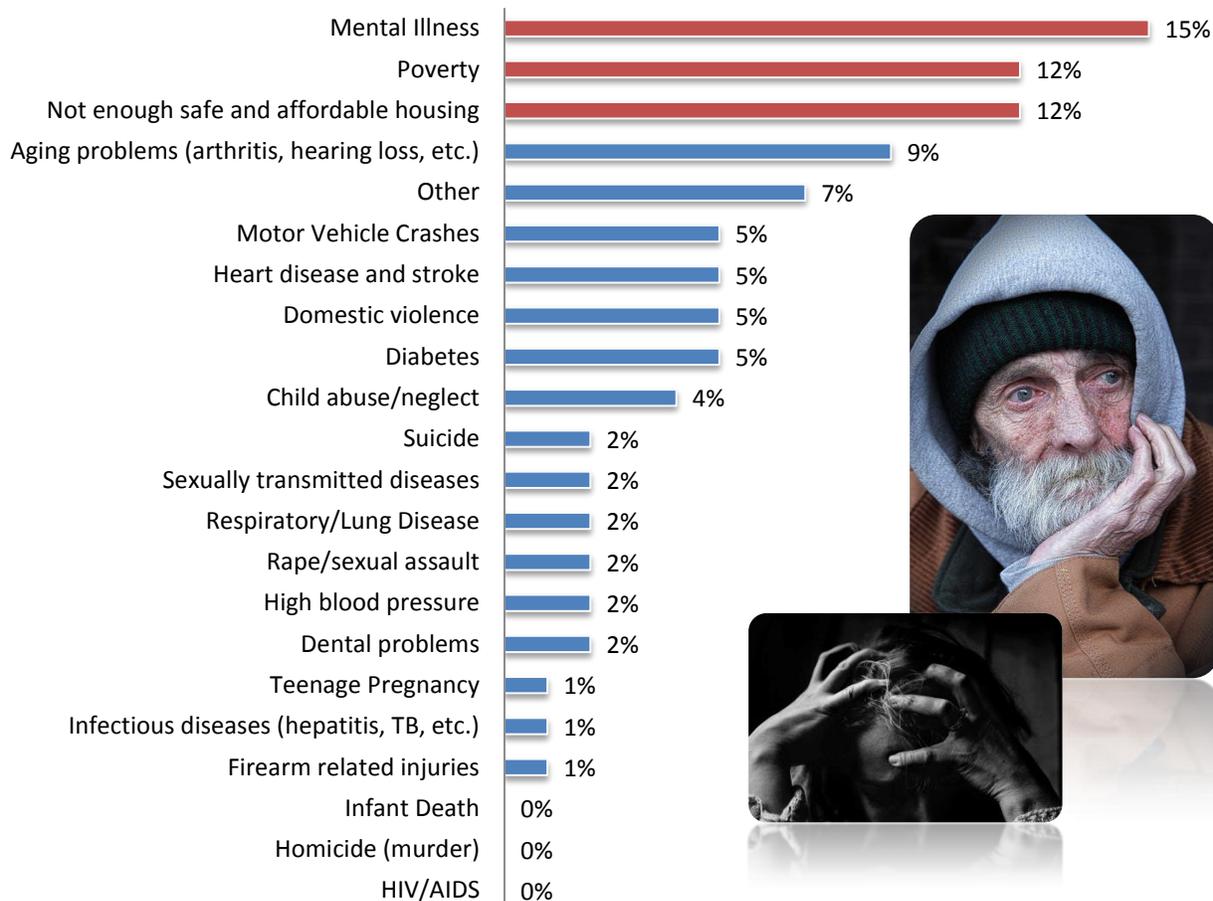


What are the important health issues for community members?

Health Issues and Problems

Although this question was asked in different ways of different populations, some clear themes for most Kittitas County residents are concerns about **mental health and substance abuse, obesity, chronic disease, housing, and poverty**. Online survey participants were asked to choose their top three health concerns (of the list below). The choices with the highest percentage of responses were **mental illness, poverty, adequate, safe, and affordable housing**. When open-ended question survey responses were analyzed, the top themes of concern for many Kittitas County residents are **substance abuse (alcohol and drugs), obesity and chronic disease, health care, and mental health**. At community events, dot survey participants were given a list of health problems and asked to indicate the health issues that they were most concerned with for Kittitas County. Dot survey participants were most concerned with **mental health, suicide, and rape/sexual assault**. Many of the dot survey participants were young adults who are students at Central Washington University, so this data is likely more relevant for that specific population.

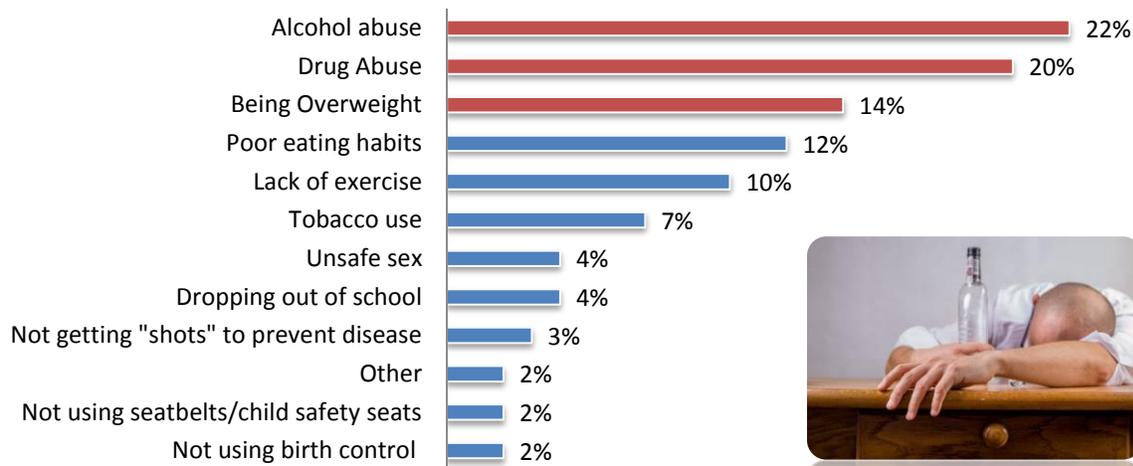
Online Survey Responses: Top Health Concerns



Risky Behaviors

Online survey participants were asked “Of the list below, what do you see as [the] three biggest “risky behaviors” in our community?”. The three health risk behaviors that received the highest percentage of responses were **alcohol and drug abuse** followed by **being overweight**. Dot-survey responses supported these choices with **alcohol abuse, drug abuse** and **poor eating habits** as the top three choices of event attendees. Although the majority of the dot-survey responses were from young adults (CWU students), they correlate with responses from the online survey participants.

Online Survey Responses: Top Risk Behaviors



Photovoice

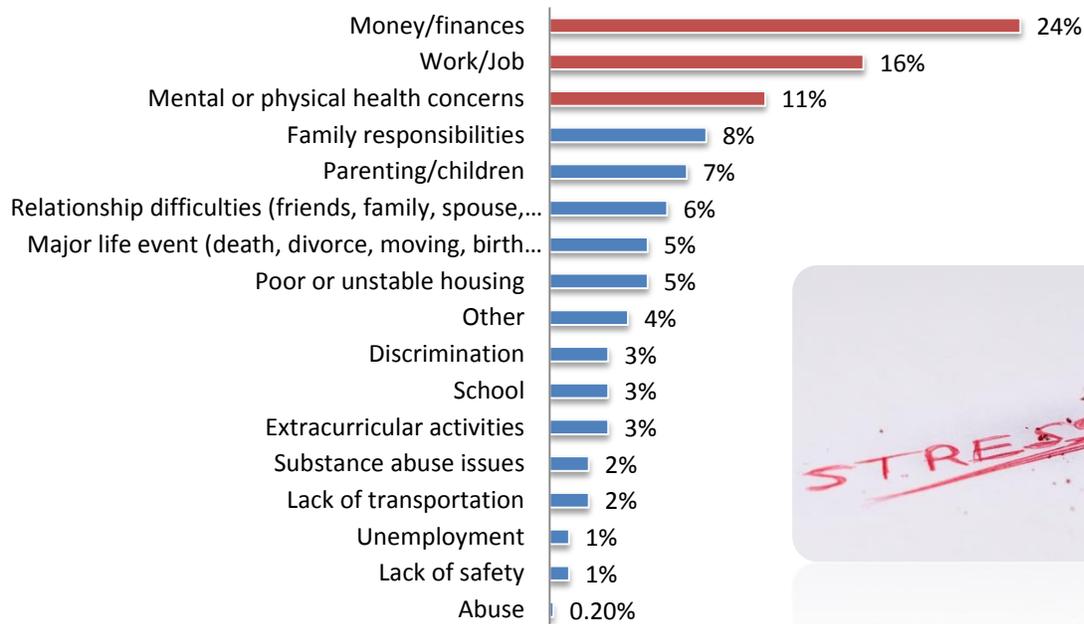
According to CWU students’ Photo Voice project, college students’ face numerous negative influences that can lead to risky behaviors such as the ones listed above. Excessive drinking, marijuana use, and unprotected sex are common themes. The downtown area support easy access to drinking with multiple bars in walking distance. Marijuana is also available in walking distance. Multiple stores sell alcohol and tobacco products in close vicinity to the school.



Causes of Stress

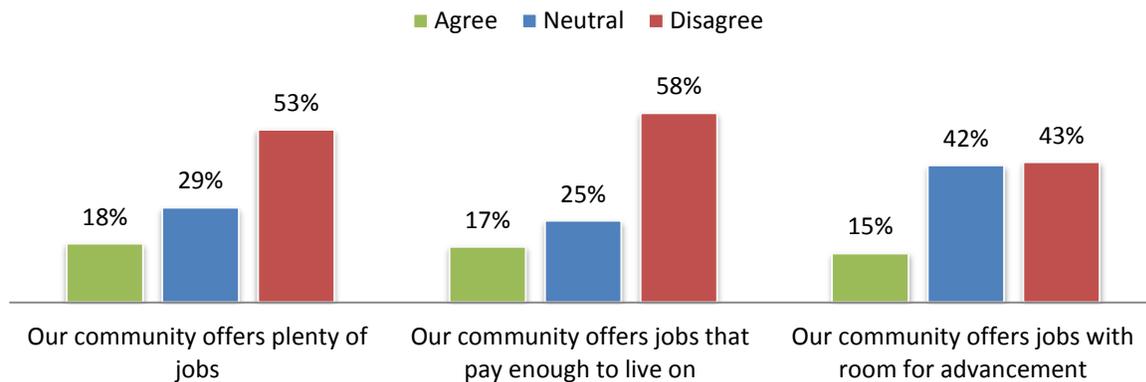
Online survey respondents were asked “Of the list below, what are the three things that today, at this point in life, cause you the most stress?”. The highest percentage of survey responses named **money, work and health concerns** as top contributors to stress. Money, work, and health concerns were also named as top stressors by Kittitas County residents who were polled at community events. CWU students in particular reported school being a high contributor to stress.

Online Survey Responses: Top Causes of Stress



Additional concerns that were highlighted in the online survey were in regards to job availability in the community. Almost two thirds of respondents (58%) disagreed with the statement that Kittitas County offers jobs that pay enough to live on. Over half (53%) did not agree that the community offers enough jobs.

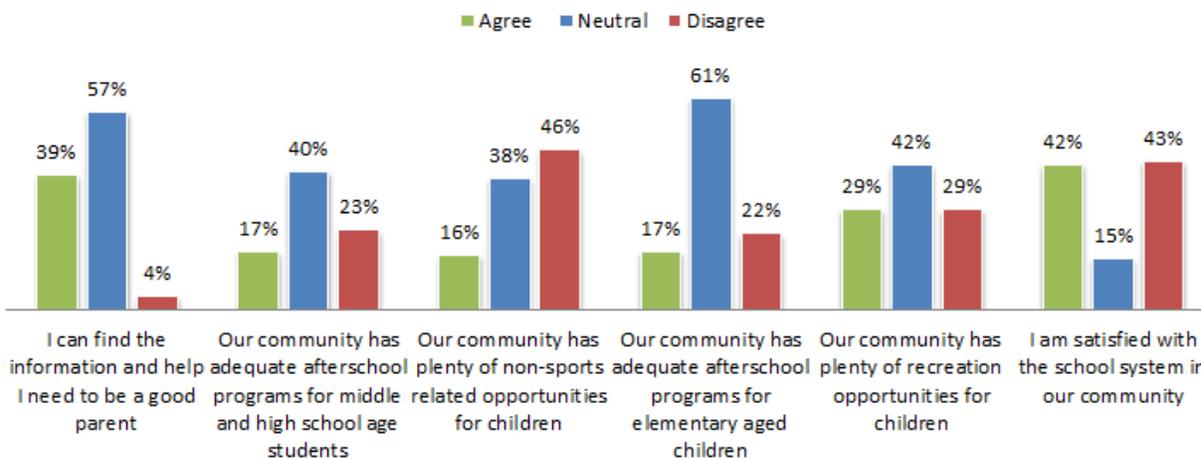
Online Survey Responses: Jobs in Kittitas County



2018 | The Health of Kittitas County

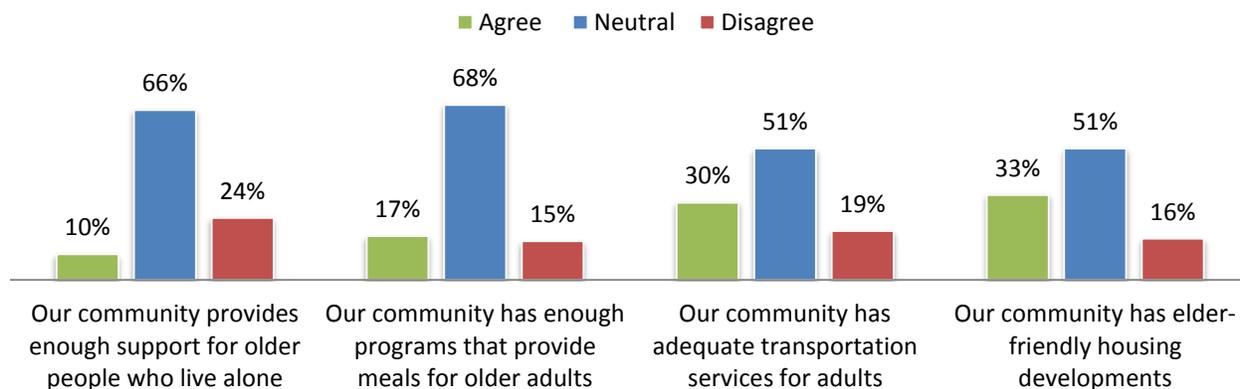
One third of online survey respondents agreed that they have access to information and resources they need to be good parents, however, two thirds of respondents were neutral or did not agree. Participants with lower income level (less than \$50,000) were less likely to think the community is a good place to raise children or find needed support.

Online Survey Responses: Family Support in Kittitas County



Approximately one third of survey takers agree with the statements that Kittitas County has adequate housing and transportation services for elderly residents. One in ten (10%) respondents agreed that our community provides enough for older adults who live alone. And less than one on five (17%) respondents agree that our community has enough programs that provide meals to elderly adults.

Online Survey Responses: Support for the Elderly in Kittitas County

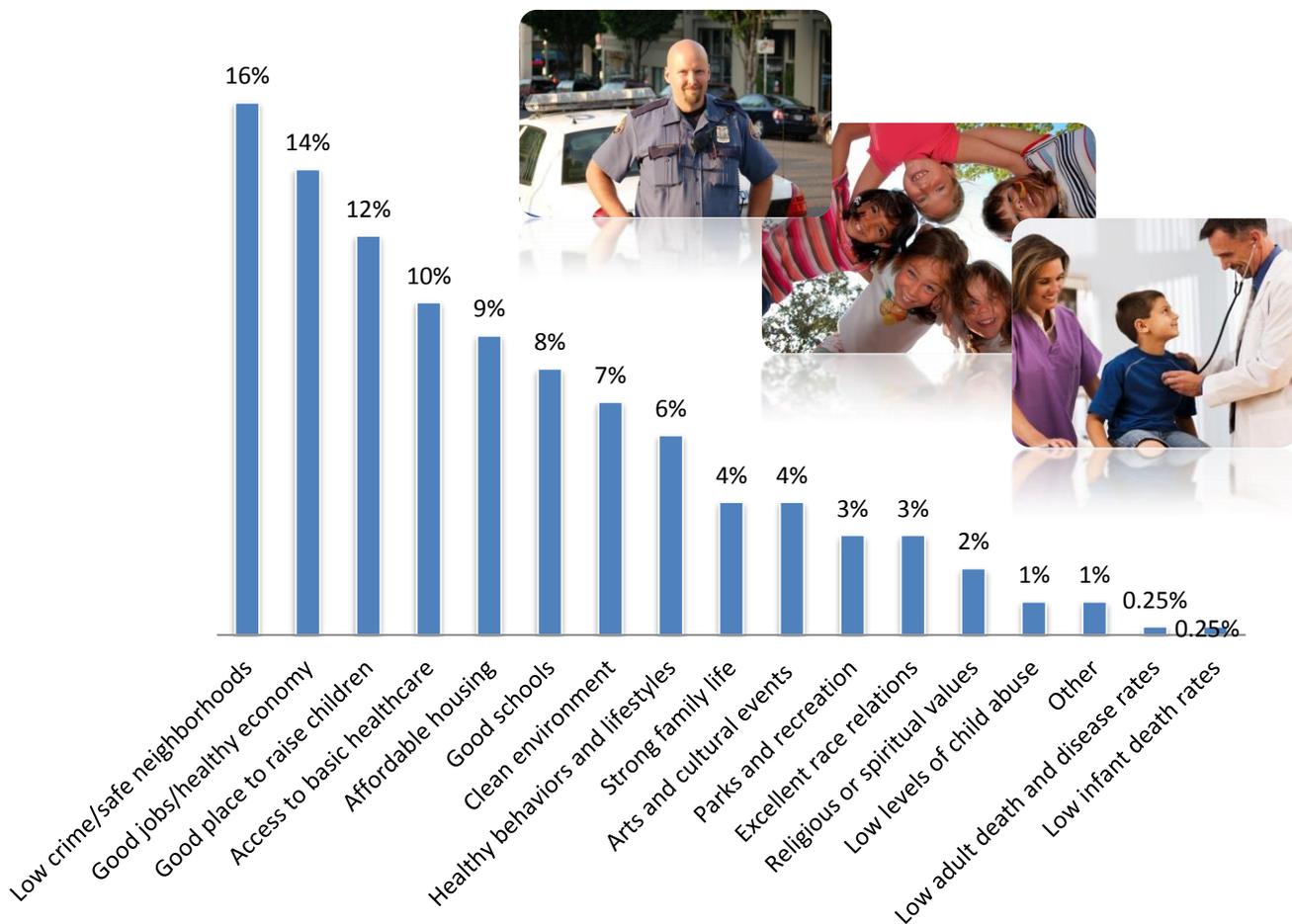


How is quality of life perceived in our community?

Definition of Quality of Life

How does Kittitas County define quality of life? According to respondents of the online community health survey, low crime and safe neighborhoods, good jobs and a healthy economy, and a good place to raise children are the most important factors for a good quality of life. Access to health care, good schools and affordable housing is also important. Polling station survey participants were asked an open ended question, “When you think of good quality of life, what words or phrases come to you?” The most common answers were happy, healthy, full life, friends and family, activities and services, basic needs being met, freedom, minimal stress, clean environment, community, work/life balance, good food, safety, social connectedness, peace, economic wellness, and fulfilled.

Online Survey Responses: What is important for quality of life?



Current Quality of Life

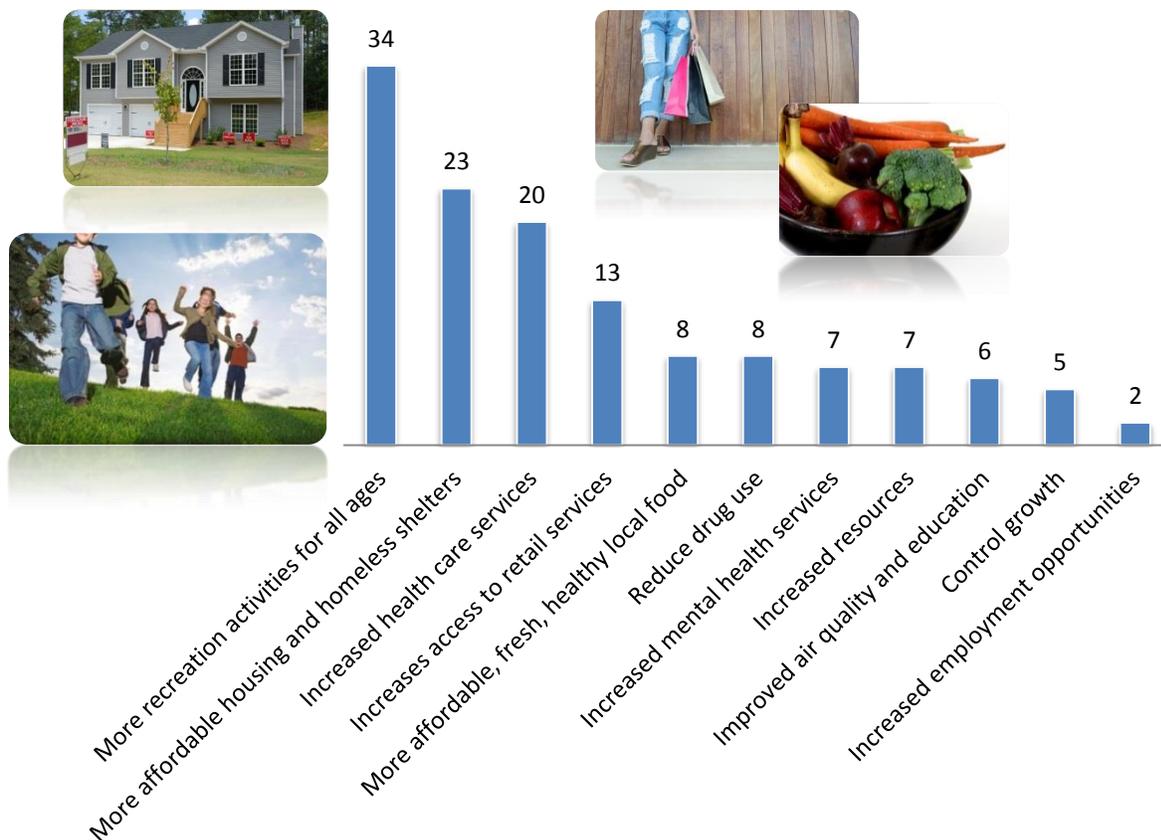
Approximately two thirds of survey respondents (73%) said that they are satisfied with the quality of life in Kittitas County. However, data analysis showed that participants with lower income levels (less than \$50K) were less likely to be satisfied with the quality of life in the community compared to participants with higher income levels (greater than \$50K.)



Improving Quality of Life

The responses to the open ended question “What would improve the quality of life in Kittitas County?” yielded several strong themes. According to many community members, more activities for all age groups, more affordable housing, increased health care services, and increased access to retail services would improve the quality of life in Kittitas County.

What would improve the quality of life in Kittitas County?



What is going on in the community that affects health and quality of life?

Forces of Change Assessment Results

The Force of Change Assessment asked members of the community and representatives from all sectors of the local public health system to identify the trends, factors (traits of our community) and significant events that are currently impacting or will impact the state of public health in Kittitas County. The results yielded several areas where forces of change are occurring on a large scale. The following charts are the summarized results of the FOCA brainstorming activity designed to collect the perceptions of the community members involved in the local public health system.

Social-Economic Factors		
Factors, Events, & Trends	Opportunities	Threats
<p><u>Housing</u></p> <ul style="list-style-type: none"> o Lack of affordable housing o Large homeless population o Existence of income supported housing o Closure of Shady Acres Mobile Home Park <p><u>Economy/Income</u></p> <ul style="list-style-type: none"> o Limited economies o Limited jobs and job growth o Economy is based on education or hay o Higher rates of poverty o Tax fatigue o Insecure budget o Decrease in childcare providers o Agricultural economy o Recreation economy <p><u>Education</u></p> <ul style="list-style-type: none"> o Inefficient school districts (money) o Limited school space, old schools o Movement to de-fund higher education <p><u>Other</u></p> <ul style="list-style-type: none"> o Raids from U.S. Immigration and Customs Enforcement (ICE) o Fire at the FISH food bank o “Not in our KittCo” movement 	<p><u>Housing</u></p> <ul style="list-style-type: none"> o Community awareness about issues- may be willing to pay for a solution through taxes o Motivation for city, county nonprofits working better together, sharing resources to solve issue o Increasing high density housing o Intergenerational housing o Green housing o Mixed-income housing <p><u>Economy</u></p> <ul style="list-style-type: none"> o Paid family and medical leave in WA State in 2020 may lead to increase in childcare opportunities and subsidies? o More small business- childcare providers <p><u>Education</u></p> <ul style="list-style-type: none"> o ACES awareness- early identification, early support to prevent consequences downstream o Community uniting around set of values 	<p><u>Housing</u></p> <ul style="list-style-type: none"> o Overcrowding in existing housing (increasing number of people living in one residence) o Income segregation will produce gentrification o Service sectors / worker will no longer be able to live in the community where they work <p><u>Economy</u></p> <ul style="list-style-type: none"> o Service-based/ government no industry o Current childcare providers refuse subsidized due to increased need / private pay

Built Environment		
Factors, Events, & Trends	Opportunities	Threats
<ul style="list-style-type: none"> o Good pedestrian access and walkability in some areas o We are seeing more parks and trails being built o Cities have action plans to address infrastructure improvement 	<ul style="list-style-type: none"> o Increased physical activity options promoting health can impact obesity, chronic disease o Complete Streets funding for infrastructure projects is available 	<ul style="list-style-type: none"> o Ongoing maintenance costs associated with infrastructure o Some community resistance to changes (i.e. - anger at bike Blvd.) o Budget impact / tax fatigue

Health Care		
Factors, Events, & Trends	Opportunities	Threats
<ul style="list-style-type: none"> ○ Healthcare reform and Affordable Care Act at risk ○ Care Coordination initiative has started in the community ○ Accountable Communities of Health are in existence ○ Closure of Royal Vista nursing home ○ Limited care facilities for all kinds of care ○ Kittitas County Health Network in planning phase—increasing cross sector collaboration ○ Medicaid and health care transformation efforts underway ○ Hospital district leadership and board changes ○ Legalization of marijuana and increase in use ○ Swedish closing general, providing special services to upper county ○ Swedish and Kittitas Valley Healthcare urgent care (Cle Elum) switching locations ○ Lack of care options for dementia, Alzheimer’s, etc. ○ Increased options for telemedicine ○ Improved access to care 	<ul style="list-style-type: none"> ○ Medicaid transformation funding is available (one time, ongoing) ○ Increase jobs in healthcare ○ Systems change through collaboration, upstream, prevention ○ Continued improvements in information technology ○ Improving access to primary care physicians ○ Consolidation of healthcare services, which could provide better coordination and lower costs ○ Increased educational opportunities for future medical professionals (medical school is in Spokane, more programs in Yakima, maybe some nearer Kittitas County) ○ Address social determinants of health 	<ul style="list-style-type: none"> ○ Overwhelmed system/ lack of infrastructure ○ Changes to ACA may result in reduced funding ○ Increase in uninsured people ○ Decreased access to healthcare ○ Competition for providers ○ Lack of dementia care ○ Increased reliance on emergency services for care ○ Potential to lose existing services ○ Continued “siloed” services instead of systems change

Population		
Factors, Events, & Trends	Opportunities	Threats
<ul style="list-style-type: none"> ○ I-90 presence (drug / human trafficking, transients, west side influence, recreational traffic) ○ Aging population ○ High proportion of college students / 18-25 year olds ○ Hispanic population ○ “Silver tsunami”: 400% increase in geriatric population by 2050 ○ Access issues related to aging population ○ Changing demographics (retirees, students, Hispanic, commuters, transient, seasonal) ○ Growing population 	<ul style="list-style-type: none"> ○ Be proactive with upcoming changes ○ New job opportunities ○ Increase in political activism among baby boomers ○ Potential volunteers / lay community health workers ○ Housing planning ○ Encourage CWU students to stay ○ Big box retail ○ Infrastructure- housing, jobs ○ More culturally / linguistically appropriate services ○ “Aging in place”- friendly policies, services, structures, community / neighborhood level orgs ○ More “makers” and cottage-level products / service options ○ More wealth in the community ○ Diversity awareness / acceptance 	<ul style="list-style-type: none"> ○ Increased need for medical services ○ Lack of preparedness for retirement ○ Increased isolation ○ Gentrification ○ Lack of housing for low wage workers ○ Big box- threat to small businesses ○ NIMBY, zoning changes ○ Lack of medical services for elderly ○ Lack of jobs for everyone ○ Decreased willingness to build infrastructure to address changing community needs ○ Un/under-informed decision making in food, agriculture related policy ○ People not fully invested in community-work elsewhere, just go to school here, retire here with no history / buy-in with community ○ Decreased community support (voting) for education, preschool, childcare ○ Increasing discrimination issues ○ Increased need for aging services

Chronic Disease		
Factors, Events, & Trends	Opportunities	Threats
<ul style="list-style-type: none"> ○ Rural setting ○ Increasing elderly population ○ Chronic respiratory issues highly impacted by air quality issues ○ New bike avenue ○ Increase in chronic disease (obesity, diabetes, etc.) ○ Increase in cancer ○ Increase in upstream thinking 	<ul style="list-style-type: none"> ○ Reallocation of funds to preventative services, social determinants of health, built environments ○ Move healthcare upstream into prevention ○ Awareness and education for children and adults-that diseases are preventable ○ Healthier living opportunities 	<ul style="list-style-type: none"> ○ Lack of access to specialty care ○ As elderly population grows, more and more resources allocated to treating and managing chronic disease ○ Chronic care is done out of county ○ Generational transmission of chronic disease- influenced by lifestyle and behaviors

Behavioral Health		
Factors, Events, & Trends	Opportunities	Threats
<ul style="list-style-type: none"> ○ Limited behavioral facilities and specialists, especially for children ○ Current efforts to identify gaps in mental health services ○ Increased opioid / all substance use and availability ○ Mental health, behavioral health, and substance abuse are treated by primary care physicians ○ Legalization of marijuana ○ Funding available for bi-directional integration of primary care and behavioral health ○ Increase in delays and problems with accessing behavioral health services ○ Increased community focus on mental health services ○ Increase in behavioral health issues 	<ul style="list-style-type: none"> ○ Behavioral health integration with healthcare ○ Increased access to behavioral health services ○ More upstream investment ○ Increased collaboration opportunities ○ Non-traditional service delivery ○ More public awareness ○ Medicaid waiver funds facilitating systems change ○ Improved school response - working toward mental health access, developing trauma informed practice, and reaching out to providers ○ Teach school district how to intervene / support / triage more proactively ○ Interest (expressed by students and others) in pursuing professional training into career readiness options ○ Develop multi-specialty mental group 	<ul style="list-style-type: none"> ○ Public health crisis- increase in downstream services, increase in costs ○ Student performance ○ Job performance ○ Increased usage of 911 / jail instead of proactive care ○ Increase in comorbid conditions (e.g.- chronic disease) ○ Lack of workforce readiness, curricular and professional preparedness – lead time for establishing these ○ Lack of mental health services leading to increase in substance abuse

Climate Change and Environmental Hazards		
Factors, Events, & Trends	Opportunities	Threats
<ul style="list-style-type: none"> ○ Increasing temperatures ○ Increasing frequency of wildfires ○ Poorer air quality ○ Flooding ○ Forest maintenance 	<ul style="list-style-type: none"> ○ Opportunities to work together, gain experience in preparedness ○ Innovation in technology ○ Create procedures for schools and public facility response to poor air quality ○ Better choices / regulation about where to build ○ Encourage maintenance of forest ○ Deal with pine beetles ○ Plan for the future while public is paying attention (25+ years) 	<ul style="list-style-type: none"> ○ Rural quality of life ○ Risk to general health/well being ○ Increased building in difficult to reach areas ○ Increased costs (taxes, communities) and resources needed to serve people that have chosen to build/live in high risk locations

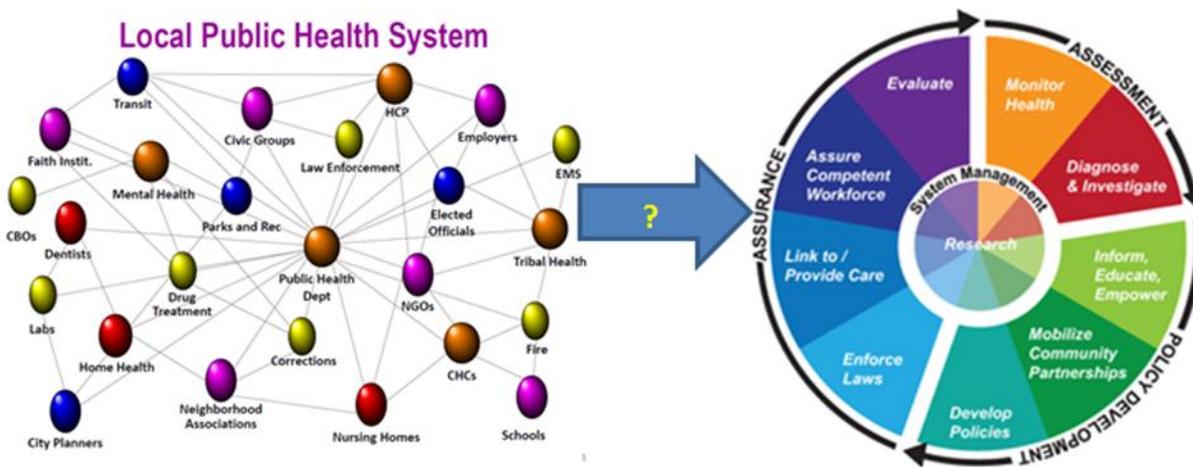
Conclusion

The Forces of Change assessment results indicate that there are many elements of change at work in the Kittitas County Community. The areas that should be addressed by health improvement planning are those that have been identified as being significant threats to the community’s health but also having multiple opportunities for improvement. The identified topic areas that meet these criteria are healthcare access, behavioral health and population growth.

How well does our local public health system work?

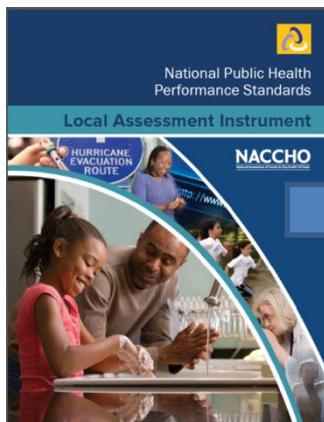
Local Public Health System Assessment

The Local Public Health Assessment (LPHSA) is a tool developed by the National Public Health Performance Standards program. This program is a partnership between seven health agencies including the American Public Health Association, the Centers for Diseases Control and Prevention, National Association of County and City Health Officials and the Public Health Foundation. The assessment tool evaluates the local Public Health system on the CDC's ten essential services of public health.



The Ten Essential Public Health Services:

- **Monitor Health Status** to identify Community Health Problems
- **Diagnose and Investigate** Health Problems and Health Hazards
- **Inform, Educate, and Empower** People about Health Issues
- **Mobilize** Community Partnerships to identify and Solve Health Problems
- **Develop Policies** and Plans that Support Individual and Community Health Efforts
- **Enforce Laws and Regulations** that Protect Health and Ensure Safety
- **Link People** to Needed Personal Health Services and **Assure the Provision of Health Care** when Otherwise Unavailable
- Assure a **Competent** Public and Personal Health Care **Workforce**
- **Evaluate Effectiveness**, Accessibility, and Quality of Personal and Population-Based Health Services



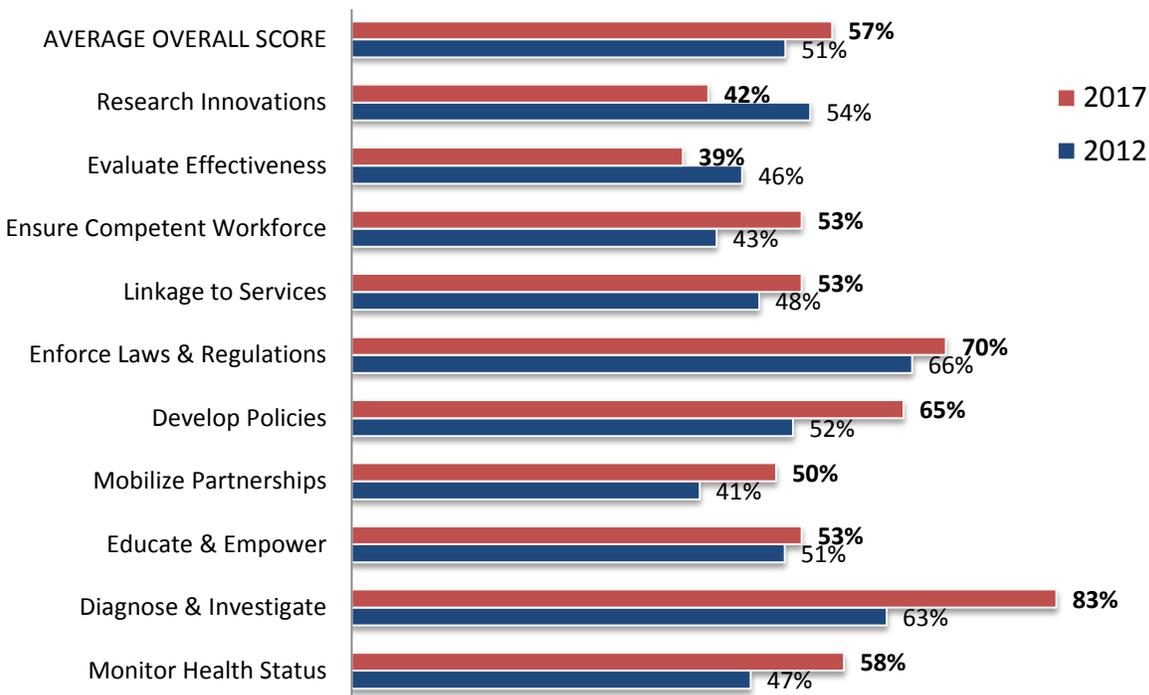
The LPHSA Instrument

Optimal Activity (76-100%)	Greater than 75% of the activity described in the question is met
Significant Activity (51-75%)	Greater than 50% but no more than 75% in the activity described within the question is met
Moderate Activity (26-50%)	Greater than 25% but no more than 50% of the activity described within the question is met
Minimal Activity (1-25%)	Greater than zero but no more than 25% of the activity described within the question is met
No Activity (0%)	0% or absolutely no activity in this area

The Rating Scale for each question....

The tool is composed of ten sections, one for each essential service, with ranking questions posed to the providers of services. The ranking matrix asks providers to estimate the activity levels of essential services in their organizations. These responses were averaged to create a consensus score of overall service positions. This tool was completed by the 2012 CHA steering committee as well as the 2017 CHA-CHIP work group. Overall, the Local Public Health System appears to have improved service delivery in the past five years. The overall average score increased five percentage points. All but two of the ten essential services report an increase in activity. The most significant areas of improvement are the diagnosis and investigation of health problems and hazards, the monitoring of health status, policy development and assuring a competent workforce. Areas experiencing less activity since 2012 are research and the evaluation of effectiveness, accessibility and quality of health services.

LPHSA Assessment Tool: 2012 CHA vs. 2017 CHA Results



Conclusion

The 2017 Assessment Scores for each evaluation segment were then weighted against the priority of the essential service activity to the Local Public Health System itself. Priority was given to issues that were legally required, supported by the CHA-CHIP values statements and outlined in the KCHN grant as deliverables for the Network. The results were placed into a priority matrix to determine which areas should be addressed with current available resources. Areas that need increased attention in order to improve the overall functioning of the LPHSA are current technology related to delivering health services, evaluation of population based health services, assuring linkage of people to health services, and strengthening of community partnerships to address these issues collaboratively.

<p>QUADRANT A <i>(High Priority/Low Performance)</i> These activities may need increased attention.</p>	<p>QUADRANT B <i>(High Priority/High Performance)</i> These activities are being done well, and it is important to maintain efforts.</p>
<p>1.2 Current technology 9.1 Evaluation of Population Health 7.1 Personal Health Services Needs 7.2 Assure Linkage 4.2 Community Partnerships</p>	<p>9.2 Evaluation of Personal Health 6.3 Enforce Laws 5.4 Emergency Plan 5.3 CHIP/Strategic Planning 3.3 Risk Communication 2.3 Laboratories 2.2 Emergency Response 2.1 Identification/Surveillance 1.3 Registries 9.2 Evaluation of Personal Health</p>
<p>QUADRANT C <i>(Low Priority/High Performance)</i> These activities are being done well; consideration may be given to reducing effort in these areas.</p>	<p>QUADRANT D <i>(Low Priority/Low Performance)</i> These activities could be improved, but are of low priority. They may need little or no attention at this time.</p>
<p>8.4 Leadership Development 8.3 Continuing Education 8.2 Workforce Standards 6.1 Review Laws 5.2 Policy Development</p>	<p>10.3 Research Capacity 10.2 Academic Linkages 10.1 Foster Innovation 9.3 Evaluation of LPHS 8.1 Workforce Assessment 6.2 Improve Laws 4.1 Constituency Development</p>

What are our primary areas of community health improvement?

Strategic Issues

All results of the four MAPP assessments were compiled in January of 2018. Results were reviewed by the CHA-CHIP work group to identify areas of community health improvement. Work group members were asked to identify areas of convergence in the 4 assessments and identify major issues based on current data, resident and community partner support for the issue and capacity or momentum to address the issue. After conversation, several key community health issues were brought to light:

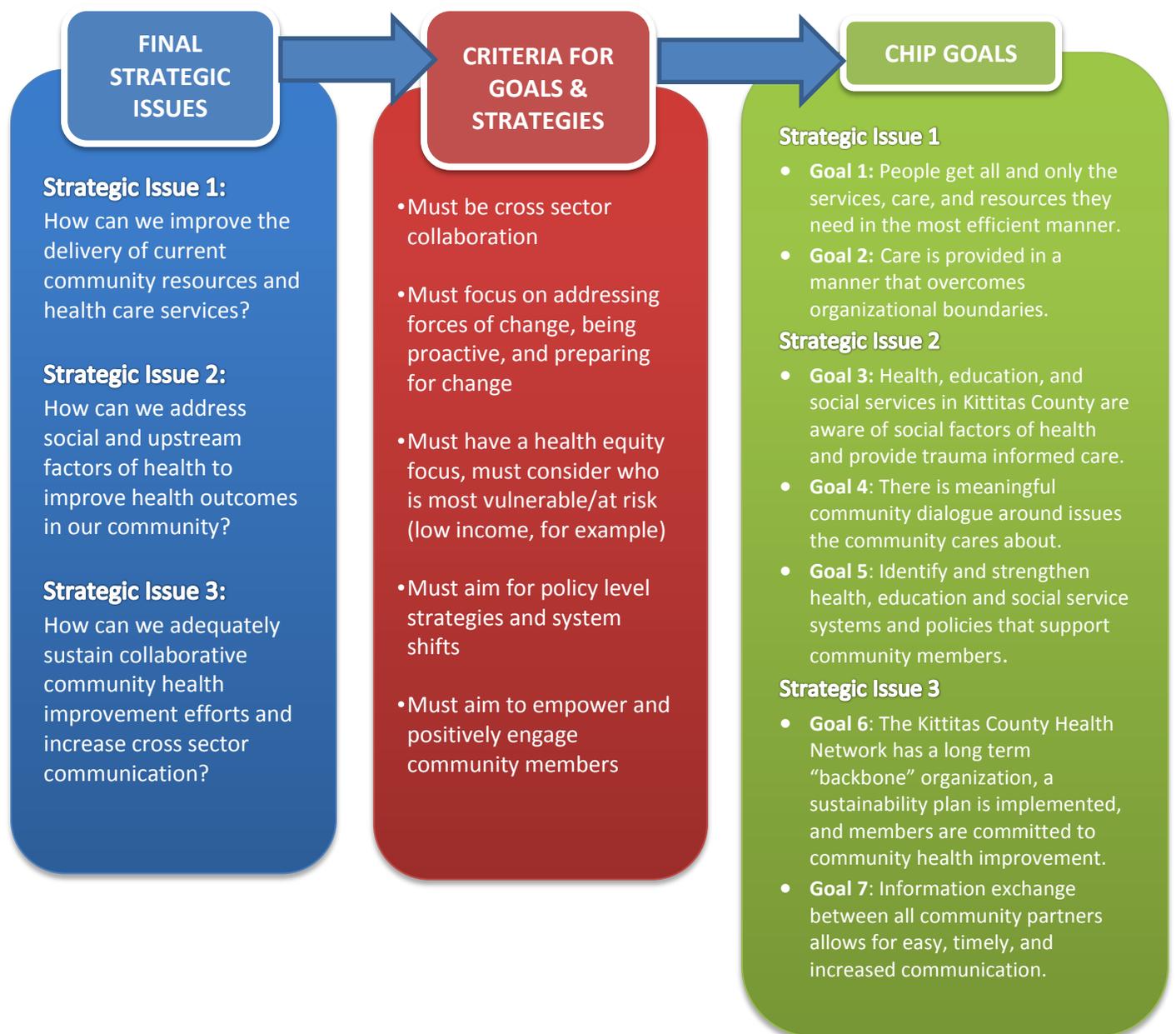
- Lack of providers—dental, mental health, and health care
- Issues with access to care (linkage to services, insurance)
- Need better communication between health providers
- Behavioral health needs (mental health and substance abuse) are increasing
- Concerning youth mental health trends (depression, anxiety, suicidal ideation)
- Higher rates of suicide than the state (common in rural areas)
- Low financial security (lack of jobs, high stress, low income)
- Higher education levels but disparities between those with degrees and those without
- Low incidence of premature death
- Good access to recreational opportunities
- Stress, housing, and poverty are high concerns
- Concerns about accessing health care and other services
- Shortage of affordable and safe housing
- Lack of child care availability
- Good sense of community and community resilience
- Food insecurity and obesity issues
- Generally good quality of life, but not for everyone
- Excessive drinking is a concern (binge drinking, alcohol related accidents)
- Increase in children in growing up in poverty
- Low teen pregnancy rates overall but ethnic disparities exist

Once the summary information was reviewed, the group conducted an exercise to create strategic health issues. The MAPP process defines “Strategic Issues” as “critical challenges that must be addressed in order for a community to achieve its (health) vision”. These issues are phrased as a question, in order to ensure future strategic activities will align as answers to those ultimate strategic questions. All community health improvement activities will fall under the “umbrella” of the strategic issues. The work group used a series of prioritization questions to narrow down the 1st draft of eight issues to three priority strategic issues:

- 1) How can we improve the delivery of current community resources and health care services?**
- 2) How can we address social factors and upstream factors to improve health outcomes in our community?**
- 3) How can we adequately sustain collaborative community health improvement efforts and increase cross sector communication?**

The work group then created criteria to guide the creation of draft goals that would answer the strategic questions. The goals were finalized in March 2018. The next steps are to create the strategies to achieve these goals. Each strategy will have an action plan with measurable objectives, timelines and agencies responsible for implementation. The finalized goals and objectives will become the community health improvement plan (CHIP). The CHIP will be available in June 2018 to be implemented by the Kittitas County Health Network in the form of their strategic plan.

The Strategic Issue Process: January – March 2018



Appendix A. Assessment Methods

The first step in the MAPP process was to convene a large work group of cross-sector agency and community partners. Individuals were recruited to ensure a broad representation of community interests and viewpoints within the local public health. From these partners, four sub-committees were formed to facilitate and oversee the four assessments outlined in the MAPP process. Two additional sub-committees were formed to oversee county-wide communication related to the assessment and evaluation of the MAPP process (what worked and what didn't). This document presents the results of the community health assessment that was conducted by KCPHD in collaboration with a CHA-CHIP Work Group (see page 2 for a list of members). Monthly work group and sub-committee meetings were held regularly over a six month period to complete the community health assessment.

Community Health Status Assessment(CHSA)

The CHSA sub-committee compiled indicators to create a snapshot of Kittitas County's health factors and the health outcomes they contribute to. A master list of core indicators was drawn from categories recommended by the MAPP guidance, the 2012 Kittitas County CHA, the County Health Rankings® and Community Commons® online data banks. Indicators were added that captured newly available datasets (example: childcare availability) or expanded on an issue in more detail (housing). Data for the indicator list were collected from primary and secondary sources: local public health data, county, state and national databanks. Secondary data sources were reviewed using weighted criteria for reliability, validity, accessibility and trendability. Finally, County Health Rankings® and Community Commons® were used to generate understandable charts, graphs and images to communicate data. Indicator data was then categorized by headings in the health outcomes model popularized by the County Health Rankings®. These indicators are summarized within the CHA and will be monitored over time between assessment cycles.

Community Themes and Strengths Assessment (CTSA)

The CTSA sub-committee worked with Dr. Rebecca Pearson and students of Central Washington University's public health program to administer several survey tools for qualitative and quantitative data collection. Survey questions were developed and administered through a variety of methods.

Online Survey

The CTSA sub-committee worked with Central Washington University students to develop community themes and strengths survey questions. Qualtrics® online survey software was used to generate a community health survey to be administered to the Kittitas County community. The online survey received a statistically valid sample of the Kittitas County population at 677 responses. However, the survey results were skewed in several areas: Ellensburg was oversampled compared to less populated areas. Females were oversampled and males were under-sampled. Oversampled higher incomes (\$50,000 and more), under sampled lower incomes (less than \$50K, especially \$15,000-35,000).

Slightly under sampled white, and oversampled non-white. Slightly under-sampled Hispanic/Latino.

Significantly over-sampled people with higher education levels.

In summary, a large sample was surveyed; however, several sub-sets of the population were not fully represented. In future community health assessment efforts, this will be countered by identifying focus groups or conducting key informant interviews to supplement survey data. In this assessment, the graphs summarizing online survey data results will show three categories of response:

“Agree” encompasses all “agree” or “strongly agree” responses.

“Neutral” which encompasses all “neither agree nor disagree” and “don’t know/doesn’t apply to me” responses.

“Disagree” encompasses all the “disagree” and “strongly disagree” responses.

Community Polling Stations

There were two types of polling activities done with the community: in person “dot” surveys and fill-in response paper surveys. The “dot” surveys were administered at local community events including Bite of the Burg, Kittitas County Farmer’s Market, Ellensburg Public Library Story Hour. Topics were pre-filled on an easel display and participants were asked to place dots next to the issues they were most concerned about. In addition, half sheets with open-ended questions with were placed at write-in polling stations. In total, 106 people were polled at community events or at the various polling stations around the county. Participants were from a variety of places: Ellensburg Public Library story time parents, Kittitas Valley Healthcare Health Fair participants, Bright Beginnings for Kittitas County parents and staff, Worksource clients and Job Club participants, Bite of the Burg participants, Kittitas County Farmer’s Market participants, Cle Elum Library patrons, local pizza business customers, Roslyn Library patrons, Kittitas County Public Health Department staff and customers, City of Ellensburg Memorial Pool patrons, Central Washington University students, Community Health of Central Washington patients and clients, and HopeSource clients). The results of the open ended surveys were evaluated for commonalities and themes. Due to the small numbers, the results are not representative of the entire county; instead they can be considered a singular cross section sample of the Kittitas County population. The results yield several commonalties with the online survey data results. Due to a difference in survey methodology, the paper surveys and the dot-survey questions from these activities could not be combined with online survey results to create composite scores, only compared and looked at generally for themes. For this assessment, graphs representing open-ended poll results will display the number of times an issue or topic was mentioned by respondents.

Photovoice

In addition to the online survey, CWU public health students used Photovoice®, a research method that helps people engage with an issue in their community by collecting photographic evidence to answer research questions. Students explored the surrounding community and took pictures to answer the following questions:

“What’s going on here that makes a healthy life easy or difficult?”

“What resources are available to help with (health issue)?”

“What is life like here, when it comes to (health issue)?”

“How is this community different from my home community, and how does that affect health and wellbeing?”

Data from the Photovoice project were compiled by CWU students and utilized in this assessment to support community survey results.

Local Public Health System Assessment (LPHSA)

The Local Public Health System Assessment (LPHSA) involves the use of a nationally recognized tool called the National Public Health Performance Standards Local Assessment Instrument. The LPHSA sub-committee designed a way to administer the tool in one two-hour meeting. The questions within the instrument were completed by a series of ten sub-committees formed to address each of the ten essential public health services being evaluated. Individuals were assigned to break-out groups and given a set time to complete the questions. Groups used a voting technique to come to consensus on each item within the tool. Scores were tabulated to create a competency score in each essential service area as well as an overall composite score for delivery of all ten services by the local public health system. Scores were also used to determine strengths, weaknesses and opportunities for improvement and summarized in a single document.

Forces of Change Assessment (FOCA)

The “Forces of Change” (FOC) are divided into three main categories:

Trends are patterns over time, such as diabetes incidence or unemployment cycles.

Factors are discrete elements, such as a community’s large ethnic population, a rural setting, or the jurisdiction’s proximity to a major roadway.

Events are one-time occurrences, such as a hospital closure, a natural disaster, or the passage of new legislation.

The FOC sub-committee designed a series of activities to garner community feedback on the forces of change in Kittitas County. Resident feedback regarding the forces of change in Kittitas County was gathered through CTSA polling activities. In addition, the FOC sub-committee completed an initial brainstorming session to generate an initial list of forces. Several theme categories arose such as “behavioral health” and “built environment”. The FOC sub-committee facilitated conducted an additional brainstorming session with the entire CHA-CHIP work group to expand upon the identified themes and continue adding forces. Participants were then asked to identify associated threats and opportunities for each of the forces of change. The results of these activities were compiled into a single document.

Citations

- 1 U.S. Census Bureau. *State and County Quick Facts*. Available at: <https://www.census.gov/quickfacts/fact/table/kittitascountywashington,US/PST045217> (Accessed January 13, 2018).
- 2 Sperling's Best Places. *Kittitas County, Washington Climate*. 2018. <https://www.bestplaces.net/climate/county/washington/kittitas> (Accessed January 13, 2018).
- 3 United States Drought Monitor. *Time Series*. Available at: <http://droughtmonitor.unl.edu/Data/Timeseries.aspx> (Accessed January 16, 2018).
- 4 Washington State University Extension. *Gardening*. 2018. Available at: <http://extension.wsu.edu/kittitas/gardening/> (Accessed January 16, 2018).
- 5 Office of Financial Management. *Growth Management Act population projections for counties:2010-2040*. 2017. Available at: <https://ofm.wa.gov/washington-data-research/population-demographics/population-forecasts-and-projections/growth-management-act-county-projections/growth-management-act-population-projections-counties-2010-2040-0> (Accessed January 18, 2018).
- 6 BERK Consulting. *Kittitas County: Population Projection Review and Analysis*. Seattle,WA: Berk Consulting, 2016. Available at: <https://www.co.kittitas.wa.us/uploads/cds/comp-plan/twenty-year/Population%20Projection%20Memo.pdf> (Accessed January 18, 2018)
- 7 Perrott, George St J., and Dorothy F. Holland. "Population trends and problems of public health." *The Milbank Quarterly* 83, no. 4 (2005): 569-608. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1468-0009.2005.00393.x> (Accessed January 18, 2018)
- 8 U.S. Census Bureau. *Urban and Rural Definitions*. October 1995. Available at: <https://www.census.gov/population/censusdata/urdef.txt> (Accessed January 18, 2018).
- 9 Kittitas County website. *Population of Cities within Kittitas County*. 2018. Available at: <https://www.co.kittitas.wa.us/about/population.aspx> (Accessed January 18, 2018).
- 10 Adaire-Jones, Carol, Timothy S. Parker, Mary Ahearn, Ashok K. Mishra, and Jayachandran N. variyam. *Health Status and Health Care Access of Farm and Rural Populations*. ERS Report Summary, Economic Research Service, U.S. Department of Agriculture, 2009. Available at: https://www.ers.usda.gov/webdocs/publications/44424/9370_eib57_reportsummary_1.pdf?v=41136 (Accessed January 18, 2018)
- 11 U.S. Census Bureau: American Fact Finder- Community Facts. Available at: https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkmk (Accessed January 16, 2018).
- 12 Central Washington University: Office of Institutional Research. *Central Washington University Student Enrollment Counts, Ellensburg Service Campus, Fall 2017 and Winter 2018*.
- 13 Colby, Sandra L., and Jennifer M. Ortman. *The Baby Boom Cohort in the United States:2012 to 2060, Population Estimates and Projections*. US Census Bureau, May 2014. Available at: <https://www.census.gov/prod/2014pubs/p25-1141.pdf> (Accessed January 19, 2018).
- 14 Guzman, Gloria. *Household Income: 2016*. American Community Survey Brief, US Census, September 2017. Available at: <https://www.census.gov/content/dam/Census/library/publications/2017/acs/acsbr16-02.pdf>
- 15 U.S. Census Bureau. *Per Capita Income*. Census.gov Quick facts. 2018. <https://www.census.gov/quickfacts/fact/note/US/INC910216> (Accessed January 26, 2018).
- 16 Employment Security Department Washington State. *Kittitas County Profile*. September 2016. <https://fortress.wa.gov/esd/employmentdata/reports-publications/regional-reports/county-profiles/kittitas-county-profile#labor> (Accessed January 20, 2018).
- 17 Employment Security Department Washington State. *Kittitas County Profile*. October 2017. <https://esd.wa.gov/labormarketinfo/county-profiles/kittitas> (Accessed January 19, 2018).
- 18 U.S. Census Bureau. American Fact Finder. *Occupation by Sex for the Civilian employed Population 16 Years and Over, 2016 estimates*. Available at: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF> (Accessed January 19, 2018).

- 19 U.S. Census Bureau. *Race & Ethnicity*. Census.gov. January 2017. Available at:<https://www.census.gov/mso/www/training/pdf/race-ethnicity-onepager.pdf> (Accessed January 22, 2018).
- 20 University of Wisconsin Population Health Institute. *County Health Rankings and Roadmaps: What and Why We Rank*. 2018. <http://www.countyhealthrankings.org/explore-health-rankings/what-and-why-we-rank> (Accessed January 23, 2018).
- 21 University of Wisconsin Population Health Institute. *County Health Rankings and Roadmaps*. 2018. Available at:http://www.countyhealthrankings.org/app/washington/2018/rankings/kittitas/county/factors/overall/snap_shot (Accessed January 22, 2018).
- 22 Washington State Department of Health, Center for Health Statistics. *Death Certificate Data, 1990–2016*. Community Health Assessment Tool (CHAT). August 2016. (Accessed January 22, 2018).
- 23 Washington State Department of Health, Center for Health Statistics, *Death Certificate Data, 1990–2016*. Community Health Assessment Tool (CHAT), October 2017. (Accessed January 22, 2018).
- 24 Centers for Disease Control and Prevention. *FastStats-Life Expectancy*. Available at: <https://www.cdc.gov/nchs/fastats/life-expectancy.htm> (Accessed January 22, 2018)
- 25 Washington State Department of Health, Center for Health Statistics. *WA Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS) 1987-2015*. Community Health Assessment Tool (CHAT), August, 2016.
- 26 Kotelchuck, Milton PhD, MD. *Overview of Prenatal Care Utilization Index*. Chapel Hill, NC: Department of Maternal and Child Health, The University of North Carolina, September, 1994. Available at: http://www.ipodr.org/Overview_APCUIndex.pdf
- 27 Washington State Department of Health, Center for Health Statistics. *Birth Certificate Data, 1990–2016*. Community Health Assessment Tool (CHAT), June 2017.
- 28 Hack M, Klein NK, Taylor HG. *Long-term developmental outcomes of low birth weight infants*. *Future Child*.1995;5:176-196. Available at: <https://futureofchildren.princeton.edu/publications/journals/article/index.xml?journalid=60&articleid=379>
- 29 Hofferth, Sandra L., Cheryl D. Hayes, and National Research Council. *The children of teen childbearers*. (1987). Available at: <https://www.ncbi.nlm.nih.gov/books/NBK219236/>
- 30 Centers for Disease Control and Surveillance. *CDC-BRFSS*. January 2018. <https://www.cdc.gov/brfss/index.html> (Accessed January 25, 2018).
- 31 Looking Glass Analytics. *Healthy Youth Survey 2016, Report of Participating Schools: Kittitas County, Grade 10. Results Report*. Olympia, WA: Looking Glass Analytics, 2017.
- 32 U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Available at: <https://www.surgeongeneral.gov/library/reports/50-years-of-progress/index.html>
- 33 Read, Robin. *The Health of Kittitas County. Community Health Assessment*. Ellensburg, WA: Kittitas County Public Health Department, December 2012. Available at: <https://www.co.kittitas.wa.us/uploads/documents/health/assessment/2012-Kittitas-County-Community-Health-Profile.pdf>
- 34 Community Commons. *Community Health Indicator Report*. www.communitycommons.org. 2018. Available at: <https://assessment.communitycommons.org/CHNA/SelectArea.aspx?reporttype=libraryCHNA>
- 35 National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: Centers for Disease Control and Prevention, 2012. Available at: <https://www.surgeongeneral.gov/library/reports/preventing-youth-tobacco-use/full-report.pdf>
- 36 U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2015-2020*. 8th Edition, Available at: <https://health.gov/dietaryguidelines/2015/guidelines/> (Accessed January 25,2018)
- 37 Centers for Disease Control and Prevention. *CDC-Current Physical Activity Recommendations*. November 29, 2016. https://www.cdc.gov/cancer/dcpc/prevention/policies_practices/physical_activity/guidelines.htm (accessed January 28, 2018).
- 38 Centers for Disease Control and Prevention. *The Health Effects of Overweight and Obesity*. June 5, 2015.

- <https://www.cdc.gov/healthyweight/effects/index.html> (Accessed January 29, 2018).
- 39 Summit Behavioral Health. *Health Effects of Drug and Alcohol Abuse*. 2018. <https://www.summitbehavioralhealth.com/resources/articles/health-consequences/> (Accessed January 29, 2018).
- 40 Saisan, J., MSW, M., MA Smith, L. Robinson, and J., PhD Segal. *Substance Abuse and Mental Health Issues: Dealing with Drug or Alcohol Addiction and Co-Occurring Mental Health Problems*. December 2017. <https://www.helpguide.org/articles/addictions/substance-abuse-and-mental-health.htm> (Accessed January 29, 2018).
- 41 Centers for Disease Control and Prevention. *Alcohol and Public Health*. January 7, 2013. <http://www.cdc.gov/alcohol/index.htm> (Accessed February 1, 2018).
- 42 National Institute on Drug Abuse. *Principles of Adolescent Substance Use Disorder: Introduction*. Available at: <https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide/introduction> (Accessed February 3, 2018)
- 43 Flowers, NT, TS Naimi, RD Brewer, RW Elder, RA Shults, and R. Jiles. *Patterns of alcohol consumption and alcohol-impaired driving in the United States*. *Alcoholism, Clinical and Experimental Research*, 2008 (32): 639-644. Available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1530-0277.2008.00622.x>
- 44 Washington State Department of Health, Center for Health Statistics. *Behavioral Risk Factor Surveillance System (BRFSS) 2012-2016*. Community Health Assessment Tool (CHAT), October 2017.
- 45 Center for Disease Control and Prevention. *Behavioral Risk Factor Surveillance System; Comparability of Data BRFSS 2016*. July 2017. Available at: https://www.cdc.gov/brfss/annual_data/2016/pdf/compare_2016.pdf (Accessed February 1, 2018).
- 46 Centers for Disease Control and Prevention. *Increases in drug and opioid overdose deaths - United States, 2000-2014*. *Morbidity and Mortality Weekly Report (MMWR) 64(50)* (Centers for Disease Control and Prevention), 2016: 1378-82. Available at: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm> (Accessed February 3, 2018)
- 47 Washington State Department of Health, Center for Health Statistics. *Washington State Drug Overdose Quarterly Report: Drug Overdose Deaths 2017 First Three Quarters and 2016 Maps*. Community Health Assessment Tool (CHAT), February 12, 2018. (Accessed March 31, 2018)
- 48 Meade, CS, and JR Ickovics. *Systematic review of sexual risk among pregnant and mothering teens in the USA: Pregnancy as an opportunity for integrated prevention of STD and repeat pregnancy*. *Social Science & Medicine*, 2005 (60): 661-678. Available at: <https://www.sciencedirect.com/science/article/pii/S027795360400276X> (Accessed February 3, 2018)
- 49 U.S. Department of Health & Human Services, Agency for Healthcare Research & Quality. *Chapter 9. Access to Healthcare*. AHRQ Archive. October 2014. <https://archive.ahrq.gov/research/findings/nhqrdr/nhdr11/chap9.html> (Accessed February 5, 2018).
- 50 Robert Wood Johnson Foundation. *What is the link between having health insurance and getting adequate health care?* Health policy snapshot, Princeton: Robert Wood Johnson Foundation (RWJF), August, 2011. Available at: https://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf71437
- 51 World Health Organization. *WHO: What is quality of care and why is it important?* 2018. Available at: http://www.who.int/maternal_child_adolescent/topics/quality-of-care/definition/en/ (Accessed February 5, 2018).
- 52 Washington State Department of Health. *Kittitas County Chronic Disease Profile*. May 2017. Available at: <https://www.doh.wa.gov/portals/1/Documents/Pubs/345-271-ChronicDiseaseProfileKittitas.pdf>. (Accessed February 6, 2018)
- 53 Center for Disease Control, U.S. Department of Health and Human Services. *Preventing Chronic Diseases: Investing Wisely in Health—Screening to Prevent Cancer Deaths*. 2008. <http://wellnessproposals.com/health-care/handouts/cancer-and-cancer-prevention/health-screening-to-prevent-cancer-deaths.pdf> (Accessed February 6, 2018).
- 54 Moy E, Chang E, Barrett M, et al. *Potentially preventable hospitalizations - United States, 2001-2009*. *MMWR Surveillance Summary*, 2013;62 : 139-143. Available at: <https://www.cdc.gov/mmwr/preview/mmwrhtml/su6203a23.htm> (Accessed February 6, 2018)
- 55 Chopra, I, TL Wilkins, and U Sambamoorthi. *Ambulatory Care Sensitive Hospitalizations among Medicaid Beneficiaries with Chronic Conditions*. *Hospital Practice* 44(91), 1995: 48-59.

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4869963/> (Accessed February 6, 2018)
- 56 Pampel, Fred C., Patrick M. Krueger, and Justin T. Denney. *Socioeconomic disparities in health behaviors*. Annual review of sociology 36 (2010): 349-370. Available at: <https://www.annualreviews.org/doi/abs/10.1146/annurev.soc.012809.102529> (Accessed February 7, 2018)
- 57 Zajacova A, Everett BG. *The nonequivalent health of high school equivalents*. Social Sciences Quarterly, 2014 (95): 221-238. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/25076799> (Accessed February 7, 2018)
- 58 Zimmerman EB, Woolf SH, Haley A. *Understanding the relationship between education and health: A review of the evidence and an examination of community perspectives*. AHRQ Publication No. 15-0002, Rockville, MD: Agency for Healthcare Research and Quality and Office of Behavioral and Social Sciences Research, National Institutes of Health, 2015. Available at: <https://www.ahrq.gov/professionals/education/curriculum-tools/population-health/zimmerman.html> (Accessed February 7, 2018)
- 59 U.S. Census Bureau, American Fact Finder. *Median Earning by Educational Attainment, 2012-2016, American Community Five Year Estimates*. Available at: https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml# (Accessed February 7, 2018).
- 60 DeWalt, D, MD, MPH, N, PhD Berkman, S, MD, MPH Sheridan, and KN, PhD and Pignone, MP, MD, MPH Lohr. *Literacy and Health Outcomes: A Systematic Review of the Literature*. Journal of General Internal Medicine, 2004;Dec19 (12): 1228-1239. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1492599/>
- 61 Robert Wood Johnson Foundation. How does employment - or unemployment - affect health? Health Policy Snapshot Issue Brief, Princeton, March 2013. Available at: https://www.rwjf.org/content/dam/farm/reports/issue_briefs/2013/rwjf403360
- 62 An J, Braveman P, Dekker M, Egerter S, Grossman-Kahn R. *Work, Workplaces and Health*. Issue Brief, Robert Wood Johnson Foundation, 2011. Available at: https://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf70459
- 63 Braveman P, Egerter S, Barclay C. .h Issue Brief No. 4, Princeton: Robert Wood Johnson Foundation (RWJF), 2011.
- 64 Ball State University. *Study finds students skew poverty rates in some college towns*. October 23, 2008. Available at: <https://cms.bsu.edu/news/articles/2008/10/study-finds-students-skew-poverty-rates-in-some-college-towns>
- 65 Cohn, D'vera. *College Students Count in the Census, but Where?* Pew Research Center. March 15, 2010. Available at: <http://www.pewsocialtrends.org/2010/03/15/college-students-count-in-the-census-but-where/>
- 66 Google Dictionary. *Social Capital Definition*. 2018.
- 67 Child Care Aware of Washington. *Child Care Aware of Washington County Profiles*. January 2017. Available at: www.childcarenet.org (Accessed February 8, 2018).
- 68 Washington State Department of Early Learning. *Child Care Check*. Available at: <https://www.findchildcarewa.org> (Accessed December 8, 2017).
- 69 Centers for Disease Control and Prevention. *Protective Factors, Adolescent & School Health*. <https://www.cdc.gov/healthyyouth/protective/index.htm> (Accessed February 7, 2018).
- 70 House, JS. *Social isolation kills, but how and why?* Psychosomatic Medicine, 2001;63: 273-274. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/11292275> (Accessed February 10, 2018)
- 71 Egerter S, Barclay C, Grossman-Kahn R, Braveman P. *Violence, social disadvantage and health. Exploring the Social Determinants of Health*. Issue Brief No. 10., Princeton: Robert Wood Johnson Foundation (RWJF), 2011. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3863696/> (Accessed February 10, 2018)
- 72 Heron, Melanie, PhD. *Deaths: Leading Causes for 2015*. National Vital Statistics Report, Volume 66, Number 5, Centers for Disease Control and Prevention Division of Vital Statistics, 2017. Available at: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_05.pdf
- 73 Soriano, A, BS, A, MA Starks, I, PhD Sharkova, and D, PhD Mancuso. *Risk and Protection Profile for Substance Abuse Prevention In Washington Locales: Locale 18*. Washington State Department of Health and Social Services, Research & Analysis Division, December, 2017. Available at: <https://www.dshs.wa.gov/data/research/research-4.53-18.pdf> (Accessed February 10, 2018)

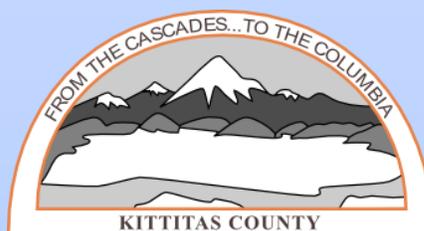
- 74 CA, Pope, Dockery DW, and Schwartz J. *Review of epidemiological evidence of health-effects of particulate air-pollution*. Inhalation Toxicology, 1995; 7(1): 1-18. Available at: <https://www.tandfonline.com/doi/abs/10.3109/08958379509014267> (Accessed February 14, 2018)
- 75 Centers for Disease Control and Prevention. *Disease and Impact, the Safe Water System, CDC*. May 2, 2014. <https://www.cdc.gov/safewater/disease.html> (Accessed February 14, 2018).
- 76 Environmental Protection Agency. *Overview of Particle Air Pollution (PM2.5 and PM10)*. PowerPoint Presentation, Air Quality Communication Workshop. San Salvador, El Salvador: Environmental Protection Agency, April 16, 2012.
- 77 United States Environmental Protection Agency. *SDWIS Overview, Envirofacts, US EPA*. March 7, 2017. <https://www.epa.gov/enviro/sdwis-overview> (Accessed February 8, 2018).
- 78 Kittitas County Public Health Department: Food Safety Program. *Food Establishment Inspection Data*. 2010-2017. (Accessed February 14, 2018)
- 79 National Center for Environmental Health. *Impact of the Built Environment on Health*. Fact Sheet, Centers for Disease Control and Prevention, June 2011. Available at: <https://www.cdc.gov/nceh/publications/factsheets/impactofthebuiltenvironmentonhealth.pdf>
- 80 Hoehner, Christine M., et al. "Commuting distance, cardiorespiratory fitness, and metabolic risk." *American journal of preventive medicine* 42.6, 2012: 571-578. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3360418/> (Accessed February 15, 2018)
- 81 U.S.Census, American Fact Finder. *Educational Attainment, 2012-2016 American Community Survey 5-Year Estimates*. Available at: https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml# (Accessed February 8, 2018).
- 82 U.S. Census Bureau, American Fact Finder. *Poverty Status in the Past 12 Months of Families, 2012-2016 American Community Survey 5 year Estimates*. https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml# (Accessed February 8, 2018).
- 83 Washington State Department of Health. *Washington State Cancer Registry-Incidence data for diagnosis years 1992-2015*. Community Health Assessment Tool (CHAT), 2018.
- 84 Fergusson DM, Boden JM, Horwood LJ. *Exposure to single parenthood in childhood and later mental health, educational, economic, and criminal behavior outcomes*. Archives of General Psychiatry, 2007;64: 1089-1095. Available at: <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/482426> (Accessed February 19, 2018)
- 85 Weitoft GR, Haglund B, Hjern A, Rosén M. *Mortality, severe morbidity and injury among long-term lone mothers in Sweden*. International Journal of Epidemiology, 2002; 31: 573-80. Available at: <http://europemc.org/abstract/med/12055157> (Accessed February 21, 2018)
- 86 Ringbäck Weitoft G, Burström B, Rosén M. *Premature mortality among lone fathers and childless men*. Social Science and Medicine, 2004;59: 1449-1459. Available at: <http://europemc.org/abstract/med/15246173> (Accessed February 21, 2018)
- 87 Wille N, Bettge S, Ravens-Sieberer U, BELLA Study Group. *Risk and protective factors for children's and adolescents' mental health: Results of the BELLA study*. European Child and Adolescent Psychiatry, 2008;17: 133-147. Available at: https://www.rki.de/DE/Content/Gesundheitsmonitoring/Studien/Kiggs/Basiserhebung/Fachartikel/Eur_Child_Adolesc_Psychiatry_2008_17_Suppl_1:133-147.pdf?__blob=publicationFile (Accessed February 21, 2018)
- 88 Neuman, T, J Cubanski, and J and Damico, A Huang. *The Rising Cost of Living Longer: Analysis of Medicare Spending by Age for Beneficiaries in Traditional Medicare*. Online Report, Henry J. Kaiser Family Foundation, 2015. Available at: <https://www.kff.org/medicare/report/the-rising-cost-of-living-longer-analysis-of-medicare-spending-by-age-for-beneficiaries-in-traditional-medicare/> (Accessed February 22, 2018)
- 89 Kazis LE, Ren XS, Lee A, Skinner K, Rogers W, Clark J, et al. *Health status in VA patients: Results from the Veterans Health Study*. American Journal of Medical Quality, 1999;14: 28-38. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/10446661> (Accessed February 23, 2018)
- 90 JA, Boscarino. *Posttraumatic stress disorder and mortality among U.S. Army veterans 30 years after military service*. Annals of Epidemiology, 2006;16: 248-56. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/16099672> (Accessed February 24, 2018)

- 91 Schnurr PP, Spiro A, 3rd, Paris AH. *Physician-diagnosed medical disorders in relation to PTSD symptoms in older male military veterans*. *Health Psychology*, 2000;19: 91-97. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/10711592> (Accessed February 24, 2018)
- 92 U.S. Census Bureau, American Fact Finder. *Veteran Status, 2012-2016 American Community Survey 5 -Year Estimates*. Available at: https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml# (Accessed February 19, 2018).
- 93 Brooks-Gunn, Jeanne, and Greg J. Duncan. *The effects of poverty on children*. *The future of children* (1997): 55-71. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/9299837> (Accessed February 24, 2018)
- 94 Duncan, Greg J., W. Jean Yeung, Jeanne Brooks-Gunn, and Judith R. Smith. *How much does childhood poverty affect the life chances of children?*. *American sociological review* (1998): 406-423. Available at: https://www.jstor.org/stable/2657556?seq=1#page_scan_tab_contents (Accessed February 26,2018)
- 95 U.S. Department of Justice Civil Rights Division. *2010 ADA Regulations*. Available at: https://www.ada.gov/2010_regs.htm (Accessed February 20, 2018).
- 96 Megan S. Pacey *Gender and Sexual Minority Youth in Nonmetropolitan Communities: Individual- and Community-Level Needs for Support*. 2016. *Families in Society: The Journal of Contemporary Social Services*: 2016, Vol. 97, No. 2, pp. 77-85. Available at: <http://familiesinsocietyjournal.org/doi/10.1606/1044-3894.2016.97.11?code=afcf-site> (Accessed February 27,2018)
- 97 Hafeez, H, M Zeshan, M tahir, M Jahan, and S Naveed. *Health Care Disparities Among Lesbian, Gay, Bisexual, and Transgender Youth: A Literature Review*. *Cureus*, 2017 Apr; 9(4)e1184: Published online 2017 Apr 20. doi: 10.7759/cureus.1184. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5478215/> (Accessed February 27,2018)
- 97 Thurston RC, Kubzansky LD, Kawachi I, Berkman, LF. *Do Depression and Anxiety Mediate the Link Between Educational Attainment and CHD?* *Psychosomatic Medicine*, 2006 Jan-Feb, 68(1): 25-32. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/16449408> (Accessed February 28,2018)
- 98 Morrell, S., Taylor, R., & Kerr, C. *Jobless. Unemployment and young people's health*. *Medical Journal of Australia*, 1998;168(5): 236-240. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/9539904> (Accessed February 28, 2018)



507 N. Nanum St. Ste. 102
Ellensburg, WA 98926
509-962-7515

Website: www.co.kittitas.wa.us/health/



For more information or extra copies of this report, please contact the Kittitas County Public Health Department by phone (509) 962-7515, or by mail at 507 N. Nanum St. Suite 102, Ellensburg, WA 98926.

To view this report online visit: <https://www.co.kittitas.wa.us/health/reports>