
KING COUNTY PUBLIC HOSPITAL DISTRICT #4
COMMUNITY HEALTH NEEDS ASSESSMENT

2023 – 2025



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Paper Copies of this document can be obtained in person: Administrative Offices, Snoqualmie Valley Hospital

Section 1: Background

This document presents Snoqualmie Valley Health’s (SVH) 2023-2025 Community Health Needs Assessment (CHNA). The Patient Protection and Affordable Care Act (ACA), commonly known as “Obama Care,” enacted on March 23, 2010, added a requirement that every not-for-profit hospital in the State conduct a CHNA once every three years. It further required that each hospital adopt an implementation plan to meet the community health needs identified through the CHNA. While SVH is a publicly owned hospital, and not a 501 (c)(3), with a commitment to providing the best quality healthcare for its community, SVH finds value in the process of collecting and evaluating data and defining priorities for health improvement. Consistent with federal requirements, this CHNA has an emphasis on the needs of that portion of our community that is at risk for poor health outcomes due to geographic, language, financial, or other barriers, commonly referred to as social determinants of health. It also includes an evaluation of the impacts of COVID on our community. SVH additionally engaged community stakeholders to discuss and prioritize unmet needs.

About Snoqualmie Valley Health

SVH is owned and operated by King County Public Hospital District No 4. It was voted into existence by the community in 1972. Public Hospital Districts are community-created, governmental entities authorized by State law to deliver health services—including but not limited to acute hospital care. Owned and governed by local citizens, hospital districts tailor their services to meet the unique needs of their individual communities. SVH was originally built in 1983 and was replaced in 2015 with a 70,000 square foot facility. SVH’s mission is to promote and improve the health and well-being of people in our community by providing quality care in a collaborative environment. SVH provides expert, advanced, and local healthcare. In addition to SVH, which is a federally designated Critical Access Hospital (CAH), the District includes four clinics: two primary care, an urgent care clinic, and a specialty care clinic, as well as a physical therapy and rehabilitation center. SVH is a designated Level 5 Trauma Center, a Level 2 Cardiac Facility and Level 3 Stroke Facility. Services include Emergency and Trauma Care, Primary Care, Inpatient and Outpatient Rehabilitation, Lab, Diagnostic Imaging and Endoscopy services. Specialty services include cardiology gastroenterology, mental health, and pediatric care.

SVH's strategic plan calls for us to build a health system that is a center for innovation, creating partnerships with the community to provide the highest quality care. Current strategic plan areas of focus include the following

- Build essential infrastructure to support a healthy future.
- Recruit and retain the highest caliber staff.
- Develop programs and infrastructure to meet and support health care needs of the community.
- Develop a brand of the future and define the “New SVH.”
- Ensure the financial resources to support our vision.

SVH will incorporate priorities identified in this CHNA into the Strategic Plan to create a healthier community.

Snoqualmie Valley Health Mission and Vision

Mission:

Promote and improve the health and well-being of people in our community by providing quality care in a collaborative environment.

Vision:

Our community will become the healthiest in the nation.

Section 2: Methodology

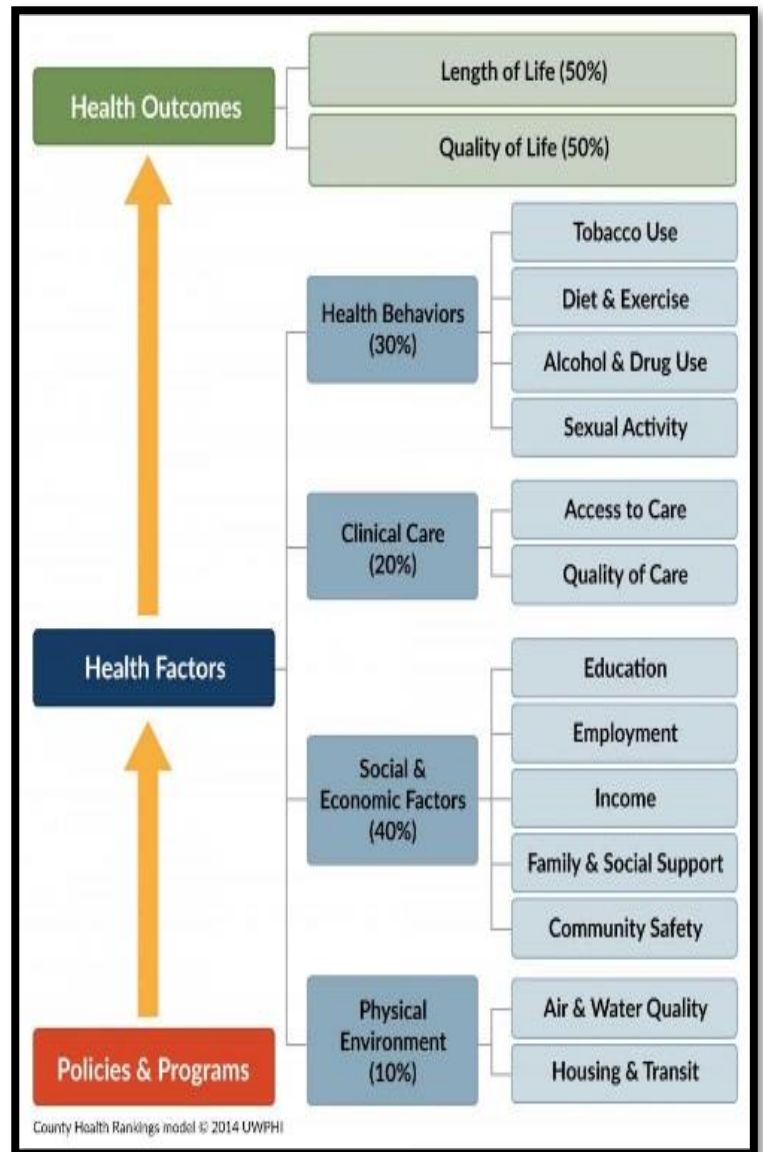
In preparing this CHNA, SVH leveraged its collaborative partnerships with local organizations to guide identification and quantification of community needs. A community survey provided further insight into the needs, priorities, and experiences of the Snoqualmie Valley community. Survey participants were identified by SVH and included community members, staff, elected officials, and community organizations representing public health, behavioral health, education, local businesses, social services, long-term care, youth focused agencies, faith-based organizations, and healthcare entities.

Exhibit 1: Robert Wood Johnson Health

The survey and data collection process paralleled the Robert Wood Johnson Foundation’s Health Rankings Model, shown in **Exhibit 1**. This model depicts the primary determinants of community and individual health, and the interconnectedness of physical, social, economic, educational, behavioral, and clinical factors that contribute to the health of communities.

Data Sources

This CHNA utilized data from multiple sources, which are detailed in the Appendix at the end of this report. As identified in **Section 3**, the SVH Service Area only represents 2% of the King County population. As such, County data likely does not provide an accurate picture of the Service Area population and needs. When possible, data is provided at the Service Area level and/or by individual zip codes/cities within the Service Area. When necessary to accommodate specific data sources, other proxy regions/areas most closely representing the Service Area were used. This allows not only for a clearer picture of the specific needs in our community but also allows for specific comparisons to King County and the rest of the State. The details on each of the Service Area proxies used are also included in Appendix 1.



Section 3: SVH’s 2019-2021 CHNA Accomplishments and the Impact of COVID

COVID-19 Response

SVH’s 2019 CHNA and Implementation Plan was “set-aside” for a period due to the impact of COVID-19 on our community and hospital. In fact, as of June 2022, both King County and Washington State, once again, report high levels of community transmission. Despite these numerous challenges, SVH was able to make significant progress on its 2019 CHNA priorities, while at the same time playing a leadership role in COVID mitigation and vaccinations, as well as access to care within our community.

Like all hospitals across the nation, SVH was significantly impacted by COVID, including Washington’s Stay at Home order. This order required that we quickly innovate to transition our clinics from in-person to telehealth, and that we prepare for significant changes to the hospital and staffing to accommodate anticipated increases in volumes, enhanced infection control and patient and staff safety protocols. As COVID extended into 2021, staff burnout and State and Federal vaccine mandates compounded staff shortages.

SVH has continued to quickly adapt to challenges in order to best serve the community. SVH also expanded physical

As of June 2022, SVH provided:
17,394 COVID tests
30,579 COVID vaccines

Exhibit 2

SVH COVID-19 Mitigation Strategies

- Expanded HVAC system to accommodate negative air pressure and admitted COVID positive patients to SVH medical unit; contributing to the Statewide bed capacity and ability to care for critical patients.
- Established drive through COVID testing and vaccine program
- Performed telephone, video, and curbside visits for all COVID symptomatic patients
- Instituted an entire team dedicated to COVID response and community support including a COVID physician to evaluate patients, interpret results, consult on care, and provide treatment to those in need.
- Launched a COVID Rx program which assesses, diagnoses, and provides therapeutic treatment to patients suffering from COVID.
- Focused outreach to minority populations to increase health equity around COVID vaccines

capacity by building specialized negative pressure rooms, and creating new outpatient, curbside, and virtual options for testing and treating patients. SVH additionally partnered with Public Health Seattle-King County to distribute vaccines to the community, including outreach for hard to reach populations. **Exhibit 2** identifies additional COVID-19 mitigation strategies implemented by SVH.

COVID’s impact on the State, King County and our Service Area has been both real and measurable. As identified in **Table 1** and **Table 2**, at the time of this writing, there have been over 1.6 million total

cases of COVID-19 in Washington State, and nearly 500,000 in King County, resulting in more than 13,000 deaths.

Table 1 COVID-19 Indicators - Counts		
	King County	WA State
Total Cases	446,957	1,617,208
Total Hospitalization	12,295	63,755
Total Deaths	2,841	13,056
7 Day Case Rate per 100,000	327	233

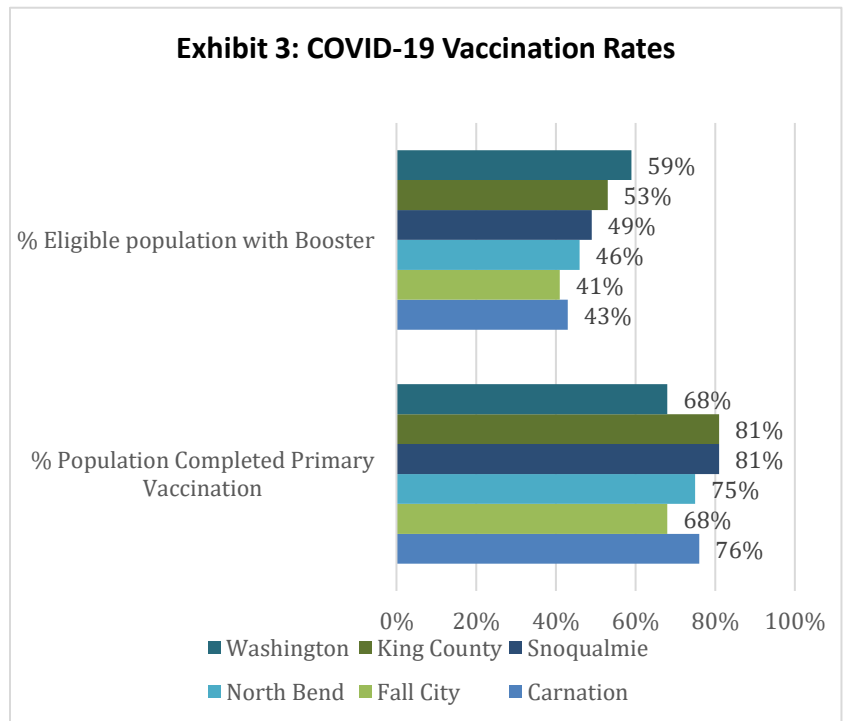
County COVID-19 Dashboard. Data updated June 12, 2022
 Source: Washington DOH COVID-19 Dashboard, Public Health Seattle-King County

Table 2 COVID-19 Indicators Service Area Rates			
	Cases per 100,000	Hospitalizations per 100,000	Deaths per 100,000
Carnation	12,516	342	38
Fall City	12,602	231	0
North Bend	16,480	415	181
Snoqualmie	16,538	269	38
King County	19,769	543	126
Washington	21,003*	828*	170*

*Calculated using cumulative counts

As identified in **Exhibit 3**, while Washington State and King County have had high rates of uptake for completion of the primary vaccination series (68% and 81% of eligible populations, respectively). Uptake of booster series is significantly lower, (59% and 53%), a trend also reflected in the Service Area.

Although most cases of COVID-19 resolve in a matter of weeks, the number of people suffering from “Long-COVID” is increasing. While not fully understood at this point, it is well documented that even minor and asymptomatic COVID-19 infections can exacerbate pre-existing chronic conditions and can cause debilitating physical and cognitive symptoms that can impact a person’s quality of life and ability to work, for months or even years after the initial infection. The Centers for Disease Control and Prevention’s National Center for Immunization and Respiratory Diseases (NCIRD), Division of Viral Diseases estimates that over 13% of all COVID-19 patients will have long-COVID symptoms one month after resolution of initial infection, with up to 30% of patients who were hospitalized experiencing



symptoms six months after initial infection. While much of the focus has been on COVID itself, we now know that the pandemic also had a profound impact on behavioral and mental health. The mental health effect of COVID in the State mirror trends seen across the United States. According to the US Centers for Disease Control and Prevention's Youth Risk Behavioral Survey Data Summary & Trends Report, "persistent feelings of sadness or hopelessness" increased by 40% from 2009 to 2019 among US high school students. Mental health professionals and organizations have been vocal about how the uncertainty, anxiety, changes in routine, and increased stress and isolation, have exacerbated mental health conditions in youth and adults alike.

In addition to the COVID mitigation strategies above, and in response to these expected long-term impacts of COVID on health, SVH developed and implemented innovative means of increasing access to physical and behavioral health care for Service Area residents. This included expanding behavioral health, primary care, urgent care, and telehealth services. Specific accomplishments included:

- Hiring two new primary care providers to address the lack of access to primary care in our community.
- Implementing telemedicine visits and services to reach patients who were unable to seek care outside of their homes.
- Substantial growth in our behavioral health program, which is now fully integrated with primary care, including increasing the program by 2.2 full-time employees.
- Hiring a pediatrician in the primary care clinic.
- Building and opening a new Urgent Care clinic with four treatment rooms.

Each of these above activities and accomplishments, while not anticipated in our 2019 CHNA, are fully expected to help SVH continue to "move the needle" on the priorities included in our 2020-2022 CHNA, which are included in **Table 3**. Also included in **Table 3** are additional targeted strategies implemented specifically to address each of these CHNA priorities.

Table 3: Snoqualmie Valley Health 2019 Priorities and Accomplishments

Priority	Activities and Progress to Date
Reduce risk factors affecting health including: <ul style="list-style-type: none"> ▪ Cigarette smoking ▪ Obesity ▪ Hypertension ▪ High blood cholesterol ▪ Low fruit & vegetable consumption 	<ul style="list-style-type: none"> ▪ Promoted local farmers markets and small farm produce opportunities to improve awareness of local fruit and vegetable opportunities ▪ Participated in the Eastside Health Network and actively engaged to reduce risk factors in community
Increase preventive care screenings and vaccinations: <ul style="list-style-type: none"> ▪ Flu shot for those 65+ ▪ Colorectal cancer screenings for those 50-70 ▪ Mammograms every two years ▪ Pap tests every three years 	<ul style="list-style-type: none"> ▪ Provided more flu vaccine than the prior three years combined ▪ Increased the number of annual wellness exams performed and included phone visits to improve exam completion rates. ▪ Increased the colonoscopy rate and invested in the screening program by hiring a dedicated nurse and improved referral coordination
Reduce the burden of chronic conditions such as: <ul style="list-style-type: none"> ▪ Diabetes ▪ Chronic respiratory disease ▪ Arthritis Reduce rates of death from: <ul style="list-style-type: none"> ▪ Cancer ▪ Diabetes 	<ul style="list-style-type: none"> ▪ Hired two RN Care Coordinators to address chronic disease management in primary care ▪ Established a transitional care program assisting patients in the transition from hospital based acute or post-acute care to the outpatient setting, connecting with and providing primary care to ensure a successful transition.

Section 4: SVH’s Service Area and Community Profile

Geography

SVH’s Service Area (shown in the teal color in Exhibit 4) parallels the legal boundaries of King County Public Hospital District No 4. It includes the towns of North Bend (98045); Snoqualmie (98065); Carnation (98014); Fall City (98024); and Preston (98050)

Because SVH’s Service Area represents only 2% of King County’s total population, we recognize that data at the County level does not accurately reflect the community.

Population

Over the period of 2017-2022, the Service Area grew by 3,633 people or more than 8% as shown in **Table 4**, it now includes more than 48,000 residents.



Table 4: Service Area Population, 2017 – 2022 (Source: Claritas)

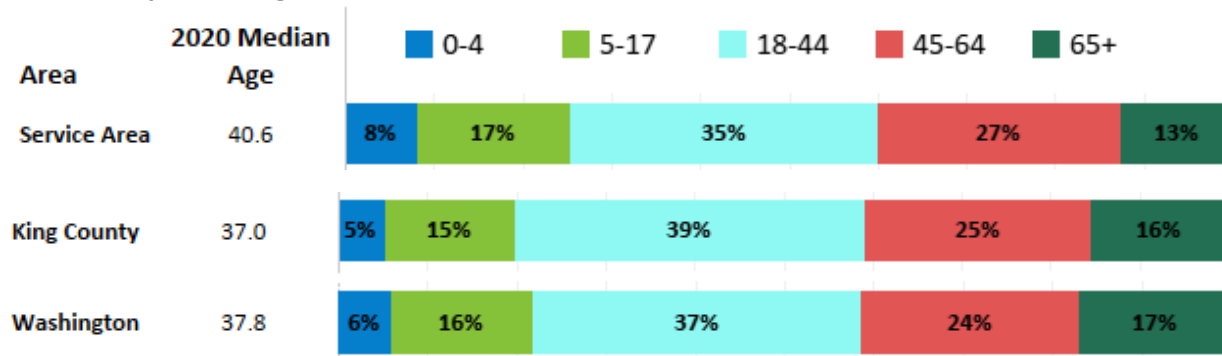
	2017	Est Population 2022	Proj Population 2027	% Change 2017-22	% Change 2022 – 27
Service Area	44,658	48,321	51,892	8.2%	7.4%
North Bend	15,174	16,303	17,413	7.4%	6.8%
Carnation	7,656	8,313	8,892	8.6%	7.0%
Snoqualmie	15,311	16,964	18,080	10.8%	8.3%
Preston ¹	N/A	367	397	N/A	8.2%
King County	2,171,465	2,338,440	2,493,931	7.7%	6.6%
Washington	7,311,903	7,858,401	8,337,583	7.5%	6.1%

¹ Beginning in the 2022 Preston has moved from a PO Box only zip code to a residential zip code.

Age Distribution

Approximately one-quarter of the overall Service Area population is under the age of 18 (25%), making the community significantly younger than King County (20% under the age of 18). Moreover, only 13% of the Service Area is age 65+ compared to 16% in the County at large and 17% Statewide.

Exhibit 5: Population Age Breakdown, 2022

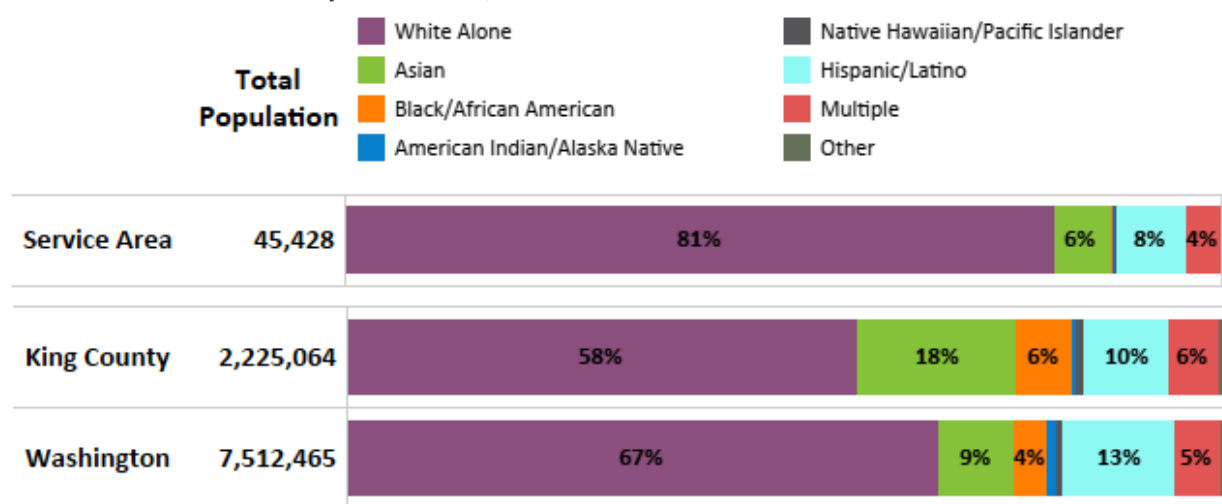


Source: Claritas (2022 Population Estimates), US Census American Community Survey 5-year estimates 2016-2020

Race/Ethnicity

Exhibit 6 presents the distribution of people among federal race categories and Hispanic ethnicity for the Service Area. The Hispanic ethnicity percentage represents those of any race, who categorize themselves as being of Hispanic/Latino ethnicity. Overall, 82% of the Service Area residents are White, 7% are Hispanic, and 5% are Asian. The makeup of the SVH Service Area is significantly less racially and ethnically diverse than King County where overall 40% of residents are persons of color.

Exhibit 6: Race and Ethnicity Breakdown, 2020



Note: Only groups with greater than 2% representation are labeled above.

Source: US Census American Community Survey 5-year Estimates, 2016 – 2020

Foreign Born Population

The foreign-born population includes naturalized US citizens, lawful permanent residents (immigrants), temporary migrants, (such as foreign students), humanitarian immigrants (such as refugees and those seeing asylum), as well as unauthorized immigrants. Anyone who was not a US citizen at birth is included in the count. **Table 5** presents information on the foreign-born population within the Service Area. Overall, approximately 9% of residents are foreign-born in the Service Area compared to nearly 23% in King County and 14% in Washington.

Table 5
Foreign-born Population, 2020

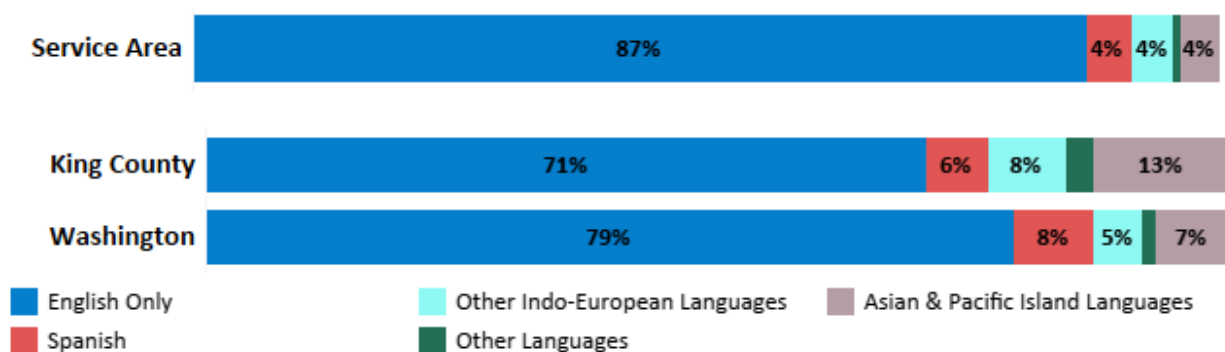
	Total Population	Foreign Born Population	
		#	% of Total
Service Area	45,428	4,039	8.9%
King County	2,225,064	507,576	22.8%
Washington	7,512,465	1,056,524	14.1%

Source: US Census American Community Survey 5-year Estimates, 2016-2020.

Language

Language adds more nuance and understanding of the racial and ethnic makeup of the area. The SVH Service Area has a higher percentage of residents speaking only English (88%) at home compared to King County (71%) or the State (80%). Data for languages spoken at home is found in **Exhibit 7**.

Exhibit 7: Language Spoken at Home, 2020



Source: US Census American Community survey 5-Year Estimates, 2016 – 2020.

Household Composition

Married couples, either with or without children comprise 70% of household types in each of the communities within the Service Area, again, a significantly higher share of families than both King County (47%) and Washington State (50%). There are approximately 872 householders over the age of 65 living alone in the Service Area. This represents about 5% of all households in the Service Area.

Source: US Census American Community Survey 5-year Estimates, 2016-2020.

Section 5: Socioeconomic Indicators

Median Household Income

Overall, median household incomes are increasing in the Service Area, County and State, and the 2020 median household income in the

Service Area is significantly higher than King County and Washington. As shown in **Table 6**, between 2016 and 2020, the King County median household income increased from \$78,800 to \$99,158 (26%) while household incomes in the Service Area increased from \$107,835 to \$133,696 (24%).²

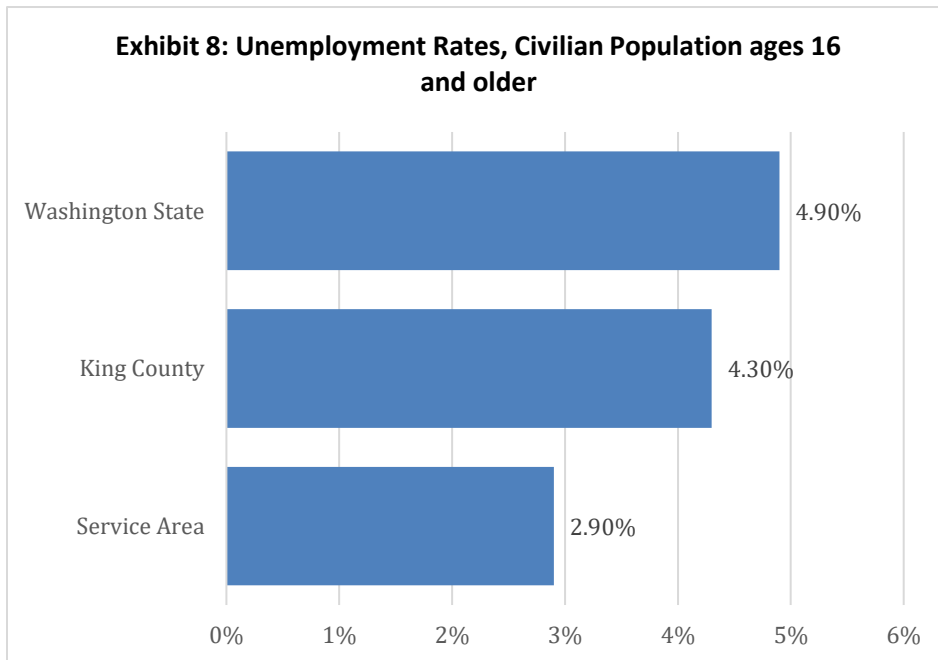
Table 6: Median Household Income

	2016		2020		% Change HH Income 2016 - 2020
	Total Households	Median HH Income	Total Households	Median HH Income	
Service Area	14,930	\$107,835	16,372	\$133,696	24%
King County	831,995	\$78,800	900,061	\$99,158	26%
Washington	2,696,606	\$62,848	2,905,822	\$77,006	23%

Source: US Census American Community Survey 5-year Estimates, 2016-2020.

Unemployment

Unemployment rates have recovered since the beginning of COVID, with the current King County rate at 4.3%, and Washington at 5% (compared to almost 8% in 2020).



The Bureau of Labor Statistics only provides unemployment rates at the County level, so in **Exhibit 8** we have provided a comparison to the Service Area using a five-year estimate provided by the American Community Survey of unemployment experienced by the civilian workforce age 16 and older. This data demonstrates that the Service Area's unemployment rate is lower than both the County and the State.

² Census Median Income in the Past 12 months 2016 and 2020. Values are adjusted for inflation and presented in 2020 dollars.

Poverty

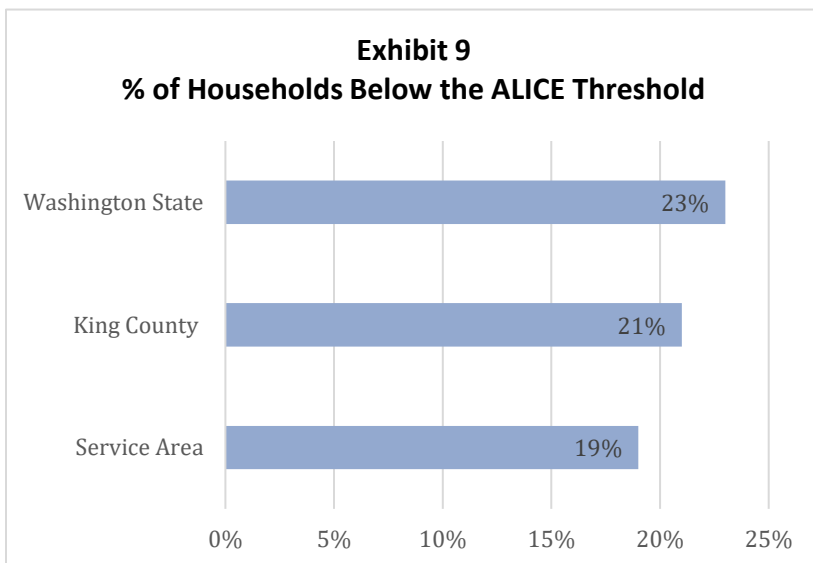
Poverty is a key measure for understanding disparities. Poverty is defined by the Federal Poverty Level (FPL). It is calculated for a family unit and varies based on the number of family members. The official definition uses household income before taxes and does not include capital gains or non-cash benefits like public assistance, Medicaid, or public housing subsidies. The FPL is updated annually for inflation using the Consumer Price Index but does not vary geographically. In 2022 the threshold ranged from \$13,590 for one person to \$46,630 for a family of eight (six children). The FPL for a family of four is currently \$27,750.

The amount of income a household needs to pay for its basic needs such as food, housing, and transportation varies by household size and geographic location. Given the low-income level set by the FPL, many benefit programs establish eligibility above 100% **Table 7** provides data on population and the percent of the population living below the FPL and below 200% of the FPL.

Table 7: Population Living in Poverty					
	2020 Population	Below 100% FPL		Below 200% FPL	
		#	%	#	%
Service Area	45,428	1,733	4%	3,609	8%
King County	2,225,064	184,895	8%	403,224	18%
Washington	7,512,465	751,044	10%	1,780,174	24%

Source: US Census American Community Survey 5-year Estimates, 2016-2020.

Approximately 4% of Service Area residents live below the FPL, with 8% living below 200% of the FPL. This is less than half the rate of King County, overall.



However, as reflected in **Exhibit 9**, when looking at the number of households that can meet basic needs, approximately 1/5 (19%) of the households in the Service Area struggle. The United Ways of the Pacific Northwest’s ALICE report provides County and zip code level estimates of ALICE households and households in poverty. ALICE is an acronym for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mloyed – households that earn more than the Federal Poverty Level (FPL), but less than the basic cost of living for the County (the ALICE Threshold). Combined the number of ALICE and poverty level households equals the total population struggling to afford basic needs.

Free and Reduced-Price Meals (FARM)

Another measure of economic disparity is the Free and Reduced-Price Meals (FARM) enrollment for school-aged children. Eligibility is determined by the US Department of Agriculture’s Food and Nutrition Service, based on federal poverty levels.

In Washington, the FARM guidelines determine eligibility for free and reduced-price lunch (FRPL). Students from families earning below 130% of the federal poverty level (FPL) are eligible for free lunch, and those families earning between 130% and 185% of the FPL are eligible for reduced-price lunch. A family of four in the 2021-2022 school year would need an annual household income of less than \$34,450 to qualify for free lunch, and an annual income of less than \$49,025 to qualify for reduced price lunch.³ **Table 8** shows the proportion of FARM in the school districts in the Service Area. Based on this measure the SVH Service Area is faring significantly better than King County as a whole.

Table 8: Free and Reduced-Price Lunch, Service Area School Districts 2021-2022							
	Total	Free Lunch Enrollment		Reduced-Price Lunch Enrollment		Total Free or Reduced-Price Lunch Enrollment	
		#	%	#	%	#	%
Total SA	10,274	864	8%	264	3%	1,128	11%
Riverview SD	3,065	304	10%	89	3%	393	13%
Snoqualmie SD	7,209	560	8%	175	2%	735	10%
King County	278,062	81,065	29%	13,959	5%	95,024	34%

Source: OSPI, 2021-2022

Educational Attainment

Education is strongly linked with health outcomes.⁴ Education is seen as both a contributing factor and solution to health disparities in communities and across generations. While overall increases in education levels in the United States have led to increased health, recent data continues to show that lower levels of education are connected to worse health outcomes in populations. Parent educational attainment, particularly of the mother, is positively linked with a child’s educational experience, attainment, and achievement. Parents with higher levels of education are more likely to raise children who are prepared to enter school and are more likely to reach higher levels of educational attainment.

According to the US Census American Community survey 5-Year Estimates, 2016 – 2020, only 4% of adults aged 25 and older in the Service Area have less than a high school education, as compared to 7% for King County and 8% for Washington overall. 54% of adults in the Service Area have a bachelor’s degree or higher, equivalent to King County, with 25% of adults in Snoqualmie having a graduate or professional degree.

³ Income eligibility guidelines for Child Nutrition Programs. <https://www.govinfo.gov/content/pkg/FR-2021-03-04/pdf/2021-04452.pdf>

⁴ Zajacova A, Lawrence EM. The Relationship Between Education and Health: Reducing Disparities Through a Contextual Approach. *Annu Rev Public Health*. 2018 Apr 15

High School Completion

Attrition from school has many causes, including non-academic factors such as housing instability, poverty, and physical and mental illness. High school graduation rates in the Service Area are consistently higher than both King County and the State, as seen in **Table 9**. Overall, 91% of Riverview School District and 98% of Snoqualmie Valley School District students graduate on time (within 4 years).

Table 9: High School 4-Year Graduation Rates					
	Total	Special Education	English Learner	Low Income	Homeless
Riverview School District	90.9%	91.5%	72.7%	70.8%	30.0%
Snoqualmie Valley School District	98.3%	>97%	98.5%	>95%	98.2%
King County	86.0%	88.9%	68.3%	75.7%	58.1%
Washington	82.5%	82.2%	68.9%	73.9%	59.2%

Source: OSPI School Report Card, 2020-2021

Housing

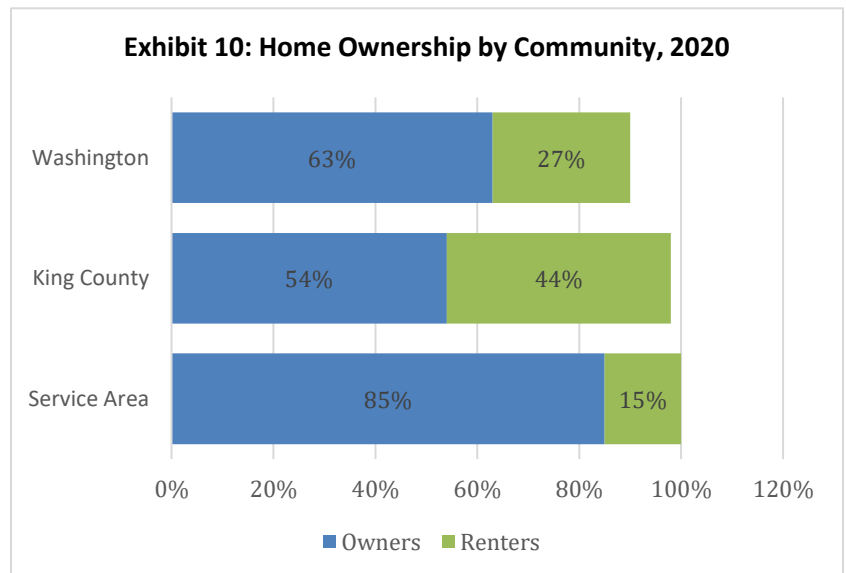
Home Ownership

Exhibit 10 shows home ownership by State, County, and Service Area. Approximately 85% of homes in the Service Area are occupied by homeowners as opposed to renters, compared to King County overall, where the proportion of owners is 54%.

Housing Cost Burden

Households are considered to be cost-burdened if they pay more than 30% of their income toward housing costs. A smaller percentage of households in the Snoqualmie Service Area are considered cost-burdened (23%) as compared to King County (33%) and Washington (32%) overall.

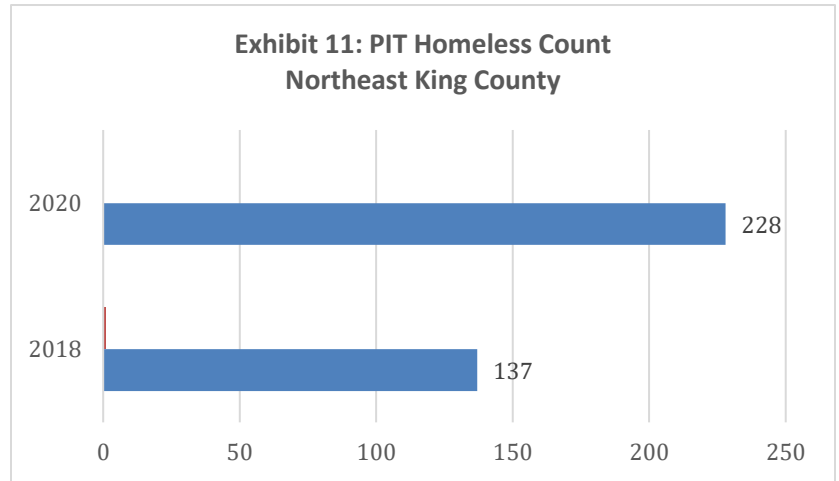
Source: King County Regional Affordable Housing Dashboard



Homelessness

All Home, the Seattle/King County Continuum of Care, conducts an annual point-in-time (PIT) homeless count. The PIT offers a snapshot of the number of people experiencing homelessness in emergency shelters, transitional housing, those sleeping outside, and in other places not meant for human habitation. Even with the assistance of homeless providers and advocates, as a non-intrusive, visual count of homeless individuals that occurs on one night, the PIT likely undercounts homeless individuals.

As shown in **Exhibit 11**, in the Northeast part of the County, which is defined as Carnation, Duvall, North Bend, Skykomish, Snoqualmie, and unincorporated areas in that vicinity, the PIT count increased from 137 individuals in 2018 to 228 in 2020. While the absolute number of those that are homeless is high, adjusting for population size, rates of homelessness are significantly lower in the Service Area than in King County overall.



Section 6: Health Indicators

Health is a complicated measure made up of physical, behavioral, and socioeconomic factors. Public health institutions at the Federal, State, and local levels use a variety of metrics to try and paint a complete picture of the health of both individuals and communities.

General Health Status Indicators

Overall, the general health metrics below are similar in the communities in the Service Area and King County, with slightly higher life expectancies in the Service Area as compared to Washington State overall. **Table 10** shows metrics of general health status indicators for regions in the Service Area.

Table 10: General Health Status Indicators					
	Bear Creek/Carnation/Duvall	Snoqualmie//North Bend/Skykomish	King County	WA State	Unit of Measure
Life Expectancy	82.3	81.3	81.3	80.3	In Years
Fair or Poor Health	6.4	13.5	11.6	14.9	Percent
Unhealthy Days (65+)	2.7	3.0	2.9	3.0	Percent
Disability	16.1	20.9	18.4	23.0	Percent

Source: Public Health Seattle King County, 2022.

Adult Health Risk Factors

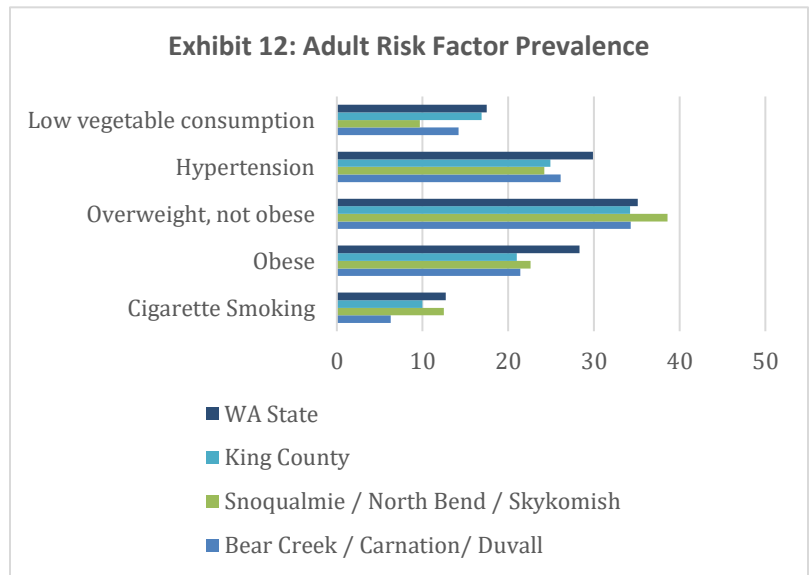
Health risk factors are behaviors or characteristics that make people more likely to develop disease. The extent to which individuals are aware of being at risk may enable them to make healthier choices about diet, exercise, and general health. Some of these factors result in chronic conditions, such as hypertension, that if addressed can often be reversed.

There are a number of adult health risk factors in which the Service Area fares worse than King County. A higher proportion of residents (12.5%) report cigarette smoking in the Snoqualmie/North Bend/Skykomish region, the most rural region of the Service Area, than in King County (10%), while only 6.3% of adults in the Bear Creek/Carnation/Duvall region report smoking.

As identified in **Exhibit 12**, the Snoqualmie/North Bend/Skykomish region has higher rates of both being overweight and obesity than King County. For hypertension, the Bear Creek/Carnation/Duvall region fares worse than the County.

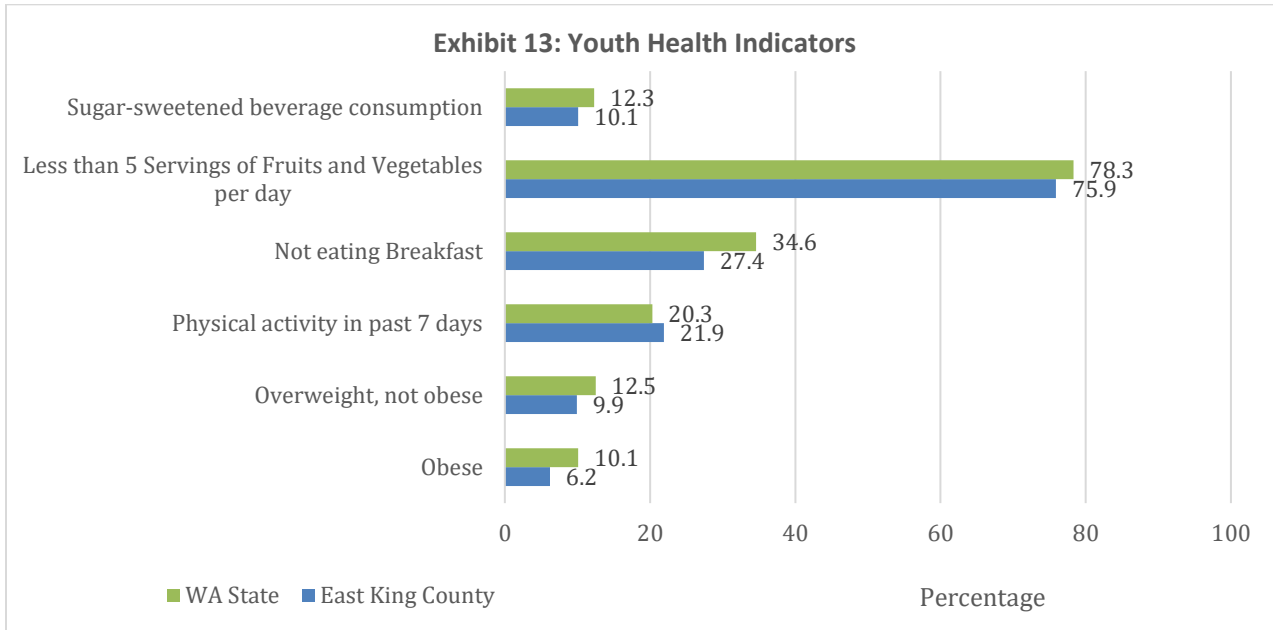
Youth Health Indicators

There are a number of Healthy Youth Survey measures which are suppressed at the individual school district level due to Insufficient sample size. To allow for analysis of the data, Public Health Seattle-King County aggregates data at a higher geographic level. For SVH’s Service Area, that geography is East King. As noted in the Appendix, East King County covers a large portion of eastern King County not in the Service Area; however, it still provides an overview of these metrics as compared to the County overall at the closest geographic level available.



Source: 2021 City Health Profiles. Public Health Seattle King County, 2022.

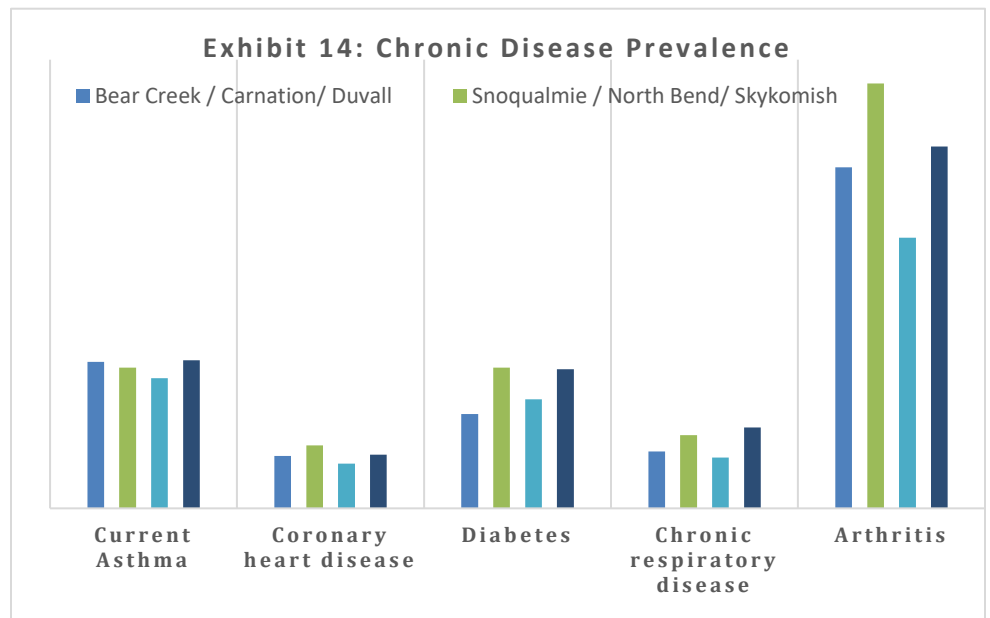
As seen in **Exhibit 13**, the East King County region reports a slightly higher percent of school children being physically active for at least 60 minutes per day over the past seven days, with 21.9% as opposed to 20.3% for the State. More school children in East King County ate five or more servings of fruits and vegetables each day than those in the County overall. Fewer schoolchildren in East King County drank sugar-sweetened beverages each day and did not have breakfast than those in the County overall.



Source: Public Health Seattle King County, 2022. Healthy Youth Survey, 2016 and 2018.

Chronic Disease

Chronic diseases are broadly defined as conditions that last one year or more and require ongoing medical attention or limit activities of daily living or both.⁵ Chronic diseases are the leading cause of death and disability in the United States. **Exhibit 14** shows that some of the metrics in the Service Area are marginally higher than King County (.5-2.1%) but these differences likely fall within the confidence intervals of the reported data.



Source: City Health Profiles Public Health Seattle King County, 2022.

⁵ <https://www.cdc.gov/chronicdisease/about/index.htm>

Leading Causes of Death

Leading causes of death are used to monitor trends, recognize emerging challenges, track the effectiveness of interventions, and make decisions that improve and save lives. As can be identified in **Table 11**, similar to the County and the State, the leading causes of death in the Service Area are cancer and heart disease. All cancer and lung cancer death rates in the Snoqualmie/North Bend /Skykomish region are higher than the County and the State. The rate of heart disease in both of the Service Area regions is also higher than the County and State. Parkinson and Alzheimer’s death rates in the in the Bear Creek/Carnation/Duvall area are higher than the County and the State

Table 11: Leading Causes of Death, rate per 100,000

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State
All Cancers	154.1	164.1	140.6	143.8
<i>Lung cancer</i>	35.2	39.7	33.9	31.4
<i>Colorectal cancer</i>	11.4	15.4	12.1	12
<i>Breast Cancer</i>	17.6	1.8	20.1	19.2
Heart Disease	143.3	149.1	124.4	134.2
Alzheimer’s Disease	50.9	44.3	45.6	43.3
Stroke	34.6	35	31.6	34.9
Unintentional injuries	30.5	28.8	34.9	44.6
Diabetes	16.7	15.1	18.7	21
Parkinson’s disease	17.9	9.9	9.3	N/A

Section 7: Behavioral Health

Adult Mental Health and Substance Abuse

Mental and behavioral health issues are prevalent both in adults and in youth. Many experts feel that the stress and uncertainty of the pandemic have exacerbated these issues across the globe. Local data has followed national trends in highlighting the importance of mental and behavioral health care for the wellbeing of communities.

Binge drinking is defined as five or more drinks on one occasion for men and four or more for women.

Snoqualmie/North Bend/Skykomish engaged in binge drinking significantly less often than King County overall and as a result have a lower rate of alcohol-related deaths. Although Bear Creek/Carnation/Duvall had a similar level of binge drinking to King County, alcohol-related deaths were also significantly lower than King County, as shown in **Table 12**.

Table 12: Adult Mental Health and Substance Use					
	Bear Creek/Carnation/Duvall	Snoqualmie/North Bend/Skykomish	King County	WA State	Unit of Measure
Suicide Rate	12.3	12.5	12.3	15.9	Per 100,000
Frequent Mental Distress	10.2	15.3	11.9	12.6	Percent
Current marijuana use	15.7	20.8	18.6	15.6	Percent
Binge drinking	18.1	11.9	18.2	15.2	Percent
Poisoning deaths	8.3	10.3	14.3	15.7	Rate per 100,000
Alcohol-related death rate	5.9	4.6	11.1	14.0	Rate per 100,000
Opioid-related deaths	7.2	7.5	10.3	10.6	Rate per 100,000

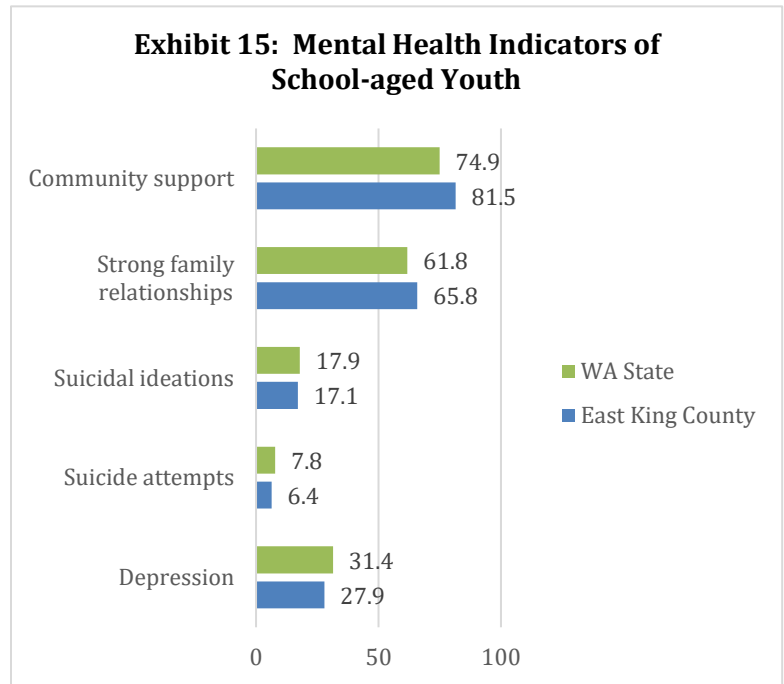
Source: City Health Profiles Public Health Seattle King County, 2022.

School-aged Mental Health and Substance Use

Mental health is a major concern for school children, particularly with the recent struggles due to the COVID-19 pandemic.

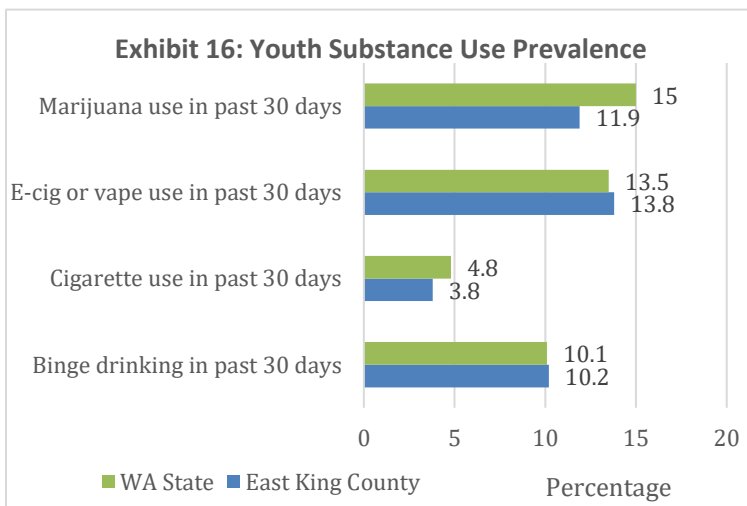
Exhibit 15 shows while a slightly lower percentage (6.4%) of school-aged children (8th, 10th & 12th grade) in East King County report suicide attempts than across the State (7.8%), the rate is high and of a significant concern. Rates of reported suicidal ideation in school age children are similarly high in both East King County (17.1%) and Washington State (17.9%)

Family and community support for children is especially important in light of the high rates of mental health struggles. 65.8% of schoolchildren in East King County felt they had strong family relationships, slightly higher than the 61.8% of youth reporting the same across the State. Over 80% of East King County students report having community support.



Source: Public Health Seattle King County, 2022. Healthy Youth Survey,

Youth Substance Use



Substance use among youth can lead to problems at school, cause or aggravate physical and mental health related issues, promote poor peer relationships, cause motor vehicle accidents, and place stress on the family. In all of the indicators shown in **Exhibit 16**, youth in 8th, 10th and 12th grade in East King County fare the same or better compared to King County overall. Binge drinking and e-cig/vape use are nearly identical to Countywide measures, and cigarette and marijuana use is less than Countywide rates. Fewer youth identify as obese or overweight and similar numbers are getting physical activity.

Section 8: Maternal and Child Health

According to the Centers for Disease Control, the birth rate of Kings County is 47.75 per 1,000, which is less than the rate of the State overall at 54.01 per 1,000. Due to the small population size in the Snoqualmie Valley data is aggregated in **Table 13** below showing the adolescent birth rate for East King County. The data shows that

Table 13: Fertility Rates of Women of Child-bearing Age (15-44)			
	East King County	WA State	Unit of Measure
Birth Rate	47.75	54.01	Rate per 1,000
Adolescent Birth Rate (15-17)	0.63	2.33	Rate per 1,000

Source: Centers for Disease Control and Prevention, WONDER Online Database. Source: Communities County, 2021

adolescent birth rates are far lower in the eastern portion of King County than for the State overall. Further, the rates are continuing to decline. The adolescent birth rate for the period of 2010 - 2012 was 2.32 and has decreased to 0.63 in the 2017 - 2019 period.

In nearly every indicator for maternal and child health shown in **Table 14**, the Service Area regions fare better than King County overall. There are lower rates of low-birth weight infants

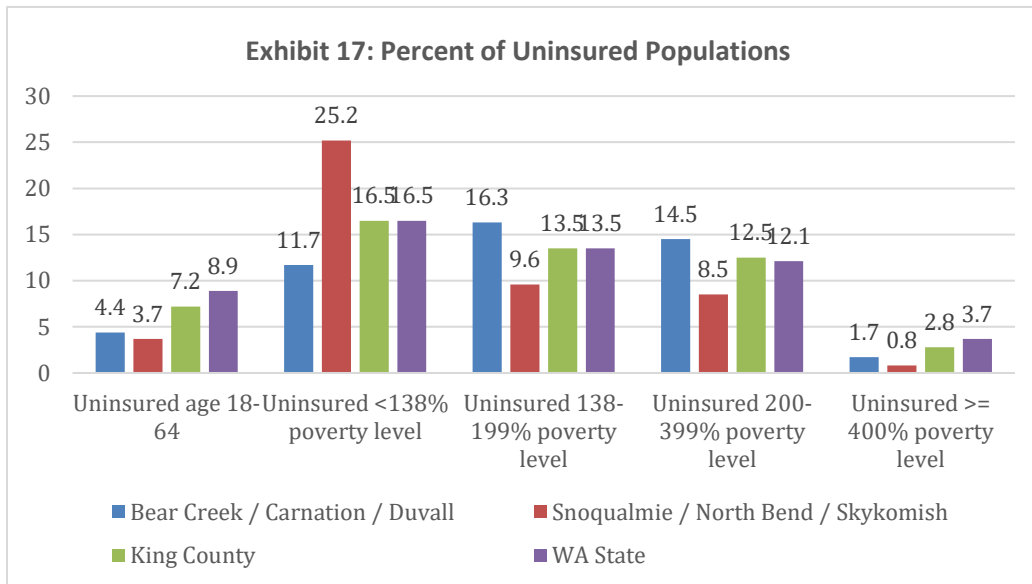
in the Snoqualmie/North Bend Skykomish region. Additionally, fewer women get late or no prenatal care and smoke during pregnancy in Bear Creek/Carnation/Duvall compared to King County overall. In the Service Area overall, there were fewer cesarean births among low-risk women compared to King County overall.

Table 14: Maternal and Child Health Outcomes					
	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	Unit of Measure
Infant mortality	-	-	3.9	4.3	Rate/100,000
Low birthweight – all births	6.2	5.3	6.7	6.6	Percent
Low birthweight – singletons	4.9	4.4	5.3	5.2	
Very low birthweight – singletons	0.7	0.4	0.7	0.8	
Late or no prenatal care	2.9	2.0	4.8	5.6	
Smoking during pregnancy	1.9	2.3	2.8	7.3	
Breastfeeding initiation	98.0	97.6	97.0	N/A	
Cesarean births - low-risk women	26.2	27.8	34.9	N/A	

Source: City Health Profiles Public Health Seattle King County, 2022 and Public Health Seattle King County, 2022.

Section 9: Access to Health Care and Unmet Need

Health Insurance

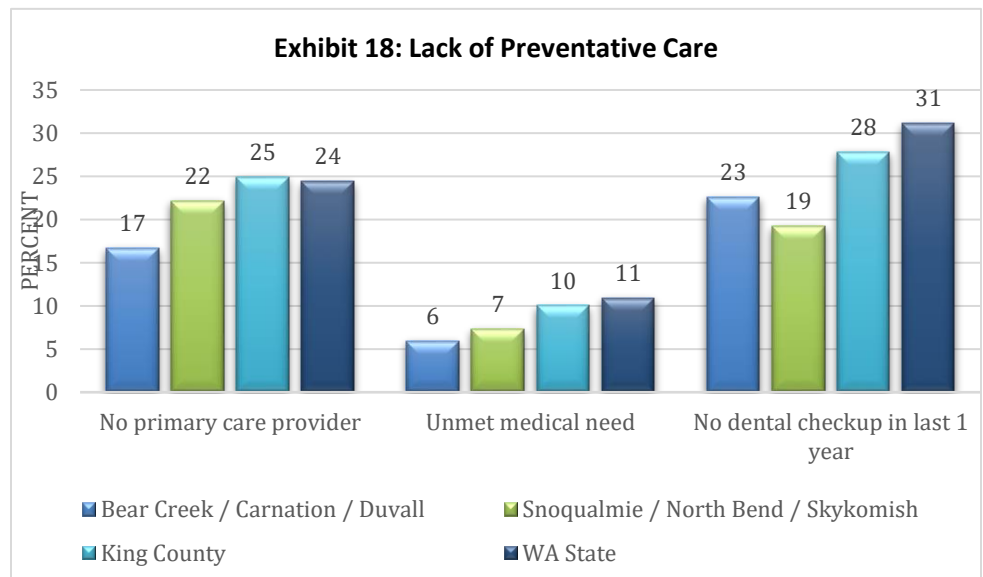


Health insurance coverage is a key component of access to health care. Among the adult population, roughly 95% have health insurance across the Service Area, a higher rate than for the County or the State. However, as shown in **Exhibit 17** the lower income population is more likely to lack health insurance. More than 25% of the Snoqualmie/North Bend/Skykomish population living at less than 138% of the

Federal Poverty level is uninsured; however, due to a wide confidence interval, this is not statistically higher than King County overall.

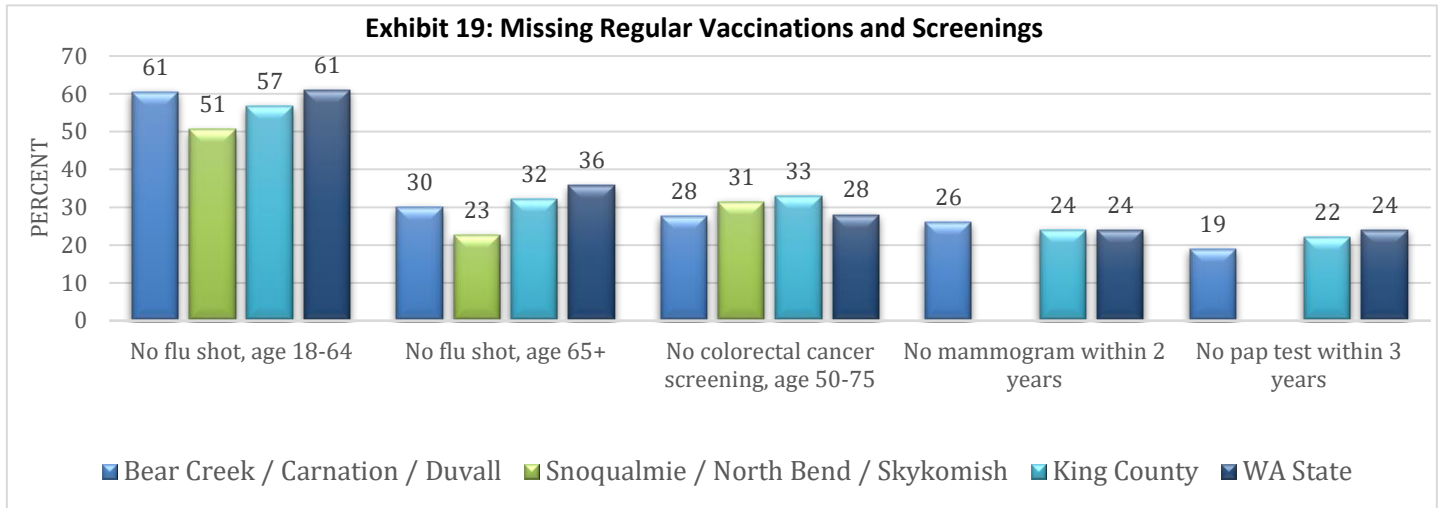
Preventative Care

For all health metrics, preventative care is a practice which can help avoid more serious illness and injury. Generally, and as can be identified in **Exhibit 18**, the Service Area regions fare better in terms of preventative care measures compared to King County, with more residents having a primary care provider and a dental checkup in the last year, and fewer with an unmet medical need.



However, in **Exhibit 19**, a few key metrics related to regular vaccinations and screenings identify areas for improvement. For example, fewer residents of the Snoqualmie/North Bend/Skykomish region ages 18-64 report receiving flu shots

than the County, and for the age 65+ population, both regions in the Service Area have lower flu shot compliance than the County and State. The Service Area also fares slightly worse in terms of the proportion of residents receiving a few key preventative screenings for cancer.



Section 10: Injury and Violence Prevention

Injury is a leading cause of death, disability, and hospitalization. Many unintentional and intentional injuries are potentially preventable. For example, death from motor vehicle accidents can be reduced through education, mandating the use of seatbelts, tougher laws against drunk driving and distracted driving, and engineering⁶ As identified in **Table 15**, the Service Area has lower rates of injury related deaths than the County or the State.

Table 15: Leading Causes of Injury Related Death					
	Bear Creek / Carnation / Duvall	Snoqualmie / North Bend / Skykomish	King County	WA State	
Unintentional injury death	30.5	28.8	37.6	44.6	Rate per 100,000
Motor vehicle accidents	4.7	-	5.4	8.4	Rate per 100,000
Fall deaths (all ages)	12.7	10.0	11.8	12.9	Rate per 100,000
Fall deaths (age 65+)	58.4	-	74.8	81.6	Rate per 100,000
Fall injury prevalence	8.2	9.5	11.0	11.0	Percent
Firearms-related deaths	5.3	8.9	7.9	10.6	Rate per 100,000

Source: City Health Profiles Public Health Seattle King County, 2022.

General Crime Statistics

Exhibit 20 presents Group 'A' crime statistics for the three jurisdictions in the Service Area as well as for Washington State.⁷ These are sums from the National Incident-Based Reporting (NIBRS) and submitted by the individual agencies to the Washington Association of Sheriffs and Police Chiefs. Due to the fact these are self-reported, and because departments are still migrating to the new reporting system, these should be considered estimates and used for descriptive purposes only.

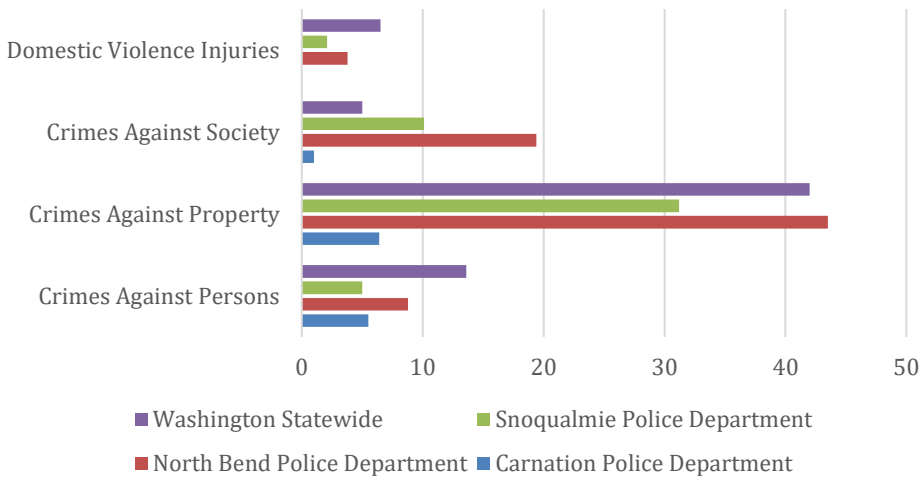
⁶ PHSKC City Health Profiles: <https://kingcounty.gov/depts/health/data/city-health-profiles.aspx>

⁷ Each NIBRS offense belongs to one of three categories: Crimes Against Persons, Crimes Against Property, and Crimes Against Society. Crimes Against Persons, e.g., murder, rape, and assault are those which victims are always individuals. The object of Crimes Against Property, e.g., robbery, bribery, and burglary, is to obtain money, property, or some other benefit. Crimes Against Society, e.g., gambling, prostitution, and drug violations, represent society's prohibition against engaging in certain types of activity; they are typically victimless crimes in which property is not the object. <https://ucr.fbi.gov/nibrs/2012/resources/crimes-against-persons-property-and-society>

Domestic Violence

Domestic violence in Washington occurs at a rate of 8.4 per 1,000 people, with the rate of injury from domestic violence being 6.5 per 1,000 people. Domestic violence is broadly defined by the relationship of the victim to the offender or by shared living space. Rate of domestic violence injuries within the jurisdictions serving the Service Area is less than that of Washington overall.

Exhibit 20: Crime Rates per 1,000 Population



Section 11: Community Convening

In May of 2022, SVH sent out electronic surveys via SurveyMonkey to procure feedback from community stakeholders. There were 92 responses representing community members, healthcare workers, service providers, educators, and local officials from across the Service Area. Respondents were representative of all zip codes in the Service Area and reported age ranged from 25 to over 85 years old. Approximately 25% of respondents were affiliated with SVH. However, analysis did not identify any significant difference between affiliated and non-affiliated respondents, so answers are reported unstratified.

The first part of the survey focused on assessing respondents’ insights on the SVH priorities established in the 2020-2022 CHNA including:

- Reduce risk factors affecting health including:
 - Cigarette smoking
 - Obesity
 - Hypertension
 - High blood cholesterol
 - Low fruit & vegetable consumption
- Increase preventive care screenings and vaccinations:
 - Flu shot for those 65+
 - Colorectal cancer screenings for those 50-70
 - Mammograms every two years
 - Pap tests every three years
- Reduce the burden of chronic conditions such as:
 - Diabetes
 - Chronic respiratory disease
 - Arthritis
- Reduce rates of death from:
 - Cancer
 - Diabetes

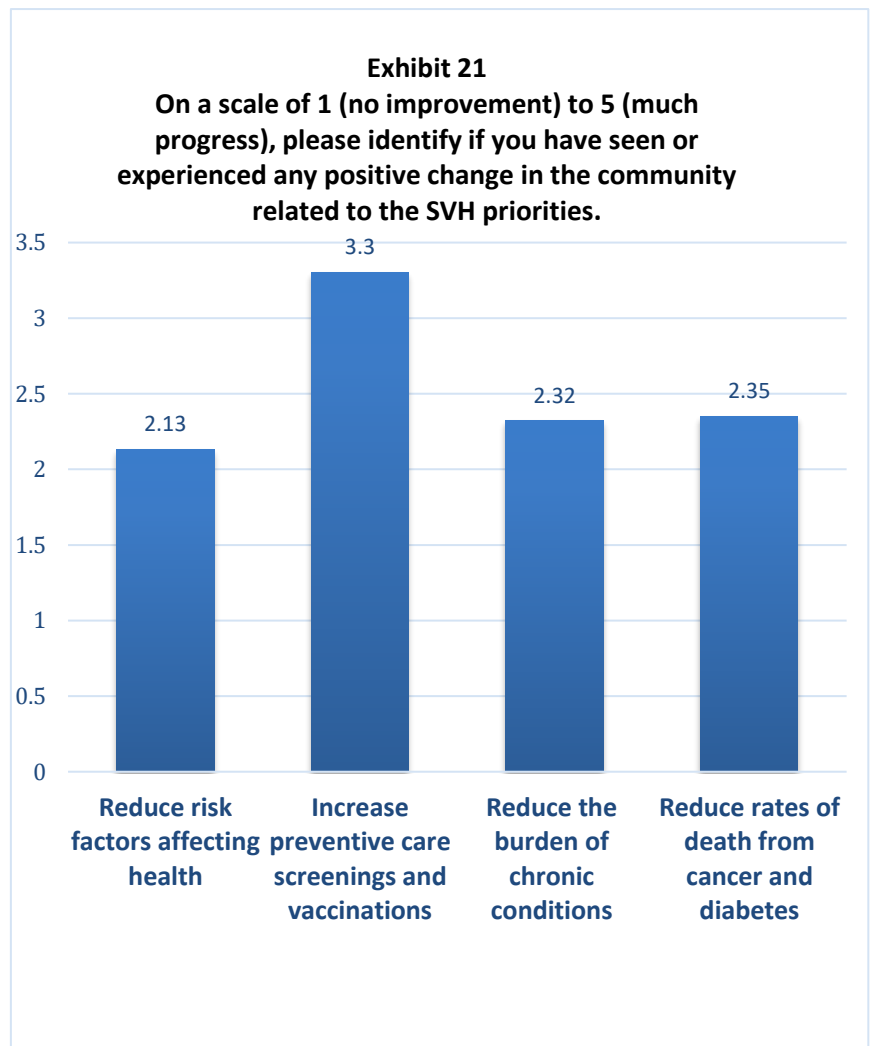


Exhibit 21 demonstrates that overall respondents agreed that at least some progress was made on all previous priorities, with the highest improvement seen in increasing preventive care screenings and vaccinations. The overwhelming majority of respondents also agreed that these focus areas should continue to be made priorities for the next 3 years.

To ensure an understanding of the community’s perspective around health disparities in the Service Area, respondents were asked the open-ended question: “Are you aware of any populations in the communities served by SVH that are less healthy or are experiencing greater disparities?”

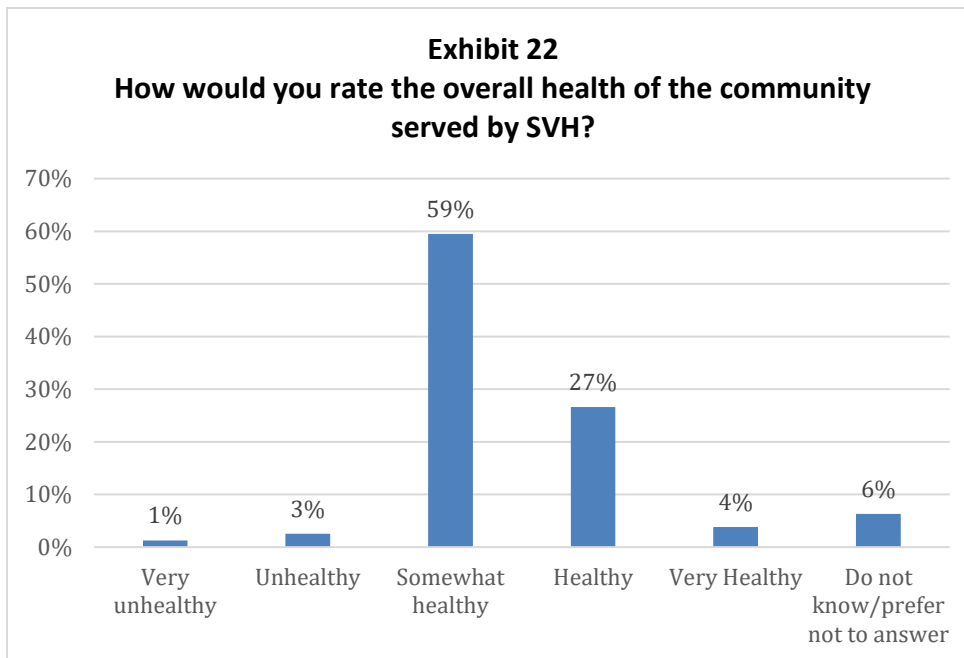
For this question, respondents were asked to write in a response rather than responding to a list. 40 participants identified specific populations experiencing disparities. As identified in **Table 16**, the largest areas of concern were the homeless, low income, and senior/elderly populations. Note that there was no limit placed on the number of populations mentioned in each response.

To get a sense of how respondents view the health of the SVH Service Area, they were asked to rate the

overall health of the community. **Exhibit 22** shows that the majority of respondents (59%) reported “Somewhat healthy” and 31% rated the community as “Healthy” or “Very Healthy.”

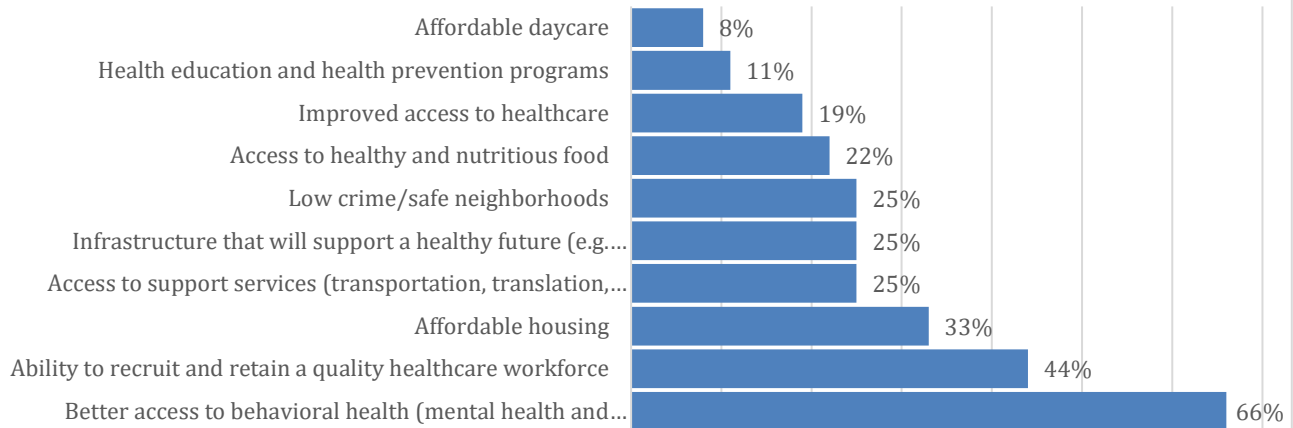
Table 16: Populations Experiencing Disparities		
Are you aware of any populations in the communities served by SVH that are less healthy or are experiencing greater disparities?		
Population	Percent	N
Homeless	30.0%	13
Low Income	25.0%	10
Seniors/Elderly	22.5%	9
People with Mental Illness	15.0%	6
People with no access to Transportation	15.0%	6
Youth	12.5%	5
Disabled/living with chronic illness	10.0%	4
People with Substance Abuse Issues	10.0%	4
Non-indigenous Minorities	7.5%	3
LGBTQ+	5.0%	2
Indigenous	5.0%	2

Respondents were additionally asked to rank the three most important factors that will improve the health and quality



of life in the community served by SVH. As identified in **Exhibit 23**, not surprisingly based on the data around the increase in behavioral health issues facing communities in response to COVID, 66% of respondents included better access to behavioral health services in their top three responses. Also, not surprising in terms of COVID’s impact on workforce, 44% of respondents chose the ability to retain a quality healthcare workforce as a top priority. Affordable housing was a priority for 33%.

Exhibit 23: Most Important Factors to Improve Health and Quality of Life in the Service Area



When asked to rank the three greatest health problems in the community, overwhelmingly respondents selected a lack of services to support aging in place to be in their top three. As detailed in **Table 17**, 74% of respondents selected this as one of the top three problems. 38% selected Alzheimer’s & Dementia, followed by 31% selecting mental health conditions. Intentional injuries (homicide, sexual assault, interpersonal violence) was selected by 29%, with unintentional injuries chosen by 27%.

Table 17: Rank the three greatest "health problems" in the community

	Percent of Respondents who chose as Top 3 Priority
Lack of services to support aging in place	74%
Alzheimer’s & Dementia	38%
Mental health conditions (e.g. anxiety, depression, and suicide)	31%
Intentional injuries (homicide, sexual assault, interpersonal violence)	29%
Unintentional injuries (Motor vehicle crash injuries, falls, burns)	27%
Health inequalities (the avoidable, unfair, and systematic differences in health and health care between different groups of people).	23%
Chronic health conditions (e.g. diabetes, obesity, high blood pressure, heart disease)	21%
Alcohol use	8%
Infectious disease (e.g. Hepatitis, TB)	8%
Impact of isolation on youth and adolescents associated with COVID	6%
Opioids and other drug use	6%

Finally, participants were asked if they had any final thoughts regarding the health of their community. 24 respondents used this space to draw attention to areas of concern. There was no limit to the number of concerns per response. As identified in **Table 18**, 29% of respondents who answered the question mentioned physical access to healthcare, including transportation and lack of facilities in the region. 21% of respondents had concerns related to substance use in their community. Access to care from the perspective of having health insurance and being able to afford medical care was mentioned by 17% of respondents, as was affordable housing and cultural competency.

With a clear focus on **access to care, behavioral health services, a quality workforce, services and supports for the elderly, and affordable housing**, the results of the community engagement process validate and provide targeted priorities to support SVH’s Strategic Planning areas of focus:

- Build essential infrastructure to support a healthy future.
- Recruit and retain the highest caliber staff.
- Develop programs and infrastructure to meet and support health care needs of the community.
- Develop a brand of the future and define the “New SVH.”
- Ensure the financial resources to support our vision.

Table 18: Is there anything else you would like to add about the health of your community?		
Topic of Concern	Percent	N
Access to Care- Physical	29%	7
Substance Use	21%	5
Access to Care- Financial/Insurance	17%	4
Affordable Housing	17%	4
Cultural Competency	17%	4
Homelessness	13%	3
Mental Health	13%	3
Quality of Care	8%	2
Senior Health	8%	2
Continuity of Care	8%	2
Environmental pollution	4%	1
Cancer	4%	1
Youth	4%	1
Chronic Conditions	4%	1
Overweight/obesity	4%	1

Over the next several months SVH will incorporate each of the prioritized community health needs into its strategic planning efforts.

Community Feedback

Snoqualmie Valley Health makes the Community Health Needs Assessment available to the public and welcomes feedback. The CHNA is available at the following locations and on the website listed below:

Snoqualmie Valley Health

9801 Frontier Avenue SE

Snoqualmie, WA 98065

<https://snoqualmiehospital.org/>

Appendix 1: Data Sources and Region Definitions

Data Sources

- **US Census Bureau American Community Survey (ACS) 5-Year Estimates.** In general, the analysis uses the 2016-2020 five-year estimates to support analysis at the city, county, and zip code levels.
- **US Department of Housing and Urban Development (HUD).** HUD releases data annually under the Comprehensive Housing Affordability Strategy Program (CHAS). Data is based on ACS 5-year estimates, and provides data on housing affordability, household income, and household composition.
- **Washington State Department of Social and Health Services (DSHS)**
- **Washington State Department of Health (DOH)**
 - **Public Health Seattle & King County (PHSKC) City Health Profiles**
- **Seattle/King County Coalition on Homelessness**
- **Washington State Office of Superintendent of Public Instruction (OSPI)**
- **Washington Healthy Youth Survey.** Healthy Youth Survey data were available at the school level for 2021 for both the Riverview and Snoqualmie Valley school districts. Due to confidentiality and the low number of responses, results were not released for the 12th grade at Mt. Si High School in the Snoqualmie Valley School District.
- **Health Resources and Services Administration (HRSA) Uniform Data System (UDS) Mapper**
- **Washington State Department of Health, Center for Health Statistics, Behavioral Risk Factor Surveillance System,** supported in part by the Centers for Disease Control and Prevention
- **Claritas Population Estimates**
- **United Ways of the Pacific Northwest**

Region Definitions

The following regions and proxy regions were used to most closely represent the Service Area:

- **Service Area** data using combined zip code-level data comprised of Carnation, Falls City, North Bend, Snoqualmie, and Preston
- **Snoqualmie Valley,** defined as: Snoqualmie Valley Census County Division (CCD)
- **East King County,** defined as: Bellevue, Carnation, Duvall, Issaquah, Kirkland, Medina, Mercer Island, Newcastle, North Bend, Redmond, Sammamish, and Skykomish.
- **Northeast King County,** defined as: Council District 3: Lake Sammamish to the Wild Sky Wilderness and Skykomish
- Area regions

- **Bear Creek/ Carnation/ Duvall**
 - **Snoqualmie / North Bend/Skykomish**
- **School Districts:**
 - **Riverview School District**
 - **Snoqualmie Valley School District**
- **Crime Data:**
 - **North Bend Police Department**
 - **Carnation Police Department**
 - **Snoqualmie Valley Police Department**