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Community Health Needs Assessment - 2019

Snoqualmie Valley Hospital



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PROJECT TEAM

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Background

Snoqualmie Valley Hospital is a critical access hospital, which is a part of the Snoqualmie Valley Hospital District. Public hospital districts were authorized by the Washington State Legislature in 1945 to deliver services to help people stay healthy physically, socially, and mentally. Snoqualmie Valley Hospital District is King County Public Hospital District #4. It was voted into existence by the community in 1972. The Hospital District includes a full-service hospital and four clinics. The hospital was originally built in 1983, with the most recent renovations in April 2015 adding 70,000 square feet of hospital facility space. This report was finalized in January 2020.

SNOQUALMIE VALLEY HOSPITAL MISSION:

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

Secondary Data Collection

DATA SOURCES

This report uses data from the following sources.

- **US Census American Community Survey (ACS) 5-year Estimates.** In general, the analysis uses the 2013-2017 five-year estimates to support analysis at the city, place, and school district level.¹
- **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 2016 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 of Mt. Si High School in the Snoqualmie Valley School District.²
- **Health Resources and Services Administration (HRSA) Uniform Data System (UDS) Mapper**

¹ Since these are estimates based on survey responses, there is always a margin of error within ACS data. When the margin of error is especially high, it is noted in the narrative.

² 2018 Healthy Youth Survey data was released after this Community Needs Assessment was drafted.

GEOGRAPHIC AREA

For the purpose of this report, the Snoqualmie Valley Hospital Total Service Area is defined as the area contained within the Riverview and Snoqualmie Valley school districts, excluding Duvall, and adding zip code 98050. This set of geographies best corresponds to Snoqualmie Valley Hospital's public taxing district, King County Public Hospital District #4, and reflects data widely available for determining needs within the community.

Throughout the report, the Total Service Area is broken into the following geographies:

- Carnation
- Fall City (unincorporated King County)
- North Bend
- Preston (zip code 98050)
- Snoqualmie
- Unincorporated Riverview School District (abbr. Unincorp. Riverview SD)
- Unincorporated Snoqualmie Valley School District (abbr. Unincorp. Sno-Valley SD)

Because of the variety of geographic types, data in this report is presented at the most specific geographic scale possible. For instance, with US Census data products, we can treat each of the areas separately and disaggregate the unincorporated parts of the school districts. However, with health data from Public Health Seattle King County (PHSKC) or housing data from the US Department of Housing and Urban Development (HUD), this granularity is not possible.

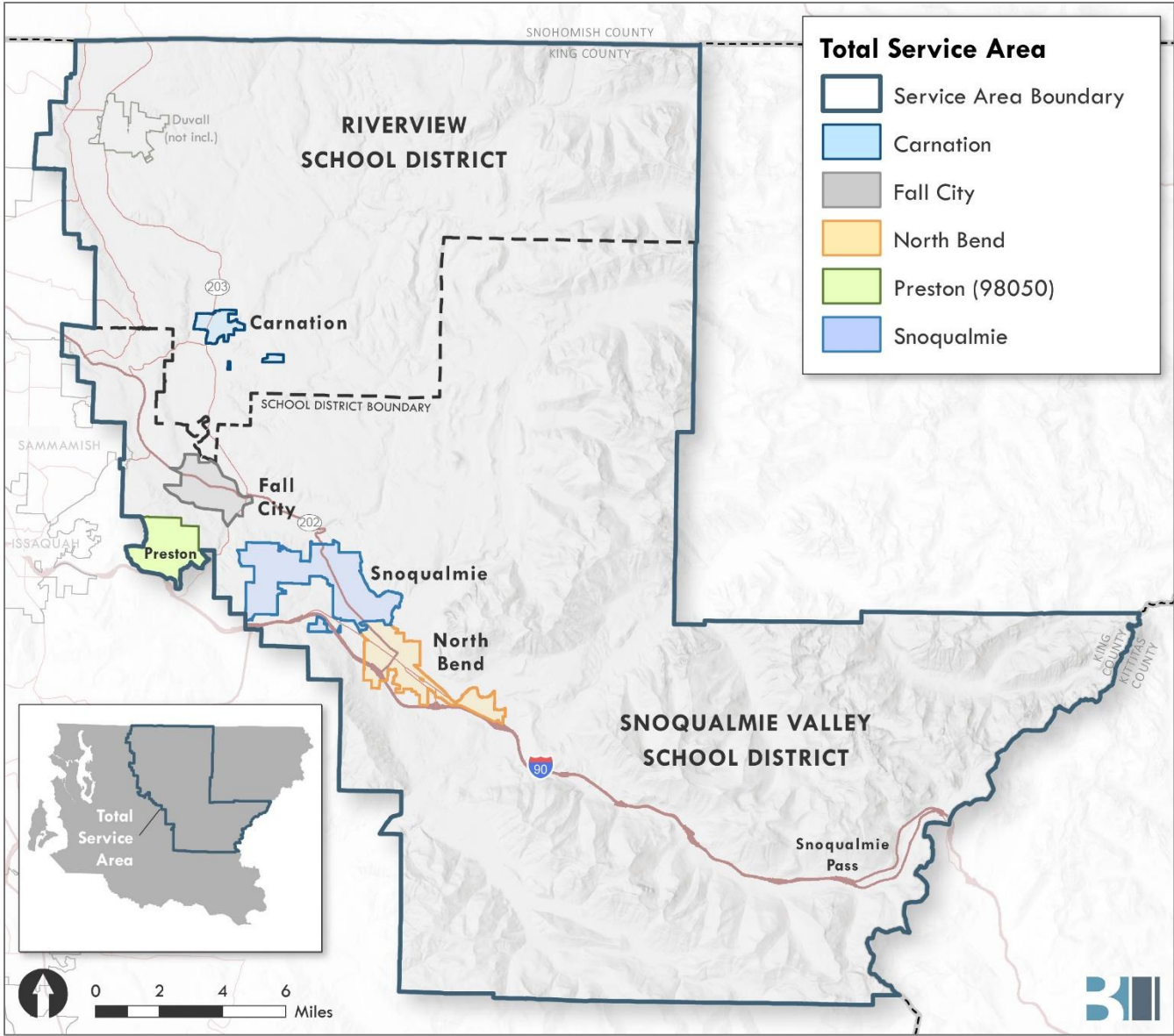
Both Fall City and Preston are treated uniquely throughout the analysis. Because they are not incorporated cities/towns, it is not always possible to separate them out from larger geographies. When possible, data is included for Fall City and Preston, keeping in mind that Preston has no legal boundary and is represented by zip code 98050. With such a small population, the data available for Preston (98050) often has a high margin of error.

In all cases throughout the report, Fall City is included in the data for Unincorporated Snoqualmie Valley School District, because it is part of unincorporated King County.

Lastly, the King County portion of Snoqualmie Pass is included in Unincorporated Snoqualmie Valley School District. As it is such a small community, it is difficult to disaggregate data points without high margins of error.

Exhibit 1 shows a map of the Snoqualmie Valley Hospital Total Service Area as defined for this report.

Exhibit 1. Snoqualmie Valley Hospital Total Service Area



Community Profile

This section of the Needs Assessment is information rich and provides a summary of general community demographics, followed by information about basic needs such as poverty, income, and housing.

POPULATION

King County's population grew by 177,342 people between 2012 and 2017, an increase of roughly 9%. During the same period, the Snoqualmie Valley Hospital (SVH) Total Service Area also grew by 9%, an addition of 4,312 people.

Exhibit 2. Service Area Population, 2012-2017

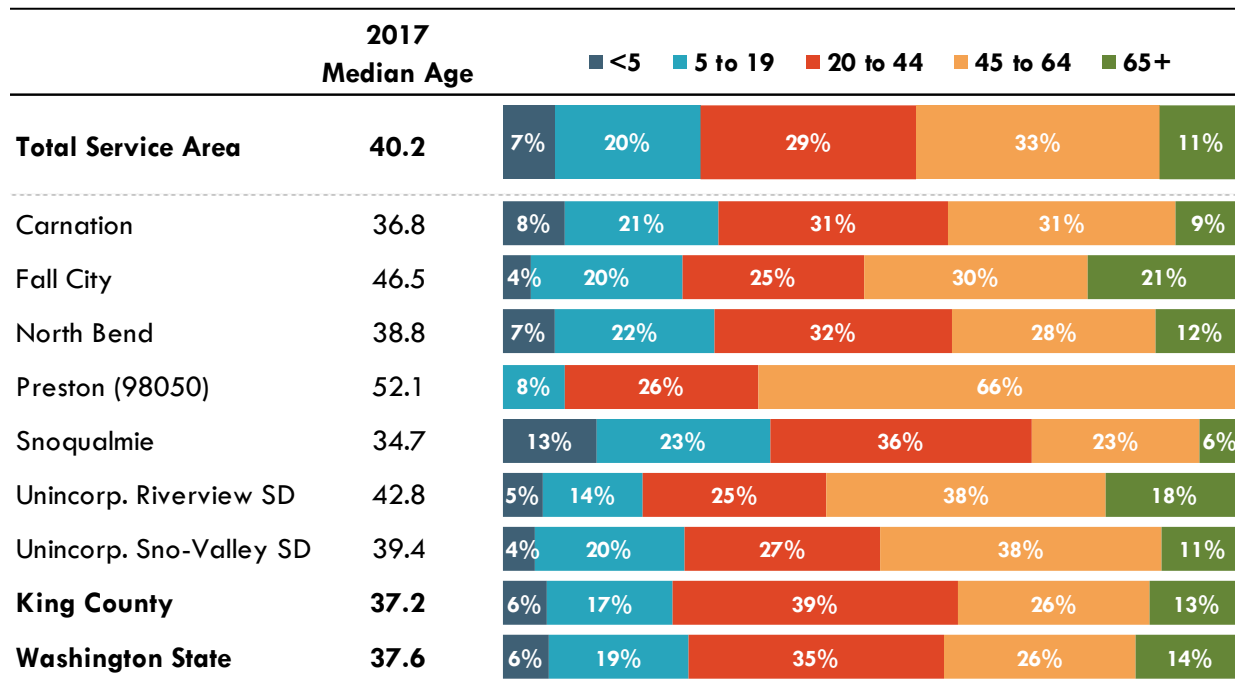
	Total Population 2012	Total Population 2017	Percent Change
Total Service Area	47,478	51,790	9%
Carnation	2,147	1,808	-16%
Fall City	2,282	1,903	-17%
North Bend	5,847	6,645	14%
Preston (98050)	174	503	189%
Snoqualmie	10,500	12,944	23%
Unincorp. Riverview SD	10,313	11,484	11%
Unincorp. Sno-Valley SD	18,497	18,406	0%
King County	1,940,777	2,118,119	9%
Washington State	6,738,714	7,169,967	6%

Source: US Census American Community Survey 5-year Estimates, Table DP05, 2008-2017; BERK, 2019.

- The cities of Snoqualmie and North Bend have seen the most growth, while both Carnation and Fall City declined in population since 2012. Preston has also seen large growth, however the data for Preston has a high margin of error.

AGE DISTRIBUTION

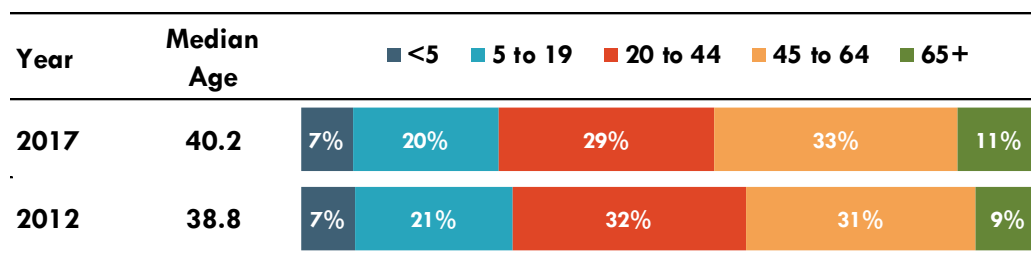
Exhibit 3. Population Age Breakdown, 2017



Source: US Census American Community Survey 5-year Estimates, Table DP05, 2013-2017; BERK, 2019.

- Over a quarter of the population in the Total Service Area is under the age of 19 (27%).
- The age of residents varies by community, with a higher proportion of young people in Carnation, North Bend, and Snoqualmie, and a higher proportion of residents over the age of 65 in Fall City, Preston, and the unincorporated area of the Riverview School District.
- Compared to King County overall, the Total Service Area includes more young people under the age of 19 and more older adults over the age of 50.

Exhibit 4. Total Service Area Age Breakdown, 2012 vs 2017



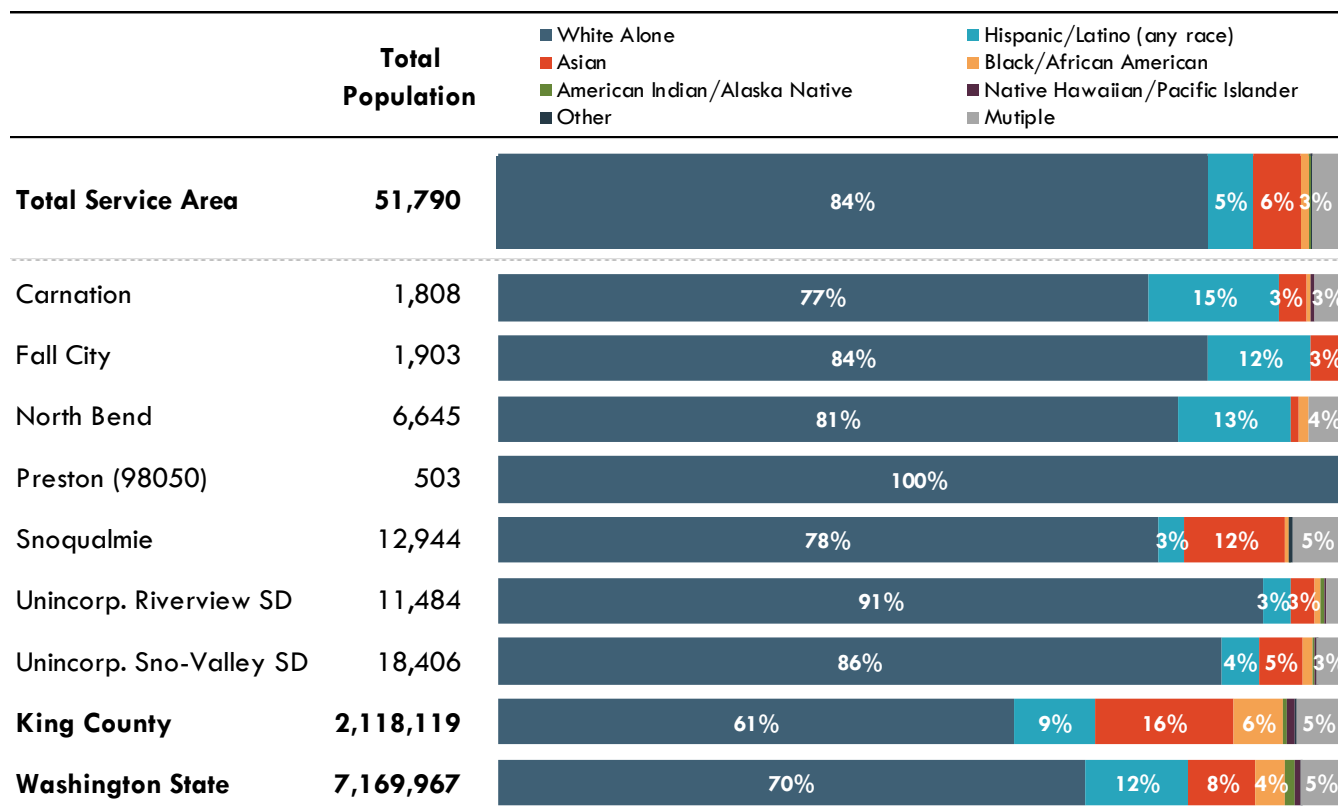
Source: US Census American Community Survey 5-year Estimates, Table DP05, 2008-2017; BERK, 2019.

- Between 2012 and 2017, the median age increased from 38.8 to 40.2.
- Between 2012 and 2017, the share of people over age 50 increased while the share of people below 50 decreased across the study area.

RACE/ETHNICITY

Exhibit 5 presents the distribution of people among the federal race categories and Hispanic ethnicity for the jurisdictions of interest. The Hispanic ethnicity percentage represents those of any race, and each race category includes those residents who reported they are non-Hispanic.

Exhibit 5. Race and Ethnicity Breakdown, 2017



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

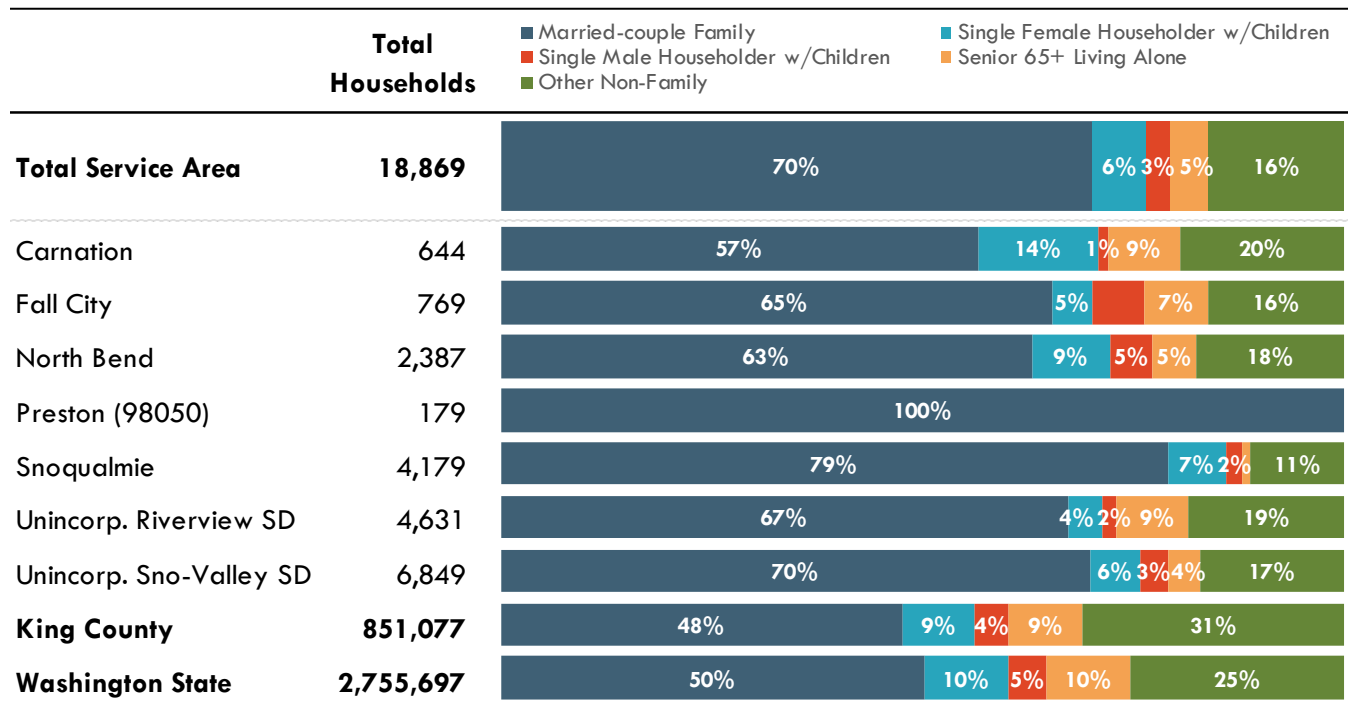
Source: US Census American Community Survey 5-year Estimates, Table B03002, 2013-2017; BERK, 2019.

- Overall, 84% of residents in the Total Service Area are White alone, 5% are Hispanic, and 6% are Asian. The makeup of the Snoqualmie Valley is less racially and ethnically diverse than King County overall where 39% of residents are people of color.
- The unincorporated, more rural areas of the Total Service Area are less racially and ethnically diverse with higher proportions of residents that are White alone. Unincorporated Riverview School District is 91% White while Unincorporated Snoqualmie Valley School District is 86% White.

HOUSEHOLD COMPOSITION

Married couples, either with or without children, comprise at least 57% of household types in each of the geographies of the Total Service Area. Each area of Snoqualmie Valley has a higher share of families than both King County and Washington State overall.

Exhibit 6. Household Composition, 2017



Source: US Census American Community Survey 5-year Estimates, Table DP02, 2013-2017; BERK, 2019.

- Carnation has the lowest percent of married couple families (57%) and the highest percent of single female householders with children (14%).
- Snoqualmie has a larger percentage of married couple families than other parts of the Valley (79%), and a lower share of seniors (1%) and single householders with children (9%). Preston has 100% married-couple families, however as a reminder, these are estimates based on household surveys, and are not 100% accurate.
- Throughout the Total Service Area, there are at least 1,000 householders over the age of 65 living alone, representing 4.7% of the total Snoqualmie Valley households. Householders 65 years and older represent a larger share of households in Carnation (9%), unincorporated Riverview School District (9%), and Fall City (7%).

ECONOMIC INDICATORS

Median Household Income

Median incomes are growing in King County; between 2012 and 2017, the King County median household income increased from \$77,680 to \$83,571.³ However, booms in select industries, such as technology, have likely raised median incomes without lifting the incomes of middle- and low-income groups.

Exhibit 7. Median Household Income, 2012 vs 2017 (in 2017 dollars)

	2012		2017		HH Income, Percent Change 2012-2017
	Total Households	Median HH Income*	Total Households	Median HH Income	
Total Service Area	17,888	\$104,328	18,869	\$114,346	10%
Carnation	755	\$70,315	644	\$79,038	12%
Fall City	910	\$76,545	769	\$98,950	29%
North Bend	2,306	\$88,917	2,387	\$100,417	13%
Preston (98050)	48	\$275,563	179	\$134,880	-51%
Snoqualmie	3,472	\$132,921	4,179	\$136,508	3%
Riverview SD	6,991	\$106,534	7,868	\$110,194	3%
Sno-Valley SD	13,006	\$112,847	13,415	\$117,201	4%
King County	796,555	\$77,680	851,077	\$83,571	8%
Washington State	2,619,995	\$64,800	2,755,697	\$66,174	2%

Notes: There is a high margin of error within this dataset, as much as 20% in some cases, so while this data provides a good indicator of income levels within the area, the margin of error should be accounted for when interpreting the data, especially those geographies in which the number of households is very low. *2012 data adjusted for inflation and presented in 2017 dollars.

Source: US Census American Community Survey 5-year Estimates, Table S1901, 2008-2017; BERK, 2019.

- While median household income in some areas of the Snoqualmie Valley remained relatively flat from 2012 to 2017, other areas saw increases that outpaced inflation (Carnation, Fall City, and North Bend).
- However, Snoqualmie and Preston have the highest median incomes (\$136,508 and \$134,880) while Carnation, Fall City, and North Bend have the lowest (\$79,038, \$98,950, and \$100,417 respectively).

³ Census Median Income in the Past 12 months 2012 (2008 – 2012 ACS 5-year estimates) and 2017 (2013-2017 ACS 5-year estimates). Values are adjusted for inflation, and presented in 2017 dollars.

Unemployment

The US economy has largely recovered from the Great Recession and the unemployment rate has declined by 4% in King County over the past five years. Because the Bureau of Labor Statistics only provides unemployment rate information at the county level and not at the city level, the unemployment rate data shown below is provided by ACS as a five-year estimate of unemployment experienced by those 20 to 64 years of age.

Exhibit 8. Unemployment Rates, Population Age 20-64, 2017

	Population Age 20-64	Unemployment Rate	
		%	
Total Service Area	40,172	4.1%	
Carnation	1,373	3.4%	
Fall City	1,583	7.3%	
North Bend	5,062	7.0%	
Preston (98050)	461	0.0%	
Snoqualmie	8,685	3.7%	
Riverview SD	16,741	4.1%	
Sno-Valley SD	28,467	4.2%	
King County	1,726,169	5.0%	
Washington State	5,734,852	6.0%	

Note: There is a high margin of error within this dataset, as much as 20% in some cases, so while this data provides a good indicator of unemployment rates within the area, the margin of error should be accounted for when interpreting the data, especially those geographies in which the population sample is very low.

Source: US Census American Community Survey 5-year Estimates, Table DP03, 2008-2017; BERK, 2019.

Poverty

A useful metric for understanding income disparity is the population living in poverty, which is defined by the Federal Poverty Level (FPL). FPL is calculated for a family unit and the threshold varies depending on the number of family members. The official poverty definition uses household income before taxes and does not include capital gains or non-cash benefits like public assistance, Medicaid, and public housing subsidies. The FPL is updated annually for inflation using the Consumer Price Index but does not vary geographically. In 2017, the most current year available for the data below, the threshold ranged from an income of \$12,488 for one person to \$40,332 for a family of eight (six children). The FPL for a family of four in 2017 was \$24,858.

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. Most federal and state benefit programs employ income thresholds by household size to determine eligibility in one of two ways, by percent of FPL (described above) which does not account for location, or relative to the area median income (AMI) which does account for location. Given the low income limit set by the FPL relative to the cost of living, many benefit programs establish eligibility above 100% at 200% or more.

Exhibit 9. Population Living in Poverty, Population for which Poverty Status is Known, 2017

	Total Population	Below 100% Poverty Level		Below 200% Poverty Level	
		#	%	#	%
Total Service Area	51,663	2,486	5%	5,500	11%
Carnation	1,808	145	8%	499	28%
Fall City	1,896	92	5%	332	18%
North Bend	6,645	880	13%	1,782	27%
Preston (98050)	503	0	0%	0	0%
Snoqualmie	12,869	173	1%	367	3%
Unincorp. Riverview SD	11,474	558	5%	1,335	12%
Unincorp. Sno-Valley SD	18,364	730	4%	1,517	8%
King County	2,089,582	212,509	10%	459,828	22%
Washington State	7,037,413	859,950	12%	1,984,694	28%

Note: The population for which poverty status is known is slightly lower than the total population, hence the discrepancy in total population metrics in Exhibit 9 as compared to Exhibit 2.

Note: The second column, 'Below 200% Poverty Level', is inclusive of the first column.

Source: US Census American Community Survey 5-year Estimates, Table S1701, 2013-2017; BERK, 2019.

- North Bend has the highest percent of people in poverty or under 200% of the federal poverty level, at 13% and 27% respectively.
- Snoqualmie and Preston have the lowest rates of poverty in the Total Service Area.
- Overall, 5% of the Total Service Area is in poverty (as defined by the FPL), and 11% are below 200% of the federal poverty level.

A family is defined by the US Census as two or more immediate family members living in the same household. Exhibit 10 shows families living in poverty across the Total Service Area.

Exhibit 10. Families Living in Poverty, 2017

	Total Families	Families in Poverty	
		#	%
Total Service Area	14,949	409	2.7%
Carnation	463	29	6.3%
Fall City	587	10	1.7%
North Bend	1,843	155	8.4%
Preston (98050)	179	0	0.0%
Snoqualmie	3,674	29	0.8%
Unincorp. Riverview SD	3,374	95	2.8%
Unincorp. Sno-Valley SD	5,416	100	1.8%
King County	512,299	32,787	6.4%
Washington State	1,782,539	142,603	8.0%

Source: US Census American Community Survey 5-year Estimates, Table S1702, 2013-2017; BERK, 2019.

- Similar to overall population, North Bend has the highest rates of families in poverty, at 8.4%.
- In the Total Service Area, 2.7% of families are in poverty, suggesting that a higher share of non-family households are in poverty as compared to family households.

Exhibit 11 shows families with a female head of household living in poverty. While this is helpful descriptive information, the error in this data set is high due to the small sample size. However, when broadly compared, the Total Service Area has less single-female head of household families in poverty than King County or Washington State overall. It should also be noted that the areas with higher female head of household families in poverty match the areas where generally there are more families in poverty.

Exhibit 11. Families with Female Head of Household (HOH) Living in Poverty, 2017

	Total Families w/ Female HOH	Families with Female HOH in Poverty	
		#	%
Total Service Area	695	130	18.7%
Carnation	70	14	20.0%
Fall City	25	0	0.0%
North Bend	161	76	47.2%
Preston (98050)	0	0	0.0%
Snoqualmie	166	29	17.5%
Unincorp. Riverview SD	39	11	27.7%
Unincorp. Sno-Valley SD	259	0	0.0%
King County	43,955	12,703	28.9%
Washington State	177,766	61,152	34.4%

Source: US Census American Community Survey 5-year Estimates, Table S1702, 2013-2017; BERK, 2019.


IMMIGRANT POPULATION

There is a large and diverse immigrant population in King County, representing 22% of the total population. Nine percent of the population in the Total Service Area is foreign-born, and using data on languages spoken at home, English proficiency, and participation in the Transitional Bilingual Instructional Program (found in the Youth Population and Health Outcomes section), patterns about needs and variations in needs across the Valley can be identified.

Foreign Born Population

The foreign-born population includes naturalized US citizens, lawful permanent residents (immigrants), temporary migrants (such as foreign students), humanitarian migrants (such as refugees and those seeking asylum), as well as unauthorized migrants. Anyone who was not a US citizen at birth is included in the count.

Exhibit 12. Foreign-Born Population, 2017

	Total Population	Foreign-Born Population		
		#	% of Total	
Total Service Area	51,160	4,832	9.4%	
Carnation	1,808	183	10.1%	
Fall City	1,896	93	4.9%	
North Bend	6,645	751	11.3%	
Preston (98050)	503	21	4.2%	
Snoqualmie	12,869	1,518	11.8%	
Unincorp. Riverview SD	11,474	972	8.5%	
Unincorp. Sno-Valley SD	18,364	1,408	7.7%	
King County	2,118,119	467,938	22.1%	
Washington State	7,169,967	986,515	13.8%	

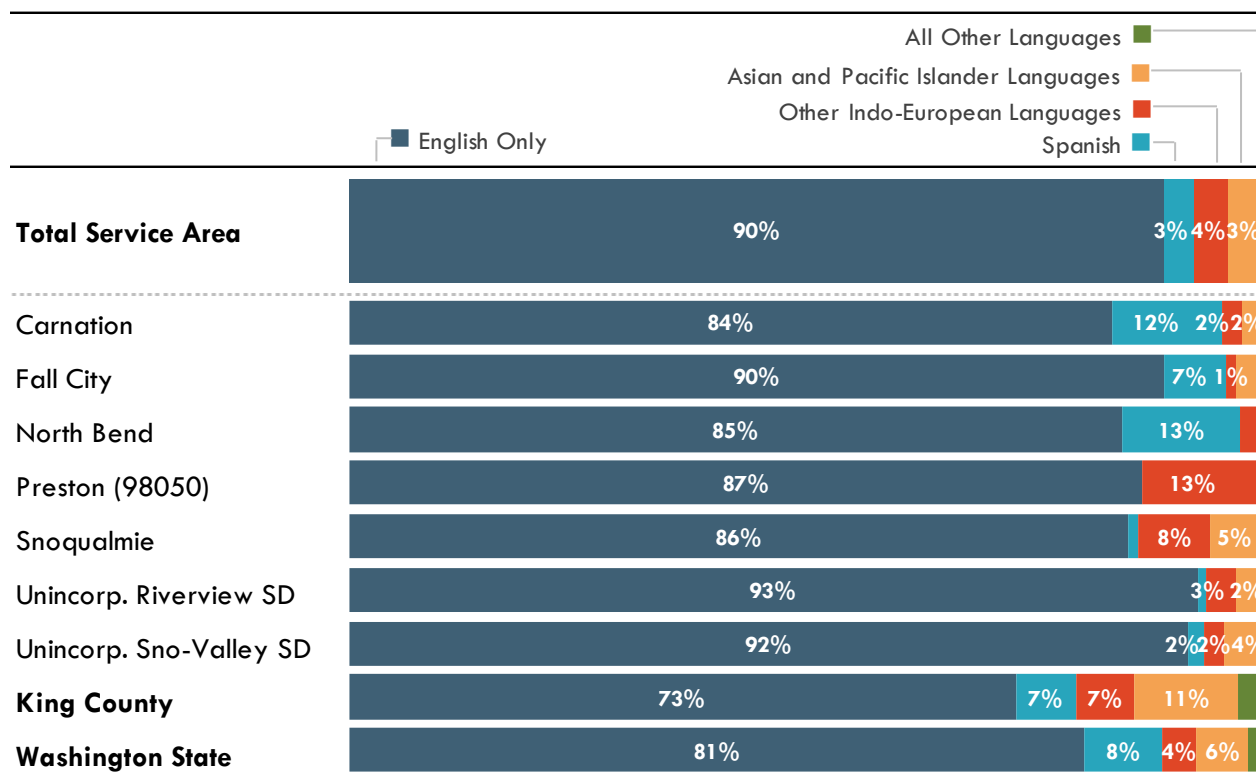
Source: US Census American Community Survey 5-year Estimates, Table DP02, 2013-2017; BERK, 2019.

- In Snoqualmie Valley over 9% of the population is foreign born, compared to 22% of the population in King County, and nearly 14% statewide.
- The highest shares of foreign-born residents in the Total Service Area live in Carnation, North Bend, and Snoqualmie (10%, 11% and 12% respectively).

Language

Language often adds more nuance to understanding the racial and ethnic makeup of an area. Snoqualmie Valley has a higher percentage of residents speaking only English at home (90%) compared to King County on the whole (73%).

Exhibit 13. Language Spoken at Home, 2017



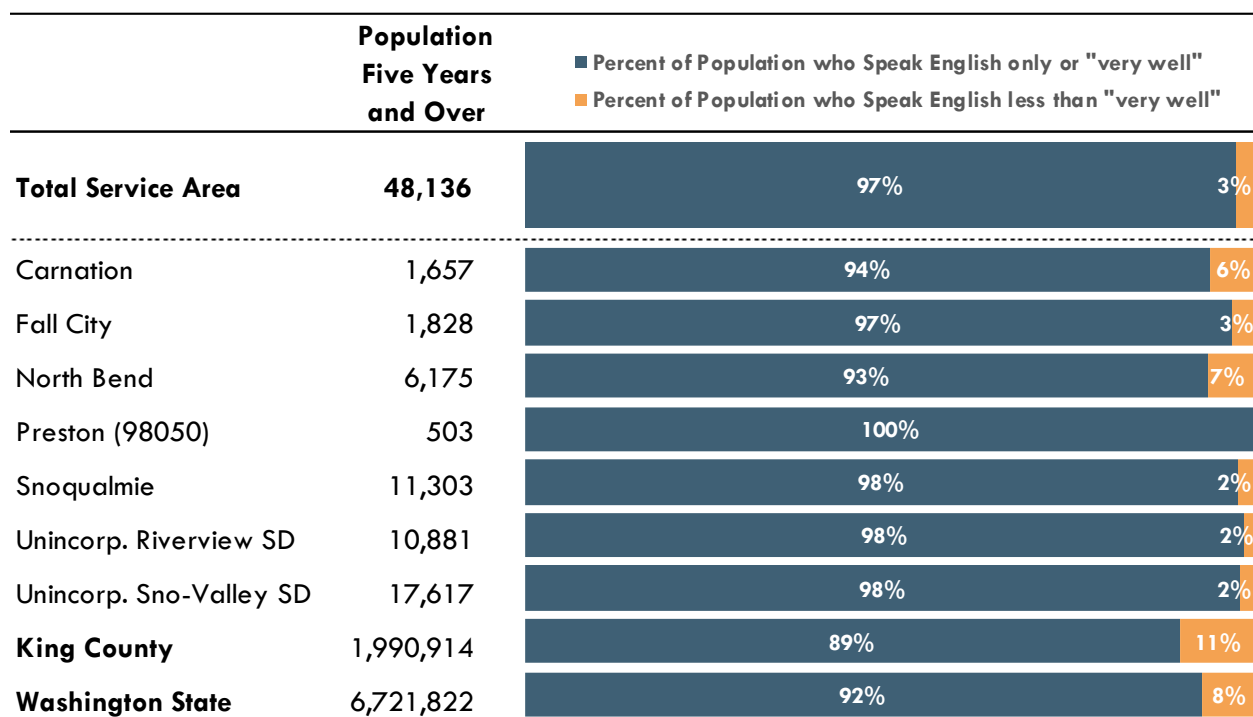
Source: US Census American Community Survey 5-year Estimates, Table C16001, 2013-2017; BERK, 2019.

- About 15% of the population in Carnation, North Bend, and Snoqualmie speak a language other than English at home. Of those speaking another language in Carnation and North Bend, most speak Spanish (12% and 13% respectively), while in Snoqualmie and Preston, most speak other Indo-European languages (8% and 13% respectively) or Asian and Pacific Islander languages (5%).

Limited English Proficiency

Individuals with limited proficiency in English often have difficulty finding jobs as many jobs require that employees communicate with customers, co-workers, or suppliers in English. Lack of English proficiency may also cause individuals to limit interactions with public agencies or staff leading to an inability to access benefits or programs.

Exhibit 14. English Proficiency, 2017



Source: US Census American Community Survey 5-year Estimates, Table S1601, 2013-2017; BERK, 2019.

- In the Total Service Area, approximately 3% of the population over the age of five speak English less than "very well". North Bend and Carnation have the greatest share of the population that speaks English less than "very well" (6% and 7% respectively); this is lower than statewide (7.6%) and countywide (10.6%).

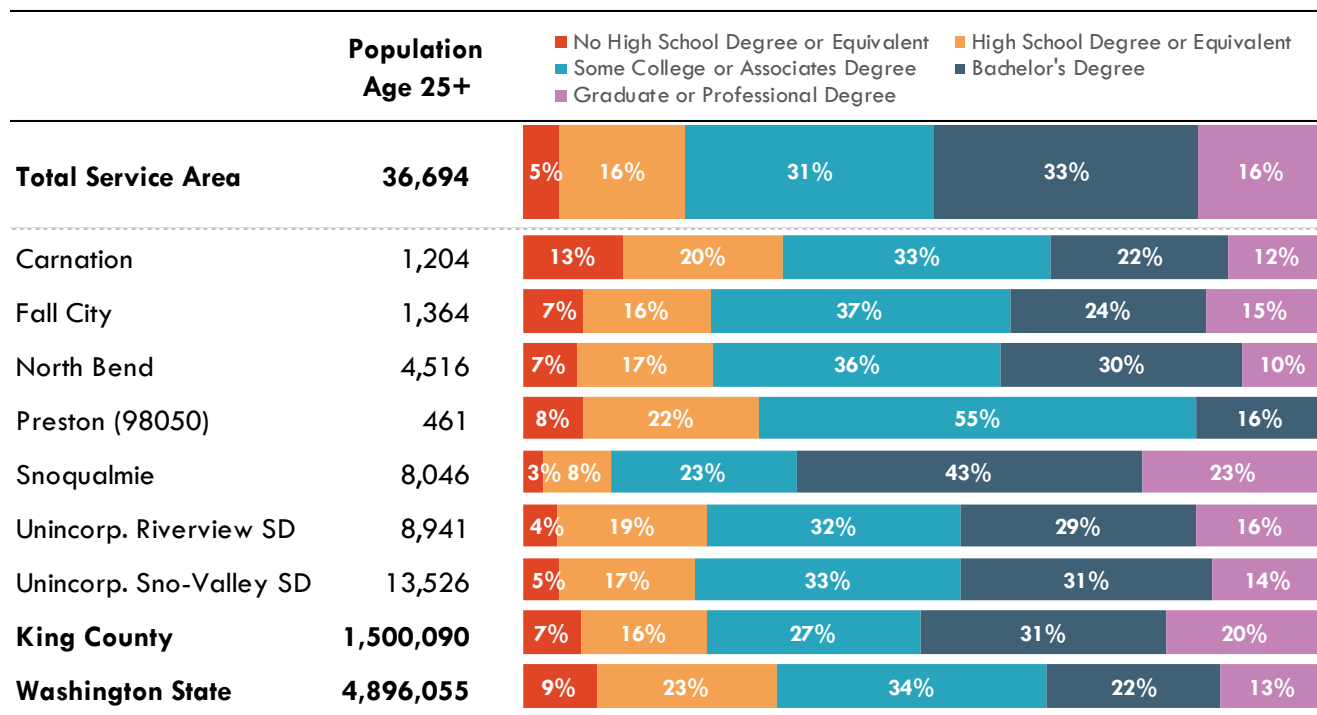
ADULT EDUCATIONAL ATTAINMENT

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.⁴

⁴ Aud, S., Fox, M. A., & Kewal-Ramani, A. (2010). Status and Trends in the Education. National Center for Education Statistics.

Exhibit 15 shows the highest educational attainment for adults aged 25 and older for the Total Service Area.

Exhibit 15. Educational Attainment of Population Age 25+, 2017



Source: US Census American Community Survey 5-year Estimates, Table DP02, 2013-2017; BERK, 2019.

- Across Snoqualmie Valley's adult population 25 and older, 49% received a bachelor's degree or higher, 31% received an associate degree or some college, and 15% received a high school diploma or equivalent.
- Compared to King County, the Total Service Area has similar rates of adult educational attainment, with King County having slightly higher rates of adults with graduate or professional degrees, and slightly higher rates of adults with no high school degree or GED.

HOUSING

The following section draws heavily on data from the US Department of Housing and Urban Development (HUD) Consolidated Housing Affordability Strategy (CHAS) dataset. This dataset is based on US Census ACS five-year estimates and presents a more detailed depiction of various household attributes than available in the ACS data.

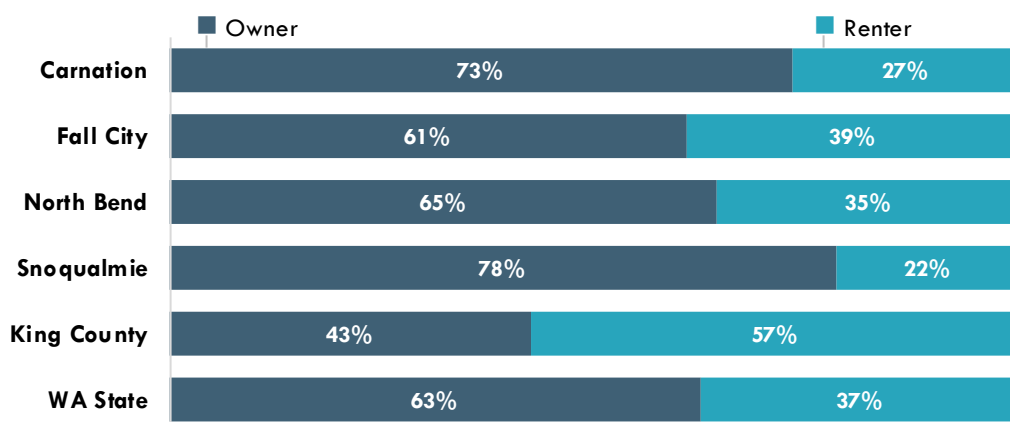
Of note, the CHAS data lags behind census data products by a few years, and the most recent year available is based on 2011-2015 ACS five-year estimates. This period includes the recovery period following the last economic recession. Housing costs have increased during the past few years alongside continued job and population growth, a fact that should be considered when interpreting cost burden data from HUD.

Additionally, CHAS data is most readily summarized at the census place level, such as a city or census designated place (CDP). Therefore, this section presents data by place of focus in the SVH Total Service Area, and aside from Fall City, does not present data for the unincorporated portions of the study area or Preston. This means that unlike other data sources, we are not able to use this data to estimate housing across the entire study area.

Housing Tenure

Exhibit 16 shows housing tenure by Service Area, both by percentage of total occupied housing units, as well as the raw number of occupied housing units.

Exhibit 16. Housing Tenure by Place, 2015



	Owner	Renter	All Households
Carnation	480	175	655
Fall City	450	290	740
North Bend	1,545	850	2,395
Snoqualmie	3,145	865	4,010
King County	349,020	470,630	819,650
WA State	1,668,070	1,000,840	2,668,910

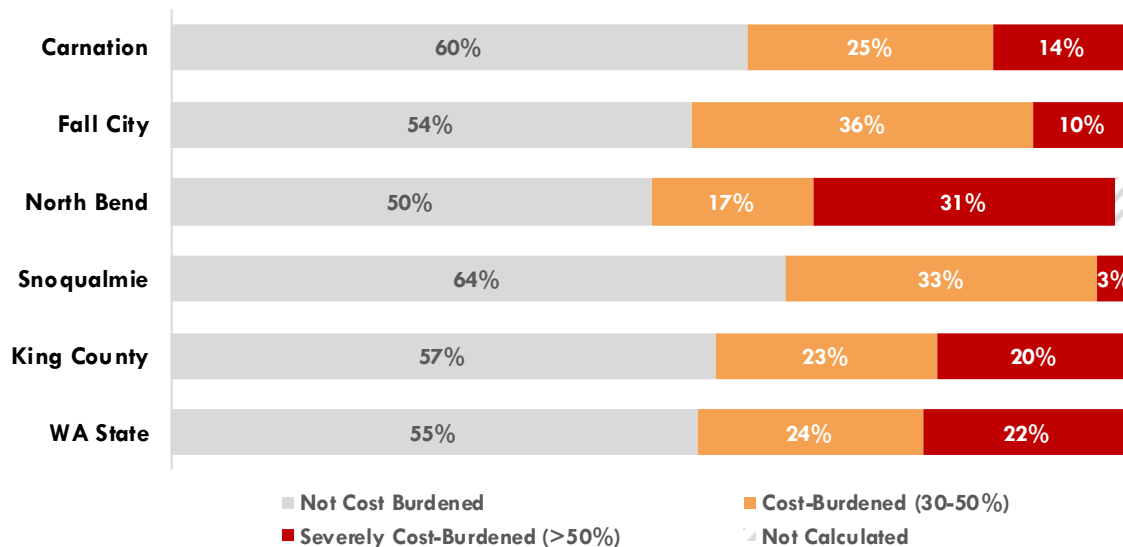
Source: US Dept. of Housing and Urban Development, Consolidated Housing Affordability Strategy, 2011-2015; BERK, 2019.

- Both Carnation and Snoqualmie have the highest share of owner households as compared to the rest of the Snoqualmie Valley. Snoqualmie has highest number of owner households among the Service Areas (3,145), and highest share at nearly 80% of households.
- Fall City has the highest share of renter households, at 39%, followed by North Bend at 35%.

Renter Cost Burden

HUD deems housing to be affordable if a household spends no more than 30% of their gross income on housing costs (rent plus basic utilities or gross monthly owner costs). Households are considered to be cost-burdened if they pay more than 30% of their income towards housing costs. Households paying more than 50% of their income towards housing costs are considered severely cost-burdened, since that share leaves that much less income for other daily living expenses. Because renter households are more likely to be cost burdened, Exhibit 17 presents data solely on renter households.

Exhibit 17. Renter Household Cost Burden, 2015



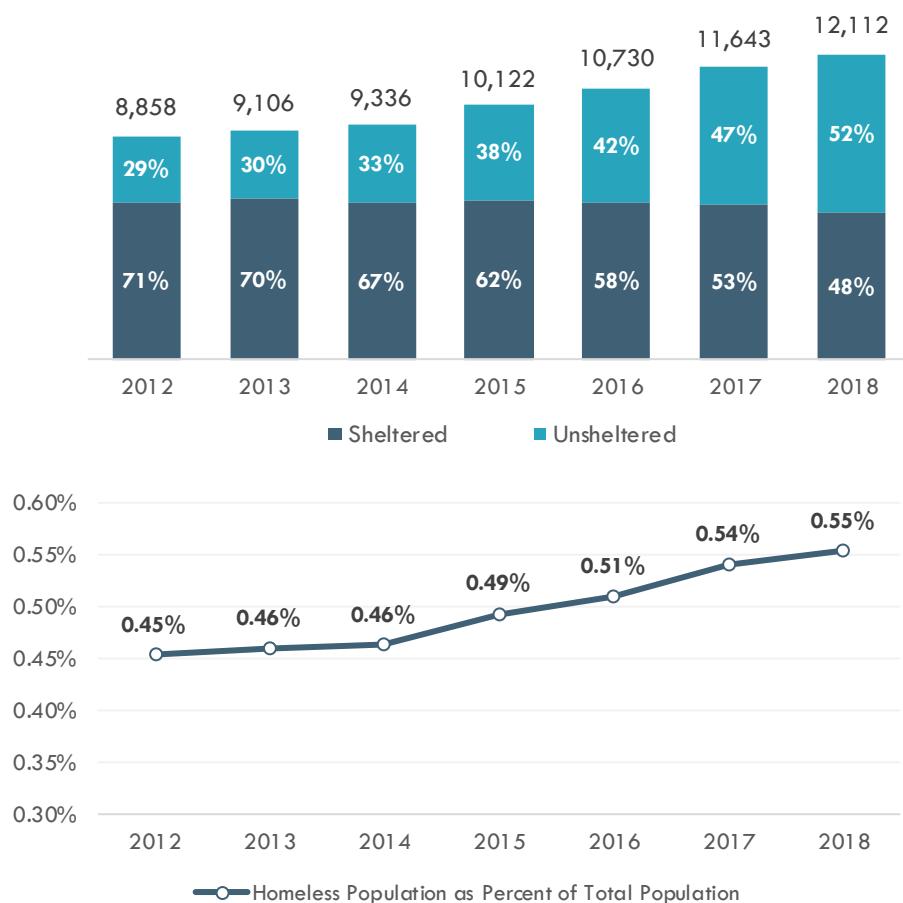
Source: US Dept. of Housing and Urban Development, Consolidated Housing Affordability Strategy, 2011-2015; BERK, 2019.

- North Bend has the highest percentage of cost-burdened or severely cost-burdened renters, at nearly 50% of all renter households, with 31% of renter households being severely cost-burdened.
- In Fall City, 46% of renter households are cost-burdened or severely cost-burdened.
- Snoqualmie has the highest rates of renter households that are not cost-burdened, and only 3% of renter households are severely cost-burdened.

Homelessness

Homelessness in the region is growing. All Home, the Seattle/King County Continuum of Care, conducts an annual point-in-time (PIT) homeless county. 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.

Exhibit 18. Homeless Individuals in King County, 2012-2018



Source: Washington State Department of Commerce & Continuum of Care, 2012-2018; BERK, 2019.

- As shown above, homelessness is on the rise, specifically unsheltered homelessness. This increase is both the total number of individuals experiencing homelessness, and as a percent of the total population in King County.

In the Northeast part of the county, the PIT count increased from 84 to 137 individuals from 2017 to 2018. This area is defined as Carnation, Duvall, North Bend, Skykomish, Snoqualmie, and unincorporated areas in that vicinity.

Exhibit 19. Unsheltered Homeless Point in Time Count by Region, 2017-2018

	<i>Unsheltered</i>	
	2017	2018
Northeast County	84	137
All King County	5,485	6,320

Source: Washington State Department of Commerce & Continuum of Care, 2012-2018; BERK, 2019.

Exhibit 20. Unsheltered Homelessness by Type, Northeast King County, 2017-2018

	Streets/ Outside	Tents	Buildings	Car	RV	Van	Total
2018	18	80	1	4	28	6	137
2017	18	38	2	6	18	2	84

Source: Washington State Department of Commerce & Continuum of Care, 2012-2018; BERK, 2019.

- The number of homeless people counted living in tents more than doubled from 2017 to 2018 in Northeast King County.

Health Indicators

This section presents a broad overview of health indicators across the Snoqualmie Valley. In many cases, areas within the Valley fare better than King County as a whole. In the instance where an area fares worse than King County, that indicator is highlighted. Indicators are grouped in alignment with Public Health Seattle-King County's (PHSKC) city profiles for community health.

Due to the way PHSKC publishes data, indicators shown below are reported at the Health Reporting Area (HRA) geography, and when possible, compared to both King County and Washington State. The two HRAs covering the SVH Total Service Area are Bear Creek/Carnation/Duvall and Snoqualmie/North Bend/Skykomish.

The last column of each chart (far right) describes the type of data presented as well as which years are represented. While much of the data is from the years 2011-2015, this is the most recent data available through PHSKC unless otherwise noted.

GENERAL HEALTH STATUS

Overall, the general health metrics below are similar in the Snoqualmie Valley and King County overall. Activity limitation in adults is slightly higher in Snoqualmie/North Bend/Skykomish. Bear Creek/Carnation/Duvall has a slightly higher life expectancy, and lower instances of fair or poor health and distress as compared to the other HRA or King County.

Exhibit 21. General Health Status Indicators

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
Life Expectancy (years)	83.07	81.89	81.77	80.31	<i>in Years (2011-2015)</i>
Fair or Poor Health	9	12	12	15.8	<i>Percent (2011-2015)</i>
Distress	9	10	10	11.4	<i>Mean Days (2011-2015)</i>
Activity Limitation	21	23	22	24.8	<i>Percent (2011-2015)</i>
Disability	23	23	23	26.4	<i>Percent (2011-2015)</i>

Note: Cells highlighted in orange represent metrics for which the given HRA has higher numbers indicating poorer results of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

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 are also chronic conditions, such as hypertension and high cholesterol, that if treated, can often be reversed.

There are a number of adult health risk factors below in which one or both of the HRAs present higher prevalence than King County.

Exhibit 22. Adult Risk Factor Prevalence

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
Cigarette smoking	5	14	11	14.7	Percent (2013-2017)
Obese	22	29	22	27.4	Percent (2013-2017)
Overweight, not obese	33	29	34	35.3	Percent (2011-2015)
No leisure-time physical activity	11	13	16	19.6	Percent (2011-2015)
Hypertension	29	31	26	30.1	Percent (2011, 2013, & 2015)
High blood cholesterol	38	56	43	45.4	Percent (2011, 2013, & 2015)
Low fruit consumption	39	39	35	36.2	Percent (2011, 2013, & 2015)
Low vegetable consumption	17	14	17	18.1	Percent (2011, 2013, & 2015)
Met physical activity recommendation	30	27	24	22.7	Percent (2013, 2015 & 2017)

Note: Cells highlighted in orange represent metrics for which the given HRA has higher instances of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

- Both HRAs have higher rates of hypertension and lower rates of fruit consumption as compared to King County.
- Snoqualmie/North Bend/Skykomish has 3% more cigarette smokers, 13% more adults with high cholesterol, and 7% more obese individuals than King County overall.

CHRONIC DISEASE

Chronic diseases are defined broadly 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. Overall, while some of the metrics in Exhibit 23 are higher than King County, they are only marginally higher (1-2%) and likely fall within the confidence intervals of the reported data.

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

Exhibit 23. Chronic Disease Prevalence

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
Current asthma	9	8	9	9.6	Percent (2011-2015)
Coronary heart disease	3	3	3	3.7	Percent (2011-2015)
Heart attack	5	3	4	5.7	Percent (2011-2015)
Stroke	27.8	25.9	32.6	37.63	Percent (2011-2015)
Diabetes	18.7	27.2	25.5	30.75	Percent (2011-2015)
Chronic respiratory disease	4	5	4	5.5	Percent (2011-2015)
Arthritis	22	21	20	24.9	Percent (2011-2015)

Note: Cells highlighted in orange represent metrics for which the given HRA has higher instances of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

COMMUNICABLE DISEASE

Tuberculosis

In 2018, 93 new cases of tuberculosis were reported in King County, for an incidence of 4.2 cases per 100,000, which makes up nearly half of the 188 reported new cases in Washington State that year. In King County, the rate of TB among persons born outside the US was 17.5 per 100,000 population in 2018, which is 25 times the rate of TB in US-born individuals in King County (0.7 cases per 100,000 in 2018).⁶ More granular data at the HRA level is suppressed in East King County in order to protect confidentiality due to low sample sizes.

Sexually Transmitted Diseases

For the sexually transmitted diseases (STDs) listed below, data is generally limited to county-wide reporting, and with all metrics presented, STDs are on the rise. Chlamydia rates continue to rise, occurring at a rate of 478.3 per 100,000 persons in King County in 2018, compared to 363.5 per 100,000 persons in 2014. Chlamydia occurs at the highest rates among females ages 15-24. The rate of Gonorrhea is also on the rise, with 202.3 cases per 100,000 persons in King County in 2018, compared to 110.0 cases per 100,000 persons for 2014, and also much higher than the state rate of 151 per 100,000 persons. Males, ages 20-29 have the highest rates of Gonorrhea.

⁶ <https://www.kingcounty.gov/depts/health/communicable-diseases/tuberculosis/data.aspx>

Exhibit 24. Sexually Transmitted Disease Rates, 2018

	King County	WA State	
Chlamydia	478.3	467.9	<i>Rate Per 100,000 (2018)</i>
Gonorrhea	202.3	151	<i>Rate Per 100,000 (2018)</i>
P&S Syphilis	18.1	10.9	<i>Rate Per 100,000 (2018)</i>
Herpes	-	21.7	<i>Rate Per 100,000 (2018)</i>

Source: WA Department of Health, DCHS ID Assessment Unit and STD Services, 2018; BERK, 2019.

Exhibit 25. Chlamydia Instance Among Females 15-24

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	
Chlamydia Instance Among Females 15-24	1,266	1,711	2,379	<i>Rate Per 100,000 (2012-2016)</i>

Source: Public Health Seattle King County, 2019; BERK, 2019.

- Chlamydia instances among females 15-24 are significantly lower in the Total Service Area as compared with King County overall.

HIV/AIDS

At the end of 2016 there were an estimated 6,798 King County residents and 12,395 Washington residents with diagnosed HIV infection. Approximately 0.32% of King County residents and 0.17% of Washington residents have been diagnosed with HIV. King County is home to 29% of the state population, but 55% of persons diagnosed with HIV. The overwhelming majority of people living with HIV/AIDS in King County are cisgender males, comprising 86% of HIV/AIDS patients.⁷

Exhibit 26. HIV/AIDS Prevalence and Incident Rates

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	
HIV Prevalence	56	40	323	<i>Rate Per 100,000 (2016)</i>
HIV Incidence	2.6*	-	11.9	<i>Rate Per 100,000 (2013-2016)</i>

Note: *Interpret with caution, the sample size is low for this geography and indicator.

Source: Public Health Seattle King County, 2019; BERK, 2019.

⁷ See the King County Semi-Annual Surveillance Report for more information:

<https://www.kingcounty.gov/depts/health/communicable-diseases/hiv-std/patients/~media/depts/health/communicable-diseases/documents/hivstd/hiv-surveillance-report.ashx>

LEADING CAUSES OF DEATH

Age-adjusted death rates are an important factor to examine when comparing mortality data. The crude death rate is a ratio of the number of deaths to the entire population. Age-adjusted death rates eliminate the bias of age in the makeup of the populations being compared.

This section presents the top 10 leading causes of death by age adjusted death rate per 100,000 people, with the main types of deaths due to cancer disaggregated. As shown below, both HRAs have slightly higher rates of cancer deaths than King County.

Exhibit 27. Leading Causes of Death

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
All cancers	159.2	158.5	147.7	159.6	Rate Per 100,000 (2011-2015)
Lung cancer	31.6	32.4	33.9	40.7	Rate Per 100,000 (2011-2015)
Colorectal cancer	13.5	16.5	12.1	13.1	Rate Per 100,000 (2011-2015)
Breast cancer	15.9	26.3	20.1	19.9	Rate Per 100,000 (2011-2015)
Heart disease	109.9	120.1	125.7	139.8	Rate Per 100,000 (2011-2015)
Stroke	27.8	25.9	32.6	37.6	Percent (2011-2015)
Alzheimer's disease	39.6	37.1	41.5	44.3	Rate Per 100,000 (2011-2015)
Diabetes-related	38.2	52.7	60.4	74.7	Rate Per 100,000 (2011-2015)
Diabetes	18.7	27.2	25.5	30.8	Percent (2011-2015)
Influenza/ pneumonia	5.7	7.7	9	10.1	Rate Per 100,000 (2011-2015)
Chronic lower respiratory disease	25.7	39.5	29.8	40.6	Rate Per 100,000 (2011-2015)
HIV/AIDS	0	0	1.4	0.9	Rate Per 100,000 (2011-2015)
Chronic liver disease/cirrhosis	4.9	7.3	9.5	11.4	Rate Per 100,000 (2011-2015)

Note: Cells highlighted in orange represent metrics for which the given HRA has higher instances of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

- In addition to higher overall death due to cancer rates, Snoqualmie/North Bend/Skykomish has significantly higher rates of breast cancer deaths compared to King County or Washington State.
- Both HRAs have higher instances of colorectal cancer deaths compared to King County.
- Snoqualmie/North Bend/Skykomish has slightly higher rates deaths due to diabetes and higher rates of chronic lower respiratory disease deaths compared to King County.

INJURY AND VIOLENCE PREVALENCE

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 engineering.⁸

Exhibit 28. Injury/Violence Metrics and Risk Factors

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
Unintentional injury death	31.0	25.7	31.7	39.4	Rate Per 100,000 (2011-2015)
Motor vehicle accident death	6.7	7.9	5.3	7.8	Rate Per 100,000 (2011-2015)
Fall death (all ages)	13.3	6.6	9.6	11.7	Rate Per 100,000 (2011-2015)
Fall death (age 65+)	58.3	35.8	66.6	80.4	Rate Per 100,000 (2011-2015)
Fall injury prevalence	10.0	17.3	11.3	12.0	Percent (2012, 2014, & 2016)
Suicide	12.3	15.9	12.2	14.7	Rate Per 100,000 (2011-2015)
Homicide	*	2.8	2.7	3.1	*Data suppressed (2011-2015)
Firearms-related death	6.2	8.7	7.3	9.4	Rate Per 100,000 (2013-2017)
Firearms in home	30	44	22	34.3	Percent (2013, 2015 & 2016)

Note: Cells highlighted in orange represent metrics for which the given HRA has higher instances of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

- There are higher rates of motor vehicle accident death across the Total Service Area than for King County, which is likely attributable to the rural nature of the region. There are many undivided highways and road with higher speed-limits which can lead to more serious injuries or death in the event of a crash.
- Suicide rates are higher in Snoqualmie/North Bend/Skykomish HRA as compared to King County, yet are similar to rates across Washington State. Additionally, homicide and firearm deaths and prevalence are both higher in the HRA than King County overall.

ALCOHOL AND SUBSTANCE USE

Binge drinking is defined as five or more drinks on one occasion for men and four or more for women. In the HRAs, 18% of adults engaged in binge drinking over the past year, which is less than for the county (20%) but higher than the state rate (16.9%). Additionally, the HRAs fare better than the county in other metrics concerning alcohol and marijuana use, as shown in Exhibit 29.

⁸ PHSKC City Health Profiles: https://www.kingcounty.gov/depts/health/data/~/_media/depts/health/data/documents/city-health-profiles/City-Health-Profile-Bear-Creek-2016.ashx

Exhibit 29. Alcohol and Substance Use

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
Poisoning death	7.4	6	10.9	12.19	Rate Per 100,000 (2011-2015)
Alcohol-related death	5.1	6.2	9.7	12.54	Rate Per 100,000 (2011-2015)
Binge drinking	18	18	20	16.9	Percent (2011-2015)
Current marijuana use	12	14	14	12.2	Percent (2013-2017)

Note: Cells highlighted in orange represent metrics for which the given HRA has higher instances of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

MATERNAL AND CHILD HEALTH

Data below shows that birth rates are slightly higher in the HRAs as compared to King County or Washington State.

Exhibit 30. Fertility Rates of Women of Child-bearing Age (15-44)

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
Birth Rate	54	59	50	53	Rate Per 1,000 (2012-2016)

Source: Public Health Seattle King County, 2019; BERK, 2019.

Due to small population size in the Snoqualmie Valley, data is aggregated in the exhibit below showing adolescent birth rate, and covers a large portion of East King County. The data shows that adolescent birth rates are far lower in the eastern portion of King County than for the county overall.

Exhibit 31. Adolescent Birth Rate

	East County	King County	
Adolescent Birth Rate (15-17)	1.0	4.0	Rate Per 1,000 (2013-2017)

Source: Public Health Seattle King County, 2019; BERK, 2019.

In nearly every indicator for maternal and child health shown below in Exhibit 32, the HRAs in the Total Service Area fare better than King County overall. There are lower rates of infant mortality, less low and very low birthweight babies, less instances of late or no prenatal care, lower rates of the mother smoking during pregnancy, and higher rates of breastfeeding initiation. The only indicator in which the Snoqualmie Valley is slightly higher than King County is cesarean births among low-risk women, and those rates likely fall within the confidence interval and are statistically similar.

Exhibit 32. Maternal and Child Health Outcomes

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
Infant mortality	2.72	2.63	4.07	4.7	Rate Per 100,000 (2011-2015)
Low birthweight -all births	5.9	5.4	6.5	6.3	Percent (2011-2015)
Low birthweight - singletons	4.3	3.7	4.9	4.8	Percent (2011-2015)
Very low birthweight - all births	0.7	0.7	1.0	1.0	Percent (2011-2015)
Very low birthweight - singletons	0.5	0.6	0.8	0.8	Percent (2011-2015)
Late or no prenatal care	2.3	2.5	4.5	5.1	Percent (2011-2015)
Smoking during pregnancy	2.4	3.9	4.2	10.1	Percent (2011-2015)
Breastfeeding Initiation	98.0	97.5	97.0	-	Percent (2013-2017)
Cesarean births among low-risk women	29.9	28.4	27.1	-	Percent (2011-2015)

Note: Cells highlighted in orange represent metrics for which the given HRA has higher instances of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

YOUTH HEALTH BEHAVIORS

While many youth health outcomes are discussed in greater detail below in the Youth Population and Health Outcomes section, there are a number of Healthy Youth Survey measures which are suppressed in the Total Service Area due to insufficient sample size. PHSKC is able to obtain raw data and aggregate it at a higher geographic level. As noted above, East County covers a large portion of eastern King County not in the Total Service Area, however it gives an overview of these metrics as compared to the county overall at the best level of detail available.

In all of the below indicators, youth in 8th, 10th, and 12th grade in East 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 both cigarette and marijuana use are less than countywide rates. Fewer youth identify as obese or overweight, and more youth are getting sufficient rates of physical activity.

Exhibit 33. Youth Health Indicators

	East County	King County	
Binge Drinking in Past 30 Days	11.0%	11.0%	Percent (2014 & 2016)
Cigarette Use in Past 30 Days	3.8%	4.8%	Percent (2016 and 2018)
E-cig or Vape Use in Past 30 Days	13.8%	13.5%	Percent (2016 and 2018)
Marijuana Use in Past 30 Days	11.9%	15.0%	Percent (2016 and 2018)
Obese	6.0%	9.0%	Percent (2014 & 2016)
Overweight, not obese	10.0%	12.0%	Percent (2014 & 2016)
Physical Activity in Past 7 Days	21.9%	20.3%	Percent (2016 and 2018)

Source: Public Health Seattle King County, 2019; Healthy Youth Survey, 2014-2018; BERK, 2019.

ACCESS TO HEALTH CARE AND UNMET NEED

Health Insurance

Health insurance coverage is a key component to accessing health care. Among the adult population, roughly 95% have health insurance across the Total Service Area, a higher rate than for the county or the state. However, as shown below, lower income populations are more likely to lack health insurance.

Exhibit 34. Uninsured Population by Age and Income

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
Uninsured-age 18-64	5.1	5.3	9.5	11.8	Percent (2013-2017)
Uninsured <138% Poverty Level	30.3	27.2	23.7	24.4	Percent (2013-2017)
Uninsured 138-199% Poverty Level	19.9	19.1	22.5	22.8	Percent (2013-2017)
Uninsured 200-399% Poverty Level	10.3	9.7	13.6	13.4	Percent (2013-2017)
Uninsured ≥400% Poverty Level	1.4	1.3	3.0	4.1	Percent (2013-2017)

Note: Cells highlighted in orange represent metrics for which the given HRA has higher instances of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

- In both HRAs, people with income under 138% of the federal poverty level (FPL) are more likely to be uninsured compared to King County or Washington State overall. In Bear Creek/Carnation/Duvall, 30.3% of people below 138% FPL lack health insurance, and in Snoqualmie/North Bend/Skykomish, that drops slightly to 27.2%.

Preventative Care

In discussing all of the health metrics, preventive care is a practice which can help avoid more serious illness or injury. Generally, the HRAs covering the Total Service Area fare better in terms of preventative care measures compared to King County. However in a few key metrics, there are areas for improvement. Exhibit 35 shows statistics for preventative care measures across the HRAs, King County, and Washington State.

Exhibit 35. Lack of Preventative Care Indicators

	Bear Creek/ Carnation/ Duvall	Snoqualmie/ North Bend/ Skykomish	King County	WA State	
No primary care provider	19	21	26	25	Percent (2011-2015)
Unmet medical need	11	10	13	14.2	Percent (2011-2015)
No dental checkup in last 1 year	17	17	30	32.7	Percent (2011-2012 & 2014-2015)
No flu shot, age 18-64	58	63	63	64	Percent (2011-2015)
No flu shot, age 65+	40	55	37	39.5	Percent (2011-2015)
No pneumonia vaccination, age 65+	24	21	26	25.5	Percent (2011-2015)
No cholesterol check in last 5 years	16	19	26	26.7	Percent (2011, 2013 & 2015)
No colorectal cancer screening, age 50-75	35	45	36	30.5	Percent (2011-2015)
No Mammogram within 2 years	24	25	22	23.1	Percent (2011-2015)
No Pap test within 3 years	10	17	16	18	Percent (2011-2012 & 2014-2015)

Note: Cells highlighted in orange represent metrics for which the given HRA has higher instances of the metric as compared to King County.

Source: Public Health Seattle King County, 2019; BERK, 2019.

- There is a higher prevalence of the population age 65+ without flu shots across the HRAs as compared to both King County and Washington State.
- In both HRAs, a higher percent of the female population has gone 2+ years without a mammogram as compared to King County, 24% in Bear Creek/Carnation/Duvall and 25% in Snoqualmie/North Bend/Skykomish.
- Snoqualmie/North Bend/Skykomish has a significantly higher percent of people who forego colorectal cancer screen between the ages 50-75 at 45% of that population compared to 36% for King County and 30.5% for Washington State.

Access to Community Care Clinics

Health Center Program sites (HCPs) provide primary care (including medical, dental and mental health services) for uninsured and medically underserved populations. There are a number of Section 330 funded grantees (Federally Qualified Health Centers – FQHCs) serving the Snoqualmie Valley Hospital service area, including: Sea Mar Community Health Centers, HealthPoint Community Health Centers, NeighborCare Health, Country Doctor Community Clinic, and King County Public Health Centers. HealthPoint is the dominant FQHC for Carnation and Fall City, while in North Bend and Snoqualmie it is Sea Mar. However, SeaMar is located in Bellevue and Health Point in Redmond, and neither adequately serve the Snoqualmie Valley due to geographic distance.

Using ZCTA (ZIP Code Tabulation Area) data for the Total Service Area and information from the Uniform Data System (UDS), 10.7% of the population in the Snoqualmie Valley service area is categorized as low-income (200% of Federal Poverty Level).⁹ Even with Section 330 funded HCPs in the area, a majority of low-income residents (83% across the service area) are not served by a clinic provider, as reported by the UDS mapping system.

Exhibit 36. Low-Income Patients Served and Not Served by Health Center Program Sites

Total HCP Patients	Penetration Among Low-Income Patients	Penetration of Total Population	Low-Income Not Served	
			#	%
788	17.0%	1.8%	3,842	83.0%

Source: UDS Mapper, 2019; BERK, 2019.

CRIME

General Crime Statistics

The following exhibit presents Group ‘A’ crime statistics for the three jurisdictions in the Total Service Area, as well as for Washington State.¹⁰ These are sums from the National Incident-Based Reporting System (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.

⁹ The service area metrics here are approximated based on ZCTAs, and do not correlate exactly to King County Hospital District #4.

¹⁰ 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 whose 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>

Exhibit 37. Group 'A' Crime Statistics, 2018

	Crimes Against Persons		Crimes Against Property		Crimes Against Society	
	#	Rate per	#	Rate per	#	Rate per
		1,000 People		1,000 People		1,000 People
Carnation Police Department*	6	2.8	7	3.2	0	0.0
North Bend Police Department	63	9.2	274	40.1	125	18.3
Snoqualmie Police Department	62	4.6	283	21.0	124	9.2
WA Statewide	103,493	13.9	330,531	44.5	37,173	5.0

Note: *2018 was the first year Carnation reported using the NIBRS system, and likely is underreporting incidents.

Source: Washington Association of Sheriffs and Police Chiefs, 2018; BERK, 2019.

- The data above suggests that crimes against persons and crimes against property are less common in the service area as compared to Washington State, while crimes against society are more prevalent in the service area.

Domestic Violence

Domestic violence offenses in Washington State occur at a rate of 7.6 per 1,000 people, with the rate of injury from domestic violence being 3.0 per 1,000 people. Domestic violence can be defined broadly as any behavior that demeans or controls a partner in a dating, cohabiting, or marital relationship. Information on domestic violence injuries, but not offenses, was available for the North Bend and Snoqualmie Police Departments; North Bend shows a higher rate of domestic violence injuries. No data was available for the Carnation Police Department.

Exhibit 38. Domestic Violence Offenses, 2018

	Offenses	Injuries	Rate per
			1,000 People
Carnation Police Department*	N/A	N/A	N/A
North Bend Police Department	N/A	29	4.2
Snoqualmie Police Department	N/A	29	2.2
WA Statewide	56,815	22,385	3.0

Note: *2018 was the first year Carnation reported using the NIBRS system, and likely is underreporting incidents. There is also evidence that domestic violence offenses may go unreported for reasons including fear and economic dependence.

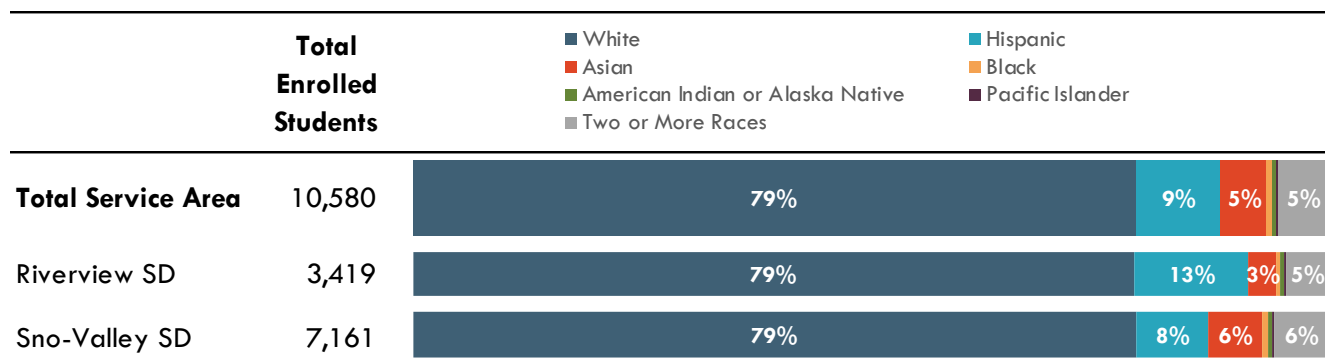
Source: Washington Association of Sheriffs and Police Chiefs, 2018; BERK, 2019.

Youth Population and Health Outcomes

STUDENT POPULATION CHARACTERISTICS

For the 2016-2017 school year, there were 10,580 students enrolled in the Total Service Area. White students comprise nearly 80% of the student body, while Hispanic students comprise 9%. There is a slightly higher Hispanic population in Riverview School District compared to Snoqualmie Valley School District, which has a slightly higher Black population.

Exhibit 39. School Enrollment and Race/Ethnicity of Students, 2016-2017



Source: OSPI, 2016-2017; BERK, 2019.

Free and Reduced-price Meals (FARM)

One measure of economic hardship is Free and Reduced-price Meal (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 (FRLP). Students from families earning below 130% of the federal poverty level (FPL) are eligible for free lunch, and those from families earning between 130%-185% of the FPL are eligible for reduced-price lunch. A family of four in the 2017 school year would need an annual household income of less than \$31,980 to qualify for free lunch, and an income of less than \$45,510 to qualify for reduced price lunch.¹¹

Exhibit 40 shows enrollment in FRLP for both school districts in the Total Study Area. While pre-K students are eligible for FRLP, Snoqualmie Elementary is the only school in the study area with pre-K students receiving free or reduced-price lunch, so the data below overwhelmingly represents K-12 students.

¹¹ Child nutrition Programs: Income Eligibility Guidelines 2017 School Year <https://www.govinfo.gov/content/pkg/FR-2017-04-10/pdf/2017-07043.pdf>

Exhibit 40. Free and Reduced Price Lunch, 2016-2017

	Total Enrollment	Free Lunch Enrollment			Reduced-Price Lunch Enrollment			Total Free or Reduced-Price Lunch Enrollment		
		#	Percent		#	Percent		#	Percent	
King County	289,865	75,510	26%	<div></div>	15,681	5%	<div></div>	91,191	31%	<div></div>
Total Service Area	10,093	798	8%	<div></div>	202	2%	<div></div>	1,000	10%	<div></div>
Riverview SD	3,402	341	10%	<div></div>	90	3%	<div></div>	431	13%	<div></div>
Sno-Valley SD	6,691	457	7%	<div></div>	112	2%	<div></div>	569	9%	<div></div>

Source: OSPI, 2016-2017; BERK, 2019

Transitional Bilingual Instructional Program

Languages spoken by students in Transitional Bilingual Instruction Program (TBIP) can provide more information on recently arrived students (and their parents) at a higher geographic specificity than the Census data.

Students in TBIP meet the following criteria: the primary language of the student is not English and the students' English skills are sufficiently lacking or absent as to delay learning.

Exhibit 41. Top 10 Languages Spoken by Transitional Bilingual Instructional Program (TBIP) Students, 2016-2017

Riverview School District			Snoqualmie Valley School District		
Language	Count	Percent	Language	Count	Percent
Spanish	127	79.4%	Spanish	94	51.1%
Russian	8	5.0%	Russian	11	6.0%
Unknown	6	3.8%	Urdu	9	4.9%
Chinese-Cantonese	3	1.9%	Chinese-Unspecified	7	3.8%
Hmong	3	1.9%	Hindi	6	3.3%
French	2	1.3%	Hmong	5	2.7%
German	2	1.3%	Japanese	5	2.7%
Japanese	2	1.3%	French	4	2.2%
Afrikaans	1	0.6%	Norwegian	4	2.2%
Arabic	1	0.6%	Afrikaans	3	1.6%
Other	5	3.1%	Other	36	19.6%
Total TBIP Students	160		Total TBIP Students	184	
Total District Enrollment	3,355		Total District Enrollment	7,073	
Percent TBIP Students		4.8%	Percent TBIP Students		2.6%

Source: OSPI, 2016-2017; BERK, 2019.

- Of the total district enrollment, 4.8% of Riverview School District students are enrolled in TBIP, while 2.6% of Snoqualmie Valley School District students are enrolled in TBIP.
- Spanish is the most prevalent language spoken in both school districts, with 79% of TBIP students in Riverview School District, and 51% of TBIP students in Snoqualmie Valley School District.

- Other languages spoken have less than 20 students enrolled each.

YOUTH HEALTH AND NUTRITION

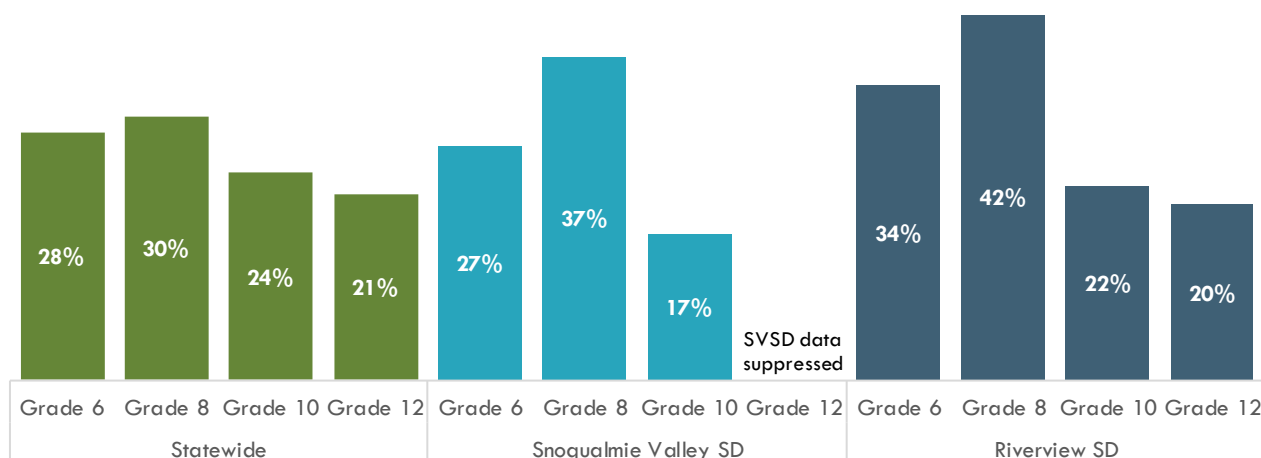
The Healthy Youth Survey provides information on eating habits and nutrition of Washington State school children, including if children are obese or overweight and what students are trying to do about their weight (i.e., nothing, lose, gain, or stay the same weight). Unfortunately, due to sample sizes in the Service Area, all data about students who are overweight or obese is suppressed, but attitudes towards weight are shown in Exhibit 44 in the Mental Health section.

The Healthy Youth Survey also asks about food nutrition, including how many servings of fruits and vegetables students eat, if they ate breakfast, and consumption of soda and snack foods. In addition to eating habits and nutrition, the survey asks about physical activity. Exhibit 42 shows the share of students who were physically active for at least 60 minutes per day over the last seven days. This is the recommended level of physical activity from the Centers for Disease Control and Prevention (CDC) and encouraged by the Washington State Department of Health. The data is self-reported for each of the four grades.

Data Suppression in the Healthy Youth Survey

- Data is suppressed in the Healthy Youth Survey when there are not enough respondents to provide anonymity.
- In the 2016 Healthy Youth Survey, there were not enough 12th grade respondents from Snoqualmie Valley School District to be able to provide results and still allow responses to be kept confidential. Therefore, in each HYS exhibit below data is shown as suppressed for 12th graders from the Snoqualmie Valley School District.

Exhibit 42, Percent of School Children Physically Active for at Least 60 Minutes per Day over the Past Seven Days, 2016



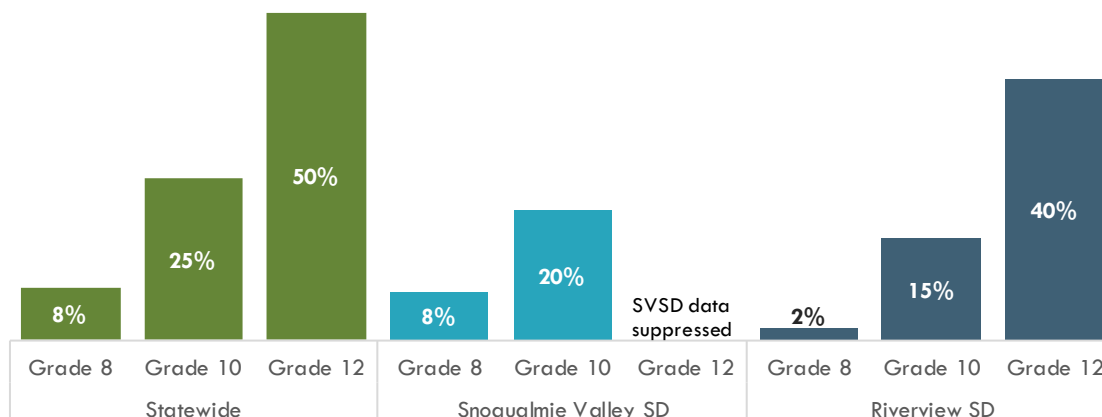
Note: Data is suppressed for SVSD 12th graders because there were not enough responses to provide anonymity.
Source: Snoqualmie Valley and Riverview School District Healthy Youth Survey, 2016; BERK 2019.

- Students in Grade 8 report higher levels of physical activity than other grades, regardless of school district. Students in this grade also report higher levels of physical activity than statewide averages.
- Riverview School District students report being more physically active than Snoqualmie Valley School District students in all grades.
- In Grade 10, physical activity levels are lower in Snoqualmie Valley and Riverview school districts than statewide. In Grade 12, physical activity levels are also lower in the Riverview School District than statewide. The data for Snoqualmie Valley is suppressed.

School-aged Sexual Activity

The Healthy Youth Survey asks children about sexual behavior, including if they have ever had sexual intercourse. Information is not reported for Grade 6, but is available for Grades 8, 10, and 12. Exhibit 43 presents the answers to lifetime sexual activity for students in the Service Area for Grades 8, 10, and 12, except for the 12th graders at Mt. Si High School, for which there were too few respondents and data is suppressed.

Exhibit 43. Lifetime Sexual Activity, 2016



Note: Data is suppressed for SVSD 12th graders because there were not enough responses to provide anonymity.
Source: Snoqualmie Valley and Riverview School District Healthy Youth Survey, 2016; BERK 2019.

- Rates of sexual activity are lower in both the Riverview and Snoqualmie Valley school districts than statewide.
- Rates of sexual activity are slightly higher in the Snoqualmie Valley School District compared to the Riverview School District.
- As expected, the percentage of students reporting sexual activity increases with grade. For example, in Grade 8, 2% of students in the Riverview School District are estimated to have ever had sexual intercourse in their lifetime, while that estimate rises to 40% by Grade 12.

School-aged Mental Health

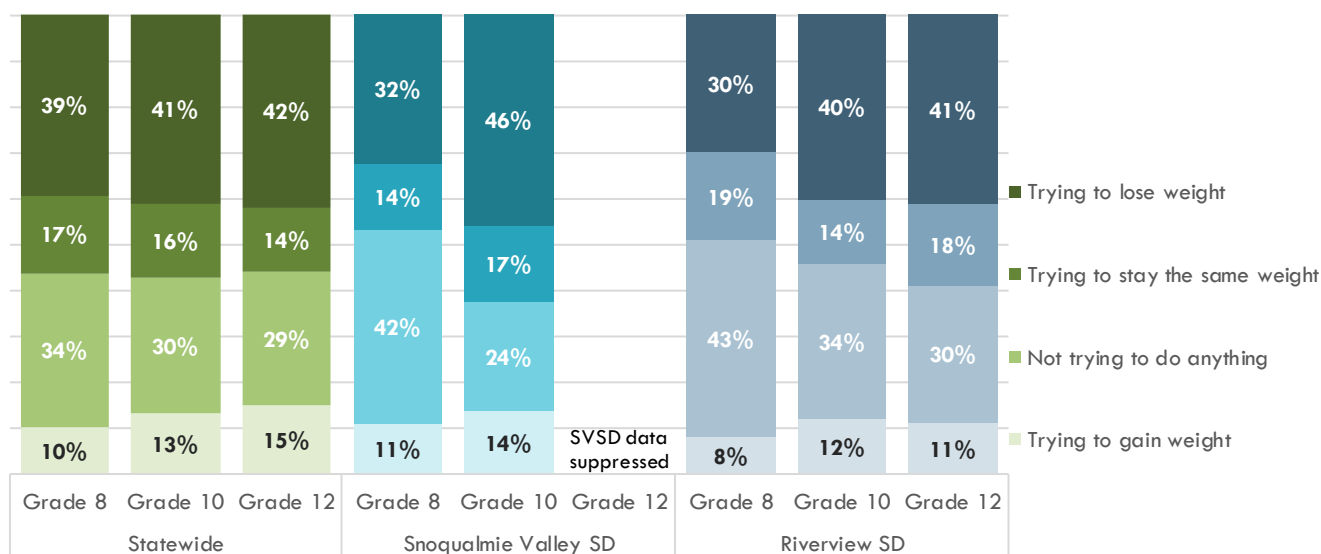
Many factors lead to anxiety, depression, and suicidal thoughts, including pressure to perform well in school, fixation on weight and appearance, and bullying. Untreated anxiety and depression can lead to

substance abuse and even suicide. Currently, suicide is the leading cause of death for Washington teens 15 through 19. Professional care for depression and anxiety, treatable mental health conditions, helps most people but accessing care can be challenging for many reasons.¹²

Attitudes Toward Weight

Exhibit 44 shows from the bottom of each bar to the top, the proportion of students trying to gain weight, not trying to do anything about their weight, trying to stay the same weight, or trying to lose weight.

Exhibit 44. Attitudes Towards Weight, 2016



Note: Data is suppressed for SVSD 12th graders because there were not enough responses to provide anonymity.
Source: Snoqualmie Valley and Riverview School District Healthy Youth Survey, 2016; BERK 2019.

- In the Total Service Area, 8th graders are more likely to not try to do anything about their weight than statewide.
- A larger proportion of students are trying to lose weight as they get older, but the proportion of students in the Service Area that are trying to lose weight is smaller than statewide.

Mental Health

The Healthy Youth Survey asks students questions about anxiety, depression, and suicide. The following exhibits show results to questions about each.

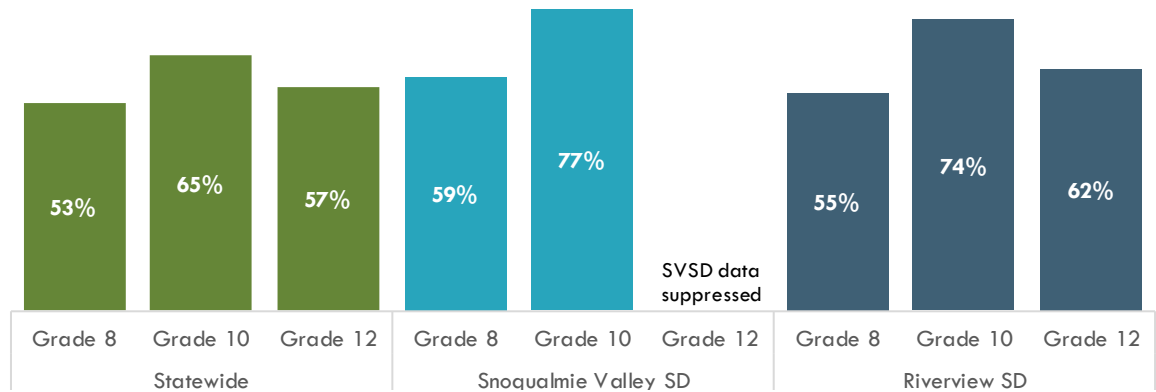
Exhibit 45 shows results for anybody responding: several days, more than half the days, or nearly every day to the question:

- How often over the last two weeks were you bothered by: feeling nervous, anxious, or on edge?

¹² Healthy Youth Survey Fact Sheets, 2016

Exhibit 45. Mental Health of Snoqualmie Valley Schoolchildren, 2016

Anxiety



Note: Data is suppressed for SVSD 12th graders because there were not enough responses to provide anonymity.
Source: Snoqualmie Valley and Riverview School District Healthy Youth Survey, 2016; BERK 2019.

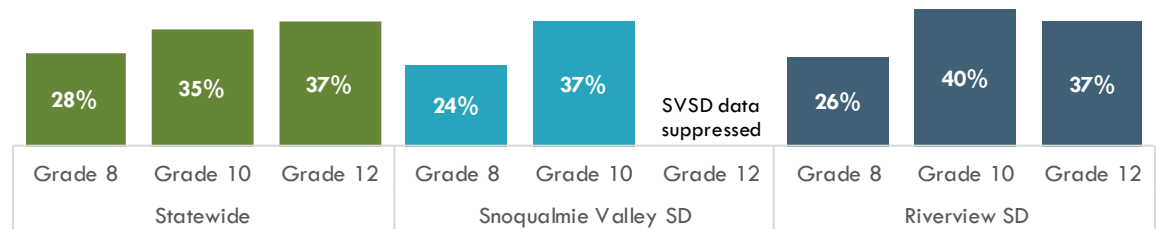
- Anxiety peaks in Grade 10 statewide and in the Snoqualmie and Riverview school districts.

Exhibit 46 shows results for those responding yes to the following question about depression:

- During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?

Exhibit 46. Mental Health of Snoqualmie Valley Schoolchildren, 2016

Depression



Note: Data is suppressed for SVSD 12th graders because there were not enough responses to provide anonymity.
Source: Snoqualmie Valley and Riverview School District Healthy Youth Survey, 2016; BERK 2019.

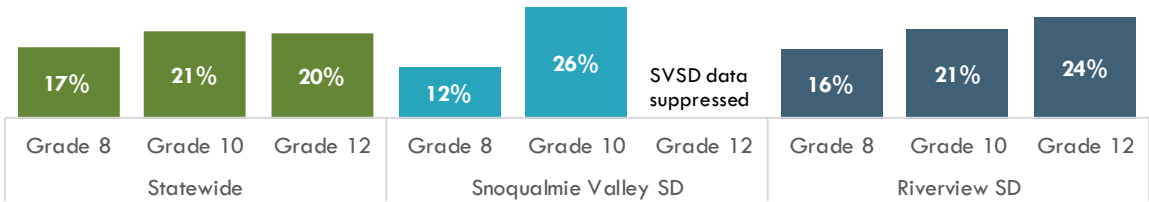
- Depression is highest in 12th grade statewide but highest in 10th grade in the Riverview School District.

Exhibit 47 shows results for those responding yes to the following question about suicide:

- During the past 12 months, did you ever seriously consider attempting suicide?

Exhibit 47. Mental Health of Snoqualmie Valley Schoolchildren, 2016

Suicide



Note: Data is suppressed for SVSD 12th graders because there were not enough responses to provide anonymity.
Source: Snoqualmie Valley and Riverview School District Healthy Youth Survey, 2016; BERK 2019.

- While suicidal ideation seems to decrease slightly in 12th grade statewide, in the Riverview School District it increases slightly in the 12th grade, to the point where nearly one in four students has considered suicide over the last year.

Family and Community Support

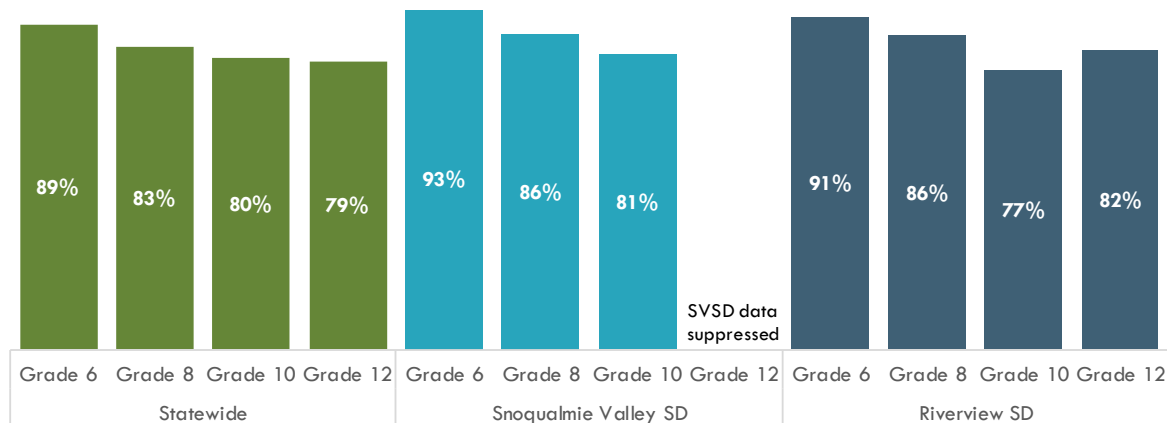
Family and community support can help youth be more resilient to mental health challenges by providing an outlet to talk to about important issues and a sense they have support if they need help or want to talk. In addition to providing a safe space, these supports can help boost self-esteem, problem solving, and coping skills.

Exhibit 48 shows that many youth in Snoqualmie Valley feel they can talk to their mom, dad, or an adult in the community about something important. The exhibit reflects those students responding “yes” or “YES!” to whether or not:

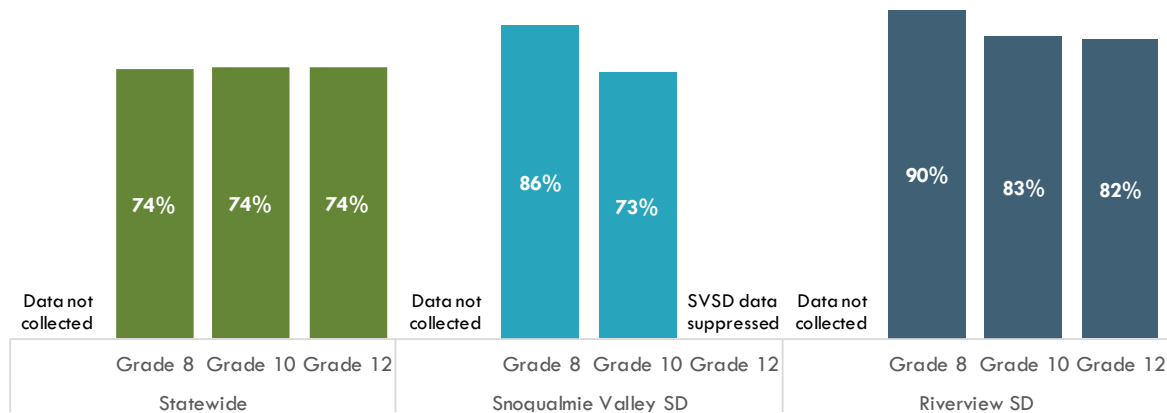
- If they had a problem, they could ask their mom or dad for help.
- There are adults in their neighborhood or community they can talk to about something important (this survey question was not asked of 6th graders).

Exhibit 48. Family and Community Support, 2016

Family Support



Community Support



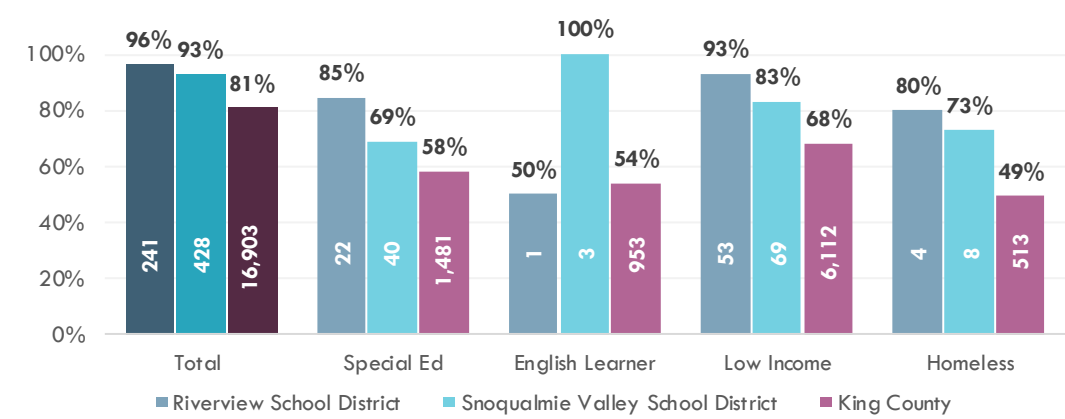
Note: Data is suppressed for SVSD 12th graders because there were not enough responses to provide anonymity.
Source: Snoqualmie Valley and Riverview School District Healthy Youth Survey, 2016; BERK 2019.

- Over 90% of 6th graders in Snoqualmie Valley feel they can ask their mom or dad for help if they have a personal problem. This decreases in the 8th and 10th grades. In Riverview School District, more 12th than 10th graders feel they can talk to their mom or dad about a problem.
- Between 73-90% of Snoqualmie Valley students in 8th through 12th grade feel like there are adults in the community they can talk to about something important.

HIGH SCHOOL COMPLETION

Attrition from school has many causes, including non-academic factors such as housing instability or personal safety.

Exhibit 49. High School 5-year Graduation Rates, 2016-2017



Source: OSPI, 2016-2017; BERK, 2019.

- Overall, 96% of students in the Riverview School District and 93% of students in the Snoqualmie Valley School District graduate on time (within 4 years).
- Graduation rates vary by student population type, with lower rates of on-time graduation for students experiencing homelessness or from low-income or special education backgrounds.
- Across nearly all population types, the school districts in the study area are faring better compared to all of King County, though the numbers are far smaller.