WELCOME TO THE 2023 COMMUNITY HEALTH ASSESSMENT

Every three to five years, Kitsap Public Health District performs a Community Health Assessment to provide to our community a comprehensive analysis of the current demographic, socioeconomic, and health status of people living in Kitsap County.

Our epidemiology team collects, organizes, and distills data from dozens of sources to create health indicators that can be used to compare our local results to those of the state overall. We also work with partners to incorporate community voices gathered through surveys, focus groups, and other engagement opportunities. These quantitative and qualitative elements are woven together to create a report that reflects both the overall health of our county and the individual experiences of community members.

We extend our sincere gratitude and appreciation to all who have contributed to this important report. We hope that this assessment will be used as a foundation for new partnerships, innovation, planning and policy development, and community and organizational priority setting. These data will drive meaningful and productive work to achieve our vision of a safe and healthy Kitsap County for all.

Now, the real work begins!

Gib Morrow, MD, MPH
Health Officer

Yolanda Fong, RN, MN, PHNA-BC
Administrator

CHAPTER LISTING

METHODS

EXECUTIVE SUMMARY

DEMOGRAPHICS & SOCIAL DETERMINANTS OF HEALTH

ENVIRONMENTAL HEALTH

HEALTHCARE ACCESS

PREGNANCY & BIRTH

MENTAL HEALTH & WELLBEING

HEALTH BEHAVIORS

COMMUNICABLE DISEASE

CHRONIC DISEASE

INJURIES, HOSPITALIZATIONS & DEATHS
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**Kitsap Public Health District**

**Lead authors**
- Kari Hunter
- Ally Power
- Wendy Inouye

**Editing and design**
- Tad Sooter
- Melissa Hartman

**Project advisors**
- Siri Kushner
- Jessica Guidry

**Contributors**
- Karen Boysen-Knapp
- Margo Chang
- Jessica Chen
- Elizabeth Davis
- Ashley Duren
- Maria Fergus
- Yolanda Fong
- Yaneisy Griego
- Gabrielle Hadly
- Gabe Hammond
- Adrienne Hampton
- Anne Howard
- Talia Humphrey
- Dayna Katula
- John Kiess
- Sarah Kinnear
- Martitha May
- Karina Mazur
- Michelle McMillan
- Kaela Moontree
- Woodi Nickerson
- Brian Nielson
- Siri Kushner
- Dr. Gib Morrow
- Carin Onarheim
- Sydney Perales
- Rachel Perry
- Tameka Phelps
- Emmy Shelby
- Justin Shoriz
- Yana Shuhler
- Kelsey Stedman
- Amanda Tjemsland
- Kate Wagner
- Lisa Warren
- Jan Wendt
- Erica Whares
- Janet Wyatt

**Virginia Mason Franciscan Health**

- Doug Baxter-Jenkins
- Stephanie Christensen

**Kitsap Community Resources**

- Anthony Ives
- Chelsea Amable-Zibolsky
- Arber Metuku
- Otto Matias
- Monica Atkins
- Patience Kropp
- Irmgard Davis

**Organizations**

- Alliance for Equitable Healthcare
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- Eagle’s Wings Coordinated Care
- Fishline Food Bank & Comprehensive Services
- Islamic Center of Kitsap
- Kitsap Black Student Union
- Kitsap Community Foundation
- Kitsap County Fire Departments
- Kitsap County Government
- Kitsap Economic Development Alliance
- Kitsap Immigrant Assistance Center
- Kitsap Mental Health Services
- Kitsap Pride
- Kitsap Regional Library
- Kitsap Rescue Mission
- Kitsap Strong
- Marvin Williams Center
- Molina Healthcare
- Mount Zion Missionary Baptist Church
- NAACP Bremerton
- Olympic College
- Olympic Educational Service District 114
- Peninsula Community Health Services
- Port Gamble S’Klallam Tribe
- Puget Sound Energy
- St. Vincent de Paul Bremerton
- Suquamish Tribe
- United Way of Kitsap County
- Washington Department of Commerce

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INTRODUCTION

The 2023 Kitsap Public Health District Community Health Assessment (CHA) highlights the current demographics, socioeconomics, and health status of residents; the factors that contribute to less-than-optimal health outcomes; and resources in a community to improve health. The CHA can be used as the foundation for community and organizational priority setting, planning, program development, policy changes, coordination of community resources, funding applications, and development of new ways to collaboratively use community assets to improve the health of the population.

The CHA is the basis for developing a community health improvement plan (CHIP). Informed by the Mobilizing for Action through Planning and Partnership (MAPP) framework, developed by the National Association of County and City Health Officials (NACCHO), the 2023 CHA includes three main assessments:

| Community Voice Assessment | • 16 key informant interviews  
|                           | • 10 focus group discussions  
|                           | • 2 community surveys         |
| Community Surveys         | • Kitsap Community Resources 2022 Community Survey  
|                           | • Kitsap Public Health District 2021 Community Survey  
|                           | • 2021 Kitsap County Community Health and Wellbeing Survey  
|                           | • 2020 Kitsap County Community Health and Wellbeing Survey  |
| Community Status Assessment | • Analysis of 126 health indicators |

The CHA also includes “Community Assets”— lists of organizations and initiatives whose work intersects with topics covered by the CHA. The Kitsap Community Resources (KCR) 2022 Community Survey and Focus Group Discussions were conducted in partnership with local community organizations and led by KCR, a nonprofit social services agency.
ASSESSMENT: COMMUNITY VOICE

Community voice is woven throughout this report to incorporate the experiences and input from Kitsap community members and organizational leaders. We used three methods to gather input from the community—focus group discussions, key informant interviews, and community surveys. The data collection and analysis methods for each are described in the following sections.

2022 Kitsap Community Resources (KCR) Focus Group Discussions

Ten focus group discussions were conducted in partnership with local community organizations and led by KCR. The purpose of the focus groups was to gather input directly from community members in small group settings throughout Kitsap County. These discussions were 60 to 90 minutes in length and conducted in person or via Zoom. Please refer to Appendix A for the questionnaire used in these focus group discussions.

The focus groups included people representing diverse races, ethnicities, ages, geographic regions, income levels, genders, and sexual orientations. Recruitment for focus groups occurred through KCR, KPHD, and partner organization outreach. All participants were compensated with a $25 gift card. Participants for the focus group discussions added voices under-represented in previous community health assessments. In addition to focus groups where the general community was invited, focus groups were held specifically with members of the following communities:

- African American/Black community members
- Community social service providers
- Mam-speaking community members
- People experiencing homelessness
- Spanish-speaking community members
- Tribal community members

2022 Virginia Mason Franciscan Health (VMFH) Key Informant Interviews

Sixteen interviews were conducted with Kitsap County organizational leaders across five sectors (health systems, human services, education, business, and community, faith-based, and nonprofit organizations). The interviews were approximately 60 minutes in length and held either in person or via Zoom or Microsoft Teams. Please refer to Appendix A for the questionnaire used in these key informant interviews.

KPHD staff from the Community Health Division and Equity and Epidemiology programs developed a list of potential interviewees as part of their work on the Virginia Mason Franciscan Health St. Michael Medical Center Community Health Needs Assessment. Individuals were selected based on the following criteria:

- Organizational leaders who work on behalf of marginalized populations;
- Leaders who represent key sectors of business, nonprofit, education, health and human services, local government, and first responders;
- Organizational leaders who were available within the project timeline (October – December 2022)
**METHODS**

### 2022 Focus Group Discussions and Key Informant Interviews Analytic Strategy

As focus group participants and key informant interviewees were asked similar questions (see Appendix A) on the health needs and concerns of the community, common themes were identified from the combined transcripts. The themes that were identified indicated that the health needs and concerns community members (focus group participants) were experiencing and perceiving were similar to what organizational leaders (key informant interviewees) were observing. Data analysis of the transcripts and notes was performed by a KPHD epidemiologist using MaxQDA, a qualitative data analysis software, and Reflexive Thematic Analysis (TA), a qualitative data analytic framework that aims to generate themes from a dataset and involves a disciplined practice of critically interrogating how the data analyst impacts and influences the analysis. The questions below were modeled from the Reflexive TA framework and used to review and refine initial themes into the final three core themes:

1. **Is this a theme that represents a pattern across participants?**
2. **Does this theme tell us something about the needs of community members?**
3. **Does this theme include or exclude many coded segments?**
4. **Is there enough data to support that this is a strong theme?**

### 2022 Kitsap Community Resources (KCR) Community Survey

Every three years, Kitsap Community Resources (KCR) conducts a comprehensive assessment to evaluate the needs and assets in our community. This year, KCR collaborated with organizations around Kitsap County to improve local data collection efforts and better understand our communities’ greatest needs. The 2022 KCR Community Survey was conducted from June through October 2022 in SurveyMonkey and included 75 questions. The survey was promoted through community organizations, including Kitsap Regional Library, and online social media platforms, such as Facebook and Twitter. A drawing for $25 gift cards was offered as an incentive for survey participants. In all, 4,544 responses were collected, including responses in English, Spanish, Tagalog, and Kurdish, with a 77% completion rate.

Survey responses were cleaned, and free-text responses were organized into categories. During the cleaning process, exact duplicate survey responses were identified and evaluated. All responses that met the following criteria were excluded from the analysis (339 responses): more than 75% identical responses across the survey submitted within five minutes of their matching response, or participant did not live, work, or access services in Kitsap. A total of 4,205 responses were included in the analysis. Participants were allowed to skip questions they did not want to answer. School district of residence was assigned to participants based on the reported ZIP code of residence. (See the data note below on Kitsap geography for more information about which ZIP codes were included in each school district.) Household income and race/ethnicity were self-reported by participants.

Selected survey participant demographics can be found in Appendix B. A public dashboard was created for service partners and community members to allow for detailed exploration of data as needed and identification of questions and responses important to individual organizations.

### 2021 Kitsap County Community Health and Wellbeing Survey

In May 2021, the Kitsap Public Health District (KPHD) conducted the Community Health and Wellbeing Survey to better understand the feelings of Kitsap County residents about COVID-19, vaccination, and how they were coping during the
pandemic. Overall, there were 7,146 respondents, however 387 non-Kitsap residents were excluded. An additional 366 individuals who did not answer the question, “Have you received a COVID-19 vaccine, or do you plan to receive one?” were also excluded. This resulted in a total of 6,393 respondents. Selected survey participant demographics can be found in Appendix C.

The survey was conducted online via SurveyMonkey and advertised in emails sent via GovDelivery, KPHD, and the Kitsap County Emergency Operations Center. There were also posts on the health district’s social media pages (Facebook, Twitter, and Instagram) including a paid advertisement on Facebook. KPHD also added banners to our homepage and other COVID-19 topic pages on our website. Finally, several of our community partners shared the survey with their members which included a notice in the Kitsap Regional Library’s email newsletter. The full report of survey findings can be viewed here.

2020 Kitsap County Community Health and Wellbeing Survey

In April 2020, the Kitsap Public Health District (KPHD) conducted the Community Health and Wellbeing Survey to better understand Kitsap residents’ perceptions of COVID-19 illness during January through April 2020 and how residents were coping during the initial phase of the pandemic and stay-at-home order. Overall, there were 11,102 respondents who clicked on the survey. Selected survey participant demographics can be found in Appendix D.

The survey was designed by KPHD in cooperation with Kitsap County government and organizations throughout Kitsap County. It was conducted in Survey Monkey in English. All responses were anonymous and voluntary. The community was notified of the survey through e-mail bulletins to KPHD COVID-19 subscribers and Kitsap County subscribers, as well as posted on Facebook, Instagram, Twitter, Nextdoor, and the Kitsap Sun newspaper. The full report of survey findings can be viewed here.


Over a 5-week period in June and July of 2016, a total of 468 surveys were completed by pregnant women, which represented nearly a quarter of the annual civilian births in Kitsap County. The overarching goal of this survey was to understand local community trends of E-cigarette and recreational marijuana use during pregnancy to guide any necessary public health interventions. Selected survey participant demographics can be found in Appendix E.

Surveys were self-administered among a convenience sample of women presenting to their scheduled appointments at civilian prenatal care providers in Kitsap County. Clinic reception staff distributed paper surveys to patients upon check-in. Written instructions directed women to complete the survey only if currently pregnant, 18 years or older, and they had not already done so on a previous visit. After anonymously completing the surveys while in the clinic waiting rooms, patients deposited them in a box that KPHD staff picked up regularly. Survey data were entered into a database and analyzed by KPHD staff.

Healthcare providers working in these clinics were also electronically surveyed to assess their perceptions about the prevalence of smoking, E-cigarette, and recreational marijuana use among their patients, current regional practices for cessation counseling, and availability of educational resources. Eight of fourteen (57%) providers responded to the survey. The respondents included 75% physicians and 25% midwives. Most of these providers (63%) described their patients as being a mix of all income groups. All providers reported they routinely ask patients about whether they smoke cigarettes and use recreational marijuana, but only half indicated they ask about E-cigarette use.
ASSESSMENT: COMMUNITY STATUS

Indicators provide information about a community, its health status, and emerging health issues, from a variety of local, state, and national data sources. Topics include demographics, socioeconomics, housing, healthcare access, wellbeing, and environmental health, among others. For a brief description of the data sources used in this report, please refer to Appendix F. Indicator estimates in this report were generated for Washington and Kitsap County. When estimates were not readily available directly from the data source, Excel, Stata, or R software were used to analyze data. Estimates for Kitsap resident subgroups were also generated when available and appropriate.

Key findings were identified within the qualitative and quantitative indicators and metrics in each chapter based on the following criteria:

- Kitsap was better or worse than the state and the difference was statistically significant.
- Kitsap has a statistically significant improving or worsening trend over time.
- Kitsap is not currently meeting a national goal from Healthy People 2030.
- The topic was identified in the thematic analysis of the key informant interviews and/or focus groups conducted with KCR in 2022.
- The topic was identified by more than half of survey participants in the 2022 KCR survey.
- There was a qualitative or quantitative concern found or expressed that was subjectively determined to be important by our epidemiologists.

Key disparities were identified in a similar manner:

- Subgroups had consistently better or worse outcomes than other groups and the differences were statistically significant.
- Data on inequities were available to be evaluated.
- The topic was identified in the thematic analysis of the focus groups conducted with KCR in 2022.
- There was a qualitative or quantitative concern found or expressed that was subjectively determined to be important by our epidemiologists.

A note on the Environmental Health chapter

By leveraging a broad range of environmental health indicators used in publicly available, county-wide reports published in the last five years (2019-2023), this chapter highlights a selection of recent environmental health data gathered for Kitsap County. While this chapter is not intended to be a comprehensive assessment of environmental health in Kitsap, with this information we hope to better understand where we are starting from as we focus more on the impact of environmental health on our community moving forward. As this chapter draws from existing reports, data may not reflect our current environmental health landscape, and the time periods and data used to generate the information included will vary.

A note on population estimates

Note that U.S. Census Bureau delays in processing data inputs from the 2020 Census have prevented the Washington Office of Financial Management’s release of the 2020 Small Area Demographic Estimates (SADE). In response, a
statewide workgroup recommends adoption of population interim estimates (PIE) that make use of available 2020 decennial data. These estimates are necessary for the calculation of disease, as well as risk and protective factor, rates which require population denominator data. PIE will be used until final population estimates are released from OFM, which is expected in 2024.

PIE were created by Public Health – Seattle & King County using a combination of the race/ethnicity and geography pattern from Census 2020 redistricting data and the age and sex pattern from Census 2010-based SADE from OFM. Once combined, the resulting estimates were calibrated to available Census 2020 based population estimates at the county level. Because we have applied PIE to historic data, some rates will be different from what we published in previous reports and dashboards posted to our website. Indicators that use PIE have been noted throughout this report.

A note on hospitalization data

To handle a mid-year code conversion from International Classification of Disease (ICD) version 9 to version 10, 2015 hospitalization data is comprised of 2015 Washington hospitalization data for the first nine months and 2014 Washington hospitalization data for the last three months.

Data terminology and notes

The following additional technical notes can help users understand the contents of this report:

- **Data availability**: Each indicator in the report is provided for the years and subgroups for which data is available. This means that some indicators will have data for 2022, while others may only have data through 2019. In addition, some indicators have data available for many subgroups (e.g., age groups), while others may have no data available for subgroups.
  - Indicators are displayed with all the available information that was selected as relevant at the time.
  - For some indicators, the subgroups, or stratification levels, may not have had a sample size adequate to draw reliable conclusions about that population and are therefore excluded from this report.

- **Data reliability and suppression**: Estimates based on too few respondents are considered unreliable and may constitute a breach of confidentiality in some circumstances. In this report data with a numerator between 0 and 10 or a relative standard error greater than 30% are not reported.

- **Relative standard error (RSE)**: RSE is used to evaluate the reliability of the statistical estimate when there are a small number of events. When the RSE is large, the estimates are imprecise (RSE ≥ 25%). Some estimates will be presented for multiple years rather than single years to reduce the RSE.

- **Counts and rates**: A count is an actual or estimated number of people or occurrences (e.g. 100 Poulsbo residents or 17 hospitalizations). Because population sizes vary across different groups or geographies, counts cannot be used to compare impacts in different communities. For instance, if 10 cases of a disease were reported in Bremerton and 10 cases of the same disease were reported in Seattle, the proportional impact would be much greater in Bremerton because Bremerton’s population is much smaller than Seattle’s. Instead of comparing counts, we calculate rates to allow for comparisons between different populations.
  - **Rate**: A standardized proportion (or ratio) expressed as the number of occurrences (e.g., live births per year) that have occurred with respect to a standard population, within a defined period (usually 1 year). Rates help compare differences in data between groups while controlling for differences in population
size. The size of the standard population used (i.e., per 100,000, per 1,000, etc.) can vary depending on whether the events are common or rare. A rate per 100,000 is calculated by dividing the number of occurrences by the population of the sample group, then multiplying by 100,000. For instance, in 2021 there were an estimated 219 dentists serving Kitsap County’s population of 277,700 people — 
\[(219/277,700) \times 100,000 = 78.9\] dentists per 100,000 population.

- **Age-adjustment**: All age-adjusted rates in this report are adjusted to the 2000 U.S. population. Because risk of death and disease is affected primarily by age, we expect that as a population ages, its collective risk of death and disease increases. As a result, a population with a higher proportion of older residents will have higher death and disease rates. To control for differences in the age compositions of the communities being compared, death and certain specific disease rates are age-adjusted. This helps us make comparisons across populations.

- **Confidence intervals and statistical significance**: Most of the estimates provided in this report come with some intrinsic level of uncertainty due to the random nature of the data. Statistical uncertainty can be summarized by a 95% confidence interval. Confidence intervals are one way to represent how “good” an estimate is, e.g., the larger a confidence interval for a particular estimate, the more caution is required when using the estimate. In this report, confidence intervals are also used to determine if there is a statistically significant difference between estimates.

  - **Statistical significance**: When the confidence intervals of two estimates of the same indicator from different groups do not overlap (for example, estimates for the state and Kitsap County), the difference between the estimates is considered statistically significant, and the estimates are likely different. However, if the confidence intervals do overlap then no statistically significant difference is detected.

  - **Subgroup comparison**: The comparison of subgroups, such as age groups, is completed by comparing the confidence intervals to the reference group identified in each subgroup. The reference group is selected based on the indicator and may be the highest or lowest estimate depending on context. For example, when comparing the percentage of Kitsap’s population without health insurance, the reference group was selected based on the subgroup category with lowest percentage since the goal is that very few to no residents will be without health insurance.

- **Trends**: Statistical trends over time were calculated using the Joinpoint Regression Program version 5.0, 2023 — accessed at [surveillance.cancer.gov/joinpoint](http://surveillance.cancer.gov/joinpoint) — for indicators with data available for multiple and consecutive years.

  - **Trend line**: The trend line shows the indicator estimate for a series of years. Sometimes it may appear that there is a large amount of change, but if it is not consistent enough over time or if the numbers affected are too small, it will not be statistically significant and will, therefore, be labeled as no change. The lack of statistical significance should not be used to discount the amount of change, but instead to help distinguish change that is occurring consistently over time in populations large enough for stable results.

- **Kitsap geography**: For the purposes of data analysis at the sub-county geography level, Kitsap was divided into five geographic regions, which align roughly with school districts and are defined by the following characteristics and ZIP codes:
METHODS

- Bainbridge Island: includes all residents of the island and ZIP codes 98110 and 98061.
- Bremerton: includes the southern half of east Bremerton, as well as the entirety of west Bremerton to include all of ZIP code 98312, as well as 98310, 98314, and 98337.
- Central Kitsap: includes Silverdale, Seabeck, and the top half of east Bremerton. It is defined by ZIP codes 98311, 98315, 98380, 98383 and 98393.
- North Kitsap: includes Poulsbo, Kingston, Hansville and the entire northern portion of Kitsap County. The Suquamish Tribe and the Port Gamble S’Klallam Tribe reside in portions of North Kitsap. It includes ZIP codes 98340, 98342, 98345, 98346, 98364, 98370, and 98392.
- South Kitsap: includes all the area south of, but not including ZIP code 98312. It is defined by ZIP codes 98322, 98353, 98359, 98366, 98367, 98378, 98384, and 98386.

For additional information about data analysis and reporting in Washington, please visit: https://doh.wa.gov/data-and-statistical-reports/data-guidelines

COMMUNITY ASSETS

Community assets are included at the end of chapters to help identify organizations within Kitsap working in the specified area and key partnerships for potential implementation changes.

The KPHD Equity Program led the development of the community assets listed at the end of each chapter. This list was created using the following process:

- Reviewing previous community assets listed in Virginia Mason Franciscan Health Community Health Needs Assessments and verifying all links and resources were up to date, making modifications as needed for wording or deleting assets no longer available.
- Consulting with Equity Program staff to add assets based on community experiences, and verifying these assets to make sure the information is as accurate as possible.
- Conducting a resource audit of the Kitsap Public Health District website for any additional assets.
- Connecting with KPHD subject-matter experts to add assets, based on topic.

STRENGTHS & LIMITATIONS

This report presents an array of qualitative and quantitative data that enable a broad view of the health status of Kitsap County. For this report, we highlighted data from focus groups, interviews, surveys, and health indicators.

Strengths

- Community voice: On-the-ground information is needed to help inform and tell the story of indicators through focus group discussions, key informant interviews, and survey participant responses.
KCR approached their 2022 community survey development and focus group outreach by collaborating with multiple service organizations and more than 4,200 members of our community shared their perspective in the community survey; the largest response to any previous survey conducted by KCR.

A public dashboard of the survey results was created to make it easier for all service partners and community members to explore data in detail and allow identification of questions and responses important to individual organizations.

Focus groups were held with populations of interest that had not been heard from in previous community health assessments. The hope is that these results will serve as an educational piece for agencies throughout Kitsap County to better understand the challenging issues our community faces and ultimately aid in creating effective solutions.

- **Data completeness:** Many of the indicators in this report rely on data that is routinely collected, has the ability to be disaggregated, and is matured, i.e., all records have been transmitted, e.g., the Center for Health Statistics estimates death data to be 99% complete, providing an accurate count of almost all deaths in Kitsap County. Similarly, hospitalizations are estimated to be 98-100% complete. Having an accurate count of all deaths and hospitalizations in our area allows comparison from year to year, by cause, and by subgroup with very high confidence, even when numbers are small.

**Limitations**

- **Disaggregated data limitations:** Disaggregated data, county level data broken down into sub-groups (age, race, ethnicity, geographic region, gender, and other groups), are not available for all the data indicators, which limits the ability to look at disparities and inequities within the community.
  - Disaggregated data may be limited by the size of the population, requiring the averaging of several years of data. This limits the ability of the report to represent the most current state of health.
  - For some indicators, these sub-groups may not have a sample size adequate to draw reliable conclusions about that population. If so, they are suppressed.

- **Limited data availability:** Data are not always collected on an annual basis, and even when they are, the most recent data may not yet be available, resulting in data that can be several years old. In addition, data delays and unavailability are seen due to the various consequences of the recent COVID-19 pandemic. Every effort was made to include the most recent data; however, the use of older data means that in some cases the data may not represent the current situation. Charts and indicators are labeled with the year of the data, so that the lag between data collection and this report can be taken into consideration.

- **Decreasing response rates:** U.S. national and state survey response rates after the onset of the COVID-19 pandemic decreased. For example, the household response rate to the US Census American Community Survey decreased from 86.0% in 2019 to 71.2% in 2020. Recent research indicates the greatest decreases in response rates occurred among persons with lower income and lower education.

- **Sampling error:** All survey and census estimates include some amount of error. Sampling error derives from the fact that the data are based on a sample of the population rather than the entire population and estimates generated from sample survey data have uncertainty associated with them. This uncertainty, referred to as sampling error, means that the estimates derived from a sample survey will likely differ from the values that
would have been obtained if the entire population had been included in the survey, as well as from values that(143,356),(894,371)(98,391),(904,406)(98,428),(905,444) would have been obtained had a different set of sample units (people responding) been selected. Sampling errors can be expressed quantitatively in various ways including confidence intervals.

- **Community survey limitations**: Survey data often have issues arising from how, where, and from whom the data were collected. The surveys included in this report employed a convenience sample of those willing to participate. In addition, monetary rewards for participation in the KCR community survey were provided. Because of this, findings cannot be assumed to represent (generalized to) the Kitsap County population or any subgroup of that population.
  
  - Additionally, differences in age, sex, and geographic region distribution between participants and the overall population in the KCR survey suggest the survey results may not represent the entire population of Kitsap, and subgroup analyses may not represent the entire subgroup. These findings should be used in combination with other data sources to start conversations about important next steps.
  
  - Some of the KCR community survey questions asked for household-level information, such as household income and use of certain services; however, because multiple individuals from the same household could submit surveys, results for these questions may be skewed. Additionally, because household members could not reliably be linked within the survey, this could not be adjusted for in the analysis.

- **Focus group discussion and key informant interview limitations**: Focus group and key informant interview results do not necessarily represent the community as a whole, and there are limitations to the strength of the conclusions. In addition, it was not possible to hear from every facet of our community. Future focus groups to discuss the health needs among additional communities are needed, including discussions among people with disabilities, people who are pregnant/postpartum, people with lived experiences of substance use disorder, parents of young children, youth, and people who are incarcerated, among others.
  
  - Additionally, while every effort was taken to use verbatim transcripts for the focus group analysis, researchers’ notes taken during the focus group discussions were used for three of the ten focus groups due to technical issues with the recording device (focus groups with people experiencing homelessness and African American/Black community members) and unexpected translation funding and service availability issues (focus group with Mam-speaking community members). While the themes generated in this report incorporate the overarching experiences and perceptions shared by these participants, the analysis relied on researchers’ observations and notes, and not participants’ spoken words.
### A. 2022 Virginia Mason Franciscan Health Key Informant Interview (KII) and 2022 KCR Focus Group Discussion (FGD) questionnaires

Sixteen key informant interviews were conducted with community members who serve in leadership roles or who are subject matter experts in various aspects of community health. Key informant interviewees were asked nine questions:

1. The World Health Organization defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” Please describe your top 3 concerns regarding the health of communities you serve in Kitsap County. Please be specific about why you chose those 3 concerns.

   *In the following questions, I will be asking you for additional information about your top concern out of the 3 you listed. If we have time, I will ask you about the other concerns, too.*

2. Who or what groups in the community are most affected by the concerns you listed (e.g., youth, older residents, racial/ethnic groups, LGBTQ+, homeless, specific Kitsap regions)?

3. What are the barriers and challenges to addressing these concerns?

4. What are some programs or projects in place or planned in Kitsap County that you think will have the most impact on these concerns?

5. How is/could our healthcare system (hospitals and healthcare providers) be involved in addressing the concerns you identified?

6. How is/could Kitsap Public Health District be involved in addressing the concern you identified?

7. What are some additional potential solutions that could help address the concern you described?

   *For our next question, I will be asking you for feedback and recommendations for Virginia Mason Franciscan Health.*

8. Virginia Mason Franciscan Health is very interested in ways they can be more involved in our community here in Kitsap County. What recommendations do you have for ways they could be more involved?

9. Is there anything else you would like to share?

Ten community focus group discussions were conducted throughout Kitsap County. Focus group participants were asked up to seven questions:

1. When you consider the state of our community, in your opinion what are the top three needs you see for our community?

2. What do you believe are the top three challenges specifically facing low-income persons in this community?

3. Could you think of 1 to 3 actions that service providers such as KCR could take to address each of these challenges?

4. What can our local hospital, clinics, EMS providers, and other parts of our healthcare system do in the next 1-3 years to improve the health and quality of life of Kitsap County residents?

5. What resources are there in Kitsap County that help keep our residents healthy and safe?

6. What are the challenges to being healthy and safe in Kitsap County?
7. Briefly share any other thoughts, suggestions, or ideas you may have on how to best address these challenging needs in our community.

B. 2022 KCR Community Survey participant demographics

A total of 4,205 responses were included in the analysis. The majority of survey participants identified as female (68%), and most participants identified as White (81%). When compared to the total Kitsap population, survey response rates were higher among the 65+ age group (32% of participants, 21% of the total population) and among Bremerton residents (24% of participants, 18% of the total population).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Survey Population, n (%)</th>
<th>Kitsap County, % of total population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 18</td>
<td>9 (0%)</td>
<td>20%</td>
</tr>
<tr>
<td>18-24</td>
<td>153 (4%)</td>
<td>9%</td>
</tr>
<tr>
<td>25-34</td>
<td>565 (13%)</td>
<td>13%</td>
</tr>
<tr>
<td>35-44</td>
<td>711 (17%)</td>
<td>12%</td>
</tr>
<tr>
<td>45-54</td>
<td>561 (13%)</td>
<td>11%</td>
</tr>
<tr>
<td>55-64</td>
<td>760 (18%)</td>
<td>14%</td>
</tr>
<tr>
<td>65+</td>
<td>1,337 (32%)</td>
<td>21%</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>109 (3%)</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American/Black</td>
<td>124 (3%)</td>
<td>3%</td>
</tr>
<tr>
<td>Asian/Asian American</td>
<td>210 (5%)</td>
<td>5%</td>
</tr>
<tr>
<td>Hispanic/Latino/Latinx</td>
<td>233 (6%)</td>
<td>9%</td>
</tr>
<tr>
<td>Native American/American Indian</td>
<td>201 (5%)</td>
<td>1%</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>76 (2%)</td>
<td>1%</td>
</tr>
<tr>
<td>White</td>
<td>3,405 (81%)</td>
<td>72%</td>
</tr>
<tr>
<td><strong>School District of Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bainbridge Island</td>
<td>446 (11%)</td>
<td>9%</td>
</tr>
<tr>
<td>Bremerton</td>
<td>1,023 (24%)</td>
<td>18%</td>
</tr>
<tr>
<td>Central Kitsap</td>
<td>691 (16%)</td>
<td>27%</td>
</tr>
<tr>
<td>North Kitsap</td>
<td>1,017 (24%)</td>
<td>19%</td>
</tr>
<tr>
<td>South Kitsap</td>
<td>893 (21%)</td>
<td>27%</td>
</tr>
<tr>
<td>Outside of Kitsap</td>
<td>62 (1%)</td>
<td>NA</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>73 (2%)</td>
<td>NA</td>
</tr>
</tbody>
</table>

*Figure 1.* Selected demographic characteristics of survey participants (4,205 participants) as compared to Kitsap County’s population

*Data source:* 2022 Kitsap Community Resources Community Survey

*Note:* For additional demographic characteristics, please visit the community survey public dashboard at ow.ly/tbvZ50Naanp
C. 2021 Kitsap County Community Health and Wellbeing Survey participant demographics

**Gender (n=5,961)**

- Female: 72%
- Male: 28%

**Age Group (n=6,036)**

- 16-24: 3%
- 25-34: 12%
- 35-49: 20%
- 50-64: 29%
- 65-74: 27%
- 75+: 9%

**Race/Ethnicity (n=5,858)**

- American Indian/Alaska Native (AIAN): 2%
- Asian: 3%
- Native Hawaiian or Pacific Islander (NHAPI): 2%
- Black: 2%
- Hispanic: 2%
- White: 83%
- Two or More: 6%

**Region (n=6,393)**

- Bainbridge: 16%
- Bremerton: 18%
- Central Kitsap: 18%
- North Kitsap: 27%
- South Kitsap: 22%

*Figure 2. Survey demographics compared to Kitsap County’s population*

*Data source: 2021 Kitsap County Community Health and Wellbeing Survey report*
D. 2020 Kitsap County Community Health and Wellbeing Survey participant demographics

![Survey Responses by Gender](chart1)

![Survey Responses by Age](chart2)

Of all survey responses, non-Hispanic whites (90%) were overrepresented by 10% compared to their percent population of Kitsap (80%). Overall, minorities were underrepresented in the survey responses.

**Figure 3:** 2020 Kitsap County Community Health and Wellbeing Survey participant demographics

**Data source:** 2020 Kitsap County Community Health and Wellbeing Survey report

E. Assessment of e-cigarette, cigarette, and marijuana use among pregnant women in Kitsap County, Washington Survey Demographics, 2016

Over a 5-week period in June and July of 2016, a total of 468 surveys were completed by pregnant women, which represents nearly a quarter of the annual civilian births in Kitsap County. The majority of survey respondents were Caucasian (78%); only 6% were Hispanic (Table 1). A little more than a third (37%) were 24-28 years old and 41% were covered by Medicaid. This demographic profile closely mirrors the typical annual county births profile. Half of the survey respondents were in their third trimester, 38% were in their second, and 12% were in their first.
METHODS

Figure 4: Demographics of patient survey respondents

Data source: Assessment of e-cigarette, cigarette, and marijuana use among pregnant women in Kitsap County, Washington Survey Demographics, 2016

F. Quantitative data sources

- Behavioral Risk Factor Surveillance System (BRFSS): This is the largest, continuously conducted, telephone health survey in the world. The survey collects information on a vast array of health conditions, health-related behaviors and risk and protective factors about individual adults. It enables the Centers for Disease Control and Prevention (CDC), state and local health departments, and other health agencies to monitor the health and health behaviors of adults to guide policy and programs. In 2011, a new data weighting approach and a new
method of reaching respondents (cell phones), was implemented, making data prior to 2011 unreliable for comparison to current data.

- **Child Care Aware (CCA) of Washington**: This data source provides the number of childcare provider slots in Washington state and by county including family childcare, childcare centers, and school-age facilities.

- **Centers for Disease Control and Prevention (CDC)**: The CDC administers the National Health Interview Survey, which monitors the health of the nation with questions on a broad range of health topics asked through personal household interviews. Survey results provide information on health status, health care access and progress toward achieving national health objectives.

- **Centers for Disease Control and Prevention (CDC), National Syndromic Surveillance Program (NSSP)**: The NSSP is a collaboration among CDC, federal partners, local and state health departments, and academic and private sector partners to collect, analyze, and share electronic patient encounter data received from emergency departments, urgent and ambulatory care centers, inpatient healthcare settings, and laboratories. States and communities use syndromic surveillance data to investigate and respond to potential health threats.

- **County Health Rankings & Roadmaps**: County Health Rankings & Roadmaps is a program of the University of Wisconsin Population Health Institute, with funding from the Robert Wood Johnson Foundation. The Rankings are compiled using county-level measures from a variety of national and state data sources and provide data, evidence, guidance, and examples to build awareness of the multiple factors that influence health and support leaders in growing community power to improve health equity. See the rankings at https://www.countyhealthrankings.org/

- **COVID After Action Report (AAR)**: The Kitsap Public Health District (KPHD) Coronavirus-19 (COVID-19) Pandemic After Action Report (AAR)/Improvement Plan (IP) was developed to synthesize the initial response of KPHD, the Kitsap County Department of Emergency Management (KCDEM) and select partners to the global COVID-19 pandemic. This AAR/IP focuses on the initial response spanning from March 2020 through April 2023. An after-action review process was conducted to capture lessons learned and areas for improvement for future public health and emergency responses.

- **Feeding America, Map the Meal Gap**: Since 2011, Feeding America has produced estimates of local food insecurity and food costs to improve our understanding of people and places facing hunger and inform decisions that will help ensure equitable access to nutritious food for all. Their interactive map features annual food insecurity estimates from their Map the Meal Gap study for the overall population and children in every county, congressional district, and state, as well as for every service area within their nationwide network of food banks. More information can be found at https://map.feedingamerica.org/.

- **Health Care Authority (HCA)**: HCA measures are calculated using ProviderOne Medicaid claims and enrollment data, also known as the Medicaid Management Information System (MMIS). The MMIS data includes all healthcare and encounters for Medicaid beneficiaries, enrollment periods, and demographic and address information. To represent the most complete dataset for the performance period, the state observes a six-month claims lag to account for data maturity and processing time.
METHODS

- **HealthData.gov**: The website HealthData.gov is maintained by the U.S. Department of Health & Human Services and is dedicated to making high value health data more accessible to entrepreneurs, researchers, and policy makers in the hopes of better health outcomes for all.

- **Health Resources and Services Administration (HRSA)**: Health Professional Shortage Areas (HPSA) information was obtained through the HRSA Data Warehouse and Map Tool available online, including point data for HPSAs in mental, dental, and primary care.

- **Healthy Youth Survey (HYS)**: HYS is a collaborative effort of the Washington State Office of the Superintendent of Public Instruction, the Department of Health, the Department of Social and Health Services Division of Behavioral Health and Recovery, and the Liquor Control Board. This public school-based survey provides information about the self-reported health and health behaviors of youth in grades 6, 8, 10 and 12 in Washington to guide policy and programs that serve youth. This report highlights data from students in grades 8, 10, and 12. This data represents a simple random sample of responses for Washington State estimates and a census of responses (all responses) for the county estimates, as recommended by the Washington State Department of Health.
  - Student participation is voluntary and anonymous. In 2021, participation rates among public school students by grade level were as follows:
    - 73% of 8th-grade public school students in Kitsap participated in the survey.
    - 61% of 10th-grade public school students in Kitsap participated in the survey.
    - 43% of 12th-grade public school students in Kitsap participated in the survey.
  - For more information on student participation rates overall, and for participation by district, please visit: [https://public.tableau.com/app/profile/kitsap.public.health.district.assessment.and.epi.team/viz/StudentDepression/HYSDepression](https://public.tableau.com/app/profile/kitsap.public.health.district.assessment.and.epi.team/viz/StudentDepression/HYSDepression)

**Special considerations for HYS 2021**: Due to concerns about the impacts of survey administration changes in 2021 and COVID-19, use caution when analyzing changes from previous years. Several factors may or may not have had an impact on 2021 data: (1) The vast majority of students took the survey in-person at school, though a small number did take the survey remotely and the potential impact of having students complete the survey remotely is still being assessed; (2) Delaying the survey by a year also means a change in the cohort of students being surveyed.

- **Kaiser Family Foundation (KFF)**: KFF is an independent source for health policy research, polling, and journalism. They publish State Health Facts, more than 800 health indicators at the state level that can be downloaded. Find out more at [https://www.kff.org/statedata/](https://www.kff.org/statedata/).

- **Kitsap Interagency Coordinating Council (KICC) Head Start/ECEAP Partnership Report**: The purpose of this report is to provide a comprehensive description, in accordance with the Code of Federal Regulations, 45 CFR Chapter XIII, Section 1305.3, of community strengths and needs, providing current data that pertain to the needs, priorities, and lives of low-income families in our community. To review the full report, please visit: [https://kitsappublichealth.org/information/files/CommunityAssessmentKICC_Annual.pdf](https://kitsappublichealth.org/information/files/CommunityAssessmentKICC_Annual.pdf)
• **Office of Superintendent of Public Health (OSPI):** The Washington State OSPI provides data for enrollment, graduation and drop-out rates, academic achievement as measured by standardized statewide exams, students experiencing homelessness and the number of students eligible for free and reduced-priced meals (FRL). FRL data have some limitations: 1) eligible students might be underrepresented depending on the time of year that statistics are collected, e.g. students may not yet be signed up in October; 2) eligibility status might change during the school year resulting in an under or overestimate of program participants; 3) data do not include children who are not enrolled in school, are home-schooled, or attend private schools.

• **Puget Sound Clean Air Agency:** The Clean Air Agency provides air quality data for Kitsap, King, Pierce and Snohomish counties. They maintain one air quality monitor in Kitsap on Spruce Avenue in east Bremerton.

• **Rapid Health Information Network (RHINO):** A Washington State Department of Health program that collects real-time, population-based healthcare visit data from hospitals, emergency departments, and urgent care clinics across the state. It is used primarily to identify, investigate, and design data-driven, rapid responses to emerging public health threats. These data can provide insight into chronic disease burden, environmental threats, communicable disease outbreaks, and injury trends.

• **U.S. Census and American Community Survey (ACS):** The ACS is a mandatory, ongoing statistical survey by the US Census Bureau that samples a small percentage of the population every year to gather information about population characteristics, housing, and economics among other topics. This mailed survey is an annual supplement to the 10-year Census and an address can only be selected for the ACS once every 5 years.
  - Due to the impact of the COVID-19 pandemic, the Census Bureau changed the 2020 ACS release schedule. Instead of providing the standard 1-year data products, the Census Bureau released only experimental estimates from the 1-year data, which included a limited number of data tables for the nation, states and the District of Columbia, but did not provide data at the county level. Because of this, 2020 estimates are missing for Kitsap and sub-county populations. The 5-year estimates were not affected.
  - The ACS location of residence is based on census tracts, which are converted to ZIP Code Tabulation Areas (ZCTAs) for analysis.

• **U.S. Department of Labor, Local Area Unemployment Statistics (LAUS):** The Department of Labor, Bureau of Labor Statistics publishes databases, tables and calculators on inflation and pricing, employment and unemployment statistics and projections, pay and benefits and other occupational data, and spending and time use in the U.S.

• **Washington Association of Sheriffs & Police Chiefs:** The Washington Association of Sheriffs and Police Chiefs provides annual crime and jail statistics for Washington.

• **Washington State Department of Commerce, Point-in-Time Count:** The Homeless Housing and Assistance Act (ESSHB 2163-2005) requires each county to conduct an annual point-in-time count (PIT) of sheltered and unsheltered homeless people (RCW 43.185C.030) in accordance with the requirement of the United States Department of Housing and Urban Development (HUD). Data was made available for this assessment by Pierce County; however, data for zip codes outside Pierce County were not available. Estimates were generated using data with a geographic identifier (city or zip code).
• **Washington State Department of Health (DOH):** DOH maintains databases of vital records for births, deaths, stillbirths, fetal deaths, marriages, and divorces that took place in the state of Washington. The Department of Health also maintains information on hospitalizations, life expectancy, and cancer incidence and makes this data available through the Community Health Assessment Tool (CHAT), which is available to Local Health Jurisdictions, such as Kitsap Public Health District.

• **Washington State Department of Health, Community Health Assessment Tool (CHAT):** This data source is a web application that incorporates data from a variety of sources and quickly generates estimates for different geographies depending on the data source. Hospitalizations and death data are available through CHAT. For hospitalizations, data only include inpatient stays at state licensed acute care hospitals, and do not include military, DOD, VA, Indian Health Services, Rehabilitation or State Psychiatric Hospital stays.

• **Washington State Department of Health, Comprehensive Hospitalization Abstract Reporting System (CHARS):** Database that stores hospital discharge data, including records on inpatient and observation patient hospital stays.

• **Washington State Department of Health, Opioid and Drug Overdose Data Dashboard:** Public dashboard that provides data on deaths, hospitalizations, and EMS responses to incidents related to drug and opioid overdoses. The information can be accessed at https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/opioids/overdose-dashboard.

• **Washington State Department of Social and Health Services (DSHS):** DSHS’s Facilities, Finance and Analytics Administration (FFA) provides leadership in financial, operational and risk management services. This administration produces a comprehensive time-series collection of county and school district-level data related to substance use and abuse, and the risk factors that predict substance use among youth, called the Risk and Protection Profiles for Substance Abuse Prevention for Washington State and its Communities.

• **Washington State Immunization Information System (WAIIS):** This online immunization registry is maintained by the Washington State Department of Health Immunization Program. Data that can be accessed include numbers of children entering kindergarten, by county, with a complete, conditional, out of compliance (incomplete) immunization series, or exempt status. A new law took effect in July 2011 requiring a licensed health care provider to sign the Certificate of Exemption for a parent or guardian to exempt their child from school and childcare immunization requirements.

• **Washington State Office of Financial Management (OFM):** OFM provides population estimates by age, sex, race, and Hispanic origin, as well as estimates of population density and change. Note that the Washington State Department of Health recommends using the population interim estimates (PIE) developed by Public Health Seattle and King County (PHSKC) for calculation of disease, risk, and protective factor rates until the Office of Financial Management (OFM) can resume development of the Small Area Data Estimates in 2024. Health indicators in this report with subpopulation data use the PHSKC PIE estimate as denominators when not provided by the estimate data source.
  - OFM also provides the healthcare workforce supply reports referenced throughout this report. For more information on the methods used for these reports, please visit: https://ofm.wa.gov/washington-data-research/health-care/health-care-workforce. OFM’s Statistical Analysis Center provides the Washington State County Criminal Justice Data Book, which is a clearinghouse for state data on crime and justice.
METHODS

topics, brought together from many different agencies and reporting systems. See https://sac.ofm.wa.gov/data for more information about these data sources.

- **Washington State Population Interim Estimates (PIE):** PIE were created by Public Health – Seattle & King County using a combination of the race/ethnicity and geography pattern from Census 2020 redistricting data and the age and sex pattern from Census 2010-based SADE from OFM. Once combined, the resulting estimates were calibrated to available Census 2020 based population estimates at the county level. For more information, see the PIE Summary of Workgroup findings at 1-PopulationInterimEstimatesGuidelines_Final05082023.docx (live.com).

  - Washington State Department of Health recommends using PIE for calculation of disease, risk, and protective factor rates until the Office of Financial Management (OFM) can resume development of the Small Area Data Estimates in 2024. Health indicators in this report with subpopulation data use the PHSKC PIE estimate as denominators when not provided by the estimate data source.

ENDNOTES


2 For a copy of the survey questions, or to review eliminated responses, please contact the Kitsap Public Health District Assessment and Epidemiology Program at epi@kitsappublichealth.org

3 To explore the public dashboard, please visit: ow.ly/tbvZ50Naanp

4 Washington State Population Interim Estimates (PIE), December 2022

5 For more information on confidence intervals, please visit: https://www.census.gov/programs-surveys/saipe/guidance/confidence-intervals.html

6 Survey participants were counted toward each race/ethnicity category they selected on the survey. This means individuals can be in multiple categories, category counts will not add up to 100%, and survey population race/ethnicity categories are not directly comparable to Kitsap County race/ethnicity population estimates, where individuals who identify as multiple races are categorized as multiracial.
INTRODUCTION & BACKGROUND

The 2023 Kitsap County Community Health Assessment (CHA) highlights the current demographics, socioeconomics, and health status of residents; the factors that contribute to less-than-optimal health outcomes; and resources in a community to improve health. It was developed by Kitsap Public Health District’s Assessment & Epidemiology Program, in collaboration with programs throughout the Health District and community partners, especially Virginia Mason Franciscan Health and the partnership team led by Kitsap Community Resources.

The 2023 CHA aims to look at health in Kitsap from a broad perspective, including many different types of indicators in our lives. Some indicators directly influence health, such as lifestyle factors like diet and activity level. Many other indicators have more of an indirect impact. These factors impact health by the resources, resiliency, and stress they give to our lives, and they include employment status, quality of housing, and educational attainment, among many others.

METHODS

Informed by the Mobilizing for Action through Planning and Partnership (MAPP) framework, developed by the National Association of County and City Health Officials (NACCHO), the 2023 CHA includes three main assessments:

- **The Community Voice Assessment** involved several qualitative methods of data collection to elicit perceptions of community strengths, needs, and opportunities for change. It included 16 key informant interviews, 10 focus group discussions, and 2 community surveys completed in 2021 and 2022. Thematic analysis of content provided important context regarding priority communities and topics.

- **The Community Status Assessment** involved the analysis of existing social, economic and health data, drawn from national, state, and local sources. It included evaluations of trends over time, comparison of Kitsap to Washington and comparison of available subgroups for approximately 126 health indicators.

- A list of **Community Assets** was compiled to include local organizations working with Kitsap residents in specific topic areas of need. This list can be found at the end of every chapter.

There are some limitations to the information presented in this CHA, for example, a time lag from when data are collected to when data are available and lack of data for some population groups. Differences between groups are assessed using statistical methods which may not align with perception and community experiences. See the Methods chapter for more information about statistical methods. In some instances, data on important topics were not available or had not been evaluated at this time.
**EXECUTIVE SUMMARY**

**FINDINGS | DEMOGRAPHICS**

In 2022, an estimated 280,717 people lived in Kitsap County. From 2010 to 2022, Kitsap had a population growth rate of 12%, which is higher than the U.S. growth rate of 8%, but lower than Washington state’s rate (17%). Kitsap County has a slightly older population than Washington as a whole (40% are 50 years and older compared to 35%), and a slightly higher percentage of males aged 20 to 24 (4% compared to 3%). Kitsap has less racial and ethnic diversity than Washington (72% white compared to 63%).

For the purposes of this report, Kitsap County is described as having five geographic regions: Bainbridge Island, Bremerton, Central Kitsap, North Kitsap, and South Kitsap. Depending on the data source, these regions are defined by the school district boundaries or by the ZIP Code boundaries for the geographic area.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bainbridge Island</td>
<td>25,103</td>
<td>9%</td>
<td>25,070</td>
<td>+0.1%</td>
</tr>
<tr>
<td>Bremerton</td>
<td>68,358</td>
<td>24%</td>
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<td>+6.1%</td>
</tr>
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<td>61,141</td>
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<td>58,976</td>
<td>+3.7%</td>
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<tr>
<td>North Kitsap</td>
<td>51,853</td>
<td>18%</td>
<td>51,318</td>
<td>+1.0%</td>
</tr>
<tr>
<td>South Kitsap</td>
<td>74,261</td>
<td>26%</td>
<td>72,194</td>
<td>+2.9%</td>
</tr>
</tbody>
</table>

*Figure 1: Population distribution by Kitsap subregion*


*Note: Geographic region is based on ZIP code rollup.*

The percentage of Kitsap residents living with a disability was about 14.5% in 2021, representing about 37,000 residents. This percentage increases with increasing age groups, resulting in about 32% of residents aged 65 and older living with at least one disability. Ambulatory disabilities were most common, followed by cognitive, independent living, hearing, self-care, and vision.
EXECUTIVE SUMMARY

More than nine in ten (93%) Kitsap residents were born in the U.S. or born abroad as U.S. citizens and more than two in five (42%) born in the U.S. were born in Washington state. Among Kitsap residents born outside the U.S., an estimated 4% were born in Asia — predominantly Southeast Asia (2%) — and about 1% were born in Central America.

In 2021, an estimated 91% of Kitsap residents five years and older spoke English at home, which was higher than the estimated percentage of Washington residents overall (79%, Figure 8). In Kitsap, excluding English, the top languages spoken at home were Spanish (3%) and Tagalog/Filipino (2%).

In 2021, an estimated 3% of Kitsap residents five years and older (about 6,700 community members) spoke a language other than English at home and reported speaking English less than very well, which was lower than the estimated percentage of Washington residents overall (8%). Over the past five years (2017-2021), residents who reported speaking English less than very well included about 2,106 residents who spoke Spanish, 1,719 residents who spoke Tagalog or Filipino, 446 residents who spoke Mandarin or Cantonese, and 374 residents who spoke Korean.

FINDINGS | SOCIAL DETERMINANTS OF HEALTH

Key findings:

- **There have been decreases in Kitsap’s population living in poverty from 2013 to 2021.** In 2021, about one in five (19%) Kitsap residents (about 52,000 people) were estimated to live below 200% of the Federal Poverty Level (FPL) (below $53,000 annual income for a family or household of four).

- **Increases are seen in Kitsap’s population experiencing homelessness from 2014 to 2022.** In January 2022, two in every 1,000 Kitsap residents (a total of about 563 people) were experiencing homelessness.

- **Kitsap renters spent more than 30% of their monthly income toward housing costs more frequently than Washington renters overall.** In 2021, more than one in two (52%) renter-occupied housing units in Kitsap spent more than 30% of their monthly income toward housing costs, which was higher than Washington (49%).

- **There have been decreases in the percentage of Kitsap households receiving SNAP benefits from 2010 to 2021.** In 2021, an estimated 12% of Kitsap households (about 12,400 households) received SNAP benefits. More research is needed to assess whether this trend is due to a decrease in needed services, a decrease in households being able to access services, or something else.

- **Community members reported cost as a barrier to meeting basic needs.** In the 2022 Kitsap Community Resources (KCR) survey, cost was reported as the primary barrier preventing survey participants from meeting basic needs for housing, food, reliable transportation, and childcare.

Key disparities (differences):

- **Disparities are seen in economic stability (income) by geography and race and ethnicity.**
  - Among Bremerton community members nearly one in three (32%) lived below 200% of the Federal Poverty Level (FPL) in 2021 (about $53,000 annual income for a family or household of four). This was the highest percentage of any Kitsap County region.
EXECUTIVE SUMMARY

○ The estimated median household income by race/ethnicity in 2021 ranged from $58,854 for American Indian or Alaska Native community members to $90,191 for White community members.

**Disparities were seen in educational attainment by geography and housing status.**

○ Across Kitsap County, the percentage of public school students graduating within four years ranged from 64% in Bremerton to 94% in Bainbridge Island during the 2020-2021 school year.

○ Of the 152 public school students recorded as experiencing homelessness, only about half (53%) graduated high school within four years compared to 83% of students not experiencing homelessness for the 2020-2021 school year.

**Disparities were seen in food insecurity by age and race and ethnicity.**

○ A higher percentage of Kitsap’s youth (younger than 18 years old) experienced food insecurity (11%) than the overall population (8%) in 2021.

○ In 2021, Black or African American residents were 2.6 times more likely to report experiencing food insecurity than white residents (18% and 7%, respectively). Hispanic or Latino residents were 2.3 times more likely (16%) to report experiencing food insecurity than white residents.

**Disparities were seen in housing stability by geography.**

○ Among Bremerton public school students, 156 (3.5%) experienced homelessness during the 2021-2022 school year, the highest percentage of any Kitsap region.

○ Among renter-occupied housing units from 2017 to 2021, the percentage of households burdened by the cost of housing (more than 30% of their monthly income spent on housing costs) ranged from 33% in Bainbridge Island to 53% in Bremerton. Across Kitsap County, the percentage of households burdened by the cost of housing was higher among renter-occupied housing units than owner-occupied units.

FINDINGS | HEALTHCARE ACCESS

**Key findings:**

- **There is less availability of healthcare providers in Kitsap County than Washington.** In 2021, the estimated rate of primary care physicians (PCPs) in Kitsap (63 per 100,000 residents) was lower than the Washington rate (90 per 100,000). Our Accountable Community of Health (ACH) region, which includes Kitsap, Clallam, and Jefferson counties, had the lowest rate of non-primary care specialists in the state. On a per capita basis, there were 110 specialists per 100,000 persons in our ACH compared to 184 per 100,000 in Washington state overall.

- **Affordability and accessibility of healthcare services in Kitsap is concerning.** After declining steadily since the implementation of the Affordable Care Act (ACA) in 2010, the percentage of uninsured community members has remained steady in Kitsap since 2018, with about 6% lacking health insurance coverage in 2021. In the 2022 KCR Focus Group Discussions, community members reported access to healthcare as a top concern in Kitsap County. Participants shared their experiences with months-long wait times for primary care and mental health services, a
lack of Medicaid providers, fear of medical bills, and previous experiences with inadequate interpretation services. Additionally, among 2022 KCR Community Survey participants, “too long to wait for an appointment” was the primary barrier to getting needed medical care (44%, 476 participants).

Key disparities (differences):

- Disparities are seen in health insurance coverage by age group, race and ethnicity, and geography.
  - Among 19- to 34-year-olds, nearly one in ten (9%) were uninsured, the highest of any age group.
  - Among community members who identified as American Indian or Alaska Native, nearly one in seven (14%) were uninsured, the highest percentage of any race/ethnicity. This may be due in part to the fact that individuals who receive their care through the Indian Health Service (IHS) do not have any health insurance and are categorized as uninsured by the Census.
  - Among Bremerton community members, about one in fifteen (7%) were uninsured, the highest of any Kitsap region.

- There are disparities for residents who report an unmet healthcare need due to cost by age, geography and income level.
  - An estimated 12% of younger adults (ages 18 to 44) reported there was a time in the past year when they needed to see a doctor but could not because of cost, higher than adults ages 65 and older (3%).
  - Among Bremerton community members, an estimated 12% reported there was a time in the past year when they needed to see a doctor but could not because of cost, the highest of any Kitsap region.
  - Among those with an income less than $25,000, an estimated 22% reported there was a time in the past year when they needed to see a doctor but could not because of cost, the highest of any income group.

- Disparities exist in preventative care visits among Medicaid beneficiaries by sex and age.
  - Fewer males (65%) had at least one adult ambulatory or preventative care visit in 2021, compared to females (80%).
  - Fewer 20 year olds to 44 year olds (71%) had at least one adult ambulatory or preventative care visit in 2021, compared to 45 year olds to 64 year olds (78%).

**FINDINGS | PREGNANCY & BIRTH**

Key findings:

- **Kitsap has 47% fewer OB/GYN providers** per 100,000 residents compared to Washington, despite having a higher pregnancy rate.

- **There is a need for improved prenatal care access in Kitsap.** From 2018 to 2019, there was a sizable decrease in the proportion of Kitsap residents who had adequate prenatal care for their pregnancies. The rate did not improve from 2019 to 2021. Only around half (52%) of Kitsap residents who gave birth in 2021 had received...
adequate prenatal care based on the Adequacy of Prenatal Care Utilization Scale; this was lower than Washington State’s percentage (70%). The difference was statistically significant.

- **There is a need for breastfeeding and chestfeeding support in Kitsap.** In the 2022 community survey, over half of respondents (54%) who had recently been or currently were pregnant said there was a time in the last two years when they needed lactation and breast- or chestfeeding support and could not get it. The most frequently cited reasons were: (a) not being able to afford the co-pay or deductible (44%), (b) the provider not taking their insurance (31%), (c) not having any way to get to services (24%) and (d) not being able to find services (23%).

**Key disparities (differences):**

- **Disparities in adequate prenatal care access exist by geography.**
  - From 2019 to 2021, less than half of Bremerton residents giving birth (47%) received adequate prenatal care compared to almost two-thirds of Bainbridge residents giving birth (65%). Although Bainbridge has the highest reported rate of adequate prenatal care in Kitsap, this region is not as high as Washington State overall (70%).

- **Disparities in adverse birth outcomes exist by race and ethnicity and geography.**
  - From 2017 to 2021, Black and African American people giving birth had statistically significantly higher rates of premature birth (11% compared to 7% for White people giving birth) and babies born at low birth weight (9% compared to 4% for White). From 2012 to 2021, infant mortality for Black and African American babies remains consistently higher than the rate for White babies (10 per 1,000 compared to 4 per 1,000).
  - From 2017 to 2021, Hispanic and Latino people giving birth had statistically significantly higher rates of premature birth (10% compared to 7% for White people giving birth) and babies born at low birth weight (6% compared to 4% for White).
  - Bremerton people giving birth had a higher rate of premature birth from 2017 to 2021 (9% compared to 5% for Bainbridge Island).

- **Disparities in gestational hypertension rates exist by race and ethnicity and geography.**
  - In 2021, more than one in ten (12%) people who gave birth in Kitsap were diagnosed with gestational hypertension at some point during their pregnancy. From 2017 to 2021, the rate of gestational hypertension was higher in those who identify as Native Hawaiian or Pacific Islander (18%), multiracial (12%) and White or Caucasian (11%) compared to those who identify as Asian (8%). The highest rates geographically were seen in Bremerton (13%), Central Kitsap (12%) and South Kitsap (10%) compared to only 7% on Bainbridge Island.

- **Preschool enrollment differences exist by geography.**
  - From 2016 to 2020, the lowest percent preschool enrollment for children aged 3 to 4 was among Bremerton children with only 38%, while Bainbridge children had the highest percentage (70%).
EXECUTIVE SUMMARY

FINDINGS | MENTAL HEALTH & WELLBEING

Key findings:

- There are concerning trends in Kitsap for depression and suicide.
  - There have been increases in Kitsap youth (12th graders) reporting depressive feelings from 2012 to 2021. In 2021, nearly half of Kitsap 12th grade students (47%) reported feeling so sad or hopeless that they stopped doing usual activities for at least two weeks in the past year.
  - Kitsap youth reported suicide ideation at higher percentages than Washington youth overall. In 2021, more than one in five Kitsap 12th graders (23%) reported they had seriously considered attempting suicide in the past year, which was higher than Washington in 2021 (20%); this difference was statistically significant.
  - Kitsap youth reported attempting suicide at higher percentages than the Healthy People 2030 goal. Healthy People 2030 aims to reduce the percentage of adolescents in grades 9 through 12 who attempt suicide to less than 2%. In 2021, 9% of 10th graders and 8% of 12th graders reported they had attempted suicide at least once in the past year.
  - There have been increases in the Kitsap resident suicide death rate from 2010 to 2021. In 2021, there were 17 deaths due to self-inflicted injury for every 100,000 residents in Kitsap.

- An encouraging trend is seen with decreases in Kitsap youth (10th graders) reporting bullying from 2012 to 2021. In 2021, 16% of 10th graders reported they had been bullied at least once in the past 30 days.

- Community members reported multiple barriers to getting needed mental healthcare. Among 2022 KCR Community Survey participants (18 years or older), appointment wait times were reported as the primary barrier to getting needed mental health counseling (44%, 361 participants), followed by cost (23%, 186 participants), and not knowing how to find a counselor (19%, 160 participants).

Key disparities (differences):

- There are disparities in mental health needs for Kitsap youth identifying as transgender, questioning, or something other than male or female. For these youth, there were differences in:
  - Bullying - About one in three (30%) youth compared to 9% of male youth.
  - Not having an adult to turn to - One in five (20%) youth compared to 9% of female youth.
  - Depressive feelings - More than seven in ten (71%) youth compared to 30% of male youth.
  - Seriously considering suicide - More than one in two (51%) youth compared to 13.5% of male youth.
  - Attempting suicide - One in five (20%) compared to 5% of male youth.

- There are disparities in mental health needs for Kitsap female youth. For these youth, there were differences in:
  - Bullying - Female youth reported more frequently being bullied than male youth, 17% compared to 9%.
EXECUTIVE SUMMARY

- **Depressive feelings** - One in two (50%) female youth compared to 30% of male youth.
- **Seriously considering suicide** - Nearly one in four (24%) female youth compared to 13.5% of male youth.
- **Attempting suicide** - Nearly one in ten (9%) female youth compared to 5% of male youth.

- There are disparities in adults by sex.
  - A higher estimated percentage of adults (18+) who identified as female reported having ever received a depression diagnosis (33%), compared to male adults (18%).
  - In 2021, death certificate data indicated the suicide rate among male Kitsap residents (26 per 100,000) was higher than among female Kitsap residents (9 per 100,000).

- There are disparities in mental health needs for Kitsap youth identifying as lesbian, gay, bisexual or other than heterosexual. For these youth, there were differences in:
  - **Bullying** - 24% compared to 11% of heterosexual youth.
  - **Not having an adult to turn to** - 21% compared to 10% of heterosexual youth.
  - **Depressive feelings** - About two-thirds (64%) of youth compared to 33% of youth who identified as heterosexual.
  - **Seriously considering suicide** - Two in five (40%) youth compared to 6% of heterosexual youth.
  - **Attempting suicide** - One in six (17%) compared to 5% of heterosexual youth.

- There are disparities by sexual orientation in Kitsap adults. From 2011 to 2021, more than one in three (34%) adults (18+) who identified as lesbian, gay, bisexual, or other reported they had 14 or more days of “not good” mental health, far more than adults who identified as heterosexual (11%).

- There are disparities in mental health needs by income level.
  - From 2011 to 2021, adults (18 years or older) with the two lowest reported incomes (less than $25,000 and $25,000 to less than $50,000) reported having received a depression diagnosis more frequently than any other income group (46% and 28%, respectively).
  - From 2011 to 2021, adults (18 years or older) with the two lowest reported incomes (less than $25,000 and $25,000 to less than $50,000) reported 14 or more days of “not good” mental health more frequently than any other income group (24% and 14%, respectively).

- There are disparities in mental health needs by age.
  - From 2011 to 2021, adults (18 years or older) in the younger age groups (18-44 years old) reported 14 or more days of “not good” mental health more frequently than older age groups (45 years or older).
  - In the 2022 KCR survey, those younger than 35 reported higher percentages of participants needing mental healthcare, but not being able to get it (52%, 243 participants), than those 65 and older (16%, 93 participants).
EXECUTIVE SUMMARY

FINDINGS | HEALTH BEHAVIORS

Key findings:

- **Kitsap experienced an increasing death rate due to opioids from 2018 to 2022.** Opioids accounted for more than three in four of our drug-related deaths in 2022. At the same time, our non-fatal opioid hospitalizations and emergency department visits have not been increasing. Fentanyl was increasingly reported as the opioid causing visits to the emergency department in 2021 and 2022, replacing heroin.

- **The alcohol-related death rate increased in Kitsap from 2018 to 2021.** Very little investigation has been done into the effects of the COVID-19 pandemic or other contributing factors to this increasing death rate in Kitsap County, but in KCR’s 2022 community survey, alcohol was the most widely used substance in an average week by respondents, with one third reporting weekly use (33%).

- **Trends in e-cigarette use among public high school students are unchanged over time; higher percentages of students reported vaping compared to smoking cigarettes in 2021.** Anecdotally, e-cigarette use in school has been expressed as a concern of parents, teachers, and staff in our school districts.

- **In general, crime appears to be decreasing in Kitsap. However, among more serious offenses such as the category of Group A crime, there was an increase in 2022 in every jurisdiction in Kitsap, after years of decreasing rates.** Group A crime includes 49 offenses grouped into 23 crime categories, such as murder, robbery, prostitution, and arson. Increases were also seen in 2021 in domestic violence, child abuse and neglect referrals, sexual assault crimes, and homicides.

- **The percentage of households that had a gun in or around their house in 2020 was higher in Kitsap (42%) than the state overall (32%).** About one in 15 Kitsap residents (6.5%) had a loaded and unlocked firearm.

Key disparities (differences):

- **There were differences in substance use rates by sex.** Compared to females, males had a higher death rate due to alcohol from 2012 to 2021, a higher opioid overdose non-fatal emergency department visit rate in 2022, and a higher death rate due to firearms (including self-inflicted) from 2017 to 2019. Among youth, female 10th and 12th grade students reported higher percentages alcohol use, binge drinking, and vaping than males in 2021.

- **There were differences in substance use by sexual orientation and gender identity.** In 2021, higher percentages of 10th and 12th grade students reported smoking cigarettes and vaping among those who reported a sexual orientation of gay, lesbian, bisexual or something other than heterosexual and among those who identified with a gender other than male or female. In 2021, higher percentages of 10th and 12th grade students reported using marijuana among those who reported a sexual orientation of gay, lesbian, bisexual or something other than heterosexual.

- **There were differences in substance use by geography.** Bainbridge and North Kitsap 10th and 12th grade students reported higher percentages drinking alcohol and using marijuana in 2021, while Bremerton students reported the lowest alcohol use and Bremerton and South Kitsap students reported the lowest marijuana use. Bainbridge Island students also reported the highest percentages binge drinking, while South Kitsap reported...
the lowest percentage. Bremerton and South Kitsap adults reported the highest percentages of adults currently smoking from 2011 to 2021, while Bainbridge Island and North Kitsap reported the lowest percentages.

- There were differences in child abuse reports by geography.
- From 2011 to 2021, decreasing percentages of adults reported smoking as level of educational attainment increased.

**FINDINGS | COMMUNICABLE DISEASE**

**Key findings:**

- **Emerging Infections and Outbreak Response**
  - From the beginning of the COVID-19 pandemic in March 2020 through the end of national Public Health Emergency on May 11, 2023, Kitsap County reported over 54,000 laboratory-confirmed cases and nearly 3,000 hospitalizations. COVID-19 has contributed to over 400 deaths in Kitsap County.

- **Reportable Communicable (Infectious) Diseases**
  - From 2013 through 2022, Kitsap County identified 31 active tuberculosis (TB) cases, including two deaths caused by tuberculosis. Multiple TB cases in the past five years have exposed worrying gaps in TB identification in Kitsap, where multiple opportunities were missed across several facilities.
  - One hundred to 300 new chronic hepatitis C diagnoses and up to four acute cases are reported each year in Kitsap. While the majority of new diagnoses are reported in people in their 50s and 60s, an increasing proportion of new diagnoses are among people in their 20s and 30s, mirroring a trend observed nationwide. Although hepatitis C patients often require complex “whole health” person-based care, resources are seldom available to communities to accomplish this. Although almost all people infected with hepatitis C can be essentially cured with medication, the CDC estimates that fewer than one-third of newly diagnosed cases were initiated on antiviral treatment.
  - Kitsap County typically has anywhere between three and twenty influenza-associated deaths each flu season.

- **Immunizations and Vaccine-Preventable Diseases**
  - According to data reported by Kitsap schools at the beginning of the 2022-23 school year:
    - 1,433 (4%) Kitsap K-12 students were not complete on their age-appropriate immunizations and did not have recorded exemptions.
    - Seven public schools’ kindergarten cohorts reported <90% of their students complete on the MMR vaccine.
    - A total of 352 (14%) public school seventh graders did not have a recorded Tdap vaccine or a recorded exemption.
EXECUTIVE SUMMARY

- 14 of 66 (21%) Kitsap Public Schools reported overall immunization rates <90%. This includes three home school programs, five elementary schools, two middle schools, two high schools, and two K-12 programs.
- KPHD estimates that between 37% and 48% of Kitsap residents (all ages) received a seasonal influenza vaccine in the 2022-23 flu season. In Washington State, coverage tends to be higher in older age groups than in younger ones; and national data showed that people who were uninsured were 60% less likely to report having received a seasonal flu vaccine.
- Beginning in 2020 (during the COVID-19 pandemic) Kitsap County and the U.S. as a whole have seen an increasing proportion of adults opting to receive immunizations at commercial pharmacies, instead of at a provider’s office.

- Sexually Transmitted Infections (STIs)
  - In 2022, there were 1,011 chlamydia, 275 gonorrhea, 80 syphilis, and ten new HIV diagnoses reported in Kitsap County. There are currently an estimated 345 Kitsap residents living with HIV.
  - Syphilis cases have risen dramatically in recent years; in 2017 there were 33 reported cases, compared to 80 in 2022. Syphilis is the only STI for which Kitsap County reports rates above the U.S. Department of Health and Human Services (DHHS) National Strategic Plan target.
  - A large proportion of Kitsap STI cases receive their care outside Kitsap County. According to 2022 Kitsap Public Health surveillance data, over 20% of chlamydia, 32% of gonorrhea and 38% of syphilis cases in Kitsap County residents were tested outside of Kitsap County; in fact, 12 cases were tested and treated by other jurisdictions’ health departments.

FINDINGS | CHRONIC DISEASE

Key findings:

- Heart disease was the second leading cause of death in Kitsap in 2021 and among the top three for all adult age groups (18-34, 35-64, and 65 and older), making it a key area for targeted prevention. In 2021, more than one in three Kitsap residents (35%) reported having been diagnosed with high blood pressure, a risk factor for heart disease. More than one in three (34%) reported high cholesterol, another risk factor.

- From 2010 to 2021, there have been increasing trends in the percentage of Kitsap adults and 10th graders who classify as overweight or obese. These trends are statistically significant. In 2021, two in three Kitsap County adults (66%) and more than one in four 10th graders (29%) reported a height and weight that classified as overweight or obese.

- Cancer, in its many forms, has been the leading cause of death and premature death in Kitsap every year since at least 2000. This makes it a key candidate for prevention initiatives. However, none of the three cancers reviewed (breast, cervical or colorectal) had concerning trends or comparisons to Washington State overall. More investigation into the role these cancers play as a cause of death in Kitsap would be beneficial.
EXECUTIVE SUMMARY

Key disparities (differences):

- Disparities exist along economic lines (such as income level and educational attainment) for many chronic disease metrics in Kitsap, similar to published findings from other areas of the United States. In Kitsap, these differences were seen across heart disease, diabetes and weight indicators, including high blood pressure diagnosis (education and income), high cholesterol diagnosis (education), diabetes (education and income), physical activity levels in adults (education and income), and overweight and obesity in adults (education). Although there are no economic subgroups for youth, physical activity and overweight and obesity in youth were also seen to differ between higher median income areas such as Bainbridge Island and lower median income areas such as Bremerton. It is important to note that there are several social and economic factors, such as healthcare access, insurance coverage and transportation, that can affect screening rates and access to preventive and treatment services, which also factor into these disparities.

FINDINGS | INJURIES, HOSPITALIZATIONS & DEATHS

Key findings:

- Leading Causes of Death
  - The top five causes of death in Kitsap in 2021 were:
    1. Cancer
    2. Heart disease
    3. COVID-19
    4. Accidents (unintentional injuries)
    5. Alzheimer’s disease
  - The top five causes of premature death in Kitsap in 2021 were:
    1. Cancer
    2. Accidents (unintentional injuries)
    3. Heart disease
    4. COVID-19
    5. Suicide & chronic liver disease and cirrhosis (tied)
  - The top five causes of years of potential life lost* before age 65 in Kitsap in 2021 were:
    1. Accidents (unintentional injuries)
    2. Cancer
    3. Suicide
    4. Heart disease
EXECUTIVE SUMMARY

5. COVID-19

- Accidents
  - The top three causes of accidental death in Kitsap in 2021 were:
    1. Substance use poisoning and falls (tied)
    2. Motor vehicle traffic-related accidents

Key disparities (differences):

- There are differences in life expectancy and premature death by sex. Life expectancy was shorter in males compared to females from 2016 to 2020. The premature death rate (deaths before age 65) was higher in males compared to females from 2017 to 2021.

- There are differences in life expectancy and premature death by race and ethnicity. From 2016 to 2020, life expectancy was shortest in Native Hawaiian or Pacific Islanders, American Indian or Alaska Natives, and Black or African Americans. It was highest among Asian or Asian Americans and Hispanic or Latinos. Premature death rates in Black or African American residents and Native Hawaiian or Pacific Islander residents were higher than rates in white residents and Hispanic or Latino residents, which were higher than rates in Asian or Asian American residents.

- There are differences in life expectancy by geography. From 2016 to 2020, life expectancy was higher in Bainbridge Island compared to all other sub-county geographies.

COMMUNITY ASSETS

The 2023 CHA lists community organizations and resources available in Kitsap at the end of each chapter. The people and organizations working in Kitsap can be integral partners with Kitsap Public Health District in celebrating the successes and helping fill the needs of our community in each of these areas.
ADDENDUM 1. KEY THEMES

The information from the 2023 CHA was presented to attendees of the Data Summit on September 26, 2023, at the Norm Dicks Government Building. Attendees included 70 participants from organizations and nonprofits, healthcare organizations, Naval Hospital Bremerton, the school districts, Olympic College, local government, and the Suquamish Tribe. After a presentation on the key findings and disparities seen in the data collected for the CHA, attendees were asked to comment on the highest priorities they saw coming out of the data, as well as the biggest gaps they saw. Addendum 1 lists the key themes that emerged from this collaborative work.

In addition, Data Open Houses were held in the community on October 7 at Sheridan Park Community Center in Bremerton, October 16 at the Port Orchard City Hall Chambers, October 23 at the Poulsbo Library Large Community Room, and October 30 at the Kitsap Mall Community Room in Silverdale. These open houses were attended by 4 guests in Bremerton, 4 guests in Port Orchard, 24 guests in Poulsbo and 40 guests in Silverdale. In addition, the data was available online for comment from October 2 to November 15 and in the lobby of the Norm Dicks Government Building for comment from November 1 to November 15. Addendum 1 lists the key themes that emerged from community input.
Demographic data can help communities identify and address current and future health needs, including culturally appropriate and geographically accessible healthcare, public health, and social services. It is also important to understand how social determinants of health — factors such as economic stability, educational attainment, food security, and housing stability — substantially shape the health of our community. Knowledge of demographics and social determinants of health can help us identify and address root causes of health issues and prevent negative health outcomes.

TOPIC OVERVIEW

This chapter provides an overview of key demographic indicators for Kitsap County and also shows how social and economic indicators vary among different parts of the county and among subpopulations by age, race, and other characteristics. It also presents data on social determinants of health (SDOH), the conditions in which people are born, grow, live, work, and age.

Implementing interventions to improve SDOH is an “upstream” approach that addresses the root causes of health inequities instead of focusing on the “downstream” effects, or the direct health outcomes of inequitable SDOH. An example of “upstream” interventions include creating laws to support access to housing or early childhood education. An example of “downstream” interventions include direct medical care services.

Kaiser Family Foundation’s model (summarized in the diagram to the right) is commonly used to explain SDOH. One key SDOH that is not called out explicitly is racism and other forms of discrimination and power imbalances. There has been a growing body of research demonstrating the adverse physiological changes and symptoms individuals, including children, develop after experiencing racism.

Just as SDOH are the social factors impacting our health, political determinants of health are the policy choices that led to SDOH in the first place. The political determinants of health involve the systematic process of structuring relationships, distributing resources, and administering power.

The political determinants of health shape opportunities that can advance or worsen health inequities. For example, systemic racism, like residential segregation, affects communities’ access to healthcare services, communities’ trust in medical and public health systems, and how communities are treated by healthcare and other service providers.

Systemic racism consists of unfair laws, policies, and practices that lead to discrimination within public and private sectors, such as justice, housing, finance, healthcare, and education. It can influence a person’s health throughout their lifespan and affect health from generation to generation. In 2021, the Kitsap Public Health Board joined public health bodies across the country in declaring racism a public health crisis. This declaration committed the Health Board and Kitsap Public Health District to take specific, meaningful action to address systemic racism and inequities.
KEY FINDINGS

Two main priority areas were identified from available public health data; these were selected based on changes over time for Kitsap residents, differences between Kitsap and Washington, and Kitsap resident input. They include:

Housing and homelessness

Decreases in poverty — In 2021, about one in five (19%) Kitsap residents (about 52,000 people) were estimated to live below 200% of the Federal Poverty Level (FPL). In 2021, a family or household of four was below 200% FPL if their yearly income was below $53,000. From 2013 to 2021, there was a decreasing percentage of residents living in poverty.

Increases in homelessness — From 2014 to 2022, there was an increasing rate of people experiencing homelessness in Kitsap. In January 2022, two in every 1,000 Kitsap residents (about 563 people) were experiencing homelessness.

Cost-burdened renters — In 2021, more than one in two (52%) renter households in Kitsap spent more than 30% of their monthly income on housing costs. This was slightly higher than Washington (49%) in 2021.

Meeting basic needs

Decreases in SNAP recipients — In 2021, an estimated 12% of Kitsap households (about 12,400 households) received SNAP benefits. From 2010 to 2021, there was a decreasing trend in the percentage of Kitsap households receiving SNAP benefits. More research is needed to assess whether this was due to a decrease in needed services, a decrease in households being able to access services, or other factors.

Cost as a barrier — In the 2022 Kitsap Community Resources (KCR) survey, cost was the primary barrier preventing survey participants from meeting basic needs for housing, food, reliable transportation, and childcare. In addition, participants in eight of 10 focus groups reported ongoing challenges to meeting basic needs for themselves and their families for housing, food, transportation, and childcare.

KEY DISPARITIES

While the findings from this report provide evidence of disparities in Kitsap County across multiple indicators, the following were identified as the most significant and are not a complete list of all disparities:

Disparities in economic stability

- Among Bremerton community members nearly one in three (32%) lived below 200% of the Federal Poverty Level (FPL) in 2021, the highest percentage of any county region.

- The estimated median household income by race/ethnicity in 2021 ranged from $58,854 for American Indian or Alaska Native Kitsap residents to $90,191 for white community members.

Disparities in food insecurity

- A higher percentage of Kitsap’s youth (younger than 18 years old) experienced food insecurity (11%) than the overall population (8%) in 2021.

- In 2021, Black or African American Kitsap residents were 2.6 times more likely to report experiencing food insecurity than white residents (18% and 7%, respectively). Hispanic or Latino residents were 2.3 times more likely (16%) to report food insecurity than white residents.

Disparities in educational attainment

- The percentage of public school students graduating high school within four years\(^\mathrm{4}\) ranged from 64% in Bremerton to 94% on Bainbridge Island for the 2020-2021 school year.

- Of the 152 public school students recorded as experiencing homelessness, only about half (53%) graduated high school within four years compared to 83% of students not experiencing homelessness for the 2020-2021 school year.

Disparities in housing stability

- Among Bremerton public school students, 156 (or 3.5%) experienced homelessness during the 2021-2022 school year, the highest percentage of any Kitsap region.

- From 2017-2021, differences by region in the percentage of households burdened by the cost of housing (spent more than 30% of their monthly income toward housing costs) were higher among renter-occupied housing units than owner-occupied units. Among renter-occupied units the percentage of households burdened by the cost of housing ranged from 33% in Bainbridge Island to 53% in Bremerton.
COMMUNITY DEMOGRAPHICS

The demographic characteristics of a community are strong predictors of health behaviors and health outcomes. Understanding these characteristics can help us understand existing population health issues and needs as well as predict future outcomes.

A note on population estimates

Population estimates are created from data collected every 10 years in the United States Census, supplemented by data collected annually from the American Community Survey. The farther we are from the last census, population estimates can become increasingly less accurate – especially for subgroups and smaller segments of the population like race and ethnicity – because the census includes all residents (at least theoretically), while the survey samples a smaller subset of the population. Due to U.S. Census Bureau delays in releasing some data from the 2020 Census, the Washington State Department of Health statewide workgroup has recommended adoption of population interim estimates (PIE) developed by Public Health – Seattle & King County which utilize available 2020 data. Final U.S. Census data for 2020 are expected in 2024.

PIE are used in the community demographics section below. Percentages and rates for demographic characteristics may differ from previous and future publications due to these variations in population estimates.

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Figure 1: Population of Kitsap County from 2000 to 2022

Data source: Washington State Population Interim Estimates (PIE)
DEMOGRAPHICS & SOCIAL DETERMINANTS OF HEALTH

Overall population
In 2022, an estimated 280,717 people lived in Kitsap County (Figure 2). Since 2010, Kitsap’s population has grown at a rate of 12%, which is higher than the U.S. growth rate of 8%, but lower than Washington state (17%) and nearby King County (20%).

Age and sex
Kitsap County has a slightly older population than Washington state as a whole (Figure 3). However, Kitsap did have a higher percentage of 20- to 24-year-old males than Washington state (4% compared to 3%); this trend is likely influenced by the military installations located in the county. Estimates for 2022 indicated:

- 40% of Kitsap residents were 50 years or older, compared to 35% of Washington state residents.
- 43% of Kitsap residents were 15-49, compared to 47% of Washington state residents.

Race and ethnicity
Kitsap County has less racial and ethnic diversity than Washington state as a whole (Figure 4). Estimates for 2022 indicated about seven in ten (72%) Kitsap residents identified as white, compared to about six in 10 (63%) Washington state residents.

Figure 2. Age and sex distribution of Kitsap County and Washington state, 2022
Data source: Washington State Population Interim Estimates (PIE), December 2022

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Kitsap County has less racial and ethnic diversity than Washington state as a whole (Figure 4). Estimates for 2022 indicated about seven in ten (72%) Kitsap residents identified as white, compared to about six in 10 (63%) Washington state residents.

Figure 2. Age and sex distribution of Kitsap County and Washington state, 2022
Data source: Washington State Population Interim Estimates (PIE), December 2022

Race and ethnicity
Kitsap County has less racial and ethnic diversity than Washington state as a whole (Figure 4). Estimates for 2022 indicated about seven in ten (72%) Kitsap residents identified as white, compared to about six in 10 (63%) Washington state residents.
Figure 3: Race/ethnicity distribution of Kitsap County and Washington state, 2022

Data source: Washington State Population Interim Estimates (PIE), December 2022

Figure 4: Geographic region distribution of Kitsap County (based on ZIP code boundaries)


Note: Geographic region is based on ZIP code rollup.

Region

For the purposes of this report, Kitsap County is described as having five geographic regions: Bainbridge Island, Bremerton, Central Kitsap, North Kitsap, and South Kitsap. Depending on the data source, these regions are defined by
the school district boundaries or by the ZIP Code boundaries for the geographic area. See the Methods section for more information.

The Suquamish and Port Gamble S’Klallam tribes and their reservations are located on the Kitsap Peninsula and in the geographic region North Kitsap. Nationally, the U.S. Census Bureau estimates that American Indians and Alaska Natives living on reservations or in Native villages were undercounted by about 5% in the 2010 Census and about 6% in the 2020 Census.7

When comparing the interim population estimates for 2022 with previous estimates for 2020 that were developed from 2010 US Census data and the American Community Survey, along with state data inputs (Figure 5), Bremerton had the largest population estimate increase (+6%) of any Kitsap geographic region.

**Population with a disability**

The Census includes self-reported hearing, vision, cognitive, ambulatory, self-care, and independence disabilities in their population disability estimates.8 In Kitsap from 2017 to 2021, the most common disabilities reported were ambulatory (serious difficulty walking or climbing stairs, 7.5%), cognitive (serious difficulty concentrating, remembering, or making decisions 6%), and independence (difficulty doing errands alone such as visiting a doctor’s office or shopping, 6%).

In 2021, an estimated 14.5% of Kitsap residents had a disability (about 37,000 community members, Figure 6), which was slightly higher than the estimated percentage of Washington residents (13%). This difference was statistically significant and is likely impacted by age distribution differences.

![Figure 5](image)

**Figure 5.** Population with a disability in Kitsap County and Washington state, 2010-2021

**Data source:** U.S. Census Bureau, American Community Survey (ACS)

**Notes:** Kitsap County and Washington trend over time data are from single-year estimates. Data for 2020 is missing because 1-year estimates were not released by the U.S. Census Bureau due to concerns about reliability of data that year.

The estimated percentage of residents living with a disability increased with age. From 2017 to 2021, for those 65 and older, an estimated 32% were living with a disability, the highest percentage of any age group (Figure 7).
Figure 6: Population with a disability by subgroup in Kitsap County, 2017-2021

Data source: U.S. Census Bureau, American Community Survey (ACS)

Notes: Geographic regions are based on school district.

Additionally, among participants in the 2022 Kitsap Community Resources’ Community Survey, 17% (731 participants) reported they had a disability that impacted their access to services or facilities in the community. When asked whether they had any barriers to employment, more than one in ten (11%, 363 participants) reported they had a mental or physical disability preventing them from employment.

Kitsap residents born outside the U.S.

More than nine in ten (93%) Kitsap residents were born in the U.S. or born abroad as U.S. citizens and more than two in five (42%) born in the U.S. were born in Washington state. Among Kitsap residents born outside the U.S., an estimated 4% were born in Asia — predominantly Southeast Asia (2%) — and about 1% were born in Central America.

An estimated 18,450 Kitsap residents are defined by the U.S. Census as foreign-born people who did not have U.S. citizenship status at birth. Since 2012, there has been a statistically significant increasing trend in the estimated number of foreign-born Kitsap residents.

Among foreign-born Kitsap residents, about half (49%) were reported as Asian or Asian American by the census, more than one in three (36%) graduated from college or technical school, and more than half were:

- naturalized citizens (61%);
- in the U.S. prior to 2000 (63%);
- owners of their home (67%);
- married (72%);
• living more than 200% above the federal poverty level (77%);
• female (62%).

Language
In 2021, an estimated 91% of Kitsap residents five years and older spoke English at home, which was higher than the estimated percentage of Washington residents overall (79%, Figure 8). In Kitsap, excluding English, the top languages spoken at home were Spanish (3%) and Tagalog/Filipino (2%).

![Languages spoken at home in Kitsap County (excluding English), 2017-2021](image)

**Data source:** U.S. Census Bureau, American Community Survey (ACS)

**Notes:** *The estimate has an elevated relative standard error (RSE) greater than 25% and does not meet KPHD reliability standards. Data are from the combined 5-year estimates for 2017 to 2021. For additional information about language categorization in the census, please visit: [https://www.census.gov/topics/population/language-use/about.html](https://www.census.gov/topics/population/language-use/about.html)*

In 2021, an estimated 3% of Kitsap residents five years and older (about 6,700 community members) spoke a language
other than English at home and reported speaking English less than very well, which was lower than the estimated percentage of Washington residents overall (8%, Figure 9).

From 2017 to 2021:

- An estimated 374 residents who spoke Korean at home reported speaking English less than very well.
- An estimated 446 residents who spoke Mandarin or Cantonese at home reported speaking English less than very well.
- An estimated 1,719 residents who spoke Tagalog or Filipino at home reported speaking English less than very well.
- An estimated 2,106 residents who spoke Spanish at home reported speaking English less than very well.

Figure 8. Residents who reported speaking English less than “very well,” 2010-2021

Data source: U.S. Census Bureau, American Community Survey (ACS)

**Notes:** Kitsap County and Washington trend over time data are from single-year estimates. Data for 2020 is missing because 1-year estimates were not released by the U.S. Census Bureau due to concerns about reliability of data that year.
SOCIAL DETERMINANTS OF HEALTH

Social and economic characteristics like economic stability, educational attainment, food security, and housing stability provide a foundation for community stakeholders to understand the available resources and potential needs in our community.

“I think the overriding concern for a big part of our county is just poverty. It is basic needs of just food and housing...”
— Organizational leader

Economic stability

Poverty is an important social determinant of health that can impact people’s access to necessities (housing, food, education, jobs, and transportation), and is associated with higher incidence and prevalence of illness, and with reduced access to quality health care. Recent research also indicates current poverty is associated with more deaths than other commonly reported causes like accidents, lower respiratory diseases, and stroke. 

Figure 9. Population living below 100% FPL in Kitsap County and Washington state, 2010-2021

Data source: U.S. Census Bureau, American Community Survey (ACS)

Notes: Kitsap County and Washington trend over time data are from single-year estimates. Data for 2020 is missing because 1-year estimates were not released by the U.S. Census Bureau due to concerns about reliability of data that year.

Federal poverty thresholds are set every year by the Census Bureau and vary by size of family and ages of family members. A high poverty rate is an indicator of poor economic conditions. Communities with higher poverty rates often experience challenges in paying for necessities, which can affect local business survival and impact school funding.
and quality due to regressive tax policies. In 2021, a family or household of four was below the federal poverty level (FPL) if their annual income was below $26,500.

In 2021, an estimated 9% of Kitsap residents (about 23,000 people) lived below 100% of the FPL, which was similar to the estimated percentage of Washington residents overall (10%). From 2010 to 2021, there has been a statistically significant decreasing trend in the estimated percentage of residents living in poverty (Figure 10).

Some of our communities in Kitsap are impacted by poverty at higher percentages. For example, from 2017 to 2021, an estimated two in seven (14%) Bremerton residents lived below 100% of the FPL, which was the highest percentage among Kitsap County regions (Figure 11).

Figure 10. Kitsap population living below 100% FPL by subgroup, 2017-2021

Data source: U.S. Census Bureau, American Community Survey (ACS)

Note: *The estimate has an elevated relative standard error greater than 25%, which does not meet KPHD reliability standards. Geographic region is based on school district.

Some research indicates that the FPL is far below what is needed to meet individual and family basic needs in Washington.\(^1\)\(^1\) Due to Washington’s high cost of living, a 200% FPL poverty rate can provide a more realistic measure of financial hardship in our community than the official 100% FPL poverty rate. In 2021, a family or household of four was below 200% FPL if their annual income was below $53,000.

In 2021, about one in five (19%) Kitsap residents (about 52,000 people) were estimated to live below 200% of the FPL (Figure 12). While the poverty rate remains too high, from 2013 to 2021, there has been a statistically significant decreasing trend in the percentage of Kitsap’s population living in poverty.
Figure 11. Kitsap population living below 200% FPL by region, 2017-2021

Data source: U.S. Census Bureau, American Community Survey (ACS)

Note: Geographic region is based on school district.

Median household income — the income where half of households in our county earn more and half of households earn less — is a well-recognized indicator of income and poverty, which have demonstrated impacts on physical and mental health.¹²

Figure 12. Median household income, 2010-2021

Data source: U.S. Census Bureau, American Community Survey (ACS)

Notes: Kitsap County and Washington trend over time data are from single-year estimates. Data for 2020 is missing because 1-year estimates were not released by the U.S. Census Bureau due to concerns about reliability of data that year.
In 2021, the estimated median household income in Kitsap was $87,314, which was similar to the estimated median income of Washington residents overall ($84,247). From 2014 to 2021, there has been a statistically significant increasing trend in Kitsap’s median household income (Figure 14).

However, there was a wide range among Kitsap subgroups (Figure 15).

For example:

- The estimated median household income by race/ethnicity ranged from $58,854 for American Indian or Alaska Native residents to $90,191 for white residents. Note that householder refers to the person in whose name the home is owned or rented, and the characteristics of the householder are used to describe the household.

- Similar to the poverty rate indicators above, Bremerton residents had the lowest estimated median household income ($62,673) of any Kitsap region.

- Among age groups, residents 15 to 24 years old had the lowest median household income ($60,173), closely followed by residents 65 years and older ($65,534). Both age groups earned considerably lower than 45 to 64 year olds ($104,123).

- Female-headed households earned dramatically less than other household types.

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**Figure 13.** Median household income in Kitsap by subgroup, 2010-2021

**Data source:** U.S. Census Bureau, American Community Survey (ACS)

**Note:** Geographic region is based on school district.
Unemployment — Multiple aspects of employment, including job security, the work environment, organizational culture, benefits and financial compensation, can impact our health. The labor force includes the estimated number of residents who are 16 years and older who do not have a job, are actively seeking work, and are available to take a job, in addition to those currently employed.

**Figure 14.** Population unemployed in Kitsap County and Washington state, 2010-2021

*Data source: US Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS)*

**Figure 15.** Kitsap population unemployed by subgroup, 2017-2021

*Data source: US Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS), Customized Tables

*Notes: *The estimate has an elevated relative standard error greater than 25%, which does not meet KPHD reliability standards. Geographic region is based on school district.*
In 2021, 5% of the Kitsap County labor force was unemployed, which was the same as the percentage unemployed in Washington state overall (5%). From 2017 to 2021, there was no statistically significant trend observed, despite the rise in unemployment in 2020 due to COVID-19 (Figure 16).

Younger age groups, multiracial residents, and those whose highest level of educational attainment was completing high school or earning a GED reported the highest percentages experiencing unemployment (Figure 17).

**Community member experiences meeting basic needs**

In the 2022 KCR focus group discussions, community members discussed the challenges they face meeting basic needs in eight of the 10 focus groups. Participants shared ongoing issues with access to reliable transportation, housing, food, and childcare needs.

“In terms of daycare, if you can find someone and afford it, then that’s great, but some people can’t. It feels like you’re just working to pay for daycare, so (you) may as well stay home. You lose a lot of people that are skilled in the workforce because there’s no available low-cost daycare.” - Community member

“I live from paycheck to paycheck and try to get things going. My husband’s truck’s down right now; I’m trying to get it fixed. (I’m) trying to make sure that I have the things I need.” - Community member

“I volunteer at a food bank, and I noticed the food that is being donated and given out to families sometimes mostly consistent of cans and frozen foods. While that might help them get through (for) some time, I don’t feel like it is nutritionally beneficial (to) have that diet all the time.” - Community member

“When I’m on 305 going through Poulsbo where they’re building another bank, another business, another for-profit, (I’m wondering), ‘Where is our housing on that level?’...We don’t need another bank. We don’t need another gas station. We need housing for the people.” - Community member

“[We need] affordable housing, transportation, and better shelters, because I was in one and they banned me permanently because I’m incontinent...So I was sleeping outside.” - Community member

**Education**

**High school graduation** — Although the avenues through which education impacts health are complex and intersecting, earning a high school diploma has been associated with decreased risk of premature death and increases in employment prospects and lifelong earning potential. In Kitsap County, for example, an estimated 17% of residents who did not graduate high school were living below 100% of the FPL compared to 11% among those who had graduated high school.

In the 2020-21 school year, the percentage of Kitsap public school students who graduated high school within four years was 81%. Overall, from 2010-11 to 2020-21, there has been a statistically significant increasing trend in the percentage of Kitsap students graduating high school within four years (Figure 18).
Although this improving trend is encouraging, there are stark disparities among subpopulations (Figure 19). A student’s ability to graduate from high school may be affected by broader institutional factors, such as family, school, and community factors, including home environment, access to economic and other resources, and school environment.\(^{15}\) Not completing high school is linked to a variety of factors that can negatively impact health, including limited employment prospects, low wages, and poverty.\(^{16}\)

The most recent Office of Superintendent of Public Instruction data (2020-21) for Kitsap seniors indicate:

- Of the 152 students recorded as experiencing homelessness, only about one in two (53%) graduated high school within four years compared to 83% among students not experiencing homelessness.
- Among English Language Learners, 54% graduated within four years compared to 82% among non-English Language Learners.
- Among students with disabilities, 60% graduate within four years compared to 85% among students without disabilities.
- Across Kitsap County, the percentage of public school students graduating within four years ranged from 64% in Bremerton to 94% in Bainbridge Island.
- Among students of low-income families, families that often have less access to resources, 69% graduated within four years compared to 90% among students who are not from low-income families.
Postsecondary education is education after high school (12th grade), including two-year colleges (community college), four-year colleges (bachelor programs), graduate programs, and professional programs.

Increased educational attainment has been associated with higher incomes, which can lead to increased access to healthcare services, better living conditions, and healthier foods. Access to higher education remains a challenge for many people, however, and can be affected by factors such as availability of college preparation at high schools, family support of or experiences with higher education, access to financial resources, and prohibitive college costs or admission requirements.

In 2021, an estimated 75% of Kitsap residents 25 years and older reported they had more than a high school education (Figure 20). Overall, from 2012 to 2021, there has been a statistically significant increasing trend in this indicator, although estimates vary across communities. For example, residents in South Kitsap and Bremerton reported the lowest percentages of residents with more than a high school education, with 69% and 70%, respectively.

In the U.S., the share of the population with a high school diploma has risen over time for Hispanic, Black, white, and Asian residents, while the gap in Bachelor’s degree attainment has widened for both Black and Hispanic adults compared to white adults. In Kitsap in 2021, the percentage of residents 25 years and older with more than a high school education was lowest among residents who identified as Native Hawaiian or Pacific Islander, American Indian or Alaska Native, and Hispanic or Latino (Figure 21). All race/ethnicity groups except multiracial were statistically significantly lower than white.
Figure 18. Percentage of residents 25 years and older with more than a high school education, 2005-2021

Data source: U.S. Census Bureau, American Community Survey (ACS)

Notes: Kitsap County and Washington trend over time data are from single-year estimates. Data for 2020 is missing because 1-year estimates were not released by the U.S. Census Bureau due to concerns about reliability of data that year.

Figure 19. Percentage of Kitsap residents 25 years and older with more than a high school education, 2017-2021

Data source: U.S. Census Bureau, American Community Survey (ACS)

Note: Geographic region is based on school district.

Food security

Population experiencing food insecurity — The United States Department of Agriculture (USDA) defines food insecurity

Food security

Population experiencing food insecurity — The United States Department of Agriculture (USDA) defines food insecurity
as lack of access, at times, to enough food for an active, healthy life for all household members as well as the limited or uncertain availability of nutritionally adequate foods.

To generate estimated food insecurity rates, Feeding America analyzes the relationships between food insecurity and its determinants including unemployment, poverty, disability, homeownership, and median income. The latest Feeding America data estimate 8% of Kitsap residents were food insecure in 2021 (Figure 22). This means about 22,000 individuals in Kitsap struggled to afford enough food for an active, healthy life in 2021.

While food insecurity remains too high, encouragingly, from 2015 to 2021, there has been a statistically significant decreasing trend in the percentage of Kitsap’s population experiencing food insecurity.

Figure 20. Population experiencing food insecurity, 2015-2021

Data source: Feeding America

Figure 21. Kitsap population experiencing food insecurity by race/ethnicity, 2021

Data source: Feeding America

Due to long-standing structural racism and discrimination influencing the locations and accessibility of grocery stores and access to culturally significant and appropriate foods, people of color have disproportionately faced food insecurity. Data indicates this disproportionate impact is seen in Kitsap, where Kitsap residents who identified as Black or African American (18%) and Hispanic or Latino (16%) had higher percentages of people experiencing food insecurity than those
who identified as white (7%, Figure 23).

A higher percentage of Kitsap’s youth (younger than 18 years old) experienced food insecurity (11%) than the overall population (8%) in 2021. High prevalence of food insecurity among youth is particularly concerning as it is linked with several negative health outcomes, such as long-term neurological damage and behavioral and mental health issues.\textsuperscript{20}

![Graph showing food insecurity rates in Kitsap County and Washington State from 2015 to 2021.](image)

*Figure 22. Youth experiencing food insecurity, 2021*

*Data source: Feeding America*

Encouragingly, the estimated percentage of youth experiencing food insecurity in Kitsap has been decreasing annually from 19% in 2015 to 11% in 2021 (Figure 24). The sharp, one-year decline from 2020 (15%) to 2021 (11%) may be due in part to COVID-19 pandemic-related policies. There is growing evidence that the expanded Child Tax Credit, which went into effect in 2021, mitigated food hardship among those who received it.\textsuperscript{21}

Additionally, in the 2022 KCR survey, cost was the primary barrier to getting food, followed by lack of alternative food sources (e.g., food banks) and transportation. Among all participants who answered the question, “Do you have barriers getting food? Choose all that apply:” 10% (327 participants) said not enough income to purchase food, 6% (193 participants) said not enough alternative food sources (e.g., food banks) available, and 6% (187 participants) said lack of transportation to grocery stores, markets, or food banks.

- Not surprisingly, about one in three (32%, 76 participants) with a household income of less than $15,000 said they did not have enough income to purchase food, a higher proportion than any other income level. The majority of participants at this income level said they worry about running out of food often or sometimes (60%, 148 participants) and one in two said that their mental or physical disability was a barrier to employment (50%, 120 participants), a higher proportion than any other income level.

- About one in eight (13%, 25 participants) who identified as Hispanic/Latino/Latinx reported not enough alternative food sources available as a barrier to getting food, a higher proportion than those who did not identify as Hispanic/Latino/Latinx (5%, 168 participants).
Access to SNAP benefits

The Supplemental Nutrition Assistance Program (SNAP) is a federal program that provides food-purchasing assistance for low- and no-income households. Anyone who qualifies on the basis of income and assets can obtain benefits, and enrollments typically rise and fall with changes in the poverty rate.22

In 2021, an estimated 12% of Kitsap households (about 12,400 households) received SNAP benefits (Figure 25). From 2010 to 2021, there has been a statistically significant decreasing trend in the percentage of Kitsap households receiving SNAP benefits. When comparing the percentage of residents receiving SNAP in 2021 to previous years, consider changes in policy during the COVID-19 pandemic.

![Graph showing percentage of population receiving SNAP benefits, 2010-2021](image)

**Figure 23.** Percentage of population receiving SNAP benefits, 2010-2021

**Data Source:** U.S. Census Bureau, American Community Survey (ACS)

**Notes:** Congress made temporary changes to SNAP during the COVID-19 pandemic, which may impact comparisons between 2021 and previous years. Kitsap County and Washington trend over time data are from single-year estimates. Data for 2020 is missing because 1-year estimates were not released by the U.S. Census Bureau due to concerns about reliability of data that year.

Access to SNAP benefits is critical in reducing households’ hunger and risk of food insecurity, as well as racial disparities in food insecurity. The most recent Census data (2017-21, Figure 26) for Kitsap indicate:

- Among households with a single female head of household, an estimated 31% received SNAP benefits — the highest percentage of any household type.
- Among households where at least one person had a disability, an estimated 21% received SNAP benefits compared to 6% among households where no one had a disability.
- Among Bremerton households, about one in five (19%) received SNAP benefits — the most of any region.
**Figure 24.** Kitsap population receiving SNAP benefits by subgroup, 2017-2021

**Data Source:** U.S. Census Bureau, American Community Survey (ACS)

**Note:** Geographic region is based on school district.
HOUSING STABILITY

“If you don't have a place to stay, it affects everything: your mental health, your stress level, your physical health.”

— COMMUNITY MEMBER

Owner-/renter-occupied housing units

In 2021, 30% of occupied housing units in Kitsap were renter-occupied and 70% were owner-occupied. Sociodemographic characteristics by householder among Kitsap renters from 2017-2021 are presented below in Figure 27. Note that the householder refers to the person whose name the housing unit is owned or rented. If the house is owned or rented jointly, the householder may be either person.

- Among householders aged 0-34, 61% were renters — the highest percentage of any age group.
- Among Black or African American householders, 69% were renters — the highest percentage of any race/ethnicity.
- Among Bremerton householders, 47% were renters — the highest percentage of any Kitsap region.

Data Source: U.S. Census Bureau, American Community Survey (ACS)

Note: Geographic region is based on school district.
In 2021, the median gross rent in Kitsap was $1,484, which was the same as the median gross rent in Washington state (Figure 28). The American Community Survey (ACS) measures gross rent as the contract rent plus the estimated average monthly cost of utilities (electricity, gas, water, and sewer) and fuels (oil, coal, kerosene, wood, etc.) if these are paid by the renter (or paid for the renter by someone else). From 2010 to 2021, there has been a statistically significant increasing trend in the median gross rent in Kitsap.

**Cost-burdened households**

Cost-burdened households are those that spend more than 30% of their monthly income toward housing costs. When households spend more than 30% of their income on housing, they are often forced to make difficult decisions in prioritizing purchases for other necessities such as food, healthcare, and childcare. This can be especially problematic for households with lower incomes, where higher housing costs can impact the household’s ability to meet basic needs. In 2021 (Figure 29):

- More than one in two (52%) renter-occupied housing units in Kitsap were cost-burdened.
- About one in four (26%) owner-occupied housing units with a mortgage in Kitsap were cost-burdened.
- About one in seven (13%) owner-occupied housing units without a mortgage in Kitsap were cost-burdened.
- Across Kitsap County from 2017-2021, differences by sub-county area in the percentage of households burdened by the cost of housing were higher among renter-occupied housing units than owner-occupied units and ranged from 33% of households burdened by the cost of housing in Bainbridge Island to 53% in Bremerton.

**Data Source:** U.S. Census Bureau, American Community Survey (ACS)

**Notes:** Kitsap County and Washington trend over time data are from single-year estimates. Data for 2020 is missing because 1-year estimates were not released by the U.S. Census Bureau due to concerns about reliability of data that year.
Figure 27. Monthly housing costs 30% or more of household income by Kitsap subgroups, 2017-2021

Data Source: U.S. Census Bureau, American Community Survey (ACS)

Note: Geographic region is based on school district.

Additionally, in the 2022 KCR survey, cost was reported as the primary housing concern with 35% (1,197 participants) reporting cost of rent or house payment is a major housing concern.

About two in five (42%, 350 participants) Bremerton residents said cost of rent or house payment is a major concern — a higher proportion than any other Kitsap County region.

Not surprisingly, about three in five (59%, 144 participants) with a household income less than $15,000 said the cost of rent or house payment is a major concern — a higher proportion than any other income level. More than one-third (39%, 75 participants) of participants at this income level said they were unsure who to contact for housing assistance; nearly half (46%, 133 participants) said they did not know how the Section 8 Program works.

Point-in-time homelessness counts

People experiencing homelessness often face higher rates of poor health outcomes than people with more stable housing.24

Each year, the U.S. Department of Housing and Urban Development (HUD) and Washington State Department of Commerce require communities to conduct a one-day Point-In-Time (PIT) count to survey individuals experiencing homelessness. The count attempts to provide a consistent set of data from around the country on “sheltered” and “unsheltered” homelessness. Sheltered homelessness refers to people living in a supervised publicly or privately operated temporary shelter, including congregate shelters, transitional housing and hotels and motels paid for by charitable organizations or federal, state or local government programs. Unsheltered homelessness refers to those with a primary nighttime residence that is a public or private place not designated as a regular sleeping accommodation for human beings, such as a car, park, abandoned building, bus or train station, airport, or campground.

In January 2022 during the one-day PIT, two in every 1,000 Kitsap residents (563 people) were experiencing
null
Figure 29. Public school students experiencing homelessness per 1,000 in Kitsap County and Washington state

Data Source: Washington State Office of Superintendent of Public Instruction (OSPI)

Rates vary across Kitsap County (Figure 32). For example, among Bremerton public school students, 35 per 1,000 students experienced homelessness — the highest rate of any Kitsap County region.

Figure 30. Public school students experiencing homelessness per 1,000 by Kitsap subgroups, 2021-2022

Data Source: Washington State Office of Superintendent of Public Instruction (OSPI)
COMMUNITY ASSETS

There are many community members and organizations working to improve conditions that support the health of Kitsap residents.

General needs

211 is a free confidential community service and one-stop connection to the local services you need: utility assistance, food, housing, health, child care, after school programs, elder care, crisis intervention and much more.

Gather Together Grow Together serves the community through transportation, food service, job readiness, and mentorship.

Helpline House provides food, housing, utilities, legal, medical equipment loans, and other assistance on Bainbridge Island.

Kitsap Community Resources is a nonprofit service organization creating hope and opportunity for low-income residents by promoting self-sufficiency through housing, employment, financial, and family resources.

North Kitsap Fishline provides food, rental assistance, eviction protection, utility assistance, health, legal and financial services, and employment and education services.

ShareNet provides food, rental assistance, and emergency power/utility assistance.

Salvation Army in Bremerton provides housing, food, poverty, and substance use treatment resources.

ShareNet and Goodwill provide clothing and household goods thrift stores, while Abraham’s House, New Beginnings Closet, Kids Kloset and Taking It to the Streets Ministry provides clothing, furniture, and other items at no cost to people in need.

St. Vincent de Paul in Bremerton provides shelter, food, clothing, financial resources, and other assistance.

Washington State Department of Social and Health Services has a Community Services Office in Bremerton and can assist with food stamps, cash, identification card vouchers, and more.

Civil and human rights

Kitsap Council for Human Rights advises county government and the Kitsap County community on issues related to discrimination, violence and harassment based on race or national origin, religion, age, gender, gender expression, sexual orientation, disability, or economic status.

NAACP Bremerton Unit 1134 advances policies and practices that expand human and civil rights, eliminate discrimination, and accelerate the wellbeing, education, and economic security of Black people and all persons of color. The NAACP can help provide resources and advocacy for individuals who have experienced discrimination.

Educational attainment

Olympic Educational Services District 114’s free Pathways to Success program helps eligible young adults, ages 16-24, explore and reach their educational and employment goals in Kitsap, Jefferson, and Clallam Counties.

Kitsap Strong’s Future Bound workgroup consists of many partner organizations and community volunteers who develop and implement strategies to create opportunities for students to explore their future bound pathways, including career exploration, financial literacy, dual credit enrollment, applying for post-secondary options, and financial
aid and scholarships.

**Kitsap Black Student Union** provides a safe space to celebrate culture, learn and preserve Black history while empowering youth leadership through mentoring and community service.

Mt. Zion Missionary Baptist Church’s **Partnering for Youth Achievement Program** along with Emmanuel Apostolic Church seek to serve at risk youth by providing positive role models through mentoring circles that assist youth to achieve their full academic, civic, social, and spiritual potential.

**OURGEMS and OURGENTS**, through mentorship and community service, provides young women and young men with opportunities to reach their fullest potential by building self-esteem, promoting the value of education and instilling leadership skills by exposing them to diverse experiences and perspectives.

**Voices of Pacific Island Nation** is committed to inspiring Pasefika (Pacific Islander) students and families by providing high-quality, culturally responsive services and resources to eliminate educational and opportunity inequities.

**Empowering Youth Mentor Program** is a community-based one-to-one mentoring program that matches volunteer mentors with mentees ages 8-21. Mentees are matched with trained mentors based on common interests and location. Mentors serve as positive role models and provide friendship and support for youth referred by professionals working in the juvenile justice system, schools, and social services.

**West Sound Tech** provides advanced career and technical programming preparing students ages of 16 to 21 or in grades 11 or 12 for career and college at no cost to the student. Students learn the technical knowledge and skill to prepare them for advanced placement in apprenticeships, technical schools, two-and-four-year colleges and universities or go directly to entry-level employment in their career interest area.

**Washington Youth Challenge Academy**, an alternative education experience for youth, provides a highly disciplined, safe and professional learning environment that empowers at-risk youth to improve their educational levels and employment potential and become responsible and productive residents of Washington state.

**NW Hopeful Horizons** empowers and advocates for at-risk youth and families, particularly those in LGBTQIA and BIPOC communities as they face unique challenges and often lack access to the resources they need to thrive.

**Employment**

Goodwill has a **Job Training and Education Center** in Bremerton that provides free training and job assistance.

**WorkSource** connects people to employment-related resources and assistance.

Through the **WA State Employment Security Department (ESD) Self-Employment Assistance Program (SEAP)**, the Northwest Business Center provides a discounted **online business bootcamp**.

**YouthBuild Kitsap** is a Department of Labor funded grant that reengages students who have dropped out academically and teaches construction trades. Participants must be 17-21 years old, Kitsap County residents, & looking to obtain their GED or diploma.

**Trillium** connects people with disabilities to employment opportunities.

**Food insecurity**

Food banks and food-related resources can be found at:
- North Kitsap Fishline
- Bremerton Foodline
- Sheryl McKinley Food Pantry at Olympic College
- Bremerton Backpack Brigade
- Taking It to the Streets Ministry
- Central Kitsap Food Bank
- ShareNet (Kingston and surrounding areas)
- The Salvation Army
- St. Vincent de Paul
- Bainbridge Island Helpline House
- South Kitsap Helpline
- Kitsap Food Bank Coalition
- Spirit of Life Lutheran Church Food bank
- Silverdale United Methodist Church Food bank
- Kitsap Immigrant Assistance Center

The U.S. Department of Agriculture Supplemental Nutrition Assistance Program, or SNAP, called Basic Food in Washington, helps people with low incomes make ends meet by providing monthly benefits to buy food.

**Housing and homelessness**

Kitsap County Housing and Homelessness Division supports a crisis response system in which the experience of homelessness is rare, brief and one-time. Our funding comes from federal, state and local sources.

Kitsap Community Resources’ Housing Solutions Center coordinates placement for shelters, provides short-term rental assistance, and makes referrals for housing and community programs.

**Housing Kitsap** provides quality affordable housing and homeownership opportunities to families and individuals.

**Bremerton Housing Authority** (BHA) is a public corporation providing affordable housing opportunities for people with limited financial means, primarily within the City of Bremerton. They also administer the Section 8 Housing Choice Voucher program throughout Kitsap and Mason counties.

**Housing Resources Bainbridge** is the nonprofit affordable housing provider and advocate on Bainbridge Island.

**Coffee Oasis** youth programs offer friendship, belonging, resources and opportunity to homeless and street-oriented youth ages 13 to 25.

**Kitsap Rescue Mission** and the **Kitsap Housing and Homelessness Coalition** advocate for and provide resource information, such as free meals calendar, Sally’s Guide and the Resource Guide for Pet Owners, and services to homeless residents, while **Homes for All Leadership Group** provides innovative leadership toward ending homelessness.
Northwest Hospitality – provides resources, such as access to supportive resources to journey back into housing, employment, and overall stability from homelessness, through hospitality kits, dental care vouchers, mobile supply closet, and hospitality cards.

Foundation for Homeless and Poverty Management breaks the pattern of generational poverty and homelessness for parents and their children by providing programs, such as life skills training, time management, Father’s Program, financial literacy, employment and Honor You Program for veterans, and resources like utility and rental assistance for renters impacted by COVID-19, who are behind on rent and are at risk of losing their housing.

Northwest Justice Project has an office in Bremerton and “provides free legal assistance to address fundamental human needs such as housing, family safety, income security, health care, education and more,” such as eviction and rental assistance.

Kitsap Legal Services provides attorney services to low-income tenants in eviction proceedings in Kitsap.

Catholic Community Services provides “shelter & homeless services, housing, Supportive services for veteran families, housing and essential needs (HEN), and home care.” They also provide transportation and home help for seniors and people with disabilities.

Specific populations

Hearing, Speech & Deaf Center (HSDC) has been serving the Puget Sound area for over 80 years and offers a comprehensive array of programs including interpreting for the deaf and hard of hearing, bilingual preschool services with instruction in American Sign Language and English, audiology and hearing aids, and speech and language therapy.

Easterseals Washington helps children and adults with disabilities and their families reach their full potential by enriching education, enhancing health, expanding employment, and elevating community.

The Kitsap County Accessible Communities Advisory Committee supports disability awareness and access for people with disabilities through technical assistance and other resources.

Kitsap County Division of Aging and Long-Term Care serve the needs of older or disabled adults, their families and caregivers residing in Kitsap County, providing services like the Senior Information and Assistance Line, Family Caregiver Support Program and resources listings, such as the Kitsap Peninsula Senior Resources Guide.

Kitsap County Veterans Assistance program works cooperatively with the Veterans Advisory Board to host events, offer services, and create opportunities to get involved and support local Veterans and their families in need.

Kitsap Immigrant Assistance Center is the only organization providing immigrant-centric family, immigration legal, and tax and business services in the West Salish/Puget Sound Region.

Kitsap County Department of Human Services provides essential services and resources that address individual, and community needs to promote health and wellbeing, such as a link to the Developmental Disabilities Resource Guide.

The Arc of the Peninsulas provides information and referrals to individuals with developmental disabilities and their families, parent to parent and parent education programs, Friday Night Social, Recreation and Resident camp and adult classes.

Island Volunteer Caregivers provides rides to older adults and adults with disabilities, community outreach navigator services, and hosts both a Caregivers’ Support Group and Grief Support Group on Bainbridge Island.
**Poulsbo Cares Initiative**, a partnership between City of Poulsbo, NK Fishline, Gateway Fellowship and Empact Northwest, helps older adults and adults with disabilities residing in Poulsbo with free rides to run errands or get home deliveries, free meals twice a day and meals, showers, internet, and laundry for people who are homeless or transient.

**Agape Unlimited** provides housing, case management and childcare programs for people in their outpatient substance use disorder treatment program.

**Scarlet Road** offers the hope of freedom to those who have been sexually exploited by working to intervene and educate to prevent victimization, providing solutions and resources to exit the industry, and journey alongside survivors to find full healing from exploitation.

**YWCA** provides emergency shelter, supportive housing, civil and criminal court navigation and accompaniment, legal advocacy services, family advocacy services, support groups, case management, resources and referrals, prevention programming, education and community outreach to survivors of domestic violence and provides prevention programming to halt the generational cycle of violence.
ENDNOTES


5 Kitsap Public Health Board, Resolution 2021-01, [https://kitsappublichealth.org/about/equity.php](https://kitsappublichealth.org/about/equity.php)

6 Graduation rate is based on a cohort of students. The cohort is made up of all students who start 9th grade together. Students who transfer into or out of a school are added or removed from the cohort. If students stop attending school, they are counted as 'drop outs'. If students have met graduation requirements, they are counted as 'graduates'. If students don't graduate but are still attending, they are considered 'continuing'. Students are tracked through their 7th year in high school.


8 How Disability Data are Collected from The American Community Survey, United States Census Bureau, [https://www.census.gov/topics/health/disability/guidance/data-collection-acs.html](https://www.census.gov/topics/health/disability/guidance/data-collection-acs.html)


10 This is the official measurement of poverty used by the Federal Government. The Department of Health and Human Services (HHS) produces simplified - but very similar - versions of these poverty thresholds called "poverty guidelines" that are used to assess eligibility for income-based programs such as Medicaid. For more information on measures of poverty, please see the detailed description provided by HHS: [http://aspe.hhs.gov/poverty/faq.cfm](http://aspe.hhs.gov/poverty/faq.cfm)


http://www.commissiononhealth.org/PDF/0e8ca13d-6fb8-451d-bac8-7d15343aacff/Issue%20Brief%204%20Dec%202008%20-%20Work%20and%20Health.pdf

14 Oreopoulos, P. Do dropouts drop out too soon? Wealth, health and happiness from compulsory schooling. Journal of 
Public Economics. 2007;91(11–12), 2213–2229.

15 Healthy People 2030: High School Graduation, Office of Disease Prevention and Health Promotion, 


17 Wilson, S. J., & Tanner-Smith, E. E. (2013). Dropout prevention and intervention programs for improving school 
completion among school-aged children and youth: A systematic review. Journal of the Society for Social Work and 

18 Healthy People 2030: Enrollment in Higher Education, Office of Disease Prevention and Health Promotion, 

19 Advancing diversity and inclusion in higher education, Office of Planning, Evaluation and Policy Development, 

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9292303/


24 Centers for Disease Control and Prevention (CDC), Homelessness and Health, 
https://www.cdc.gov/orm/science/homelessness/index.html
DATA SOURCES


- Washington State Population Interim Estimates (PIE), December 2022


- U.S. Census Bureau, American Community Survey (ACS), accessed at data.census.gov


- Feeding America, Map the Meal Gap, https://map.feedingamerica.org

- Washington State Department of Commerce, Kitsap County Department of Human Services, Housing & Homelessness Division, Annual Point in Time Count Results
Environmental health focuses on the relationships between people and their environment. By maintaining a healthy natural environment and creating a healthy built environment — the human-made spaces in our communities such as parks and green spaces, transportation systems, safe sidewalks/bike lanes, and buildings — we improve public health outcomes.

TOPIC OVERVIEW

This chapter includes both indicators of our natural and our built environment that influence health. It also highlights a selection of recent environmental health data gathered for Kitsap County from publicly available, countywide reports published in the last five years (2019-2023).

While this chapter is not intended to be a comprehensive assessment of environmental health in Kitsap, with this information we hope to better understand where we are starting from as we focus more on the impact of environmental health on our community moving forward.

For more information about foodborne and waterborne diseases, as well as how climate change is impacting communicable disease vectors and local disease epidemiology, see the Communicable Disease chapter.

KEY FINDINGS

While the findings from this report provide evidence of disparities in Kitsap County across multiple indicators, the following were identified as the most significant and are not a complete list of all disparities:

A lapse in data

More recent data are needed in order to identify key environmental health priorities, we need timely data that reflects our current environmental health landscape and identifies the subpopulations that may be disproportionately impacted by and/or more vulnerable to environmental health risks, climate change impacts, built environment changes, and exposures to hazards.

Natural environment

- **Surface water** quality is good. Since 1995, there has been a net increase of more than 5,000 acres of shellfish beds approved for harvest in Kitsap County. No public health advisories were issued for Kitsap streams in 2023.

- **Per- and polyfluoroalkyl substances** (or PFAS) groundwater contamination affects very few public drinking water systems in Kitsap: There was only one system requiring corrective action and one system exceeding the state action level, all other systems had no detection or detection below the state action level.
- **Climate change impacts** — In a 2020 report commissioned by Kitsap County, increases in heat-related illnesses and increases in acute injuries from extreme weather events are expected to have a high magnitude of impact in Kitsap moving forward.

- **Increases in total greenhouse gas emissions** — From 2015 to 2019, Kitsap County increased overall emissions by 16%. Emission increases were primarily driven by tree loss, fossil fuel-based electricity, and population growth.

- **Air quality** — Air quality in 2021 was excellent at the one station monitored by the Puget Sound Clean Air Agency located at 3250 Spruce Ave, Bremerton. More stations may be helpful to monitor differences in air quality throughout the county.

- **Community members’ transit priorities** include 30-minute services, new transit routes, and high-capacity transit (2022): In a 2022 Kitsap Transit survey, respondents ranked their top preferred transit service investments as: 30-minute service on most routes (60%), new ferry route(s) (52%), new bus routes (49%), and high-capacity transit (49%).

- Two-thirds of the Kitsap workforce reported *driving alone to work*, similar to Washington state (2017-2021).

- **Puget Sound Regional Council designated 6 communities in Kitsap as High Transit Communities** (2020). These communities are expected to accommodate regional employment and population growth in the coming years and include Bainbridge Island, Kingston, Port Orchard, Port Orchard Urban Growth Area (UGA), Poulsbo, and Poulsbo UGA.

- The percentage of Kitsap youth who *walked or biked to school* was lower than Washington overall (2018). In 2018, 31% of 8th graders in Kitsap reported walking or biking to school one or more days a week on average, which was lower than the percentage of Washington 8th graders overall (38%).

### KEY SOURCES

<table>
<thead>
<tr>
<th>Source</th>
<th>Author</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitsap Water Quality Report</td>
<td>Kitsap Public Health District</td>
<td>2022</td>
</tr>
<tr>
<td>Washington Tracking Network</td>
<td>Washington State Department of Health</td>
<td>*</td>
</tr>
<tr>
<td>Climate Change Resiliency Assessment</td>
<td>Kitsap County</td>
<td>2020</td>
</tr>
<tr>
<td>Air Quality Data Summary for 2021</td>
<td>Puget Sound Clean Air Agency</td>
<td>2022</td>
</tr>
<tr>
<td>Long-Range Transit Plan 2022–2042</td>
<td>Kitsap Transit</td>
<td>2022</td>
</tr>
<tr>
<td>VISION 2050: A Plan for the Central Puget Sound Region</td>
<td>Puget Sound Regional Council</td>
<td>2020</td>
</tr>
<tr>
<td>Communitywide Geographic Greenhouse Gas Emissions</td>
<td>Kitsap County</td>
<td>2022</td>
</tr>
<tr>
<td>Community Health Assessment</td>
<td>Kitsap Public Health District</td>
<td>2019</td>
</tr>
<tr>
<td>County Health Rankings &amp; Roadmaps</td>
<td>University of Wisconsin Population Health Institute</td>
<td>**</td>
</tr>
</tbody>
</table>

*Source is not a published report, website accessed Nov. 19, 2023.*  
**Source has many indicators with different dates (see page 10).
INDICATORS

**Kitsap Water Quality Report**

The Kitsap Water Quality Report is published yearly by the Kitsap Public Health District to provide the community with an overview of surface water health in Kitsap County. It includes sampling results for dozens of Kitsap streams and other indicators of surface water health.

**Surface water quality monitoring** — The Health District Pollution Identification and Correction (PIC) program employees sample shorelines, streams and swimming beaches across the county for *E. coli* bacteria, an indicator of fecal pollution caused by human or animal waste. Fecal pollution can carry viruses, bacteria and parasites that make people sick. In the 2022 water year (Oct. 1, 2021 – Sept. 30, 2022), 3,559 fresh and saltwater samples were collected.

Fecal pollution can come from many sources, including failing septic systems, leaking sewage pipes, and wildlife and pet waste. While the PIC team works with the community to try to correct pollution as soon as possible, improvements can take weeks, months and sometimes years to complete.

One indicator of improvements in pollution in surface waters is the number of acres of shellfish beds open for harvest. Since 1995, there has been a net increase of more than 5,000 acres of shellfish beds approved for harvest in Kitsap County. (Figure 1)

![Figure 1. Cumulative acres of shellfish beds approved since 1995](image)

*Data source: Washington State Department of Health Shellfish Program*
Figure 2. Sampling results for water year 2022 for streams monitored by Kitsap Public Health District. Green dots represent monitoring stations reporting low bacteria, yellow stations reported periodic high bacteria, red stations reported consistent high bacteria.

Data source: Kitsap Water Quality Report, Kitsap Public Health District, 2022

Figure 3: Water sampling results for streams monitored by Kitsap Public Health District

Data source: Kitsap Public Health District Water Pollution Identification and Correction Program
ENVIRONMENTAL HEALTH

The PIC program also monitors about 70 streams for *E. coli* bacteria (Figure 2). The state Department of Ecology establishes standards for surface water quality. The freshwater standard is applied to “primary contact” water bodies, where people are likely to become submerged or ingest water through recreational activities such as wading and swimming. The City of Bainbridge Island performs its own water quality monitoring, and those data points are not presented in this report.

Sixty-four percent of monitored streams in Kitsap County met water quality (bacteria) standards during the 2023 water year, down slightly from the prior two water years. (Figure 3)

Public health advisories are issued for streams that have consistent problems with high bacteria levels. Advisories are posted to protect the health of people who might encounter stream water, especially children. A new advisory threshold was adopted in 2022 to incorporate changes to the state water standard to improve our monitoring of risk to human health. Based on water quality results the year prior, there were no public health advisories in effect for the 2023 water year (Oct. 1, 2022 to Sept. 30, 2023). The number of stream advisories has declined since 2007. (Figure 4)

![Figure 4: Stream advisories issued by Kitsap Public Health since 2006](chart)

*Data source:* Kitsap Water Quality Report, Kitsap Public Health District, 2022

*Note:* A new advisory threshold was adopted in 2021.

The Health District freshwater swimming beach monitoring program samples at 17 lakes across Kitsap County during summer months to help keep swimmers healthy. Health advisories are issued when water samples show high levels of *E. coli* bacteria or when potentially toxic cyanobacteria (blue-green algae) blooms are present. Three lakes had advisories issued in the calendar year 2022 with a total of 162 health advisory days. Island Lake had three advisories, Long Lake had one advisory, and Kitsap Lake had two advisories.
Polyfluoroalkyl substances (PFAS) in drinking water

The Washington State Board of Health adopted a new rule in 2021 that requires over 2,400 public drinking water systems (Group A) to test for a large family of chemicals called per- and polyfluoroalkyl substances (PFAS). PFAS stay in the environment for a very long time and could harm human health when they build up in our bodies over time. Historical use of firefighting foam is a common source of PFAS in drinking water.

Figure 5. Drinking water PFAS testing results

Data source: Washington Tracking Network, Washington State Department of Health
The federal government has not finalized safety standards for PFAS in drinking water, but Washington state created rules to inform communities about PFAS in drinking water when it is found. A PFAS detection at a single source doesn’t necessarily mean that results occur throughout the water system or at nearby homes.

Across Washington state, 2% of water systems have found PFAS above the state action level. Figure 5 shows Group A water system PFAS test results since October 2021. Of Kitsap County water system tests for PFAS, one system had PFAS detected and corrective action has been taken (star); one system had results at or exceeding the state action level (purple); 14 additional systems had PFAS detected but lower than the state action level (yellow dots); and all other systems had no PFAS detected (green dots).

**Kitsap County Climate Change Resiliency Assessment**

In 2020, Kitsap County, the City of Bremerton, and the City of Port Orchard commissioned Cascadia Consulting Group, with Greene Economics and Herrera Environmental, to prepare a Climate Change Resiliency Assessment to review and summarize climate change drivers, impacts, and risks for Kitsap County. This assessment studies the area’s natural environment. (Figure 6)

<table>
<thead>
<tr>
<th>Public Health-Related Climate Change Key Findings</th>
<th>Reported “Magnitude of Impact”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in heat-related illnesses</td>
<td>High</td>
</tr>
<tr>
<td>Increase in respiratory illnesses</td>
<td>High</td>
</tr>
<tr>
<td>Increase in acute injuries from extreme weather events</td>
<td>Low-Medium</td>
</tr>
<tr>
<td>Increase in vector-borne diseases</td>
<td>Medium</td>
</tr>
</tbody>
</table>

*Figure 6. Public health-related climate change impacts and magnitude*

*Data source: Kitsap County Climate Change Resiliency Assessment*

*Note: The magnitude of climate impact is defined qualitatively based on its relative change from historical or current baseline conditions.*

**Puget Sound Clean Air Agency Air Quality Data Summary reports**

The purpose of the Puget Sound Clean Air Agency’s Air Quality Data Summary reports is to summarize air quality data from their core monitoring network every year.

The Agency’s jurisdiction includes King, Kitsap, Pierce, and Snohomish Counties. Monitoring stations are in a variety of geographic locations in the Puget Sound region. Note that in Kitsap County, there is only one official air quality monitoring station, located at 3250 Spruce Ave. in Bremerton.

The summary studies the area’s natural environment. (Figure 7)
ENVIRONMENTAL HEALTH

<table>
<thead>
<tr>
<th>% of year with an Air Quality Index (AQI) rating of “good”</th>
<th>98.4%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest AQI (on a scale of 0 to 500)</td>
<td>113</td>
</tr>
</tbody>
</table>

*Figure 7.* Air quality monitoring summary for Kitsap County, 2021

*Data source:* Puget Sound Clean Air Agency, Air Quality Data Summary for 2021

**Kitsap Transit Long Range Transit Plan 2022-2042**

The purpose of Kitsap Transit’s Long-Range Transit Plan, updated every five to 10 years, is to provide a roadmap for service and capital investments over the next 20 years. The last plan was adopted by the Kitsap Transit Board of Commissioners in 2016. The transit plan supports regional plans and state policies, including the Puget Sound Regional Council’s Vision 2050 Transportation Plan, Washington State Commute Trip Reduction, and the Washington State Growth Management Act.

The plan studies the area’s built environment. (Figure 8)

<table>
<thead>
<tr>
<th>Preferred transit investments among Kitsap Transit survey respondents</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-minute service on most routes</td>
<td>60%</td>
</tr>
<tr>
<td>New ferry routes</td>
<td>52%</td>
</tr>
<tr>
<td>New bus routes</td>
<td>49%</td>
</tr>
<tr>
<td>High-capacity transit</td>
<td>49%</td>
</tr>
<tr>
<td>Bremerton-Tacoma express route</td>
<td>34%</td>
</tr>
<tr>
<td>More on-demand service</td>
<td>31%</td>
</tr>
<tr>
<td>Circulator service</td>
<td>28%</td>
</tr>
</tbody>
</table>

*Figure 8.* Kitsap Transit survey responses, 2022

*Data source:* Kitsap Transit, Long-Range Transit Plan 2022–2042

*Notes:* Respondents were asked to select their top 3 choices. Every Kitsap County household was sent a postcard and invited to take the Kitsap Transit survey.

**Puget Sound Regional Council’s VISION 2050**

The purpose of Puget Sound Regional Council’s VISION 2050: A Plan for the Central Puget Sound Region, a long-range plan, is to fulfill requirements under Washington’s Growth Management Act to develop multicounty planning policies. The policies also serve as the region’s guidelines and principles required under RCW 47.80. The plan is grounded in the
public’s commitment to environmental sustainability, social equity, and efficient growth management that maximizes economic strength and mobility. The plan looks ahead to the year 2050, recognizing the significant growth the region expects.

VISION 2050 studies the area’s built environment. (Figure 9)

<table>
<thead>
<tr>
<th>Key finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISION 2050’s Regional Growth Strategy calls for the 34 High Capacity Transit Communities (cities and unincorporated areas that are connected to the regional high-capacity transit system) in Washington to accommodate 24% of the region’s population growth and 13% of its employment growth by the year 2050.</td>
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</tbody>
</table>

*Figure 9. Kitsap High Capacity Transit Communities identified in the Vision 2050 Regional Growth Strategy

Data source: Puget Sound Regional Council’s VISION 2050: A Plan for the Central Puget Sound Region, 2020

**Kitsap County’s Communitywide Geographic Greenhouse Gas emissions inventory**

The purpose of the 2019 Kitsap County Geographic Greenhouse Gas (GHG) emissions inventory was to meet the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions and the Global Protocol for Community Scale Greenhouse Gas Emission Inventories.

Inventory data was gathered for the 2019 calendar year and accounts for emissions from the activities of Kitsap County residents, businesses, employees, and visitors undertaken within or originating from within the county limits. A geographic emissions inventory does not account for upstream emissions from goods and services consumed within the community, such as food or furniture.

Emissions are reported in metric tons of carbon dioxide equivalent (MTCO2e), a metric used to measure and compare emissions of a variety of greenhouse gases.

The GHG emissions inventory studies the area’s natural and built environments. (Figure 10)
### Environmental Health

<table>
<thead>
<tr>
<th>Change in Kitsap emissions from 2015-2019</th>
<th>+16% (+0.4 million MTCO$_{2e}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in emissions due to land use (including tree loss)</td>
<td>+181k MTCO$_{2e}$</td>
</tr>
<tr>
<td>Change in emissions due to fossil fuels-based electricity</td>
<td>+131 MTCO$_{2e}$</td>
</tr>
<tr>
<td>Change in emissions due to population growth</td>
<td>+110 MTCO$_{2e}$</td>
</tr>
<tr>
<td>Change in emissions due to colder winters</td>
<td>+35 MTCO$_{2e}$</td>
</tr>
<tr>
<td>Change in emissions due to improved vehicle efficiency</td>
<td>-99 MTCO$_{2e}$</td>
</tr>
<tr>
<td>Change in emissions due to decreased residential energy use (per home)</td>
<td>-32 MTCO$_{2e}$</td>
</tr>
<tr>
<td>Change in emissions due to decreased commercial energy use (per job)</td>
<td>-20 MTCO$_{2e}$</td>
</tr>
<tr>
<td>Change in emissions due to decreased waste generation (per person)</td>
<td>-13 MTCO$_{2e}$</td>
</tr>
</tbody>
</table>

**Figure 10.** Change in Kitsap greenhouse gas emissions

**Data source:** Kitsap County, Communitywide Geographic Greenhouse Gas Emissions, 2019

**Note:** Metric tons of carbon dioxide equivalent (MTCO$_{2e}$) is a metric used to measure and compare emissions of a variety of greenhouse gases.

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**University of Wisconsin County Health Rankings & Roadmaps**

The purpose of the County Health Rankings & Roadmaps, a program of the University of Wisconsin’s Public Health Institute, is to provide data, evidence, guidance, and examples to build awareness of the multiple factors that influence health and support leaders in growing community power to improve health equity.

The program studies each county’s built environment. (Figure 11)

<table>
<thead>
<tr>
<th>Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities</th>
<th>Kitsap</th>
<th>Washington</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>14%</td>
<td>17%</td>
<td>2015-19</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of the workforce that drives alone to work</th>
<th>Kitsap</th>
<th>Washington</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>66%</td>
<td>68%</td>
<td>2017-21</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Among workers who commute in their car alone, the percentage that commute more than 30 minutes</th>
<th>Kitsap</th>
<th>Washington</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td>37%</td>
<td>2017-21</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 11.** Built environment indicators from the 2023 County Health Rankings & Roadmaps

**Data source:** County Health Rankings & Roadmaps
Kitsap Public Health District’s 2019 Community Health Assessment

The last Kitsap Community Health Assessment conducted in 2019 included several indicators of the area’s built environment.

The following indicators provide information about our built environment. (Figure 12)

<table>
<thead>
<tr>
<th>Estimate</th>
<th>Compared to Washington</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density of supermarket and grocery stores</td>
<td>18 per 100,000 residents</td>
<td>Same</td>
</tr>
<tr>
<td>Density of fast food and convenience stores</td>
<td>65 per 100,000 residents</td>
<td>Same</td>
</tr>
<tr>
<td>8th graders walk/bike to school</td>
<td>31%</td>
<td>Lower</td>
</tr>
</tbody>
</table>

**Figure 12.** Built environment indicators from the 2019 Kitsap Community Health Assessment

**Data source:** Kitsap Public Health District’s Community Health Assessment, 2019
DATA SOURCES


- Kitsap Public Health District, Community Health Assessment 2019, accessed at http://nebula.wsimg.com/c287fe1a08fbda3f63c101159e0f83b7?AccessKeyId=2E4DF62153933E23772&disposition=0&alloworigin=1
What does ‘healthcare access’ mean? In the “Five A’s of Access,” access is defined as availability, accessibility, accommodation, affordability, and acceptability. This chapter focuses on three of these dimensions to identify the key assets and problems in the community in terms of healthcare access, including the advancement of equitable opportunities for historically excluded groups: availability, affordability, and accessibility.

TOPIC OVERVIEW

Achieving access to healthcare for all is a nationally recognized goal. The U.S. Department of Health and Human services’ Healthy People 2030 initiative sets data-driven objectives to improve health and wellbeing over the next decade and lists improved access to comprehensive, high-quality healthcare services as a key goal. Understanding where barriers to access remain and why they occur can help our community tailor interventions aimed at improving access to healthcare.

LOCAL SNAPSHOT

The Kitsap Peninsula is home to the Suquamish and Port Gamble S’Klallam tribes — both of which provide healthcare services — as well as several Navy installations, which add unique elements to healthcare access for our communities. For example, in 2014, Naval Hospital Bremerton (NHB) converted its emergency room to an urgent care facility with limited hours, and in 2022, indefinitely diverted its labor and delivery unit citing staffing concerns.

Additionally, Kitsap and nearly all counties in Washington are designated geographic Health Professional Shortage Areas by the Health Resources and Services Administration. This means our community has a shortage of primary, dental, and mental healthcare providers.

In 2022, Kitsap County healthcare providers shared testimony at KPHD Board of Health meetings, warning that obstetrical services in the county were on the verge of collapse. Emergency Medical Response (EMS) and ambulance teams reported facing hours-long wait times to admit their patients to the emergency room at St. Michael Medical Center, the only ER on the Kitsap Peninsula.

In 2023, the Kitsap Public Health Board, recognizing the ongoing concerns around access to care, declared high healthcare costs and inadequate access to services a public health crisis. The resolution commits the Board and Health District to advance a public health approach to addressing costs and barriers to accessing care.

Additionally, researchers at the Center for Health Security at The Johns Hopkins Bloomberg School of Public Health were awarded a contract by KPHD to conduct an assessment of healthcare access in Kitsap. The assessment will be released to the public in February 2024. It aims to identify and document gaps in healthcare access. It also aims to provide specific recommendations to improve access to care for community members.
KEY FINDINGS

Two main priority areas were identified from available public health data; these were selected based on changes over time for Kitsap residents, differences between Kitsap and Washington, and Kitsap resident input. They include:

**Availability of care providers**
In 2021, the estimated rate of primary care physicians (PCPs) in Kitsap was lower than the state rate. There were 63 PCPs per 100,000 people in Kitsap compared to 90 per 100,000 in Washington state. Our Accountable Community of Health (ACH) region, which includes Kitsap, Clallam, and Jefferson counties, had the lowest rate of non-primary care specialists in the state. There were 110 specialists per 100,000 people in our ACH compared to 184 per 100,000 in Washington overall in 2021.

**Affordability/accessibility of healthcare**
The percentage of uninsured community members has remained steady in Kitsap since 2018, with about 6% lacking health insurance coverage in 2021. However, inequities in health insurance coverage persist for some communities. In the 2022 KCR Focus Group Discussions, community members reported access to healthcare as a top concern in Kitsap County. Participants shared their experiences with months-long wait times for primary care and mental health services, a lack of Medicaid providers, fear of medical bills, and previous experiences with inadequate interpretation services. Among 2022 KCR Community Survey participants, “too long to wait for an appointment” was the primary barrier to getting needed medical care (44%, 476 participants).

KEY DISPARITIES

While the findings from this report provide evidence of disparities in Kitsap County across multiple indicators, the following were identified as the most significant and are not a complete list of all disparities:

**Disparities in health insurance coverage**
- Among 19-34-year-olds, nearly one in ten (9%) were uninsured, the highest percentage of any age group.
- Among community members who identified as American Indian or Alaska Native, nearly one in seven (14%) were uninsured, the highest percentage of any race/ethnicity. This may be due in part to the fact that individuals who receive care through the Indian Health Service (IHS) do not have any health insurance and are categorized as uninsured by the Census.
- Among Bremerton residents, about one in fifteen (7%) were uninsured, the highest rate of any Kitsap region.

**Disparities in unmet needs due to cost**
- Among 18 to 24 year olds, an estimated 12% reported there was a time in the past year when they needed to see a doctor but could not because of cost — the highest percentage of any age group.
- Among those with an income less than $25,000, an estimated 22% reported there was a time in the past year when they needed to see a doctor but could not because of cost, the highest percentage of any income group.
- Among Bremerton residents, an estimated 12% reported there was a time in the past year when they needed to see a doctor but could not because of cost, the highest percentage of any Kitsap region.

**Disparities in preventative care (Medicare beneficiaries)**
- Among males, 65% had at least one adult ambulatory or preventative care visit in 2021. Among females, 80% had at least one visit.
- Among 20-44-year-olds, 71% had at least one adult ambulatory or preventative care visit in 2021, while among 45-64-year-olds, 78% had at least one visit.
AVAILABILITY OF HEALTHCARE

“We have a fragile and fragmented and overstretched healthcare system... We have glaring weaknesses and deficiencies in primary care, obstetrics, urgent, and emergency health care services.”

— Organizational leader

Hospital beds

One measure of the availability of healthcare is the rate of staffed, inpatient hospital beds per 1,000 population. This rate provides an indication of the availability of inpatient services in a community. The COVID-19 pandemic has fundamentally forced the healthcare field to think differently about how care is being delivered and how workforces are managed. It has highlighted the need to have enough hospital beds and flexibility in their use to address any unexpected surge in demand for intensive care. While a recent study investigating the optimal number of beds in hospitals and regions concluded that there is no one standard to be applied, in 2021 Kitsap had fewer staffed inpatient hospital beds per capita (0.99 per 1,000 residents) than Washington (1.60 per 1,000) and the U.S. (2.37 per 1,000). (Figure 1)

<table>
<thead>
<tr>
<th>Region</th>
<th>Staffed inpatient hospital beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitsap County</td>
<td>0.99 beds per 1,000 residents</td>
</tr>
<tr>
<td>Washington</td>
<td>1.6 beds per 1,000 residents</td>
</tr>
<tr>
<td>United States</td>
<td>2.37 per 1,000 residents</td>
</tr>
</tbody>
</table>

*Figure 1. Comparing staffed inpatient hospital beds*

*Data sources: Kaiser Family Foundation, State Health Facts; HealthData.gov, U.S. Department of Health & Human Services, COVID-19 Reported Patient Impact and Hospital Capacity by Facility*

Physician supply

In 2022, the state’s Office of Financial Management (OFM) Health Care Research Center published the Physician Supply Report. The report estimated that in 2021 there were 63 primary care physicians (PCPs) in Kitsap for every 100,000 residents compared to 90 per 100,000 residents in Washington — meaning Kitsap had 30% fewer PCPs to serve a similar number of patients. According to OFM, the lack of physician assistants (PAs) was also similar in Kitsap, with 28% fewer PAs in 2021 (33 per 100,000 compared to the statewide rate of 46 per 100,000).
Additionally, OFM estimated our Accountable Community of Health (ACH) region, which includes Kitsap, Clallam, and Jefferson counties, had the lowest rate of non-primary care specialists in the state with 110 providers per 100,000 population (compared to the statewide rate of 184 per 100,000). Kitsap also had 47% fewer OB/GYN providers per 100,000 residents than Washington overall. See also the Pregnancy & Births chapter of this report.

Although the Physician Supply Report does not include data on the demographic characteristics of Kitsap’s PCPs, there is strong evidence that healthcare provider diversity (including race, sex, and age) can improve healthcare quality through: (1) higher levels of patient satisfaction and trust; (2) enhanced cultural competency in patient-provider relationships; (3) expanding minority patients' access to and utilization of health services; (4) increasing access to care for geographically underserved communities; and (5) enhancing the breadth and scope of research with a broader range of racial/ethnic perspectives.  

**Nursing supply**

Advanced registered nurse practitioner (ARNP) is a health profession license category in Washington. An ARNP can practice independently to admit, manage, and discharge patients to and from facilities and may prescribe medications. Overall ARNP supply increased from 2018 to 2021 in Kitsap County (from 32 to 47 per 100,000 population) and Washington (from 61 to 76 per 100,000). The increase in ARNP supply came almost entirely from specialist care ARNPs.

Although the numbers of both groups increased from 2018 to 2021, the ARNP increase in specialist care outpaced the population growth. In Kitsap, the number of primary care ARNPS increased from 13 to 14 per 100,000 population in 2018 and 2021, while the number of specialist care ARNPs increased from 19 to 32 per 100,000 population.

**Figure 2: Mental health provider availability**

**Data source:** County Health Rankings & Roadmaps

**Notes:** Mental health providers include psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers that treat alcohol and other drug abuse, and advance practice nurses specializing in mental health care. Providers who transmit electronic health records are required to obtain an identification number. However, very small providers may not obtain a number, some may longer be practicing or accepting new patients, and some may be registered with an address in
Mental health supply

In 2022, there were an estimated 417 mental health providers for every 100,000 residents in Kitsap. (Figure 2) Encouragingly, from 2015-2022, there was a statistically significant increasing trend in the number of mental health providers for every 100,000 residents in Kitsap. However, the number of mental health providers per 100,000 population in Kitsap was still lower than the state overall in 2022 (417 per 100,000 compared to the statewide rate of 457 per 100,000).

Dentist supply

In 2021, there were an estimated 79 dentists for every 100,000 residents in Kitsap. (Figure 3) In a promising trend, from 2012-2021 there was a statistically significant increasing trend in Kitsap. The number of dentists per 100,000 population in Kitsap was similar to the state overall in 2021.

![Figure 3: Dentist availability rate](image)

**Data source:** County Health Rankings & Roadmaps/National Provider Identification Data File

**Notes:** Providers who transmit electronic health records are required to obtain an identification number, but some may no longer be practicing or accepting new patients, and some may be registered with an address in one county while practicing in another. This may result in an overestimate or underestimate of active dentists.

Appointment wait times

Staffing shortages like those highlighted above have the potential to contribute to increased patient wait times for healthcare services. Kitsap community members have shared that appointment wait times have contributed to their lack of access to healthcare. Among the 2022 Kitsap Community Resources (KCR) Community Survey participants, “too long to wait for appointment” was the primary barrier to getting needed medical care (44% or 476 participants, Figure 4).
Appointment wait times were also the primary barrier to getting needed mental health counseling (44% or 361 participants). Of note, the primary barrier shifted based on demographic characteristics. Among KCR participants who selected Asian/Asian American as their race/ethnicity, the primary barrier to getting needed mental health counseling was not being able find a provider who offered interpretation or culturally competent services (32% or 14 participants). Although this is a small sample of our community, there is strong evidence that culturally adapted healthcare — care tailored to a patients’ norms, beliefs, values, language, and literacy skills — improves health outcomes and is likely to decrease disparities.\(^{11}\)

“Nobody — I don’t mean to sound rude — but nobody competent wants to accept Apple Healthcare (Medicaid) and those who do only allot a very small percentage of their caseload to Apple Healthcare because they don’t pay anything.”

— Community member
Interpreter services (Medicaid)

According to the U.S. Census Bureau, an estimated 3% of the Kitsap County population, representing over 6,500 people, speaks English less than “very well.” In certain areas of our county, including Bremerton and Central Kitsap, the proportions are higher (for more information, please refer to the Community Demographics and Social Determinants of Health chapter of this report).

Providers are required to ensure spoken and sign language access according to Title VI of the Civil Rights Acts of 1964 and the Americans with Disabilities Act (ADA). The Health Care Authority's (HCA) interpreter services program supports these efforts by offering interpreter services for Apple Health (Medicaid) healthcare appointments.

In 2022, there were 395,994 interpreter services requests among providers for Medicaid healthcare appointments in Washington. Three in four (75%) of these requests were filled (i.e., an interpreter was assigned to and accepted the request), while only about half (51%) were completed (i.e., an interpreter filled a request, and the appointment was completed with the client and provider).

In 2022, there were 307 interpreter service requests among providers for Medicaid healthcare appointments in Kitsap County:

- 57% of these requests were assigned to an interpreter, and only 40% were completed (i.e., an interpreter filled a request, and the appointment was completed with the client and provider)
- Spanish accounted for the majority of these requests (93%) in Kitsap; the remaining 7% included Cantonese, Farsi, Kanjobal, Korean, Mam, Marshallese, Pashto (Pashtu, Pushto), Russian, Thai, and Vietnamese
“CHI (St. Michael Medical Center) has their charity care program, and it is sometimes hard to access... A lot of people pay bills that they’ll find the money and figure out how to pay it, but they can’t afford it at all and are going into debt.”

— Organizational leader

Health insurance coverage

Health insurance coverage is a key component of entry into healthcare systems in the U.S. Without health insurance, people are less likely to have a regular healthcare provider and more likely to skip routine healthcare. This can put them at increased risk for serious health problems.

Even with insurance, access to care can be challenging for many populations. For example, among people reentering communities after incarceration, the stigma associated with incarceration, mental illness, and substance use disorders can negatively affect their requests for needed services.

After the implementation of the Affordable Care Act (ACA), the percentage of community members in Kitsap without health insurance decreased from an estimated 12% in 2010 to 5% in 2018 (Figure 6). Since 2018, the percentage of uninsured has held steady with about 6% (or about 15,000 community members) uninsured in 2021. Of the community members ages 19 to 65 who were uninsured in 2021, an estimated 40% worked full-time in the past 12 months.

**Figure 5.** Residents without health insurance

**Data source:** U.S. Census Bureau, American Community Survey (ACS)

**Notes:** Washington/Kitsap data are from the 2021 single-year estimates; missing data for 2020 is due to 1-year estimates not being released by the U.S. Census Bureau because of a lack of reliable data that year.
Despite improvements in health insurance coverage, disparities persist in Kitsap:

- Among 19 to 34 year olds, nearly one in ten (9%) were uninsured—the highest percentage of any age group. When compared to the reference group of 65+ (with less than 1% uninsured), this difference was statistically significant. Note that if their parent’s health insurance plan covers dependents, young adults usually can get added to or stay on their parent’s health plan until they turn 26 years old.

- Among community members who identified as American Indian or Alaska Native, nearly one in seven (14%) were uninsured—the highest percentage of any race/ethnicity. The lowest percentage of uninsured was among community members who identified as Black or African American (3%). When compared to this reference group, there was a statistically significant difference among community members who identified as American Indian or Alaska Native (14% uninsured), Asian (5%), multiracial (6%), and Hispanic or Latino (8%). (Note that for this indicator races include Hispanic).

- Among Bremerton community members, about one in fifteen (7%) were uninsured — the highest percentage of any Kitsap region. When compared to the reference group of Bainbridge Island with about 2% uninsured, this difference was statistically significant.

In the U.S., the American Indian or Alaska Native population has the highest uninsured rate compared to other racial and ethnic populations. This may be due in part to the fact that individuals who receive their care through the Indian Health Service (IHS) but do not have any health insurance are categorized as uninsured by the Census.

Additionally, health insurance alone cannot remove every barrier to care. For example, a 2022 Pew Research Center report found less access to quality medical care as the top factor Black Americans see contributing to generally worse health outcomes for Black people in the U.S. When asked about their own health care experiences, most Black Americans had positive assessments of the quality of care they’ve received most recently. However, a majority (56%) say they’ve had at least one negative experience, including having to speak up to get proper care and being treated with less respect than other patients.

**Dental insurance coverage**

While the number of Kitsap residents without medical health insurance has declined since the launch of the ACA, dental benefits are offered primarily as separate products and generally not as part of a medical plan. Additionally, traditional Medicare does not cover routine dental care, and many dental providers do not accept Medicaid (Apple Health).

Regular preventative dental care is essential to a person’s general health and wellbeing and dental insurance coverage can be help increase access to dental care. Among KCR survey participants, lack of dental insurance was reported as the primary barrier to getting needed dental care (40% or 340 participants) followed closely by not being able to afford co-pays or deductibles (36% or 307 participants, Figure 7).
Medicaid (Apple Health) coverage

During the COVID-19 public health emergency, federal requirements paused the process of determining eligibility in order to keep Medicaid clients enrolled during the pandemic. This extension has now ended and, for the first time in over three years, Kitsap Apple Health clients (around one-third of whom are minors under age 18) need to take action to maintain their health insurance coverage.16

Washington has until April 2024 to review the eligibility for all 2.3 million Medicaid clients. It’s the largest benefit renewal process the state has ever attempted and may lead to Medicaid-eligible enrollees losing coverage. A July 2023 analysis in Bloomberg Law estimated that around 2.9 million Medicaid beneficiaries nationwide had been disenrolled from their policies as of July 18.17 The Kaiser Family Foundation (KFF) further estimated that 74% of Medicaid beneficiaries who lost coverage were disenrolled due to procedural reasons like missing renewal forms, failure to locate a beneficiary’s current address, and glitches from state automatic enrollment systems18. KFF estimates that around 413,000 Washington residents will lose Medicaid in 2023. In addition to this challenge, Washington State Health Care Authority has recently warned the public about scams targeting Apple Health clients, where individuals posing as Medicaid authorities attempt to trick victims into paying money or gift cards to renew their health insurance.19

In 2021, about one in five people were enrolled in Medicaid in Kitsap County (19% or 52,175 people, Figure 8). From 2015 to 2021, there has been a statistically significant decreasing trend in enrollment, and in 2021, Kitsap’s percentage

**Figure 6.** Survey results on dental care obstacles

**Data source:** Kitsap Community Resources (KCR) Community Survey, 2022

**Note:** This question allowed more than one response; percentages will add to more than 100%.
of residents enrolled in Medicaid was lower than the state. In 2020 (the most recent year disaggregated data from the HCA is available), about one in three Kitsap community members 0 to 18 years old were enrolled in Medicaid (35%) and about one in three Bremerton community members (all ages) were enrolled in Medicaid (32%) – the highest percentage of any age group and region in Kitsap, respectively.

Using Medicaid claims data submitted by providers for reimbursement purposes can also provide insight into healthcare usage by this population. Refer to the section on Accessibility of Healthcare below for more information.

**Figure 7. Population enrolled in Medicaid**

*Data source: Health Care Authority (HCA) Medicaid Enrollment and Claims Data*

**Unmet healthcare needs due to cost**

Health insurance alone does not guarantee access to care. Among participants in the KCR survey, more than half (58% or 1,916 participants) were very (17%) or somewhat (41%) worried about paying medical bills if they got sick or injured. While appointment wait times were reported as the primary barrier to getting needed medical care among survey participants (44% or 476 participants), not being able to afford co-pays or deductibles was the second most-cited barrier (29% or 316 participants).

About one in seven participants (14% or 451 participants) also reported there was a time in the last year when they needed prescription medicine but were not able to get it; not being able to afford the co-pay or deductible was the primary barrier to getting needed prescription medicine (44% or 198 participants) followed closely by it not being covered by insurance (35% or 161 participants).

Additionally, in 2020 and 2021, an estimated 6.5% of adults in Kitsap County reported that there was a time in the past year when they needed to see a doctor but could not because of cost (Figure 9). Encouragingly, there has been a statistically significant decreasing trend in the percentage of adults reporting an unmet healthcare need due to cost since at least 2012 in Kitsap. Despite this improving trend, disparities persist among Kitsap community members, for example:

- An estimated 12% of younger adults (ages 18 to 44) reported there was a time in the past year when they
needed to see a doctor but could not because of cost, higher than adults ages 65 and older (3%). The percentages for all other adult age groups were statistically significantly higher than those age 65 and older.

- Among Bremerton community members, an estimated 12% reported there was a time in the past year when they needed to see a doctor but could not because of cost—the highest percentage of any Kitsap region. When compared to the reference group of Bainbridge Island (with about 6% of community members reporting an unmet need due to cost), this difference was statistically significant.

- Among those with an income less than $25,000, an estimated 22% reported there was a time in the past year when they needed to see a doctor but could not because of cost—the highest percentage of any income group. Not surprisingly, the lowest percentage was among participants with an annual income greater than $100,000 (4%). When compared to this reference group (annual income greater than $100,000), the difference was statistically significant among all income groups less than $75,000.

Figure 8. Adults reporting delayed medical care due to cost

Data source: Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)
ACCESSIBILITY OF HEALTHCARE

“A really strong and well-functioning primary health care system is fundamental to a healthy public and it’s a good investment.”

— Organizational leader

Wellness and prevention (Medicaid)

Although data was not available for preventative care visits for all types of health insurance coverage, Medicaid claims provide results that can help inform quality improvement efforts within our healthcare system as well as highlight opportunities to support people enrolled in Medicaid with accessing care. For example, annual well-care visits during adolescence promote healthy behaviors, prevent harmful ones, and detect conditions that can interfere with a teen’s physical, social, and emotional development.

For Kitsap children and adolescents (3 to 21 years old) enrolled in Medicaid, 43% received at least one well-care visit in 2021 (Figure 10). This was similar to Washington’s data. From 2017 to 2021, no trend had been detected in Kitsap. However, differences were identified among age groups:

- Among 18- to 21-year-olds, about one in six (17%) received at least one comprehensive well-care visit in 2021, the lowest percentage of any age group.
- Among 12- to 17-year-olds, 45% received at least one visit. When compared to the reference group of 3- to 11-year-olds (with more than 50% having received at least one visit), the difference was statistically significant.

![Figure 9. Child and adolescent well-care visits (Medicaid)](image)

Data source: Health Care Authority (HCA) Medicaid Enrollment and Claims Data

Among Kitsap adults (20 and older) enrolled in Medicaid, about three in four (73%) received an ambulatory or preventative care visit in 2021 (Figure 11). These visits — which include outpatient and telehealth visits — are opportunities for individuals to address acute issues, manage chronic conditions, and receive preventative services and
counseling on topics such as diet and exercise.

From 2017 to 2021, no trend had been detected in Kitsap. However, differences were identified among subgroups:

- Among males, 65% received at least one ambulatory or preventative care visit in 2021. When compared to the reference group of females (with 80% having at least one visit), this difference was statistically significant.
- Among 20- to 44-year-olds, 71% received at least one ambulatory or preventative care visit in 2021. When compared to the reference group of 45- to 64-year-olds (with 78% having had at least one visit), this difference was statistically significant.

Figure 10. Adult access to preventative ambulatory health services (Medicaid)

Data source: Health Care Authority (HCA) Medicaid Enrollment and Claims Data

In 2016, the U.S. Preventive Services Task Force (USPSTF) recommended that women between the ages of 50 and 74 receive a mammography screening once every two years. Early detection via mammography screening and subsequent treatment can reduce breast cancer mortality for women in this age range.

Among Kitsap female Medicaid beneficiaries 50 to 74 years old, one in two (50%) had a breast cancer screening during the most recent measurement period, which was higher than Washington and a statistically significant difference (Figure 12). From 2017 to 2021, no trend was detected in the percentage of Kitsap Medicaid beneficiaries receiving these screenings.

As data were unavailable on access to mammography screening among different groups, further exploration is needed. For example, in the U.S. overall, non-Hispanic Black women have the highest breast cancer death rates — which may be connected to barriers in accessing breast cancer screening services. Data identifying which populations may be most impacted in Kitsap would help this organization better understand the community’s needs.
Health system performance (Medicaid)

Unnecessary visits to a hospital emergency department (ED) may indicate lack of access to more appropriate sources of medical care, such as a primary care provider or specialist. Excessive visits to the ED can result in overcrowding and increased ED wait times. Understanding the rate of ED visits, which include those related to mental health and substance use disorders, among people enrolled in Medicaid can help communities identify strategies to improve access to and use of appropriate sources of care.

In 2021, there were 51 all-cause ED visits per 1,000 member months in Kitsap compared to 40 per 1,000 member months in Washington (a lower score is better).

Telemedicine use among adults, United States

The demonstrated benefits of telemedicine -- a healthcare visit hosted primarily online -- include improved access to care, convenience, and slowing spread of infection. During the COVID-19 pandemic, legislation expanded coverage for telemedicine healthcare services.

Further exploration of local-level data for telemedicine services is needed to better understand the Kitsap community’s access to and experiences with these services. The CDC reported the following data for the U.S. overall (Figure 12):

- As of 2021, 37.0% of adults used telemedicine in the past 12 months.
- Telemedicine use increased with age and was higher among women (42.0%) compared with men (31.7%).
- Non-Hispanic White (39.2%) and non-Hispanic American Indian or Alaska Native (40.6%) adults were more likely to use telemedicine compared with Hispanic (32.8%), non-Hispanic Black (33.1%), and non-Hispanic Asian (33.0%) adults.
- The percentage of adults who used telemedicine increased with education level and varied by family income.
The percentage of adults who used telemedicine varied by region and decreased among adults in more rural regions.

**U.S. Adults Who Used Telemedicine in the Past 12 Months**

- Total: 37%
- Men: 32%
- Women: 42%
- Ages 18-29: 29%
- Ages 30-44: 35%
- Ages 45-64: 39%
- Ages 65 and older: 43%

**Figure 12.** Percentage of U.S. adults 18 and older who have used telemedicine in the past 12 months

**Data Source:** Centers for Disease Control and Prevention (CDC), National Health Interview Survey (NHIS)

Community members and organizational leaders named access to healthcare an ongoing challenge for our community during the 2022 KCR Focus Group Discussions and 2022 Virginia Mason Franciscan Health (VMFH) Key Informant Interviews.

There was significant worry among participants about the capacity of the St. Michael Medical Center Emergency Department, its impact on emergency medical services' ability to promptly transfer care, and the lack of accessible and available urgent care facilities.

Participants referred to recent news coverage about the emergency department, including several community members who said they were concerned about long wait times and would prefer to seek care outside of Kitsap County.

“...the loss of trust in our county’s healthcare system is something that can’t go without being mentioned. The fact that the average person on the street is afraid to go to the emergency room is a big issue.”

— Organizational leader
In both the KCR focus group discussions and community survey, community members reported experiencing barriers to accessing healthcare. Appointment wait times were reported as the primary barrier to accessing needed medical care and mental health counseling by survey participants. Additionally, participants in nine of 10 focus groups referenced many barriers to seeking and receiving healthcare, including months-long wait times for primary care and mental health visits, a lack of Medicaid providers, fear of medical bills, and previous experiences with inadequate interpreter services.

“I mean, some places just don’t even have a wait list. The wait list is so long that they close the wait list. And that’s for mental health, therapy, everything.”
— Community member

“I can’t even find service here for my kids. I can’t find doctors that will bring them in... My kids are on state, they’re on Apple Care, and nobody takes it.”
— Community member
COMMUNITY ASSETS

There are many community members and organizations working to improve healthcare access in Kitsap County: connects Medicaid-eligible children to preventive and restorative dental care.

The Affordable Connectivity Program (ACP) and Lifeline are federal government programs that help eligible households pay for internet services and internet connected devices, increasing telemedicine opportunities for community members. Households may be eligible to receive both the ACP and Lifeline programs combined with other state and local benefits where available.

The ArrayRX Discount Card Program provides discounts on prescription medications to Washington residents who do not have prescription drug insurance coverage or have limited coverage.

Kaiser Permanente provides assistance to its members in Washington with exploring their insurance options, including Medicaid, Medicare, and other plans via their website or specific call centers.

Kitsap County Housing and Homeless Coalition coordinates the annual Project Connect event that provides residents with limited resources with referrals, medical exams, immunizations, and other services.

Kitsap Transit Access Program provides transportation for seniors and people with disabilities who are unable to use the regularly routed buses.

Lindquist Dental Clinic for Children (LDCC) provides accessible, compassionate dental care to Puget Sound children in need. Their closest clinic is in Tacoma.

The Marvin Williams Center offers various health programs and events, including blood pressure monitoring events, nutrition classes, and health fairs.

Northwest Washington Family Medicine Residency operates the Virginia Mason Franciscan Health (VMFH) Family Medicine Clinic, training residents in family medicine to help ease the workforce shortage in the area.

Olympic Community of Health (OCH) is an Accountable Community of Health that brings together partners from many different backgrounds, sectors, communities, and tribes to build bridges between the community and clinical workforce and create a more person-centered approach to health.

Organizations such as Gather Together Grow Together, Island Volunteer Caregivers, and Catholic Community Services provide transportation assistance including to medical appointments. The Kathleen Sutton Fund provides transportation reimbursement for women traveling to cancer treatment.

Peninsula Community Health Services is a federally qualified health clinic offering integrated physical, behavioral and oral health care throughout the county. They have mobile clinics and host health events like back-to-school fairs. They also can help individuals with signing up for health insurance and house the local unit of the Statewide Health Insurance Benefits Advisors program.

Project Access Northwest helps low-income patients connect with primary health care and specialty providers to improve health outcomes and reduce inappropriate emergency room use. Project Access also provides premium
assistance for individuals on the health exchange. Virginia Mason Franciscan Health’s Financial Assistance Policy provides financial relief to patients who qualify based on a comparison of their financial resources and/or income to Federal Poverty Guidelines. The program is designed specifically for emergent, urgent, and/or medically necessary care for patients whose household financial resources and income are at or below 400% of the Federal Poverty Level. This program is applicable to all VMFH sites of care, including St. Michael Medical Center, all VMFH clinics, and The Doctors Clinics locations.
ENDNOTES


10 Information on what criteria are used to make the primary/specialist care designation is not available in the data source.


16 Health Care Authority (HCA) Medicaid Enrollment and Claims Data. Accessed at: https://hca-tableau.watech.wa.gov/t/51/views/MedicaidExplorer/MedicaidExplorer?%3AisGuestRedirectFromVizportal=y&%3Aembed=y


20 At the time of writing this report, the USPSTF had published an updated draft recommendation for biennial screening mammography for women ages 40 to 74 years (https://www.uspreventiveservicestaskforce.org/uspstf/draft-recommendation/breast-cancer-screening-adults#fullrecommendationstart, May 2023).


DATA SOURCES

- Kaiser Family Foundation, State Health Facts, Hospital Beds per 1,000 Population by Ownership Type, accessed at https://www.kff.org/47a2f1f


- Kitsap Community Resources (KCR) Community Survey, 2022. To explore the data further, please visit: https://ow.ly/tbvZ50Naanp


- U.S. Census Bureau, American Community Survey (ACS), accessed at https://data.census.gov


- Washington State Department of Health, Center for Health Statistics, Behavioral Risk Factor Surveillance System (BRFSS), analyzed by Kitsap Public Health District, Assessment & Epidemiology Program

- Health Care Authority (HCA) Medicaid Enrollment and Claims Data, Medicaid Maternal and Child Health Measures Dashboard, accessed at https://hca-tableau.watech.wa.gov/t/51/views/MaternalandChildHealth/Dashboard?%3AisGuestRedirectFromVizportal=y&%3Aembed=y%2C


- Centers for Disease Control and Prevention (CDC), National Health Interview Survey (NHIS), 2021, accessed at https://www.cdc.gov/nchs/nhis/data-questionnaires-documentation.htm

- Washington State Population Interim Estimates (PIE), December 2022
The health and well-being of our mothers and infants is vital to creating a healthy community in Kitsap. A mother’s mental, physical, emotional, and socioeconomic well-being can affect pregnancy and birth outcomes as well as the health of their children into adulthood and subsequent generations. Protecting and promoting positive behaviors, such as adequate prenatal care and breastfeeding, can directly impact the health of our community into the next generation.

**TOPIC OVERVIEW**

While Kitsap County performs better than other parts of Washington State on many maternal and child health indicators, indicators for premature birth, low birth weight, and infant mortality have shown little or no improvement since at least 2000 in Kitsap.

Other indicators are getting worse, such as the percentage of births where gestational diabetes or gestational hypertension were diagnosed and the percentage of births with adequate prenatal care.

“Maternal and child health is an important public health issue because we have the opportunity to end preventable deaths among all women, children and adolescents and to greatly improve their health and well-being ...Investments in prevention, health care and education last a lifetime.”

American Public Health Association

Disparities in birth outcomes are observable across almost all indicators, particularly for Bremerton residents compared to Bainbridge residents, and among Black and African American, and Hispanic and Latino populations, compared to white residents.

In Kitsap County, the indicators that have statistically significantly improved over time are residents smoking during pregnancy and the percentage of births that are to residents younger than 18, which have both been steadily decreasing since at least 2000. These indicators can be viewed at kitsappublichealth.org/data.

The overall health of our population who are of childbearing age (approximately 15 to 44 years old), including mental health, generational context, and socioeconomic factors, is especially important in maternal and child health. Other chapters discuss factors such as food insecurity, economic insecurity, general healthcare access, mental health.

**Note:** We use “mothers” in this report to reflect the terminology used on birth certificates, from which much of our data is drawn. We recognize that not everyone who is pregnant or gives birth identifies as a mother.
KEY FINDINGS

Three main priority areas were identified from available public health data; these were selected based on changes over time for Kitsap residents, differences between Kitsap and Washington, and Kitsap resident input:

Available of OB/GYN care

Kitsap has 47% fewer OB/GYN providers (obstetricians and gynecologists) per 100,000 residents than Washington as a whole.

Prenatal care access

From 2018 to 2019, there was a decrease in the proportion of Kitsap residents who had adequate prenatal care during pregnancy. The rate did not improve from 2019 to 2021.

About half (52%) of Kitsap residents who gave birth in 2021 received adequate prenatal care based on the Adequacy of Prenatal Care Utilization Scale. This was lower than the statewide percentage (70%).

Lactation support

In a 2022 community survey, more than half of respondents (54%) who were pregnant or had recently been pregnant said there was a time in the last two years when they needed lactation (breastfeeding or chestfeeding) support and could not get it.

Reasons cited for not being able to access support included:

- 44% Not being able to afford a copay or deductible
- 31% A provider not taking their insurance
- 24% Not having any way to get services
- 23% Not being able to find services

KEY DISPARITIES

While the findings from this report provide evidence of disparities in Kitsap County across multiple indicators, the following were identified as the most significant and are not a complete list of all disparities:

Disparities in adequate prenatal care

- From 2019 to 2021, less than half (47%) of Bremerton residents giving birth received adequate prenatal care compared with almost two-thirds (65%) of Bainbridge Island residents giving birth. Although Bainbridge had the highest reported rate of adequate prenatal care in Kitsap, its rate was lower than the statewide rate (70%).

Disparities in gestational hypertension

- In 2021, more than one in ten (12%) of people who gave birth in Kitsap were diagnosed with gestational hypertension at some point during their pregnancy.

- From 2017 to 2021, the rate of gestational hypertension was higher in those who identified as Native Hawaiian or Pacific Islander (18%), multiracial (12%) and white or Caucasian (11%) compared with those who identify as Asian (8%). The highest rates geographically were seen in Bremerton (13%), Central Kitsap (12%) and South Kitsap (10%) compared with 7% on Bainbridge Island.

Disparities in adverse birth outcomes

- From 2017 to 2021, Black and African American people giving birth had higher rates of premature birth (11% compared to 7% for white mothers) and babies born at low birth weight (9% compared to 4% for white). From 2012 to 2021, infant mortality for Black and African American people giving birth was higher (10 per 1,000 compared to 4 per 1,000 babies born to white mothers).

- From 2017 to 2021, Hispanic and Latino people giving birth had higher rates of premature birth (10% compared to 7% for White people giving birth) and babies born at low birth weight (6% compared to 4% for White).

- Bremerton people giving birth had a higher rate of premature birth from 2017 to 2021 (9% compared to 5% for Bainbridge Island).

Disparities in preschool enrollment

- From 2016 to 2020, the lowest percentage preschool enrollment for children aged 3 to 4 was among Bremerton children (38% enrollment), while Bainbridge Island children had the highest percentage (70% enrollment).
Background & Demographics

Kitsap had a smaller proportion of the population who are females of childbearing age, between the ages of 15 and 44, (15%) in comparison to the state overall (20%) in 2020. This accounts for just over 40,000 residents in Kitsap. Despite this, Kitsap’s rate of pregnancies was higher (83.2 per 1,000 women aged 15 to 44) than Washington’s rate (66.6 per 1,000 women aged 15 to 44). In this context, pregnancy includes all live births, fetal deaths of 20 weeks or more of pregnancy, and induced abortions.

Live births

In 2021, there were 2,735 live births to Kitsap residents. The birth rate is calculated as the total live births divided by the entire male and female population of all ages. This is an indication of the natural growth of the population. Population growth that occurs is natural growth plus migration into the county, minus deaths and migration out of the county.

Kitsap's birth rate, about 10 per 1,000 residents (Figure 1), has been decreasing since 2016 and was lower than Washington state’s rate in 2021 (11 per 1,000). The average age of Kitsap residents who gave birth in 2021 was 29.7 years, the median age was 30, and ages ranged from 14 years to 48 years old. For first-time births, the average age of the mother was 27.8 years, the median was 28, and it ranged from 14 to 47.

Figure 1. Birth rate per 1,000 residents

Data source: Washington State Department of Health, Birth Certificate Data
PREGNANCY & BIRTH

### Location of birth

<table>
<thead>
<tr>
<th>Location of birth</th>
<th>2021</th>
<th>2020</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitsap</td>
<td>77%</td>
<td>76%</td>
<td>77%</td>
<td>78%</td>
<td>80%</td>
</tr>
<tr>
<td>Pierce</td>
<td>17%</td>
<td>18%</td>
<td>17%</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>King</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>&lt;1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Figure 2. Kitsap resident births by year and location of birth*

**Data Source:** Washington State Department of Health, Birth Certificate Data

In 2021, 77% of births to mothers living in Kitsap occurred in Kitsap County, another 17% occurred in Pierce County and 6% occurred in King County. (Figure 2)

### Figure 3. Pregnancies and births by subgroup, 2021

**Data source:** Washington State Department of Health, Birth Certificate Data

**Note:** Geographic region is based on ZIP code rollup.
**Births to people younger than 18**

The percentage of births that were to people younger than 18 was only 0.6% in 2021 and had decreased since at least 2000. However, the percentage of Kitsap births to people younger than 18 is slightly higher in people who identify as Hispanic or Latino and multiracial, and slightly higher among people who live in Bremerton.

Nationally, the links between teen childbearing, family planning and socioeconomic characteristics can be attributed largely to inequities in access to family planning services and information; differences in attitudes about contraception, teen pregnancy, and teen childbearing; and distrust of medical professionals due to experiences with providers and historical mistreatment by the medical field.²

**Availability of OB/GYN providers**

In 2021, the estimated number of OB/GYNs in Kitsap County was 23, which means Kitsap (8 providers per 100,000 residents, Figure 4) has almost 47% fewer OB/GYN providers compared to Washington state overall (15 per 100,000 residents). While the OB/GYN rate has increased in Washington state (from 13 per 100,000 population in 2020 to 15 in 2021), the rate in Kitsap has declined (from 9 per 100,000 population in 2020 to 8 in 2021).³

Kitsap residents may access obstetrical care from midwives, the Northwest Washington Family Medicine Residency, and other family practice providers in Kitsap. However, for complicated pregnancies and births, obstetricians are essential. The OB/GYN workforce shortage is part of an overall need for increased access to healthcare in Kitsap. For more information on healthcare access, see the Healthcare Access chapter of this report.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Kitsap</th>
<th>Washington</th>
<th>Kitsap Compared to WA</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care providers per 100,000 population</td>
<td>63</td>
<td>90</td>
<td>30% fewer</td>
<td>Office of Financial Management (OFM), 2021</td>
</tr>
<tr>
<td>Physician assistants per 100,000 population</td>
<td>33</td>
<td>46</td>
<td>28% fewer</td>
<td>OFM, 2021</td>
</tr>
<tr>
<td>OB/GYNs per 100,000 population</td>
<td>8</td>
<td>15</td>
<td>47% fewer</td>
<td>OFM, 2021</td>
</tr>
<tr>
<td>Mental health care providers per 100,000 population</td>
<td>396</td>
<td>436</td>
<td>9% fewer</td>
<td>NPI Registry via County Health Rankings, 2021</td>
</tr>
<tr>
<td>Dentists per 100,000 population</td>
<td>80</td>
<td>84</td>
<td>5% fewer</td>
<td>Area Health Resource File/NPI Registry via County Health Rankings, 2020</td>
</tr>
<tr>
<td>Staffed inpatient hospital beds per 1,000 population</td>
<td>1.01</td>
<td>1.58</td>
<td>36% fewer</td>
<td>HealthData.gov, 2022; AHA/KFF, 2020</td>
</tr>
</tbody>
</table>

*Figure 4. Healthcare workforce*
Importantly, OB/GYN counts exclude providers who only work at federal facilities. Federal providers have historically provided care for people giving birth in Kitsap.

However, births at Naval Hospital Bremerton have experienced a steady decline since the middle of the last decade (Figure 5). For example, in 2014, NHB converted its emergency room to an urgent care facility with limited hours due to having less than two percent of actual life, limb and/or eyesight threatening emergencies, and on April 29, 2022, indefinitely diverted its labor and delivery unit citing staffing concerns as well as facing minimal case complexity to retain critical competency skills.

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Births at Naval Hospital Bremerton</em></td>
<td>700</td>
<td>683</td>
<td>530</td>
<td>490</td>
<td>503</td>
<td>396</td>
<td>195</td>
<td>62</td>
</tr>
</tbody>
</table>

*Figure 5. Births at Naval Hospital Bremerton by year*

*Data source: Naval Hospital Bremerton*
PREGNANCY & BIRTH

PREGNANCY IN KITSAP

For people who are pregnant, the ability to access quality healthcare specific to the individual’s circumstances in a comprehensive manner is one of the best opportunities to influence birth outcomes. Nationally, babies born to mothers who do not get prenatal care are three times more likely to have a low birth weight and five times more likely to die than those born to mothers who do get care. 5

Prenatal care access

In Kitsap, there has been a decreasing trend since 2013 in pregnant people accessing prenatal care in the first trimester. In 2021, two-thirds of Kitsap residents who were pregnant (67%) were able to see their prenatal care provider during their first trimester of pregnancy (Figure 6). This rate has been decreasing since 2013 and is lower than Washington overall, where about three-fourths (75%) access care during the first trimester.

![Figure 6. Prenatal care in the first trimester](image)

**Data source:** Washington State Department of Health, Birth Certificate Data

Those who identify as Hispanic or Latino (59%) and those who live in Bremerton (62%) have the lowest rates of first trimester prenatal care access in Kitsap. For those on Medicaid, the percentage is better: About 88% of all live birth deliveries received a prenatal care visit in the first trimester, similar to Washington (89%). 6

In addition, from 2018 to 2019, Kitsap residents had a decrease in the percentage of people who gave birth who had adequate prenatal care for their pregnancies (from 62% to 51%, Figure 7). This trend continued through 2021. The Adequacy of Prenatal Care Utilization scale defines adequate prenatal care as accessing care before the fourth month of pregnancy and receiving at least 80% of recommended healthcare visits. More than half (52%) of people who gave birth received adequate prenatal care in 2021, which is statistically significantly lower than Washington state (70%).

Bainbridge Island residents had the highest percentage of those who received adequate prenatal care (65%) in Kitsap, but their percentage was still not as high as the state’s average (Figure 8). Bremerton residents had the lowest rate of adequate prenatal care (47%).
In addition to the availability of providers, other barriers to accessing reproductive care identified in the 2022 KCR community survey include transportation, insurance coverage, and financial concerns. Less than 10 respondents (1%) said they did not receive any prenatal care. 15% of respondents (39 people) said they did not receive prenatal care as early as they wanted. The reason reported by the highest number of respondents was that they didn’t have transportation (23%), followed by not being eligible (18%), not being able to afford fees or co-pays (16%), not having services available in their area (14%), and not wanting to ask for help (13%).

Notes: *The estimate has an elevated relative standard error (RSE) greater than 25% and does not meet KPHD reliability standards. Geographic region is based on school district.
About one in ten (9%) community survey respondents said there was a time in the past year when they needed reproductive, pregnancy or post-partum care but could not get it. The reasons voiced by the most respondents were the provider not taking their insurance (30%), not being able to afford the co-pay or deductible (29%) and not having any way to get to the doctor (29%). For more information about barriers to accessing health care, see the Health Access chapter. For more information about socioeconomic barriers, see the Demographics and Social Determinants of Health chapter.

Complications during pregnancy

Complications can be experienced in any pregnancy, which can involve the mother’s health, the fetus’s health, or both. In addition to contributing to adverse birth outcomes and impacting the long-term health of the mother, complications during pregnancy add workload on the OB/GYN providers and increase the need for early and adequate prenatal care. Health conditions that can complicate pregnancy include gestational hypertension (high blood pressure during pregnancy) and gestational diabetes, which affect about 12% and 10% respectively of people who give birth in Kitsap.

The percentage of people who gave birth in 2021 who experienced gestational hypertension in Kitsap (12%) was higher than in Washington (10%, Figure 9). In Kitsap, the rate was higher in those who identify as Native Hawaiian or Pacific Islander (18%), multiracial (12%) and white or Caucasian (11%) compared to those who identify as Asian (8%). The highest rates geographically were seen in Bremerton (13%), Central Kitsap (12%) and South Kitsap (10%) compared to 7% on Bainbridge Island. Rates of gestational hypertension were also higher in first-time pregnancies (18%) compared with those who had previously been pregnant (10%).

![Figure 9. Gestational hypertension](image)

*Data source: Washington State Department of Health, Birth Certificate Data*
For gestational diabetes, there has been a steadily increasing trend in Kitsap from 2000 to 2021 (Figure 10). In 2021, Kitsap’s rate (10%) was lower than Washington’s rate (12%). Unlike gestational hypertension, mothers who identify as Asian have an increased rate (17%) compared to most other races and ethnicities. There was little difference between geographic regions, with Bainbridge Island having a slightly lower (but not statistically significantly lower) rate (6%) compared to the other geographic regions, which range from 8% to 9%. There was also little difference by prior pregnancy status, with about 9% of first-time pregnancies and 10% of those who had previously been diagnosed with gestational diabetes.

**Figure 10. Gestational diabetes**

*Data source: Washington State Department of Health, Birth Certificate Data*

### Substance use during pregnancy

Substance use prevention during pregnancy is influential in the health outcomes of the mother and baby. This report focuses on marijuana and tobacco use in Kitsap. Further investigation into these substances, as well as other substances affecting health outcomes of Kitsap mothers, would help to better define the magnitude of the concern in Kitsap.

According to anecdotal reports from KPHD’s Parent Child Health Program, marijuana use is on the rise among people who are pregnant in Kitsap. A growing number of people who are pregnant nationally view it as a safe, natural way to treat nausea and vomiting associated with morning sickness. However, marijuana use during pregnancy can be harmful to a baby’s health and cause negative health effects, such as stillbirth, preterm birth, and development issues. In 2018, the American Academy of Pediatrics released its first official guidelines on marijuana use during pregnancy.7

A 2016 survey by KPHD administered in civilian prenatal care clinics in Kitsap found about 10% of respondents used marijuana in the past 30 days during their pregnancy, the same percentage as reported smoking in the past 30 days. In this study, younger women 18 to 23 years old reported use more than women older than 23. Only 46% of women reported their healthcare provider had talked with them about marijuana use during pregnancy; the percentage was higher for women who had told their provider they were using marijuana.
All providers said they asked about marijuana use and counseled patients to quit using if they were using it, but only 13% of providers reported having educational materials to hand out to patients on marijuana use. Investigation into the use of marijuana and other substances in Kitsap would help to better highlight the need for additional resources.

Smoking tobacco has also been shown to increase the risk of negative health outcomes, such as preterm birth and low birth weight. From 2000 to 2021, there was a large decrease in Kitsap residents smoking cigarettes during pregnancy. This trend was similar to Washington overall. Despite this trend, there were still an estimated 147 mothers who smoked during pregnancy in 2021 (5.4% of mothers). Large disparities in smoking rates exist between American Indian and Alaskan Native mothers (17%), multiracial mothers (13%), Native Hawaiian and Pacific Islander mothers (11%) and white mothers (9%) compared to Hispanic and Latino mothers (5%). Residents of Bremerton (11%) and South Kitsap (10%) have the highest rates of smoking while pregnant. (Figure 11)

![Figure 11. Smoking during pregnancy by subgroup](image)

**Data source:** Washington State Department of Health, Birth Certificate Data

**Notes:** *The estimate has an elevated relative standard error (RSE) greater than 25% and does not meet KPHD reliability standards. Geographic region is based on school district.*
BIRTHS IN KITSAP

More than three million healthy babies are born annually in the U.S. Although most Kitsap pregnancies result in uncomplicated deliveries, there can be complications with the birth leading to adverse birth outcomes.

The age, genetics, medical health, socioeconomic status, behaviors, access to healthcare, health of the pregnancy and environmental exposures of the parents all contribute to the health of the mother and child during pregnancy, birth, and throughout their lives. Our understanding of this cycle has increased greatly, but is still not completely understood, and, when adverse outcomes occur, they most likely involve multiple factors occurring at the same time in several areas of a woman’s life. See the chapter on Demographics and Social Determinants of Health for more information about socioeconomic factors affecting a person’s health.

Adverse birth outcomes, including both premature birth (less than 37 weeks of pregnancy) and low birth weight (less than 2,500 grams or 5.5 pounds) can lead to higher rates of illness and infection in newborns, long-term neurological and health problems and infant mortality. Because pregnancies involving twins or higher multiples are at a much higher risk of these complications, for the purposes of this report we only investigated premature birth and low birth weight among singleton births (pregnancies with only one fetus). This group accounted for 96.7% of all births in Kitsap in 2021.

Premature birth (<37 weeks)

In Kitsap, about 8% of singleton babies were born prematurely. The rate varied slightly from year to year with no statistically significant change since 2000. There has been an increase in premature birth in Washington in 2020 and 2021, with no increase in premature birth in Kitsap. Kitsap’s rate in 2021 (8%) is statistically significantly lower than Washington’s rate overall (10%). Among Kitsap births, Black and African American residents (11%), Native Hawaiian and Pacific Islander residents (12%), and Hispanic and Latino residents (10%) experienced higher rates of premature birth compared to white residents (7%). Residents of Bremerton have a higher rate of premature birth (9%) compared to those who live on Bainbridge Island (5%). (Figure 12)

<table>
<thead>
<tr>
<th>Age of Mother</th>
<th>10-17</th>
<th>18-34</th>
<th>35-49</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td>14.3%</td>
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Race/Ethnicity of Mother (Races exclude Hispanic)

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
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<th>Asian</th>
<th>Black or African American</th>
<th>Native Hawaiian or Pacific Islander</th>
<th>White</th>
<th>Multiracial</th>
<th>Hispanic or Latino</th>
<th>Total</th>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12.2%</td>
</tr>
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<tr>
<th>Geographic Region</th>
<th>Bainbridge Island</th>
<th>Bremerton</th>
<th>Central Kitsap</th>
<th>North Kitsap</th>
<th>South Kitsap</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.3%</td>
<td>8.6%</td>
<td>7.9%</td>
<td>6.5%</td>
<td>7.6%</td>
<td>7.1%</td>
</tr>
</tbody>
</table>

Legend

- Reference Group
- Not Statistically Significant
- Statistically Significant

Data source: Washington State Department of Health, Birth Certificate Data
Notes: *The estimate has an elevated relative standard error (RSE) greater than 25% and does not meet KPHD reliability standards. Geographic region is based on school district.

Low birth weight (<2,500 grams or 5.5 pounds)
In 2021, the percentage of singleton babies born less than 2,500 grams in Kitsap was 6%. This rate has not changed significantly since 2000 and is about the same as Washington overall (5.6%). It’s important to note that Washington has had a statistically significantly increasing trend in babies born with low birth weight from 2012 to 2021. Although Kitsap’s trend appears similar, Kitsap has not seen a statistically significant trend. Certain groups within Kitsap have much higher percentages of babies born at low birth weight (Figure 13), including Black or African American (9%), multiracial (7%), Asian (6%), Hispanic or Latino (6%), compared to white (4%).

<table>
<thead>
<tr>
<th>Age of Mother</th>
<th>%</th>
<th>*</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-17</td>
<td>4.7%</td>
<td></td>
</tr>
<tr>
<td>18-34</td>
<td>*</td>
<td></td>
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<tr>
<td>35-49</td>
<td>*</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity of Mother (Races exclude Hispanic)</th>
<th>%</th>
<th>*</th>
</tr>
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<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td>6.4%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Asian</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td>4.2%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Multiracial</td>
<td>3.5%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>4.1%</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Figure 13. Low birth weight by subgroup

Data Source: Washington State Department of Health, Birth Certificate Data

Notes: *The estimate has an elevated relative standard error (RSE) greater than 25% and does not meet KPHD reliability standards. Geographic region is based on school district.

Infant mortality
In 2021, there were fewer than 10 infant deaths during the first year of life in Kitsap, the lowest number since at least 2000. Overall, since 2000, there has been no increasing or decreasing trend over time, ranging from 10 to 22 deaths annually. Kitsap’s rate in 2021 was based on less than 10 births, and is therefore suppressed, but is similar to the state’s rate of 4.3 per 1,000 live births. Washington had a statistically significant decreasing trend in infant mortality from 2000 to 2021. Kitsap has very small numbers of infant deaths each year and no statistically significant trend is detected. Over the past ten years (2012-2021), Black or African American infants in Kitsap have had a slightly higher, but not statistically significantly higher, mortality rate (10 per 1,000) compared to white infants (4 per 1,000) in Kitsap.
PREGNANCY & BIRTH

From 2011 to 2020, the top four causes of infant death were:

- Perinatal conditions, which include maternal complications, placenta, cord and membrane complications, and short gestation and low birth weight,
- Congenital and chromosomal abnormalities,
- External causes of death (accidents), and
- Sudden Infant Death Syndrome (SIDS).
THE HEALTH OF YOUNG CHILDREN IN KITSAP

The first five years of a child’s life are critical to establishing the strong educational, mental and emotional foundation upon which their future resilience and health will be built. Experiences during these formative years can significantly influence future outcomes for children and families.

Initial well child visits for Medicaid beneficiaries

For infants and toddlers, initial well child visits for Medicaid beneficiaries is the percentage of Medicaid beneficiaries who turned 30 months old during the year and received the recommended number of well-child visits. This means six or more well-child visits during the first 15 months of life and two or more well-child visits from 15 to 30 months of life. Any provision of well-child services is included, regardless of provider type.

In 2021, 63% of Kitsap County Medicaid beneficiaries who turned 30 months old had the recommended number of well-child visits — less than two out of every three. From 2017 to 2021, there was no statistically significant trend in Kitsap and Kitsap’s percentage was similar to Washington’s overall.

Breastfeeding/chestfeeding

Breastfeeding and chestfeeding have health benefits for both babies and their mothers. The American Academy of Pediatrics recommends exclusive breastfeeding for about six months and then continuing breastfeeding while introducing complementary foods until the child is 12 months old or older.

In the 2022 community survey conducted by Kitsap Community Resources, lactation services were seen as a need in Kitsap, with over half (54%, 126 people) of respondents saying there was a time in the last 2 years when they needed lactation and breast- or chestfeeding support and could not get it.

The reasons voiced by the most respondents were not being able to afford a co-pay or deductible (44%), a provider not taking their insurance (31%), not having transport to services (24%), and not being able to find services (23%).

Childcare and preschool

Childcare and preschool are important in the development of children and also essential for the 14 million working parents in the U.S. who rely on childcare.

The number of family childcare providers in Kitsap has been declining over the past decade, while the number of childcare centers has remained relatively stable (Figure 14). There were 138 childcare facilities identified in Kitsap County during 2020, down from 213 in 2007. The total number of slots available for childcare declined 7% from 2009 to 2019, which equates to a loss of 365 slots. At the same time, school age providers have increased to 31 in 2019 and the number of school age slots more than doubled between 2009 and 2019.

Child Care Aware (CCA) of Washington provides referrals to licensed childcare facilities for families seeking care. During 2019, 454 Kitsap families used referral services provided by CCA. Of the 502 children for which care referral was requested, 21% were infants (less than 1 year old), 33% were toddlers (1 and 2-year-olds), 23% were preschoolers (3 and 4-year-olds), and 23% were school age (at least 5 years old).
Almost two in three children between the ages of 3 and 4 in Kitsap were enrolled in a preschool program in 2019. This percentage (65%) is statistically significantly higher than Washington state’s average (48%). However, there are differences within the county; Bremerton children aged 3 to 4 have the lowest percentage in preschool with only 38%, while Bainbridge children have the highest percentage (70%).

There are four Head Start, ECEAP and Early Head Start providers in Kitsap: Kitsap Community Resources (KCR), Olympic Educational Service District 114, the Port Gamble S’Klallam Tribe, and the Suquamish Tribe. This year, the Kitsap Interagency Coordinating Council (KICC), the coordinating body of the four Head Start providers, is updating its community assessment of children aged 0 to 5 and their parents and caregivers. This update should provide more information about childcare availability in Kitsap.

**Additional health indicators**

There are many more health behaviors and metrics which influence the health of young children and wellbeing of their families. For more information about health behaviors, housing and socioeconomic factors, chronic disease, mental and emotional health, injuries, and substance use, see the appropriate chapters in this report. Information on childhood immunizations can be found in the *Communicable Disease* chapter.
COMMUNITY ASSETS

There are many community members and organizations working to improve the health of our pregnancies and babies:

**Answers Counseling** provides First Steps Maternity Support Services and Infant Case Management. For those with Medicaid/Apple Health, Answers Counseling is the Kitsap provider for free, strength-based Maternity Support Services (MSS) and Infant Case Management services.

**Black Birth Power Initiative** is run by Swedish Medical Center’s doula program seeks to honor Black lives by centering and uplifting the Black birth experience with culturally congruent doula care at their Birth Centers.

**Black Mamas Matter Alliance** is a Black women-led alliance that centers Black mamas and birthing people to advocate, drive research, build power, and shift culture for Black maternal health, rights, and justice.

**Child Care Aware Washington** offers the only statewide childcare resource and referral program in Washington state.

**Cribs for Kids** is part of National Infant Safe Sleep Initiative partners, who have been making an impact on reducing the rate of infant sleep-related deaths due to accidental suffocation, asphyxia or undetermined causes in unsafe sleeping environments.

**Dolly Parton’s Imagination Library** is dedicated to inspiring a love of reading by gifting books free of charge to children from birth through age five once a month.

The **Family Birth Center at St. Michael Medical Center** offers breastfeeding support with their certified lactation consultants and childbirth and parenting classes.

**Head Start and Early Head Start Programs** provide free preschool programs for children ages 0 to 5 from income-eligible families and children with special needs. There are four providers in Kitsap County, including the **Port Gamble S’Klallam Tribe**, the **Suquamish Tribe**, **Olympic Educational Services District**, and **Kitsap Community Resources**.

**Holly Ridge Center** is dedicated to enabling children and adults with differing abilities to reach their fullest potential, creating a positive and lasting impact on the community.

**House of Hope** is a local nonprofit organization that empowers and equips pregnant youth under the age of 25 with classes, support groups, resources, and other services.

**KidVantage**, formerly “Eastside Baby Corner West Sound,” partners with local agencies to bring essentials (like diapers, cribs, and car seats) to local children living in poverty or crisis via their Bremerton hub.

**Kitsap Community Resources** houses the **Women, Infants and Children (WIC)** program, which provides support for pregnant women, nursing moms, and children under five to improve access to healthy foods, receive health education and screening services, increase breast feeding and access other health and social services. They also run the **Parenting**
PREGNANCY & BIRTH

Place, which offers classes and resources that help family members build positive family relationships and create healthy home environments.

Kitsap Immigrant Assistance Center provides direct services to our immigrant neighbors, including rent assistance, translation assistance, medical and dental services, and connecting families with clothing, baby items, pantry staples and more. provides information, resources, training, and support for families caring for children and individuals with disabilities living in the Kitsap County community.

Kitsap Public Health District services include:

- Nurse Family Partnership Program services for people who are pregnant with their first baby. A specially trained nurse visits parents throughout their pregnancy until the babies turn 2, providing education and support.
- Children and Youth with Special Healthcare Needs provides support and a resource referral list for families and providers taking care of a child who has or is at risk to have a physical, developmental, behavioral, or emotional condition.
- Mama Moves Kitsap is a Group Peer Support model that encourages movement, mindfulness and social connection for new parents and is supported by bilingual staff.
- Child Death Review Panel was restarted in 2023 to convene community organizations invested in the health of our children to investigate pediatric deaths and identify potential solutions and best practices to prevent deaths.
- Kitsap County Breastfeeding Coalition protects, promotes, and supports breastfeeding by providing mothers, and their families with the education and resources, that assist them in attaining their breastfeeding goals.

Kitsap Strong is coalition of more than 115 organizations that are collectively working together, grounded in the latest research, to prevent and overcome childhood trauma by building a culture of empathy, equity, and connection.

La Leche League is a volunteer-led, parent-oriented group for families in need of support milk feeding their children. Leaders in the Washington chapter provide support and information to local families from pregnancy through weaning.

The Native American Women’s Dialogue on Infant Mortality (NAWDIM), a Native-led collective whose members are concerned about high rates of infant mortality in their communities.

Naval Base Kitsap provides a free New Parent Support Program helping military parents transition successfully into parenthood.

The Northwest Infant Survival & SIDS Alliance is dedicated to reducing the risk of sudden unexpected infant death and supporting families affected by a fetal or child death.

The Parent-Child Assistance Program is an evidence-based federal research program, housed by Agape Kitsap, helping mothers build and maintain healthy, independent family lives, assure that children are in safe, stable homes and prevent future births of alcohol and drug exposed children. This program is free to help pregnant and parenting mothers get healthy and gain independent family lives, providing home visitation, support and transportation. PCAP helps
participants create personalized goals for success in recovery and walks alongside you during the 3-year journey through the program.

**ParentHelp123.org**, operated by **WithinReach**, helps Washington state families find services in their communities and apply for health insurance, food assistance programs, and more. The website also provides important health information for pregnant women, children and families.

**Parents as Teachers** promotes the optimal early development, learning and health of young children by supporting and engaging their parents and caregivers.

**Peninsula Birth Network** provides pregnancy, birth, postpartum resources in Kitsap and the Peninsula.

**Perinatal Support Washington** provides perinatal mental health resources to families and communities.

**The Period of PURPLE Crying** curriculum helps parents understand this time in their baby’s life and is a promising strategy for reducing the risk of child abuse.

**South Puget Intertribal Planning Agency (SPIPA)'s** Healthy Families Program provides home visitation services to tribal members to improve child and family outcomes for health and development, parenting practices, school readiness, and coordination of referrals to community resources.

**True North Birth Center**, a North Kitsap-based center offering individualized care during pregnancy, birth and beyond.

**YWCA of Kitsap County** is dedicated to ensuring the personal safety, rights, welfare, and dignity of those who experience domestic abuse while building partnerships and increasing community awareness to create positive social change.
ENDNOTES


4 Douglas H Stutz, Public Affairs Officer, Naval Hospital Bremeraton, Navy Medicine Readiness and Training Command (NMRTC), personal communication

5 US. Dept of Health & Human Services, Office of the Assistant Secretary for Health, Office on Women’s Health, https://www.womenshealth.gov/a-z-topics/prenatal-care#:~:text=Prenatal%20care%20can%20help%20keep,when%20they%20see%20mothers%20regularly

6 HCA Medicaid Maternal and Child Health Measures Dashboard, https://hca-tableau.watech.wa.gov/t/51/views/MaternalandChildHealth/Dashboard?%3AisGuestRedirectFromVizportal=y&%3Aembed=y


8 Centers for Disease Conrol and Prevention (CDC), Smoking during pregnancy, https://www.cdc.gov/tobacco/basic_information/health_effects/pregnancy/index.htm#:~:text=Smoking%20during%20pregnancy%20can%20cause,maternal%20smoking%20and%20cleft%20lip.&text=Studies%20also%20suggest%20a%20relationship%20between%20tobacco%20and%20miscarriage


DATA SOURCES

- Washington State Department of Health, Center for Health Statistics, Birth Certificate Data, Community Health Assessment Tool (CHAT), July 2022


- Washington State Department of Health, Center for Health Statistics, Death Certificate Data, Community Health Assessment Tool (CHAT), April 2023

- Health Care Authority (HCA) Medicaid Enrollment and Claims Data, Medicaid Maternal and Child Health Measures Dashboard, accessed at https://hca-tableau.watech.wa.gov/t/51/views/MaternalandChildHealth/Dashboard?%3AisGuestRedirectFromVizportal=y&%3Aembed=y&%2C

Mental health is an essential part of overall health and is just as important as our physical health.\(^1\)\(^2\) It includes our emotional, psychological, and social wellbeing, affecting how we think, feel, and act. Continuing support for systems and policies committed to addressing mental health concerns and improving equitable access to mental healthcare can strengthen our community.

**TOPIC OVERVIEW**

A mental illness is a condition that affects a person’s thinking, feeling, behavior, or mood. These conditions deeply impact day-to-day living and may also affect the ability to relate to others. According to the CDC, more than 1 in 5 U.S. adults live with a mental illness.\(^3\) People of all ages, from childhood to adulthood, with untreated mental health conditions are at an elevated risk for having more than one type of disorder at once.

Although mental health challenges are treatable and often preventable, not everyone has access to the resources they need. For example, disparities in accessing mental healthcare by racial/ethnic groups are well-documented.\(^4\)

In addition to being able to access treatment, positive social connections are an important component of good mental health.

**KEY FINDINGS**

The following priority areas were identified from available public health data; these were selected based on changes over time for Kitsap residents, differences between Kitsap and Washington, and Kitsap resident input. They include:

- **Depression & suicide**
  - **Increases in Kitsap resident suicide rate:** In 2021, there were 17 deaths due to self-inflicted injury for every 100,000 residents in Kitsap. From 2010 to 2021, there was an increasing trend in the suicide mortality.
  - **Kitsap youth reported suicide ideation** at higher percentages than Washington youth overall. In 2021, more than one in five Kitsap 12th graders (23%) reported they had seriously considered attempting suicide in the past year — higher than Washington in 2021 (20%).
  - **Increases in Kitsap youth reporting depressive feelings:** In 2021, nearly half of Kitsap 12th grade students (47%) reported feeling sad or hopeless for at least two weeks in the past 12 months. From 2012 to 2021, there was an increasing trend in the percentage of 12th graders reporting depressive feelings.
  - **Kitsap youth reported attempting suicide** at higher percentages than the Healthy People 2030 goal. Healthy People 2030 aims to reduce the percentage of adolescents in grades 9 through 12 who attempt suicide to less than 2%. In 2021, 9% of 10th graders and 8% of 12th graders reported they had attempted suicide at least once in the past year.
Isolation & support

- **Decreases in Kitsap youth reporting bullying:** In 2021, 16% of 10th graders reported they had been bullied at least once in the past 30 days. From 2012 to 2021, there was a decreasing trend in the percentage of 10th graders reporting they had been bullied.

**KEY DISPARITIES**

While the findings from this report provide evidence of disparities in Kitsap County across multiple indicators, the following were identified as the most significant and are not a complete list of all disparities:

**Note:** “Youth” data on this page represent 10th and 12th students who participated in the 2021 HYS. Participants were asked to select the gender identity-related term that they identified with.

**Disparities by income**

Adults reporting lower incomes (less than $50,000) reported higher rates of:

- Having received a **depression diagnosis**
- Having 14 or more days of “**not good**” mental health

**Disparities by age**

- From 2011 to 2021, a higher percentage of adults ages 18-44 reported 14 or more days of “not good” mental health compared with adults 45 and older.
- In the 2022 Kitsap Community Resources survey, a higher percentage of adults aged 18-34 (52%) reported needing mental healthcare but not being able to get it compared to adults 65 and older (16%).

**Disparities by race/ethnicity**

- Among youth who selected more than one race (multiracial), 21% reported not having an adult they could turn to, the highest percentage of any race/ethnicity.

**Note:** No significant differences were observed by race/ethnicity across the other indicators in this topic area where race/ethnicity data were available.

- **Community members reported barriers** to needed mental healthcare. Among 2022 Kitsap Community Resources survey participants (18 years or older), appointment wait times were reported as the primary barrier to getting needed mental health counseling (44%, 361 participants), followed by cost (23%, 186 participants), and not knowing how to find a counselor (19%, 160 participants).

**Disparities by sex**

Youth who identified as female or transgender, questioning, or something else fits better reported higher rates of:

- Frequently being bullied (17% and 30%, respectively, vs. youth identifying as male at 9%)
- Seriously contemplating suicide (24% and 51%, respectively, compared to youth identifying as male at 13.5%)
- Attempting suicide (9% and 20%, respectively, compared to youth identifying as male at 5%)

**Disparities by sexual orientation**

Youth who identified as lesbian, gay, bisexual, or other reported higher rates of:

- Frequently being bullied (24% compared to 11% of heterosexual youth)
- Seriously contemplating suicide (40% compared to 6% of heterosexual youth)
- Attempting suicide (17% compared to 5% of heterosexual youth)
**BACKGROUND**

Since the COVID-19 pandemic began, national rates of psychological distress among youth have increased. Like in many areas, Kitsap community members have experienced many disruptions due to COVID-19 and associated mitigation strategies, such as school closures and remote learning, isolation, financial hardship, disruptions in routine healthcare screening, and for some, the death of a family member due to COVID-19.

This chapter seeks to provide a brief overview of trends in mental health and wellbeing among Kitsap County youth and adults to better understand what communities have been experiencing and identify areas where focused interventions could be helpful.

**A note about the 2021 Healthy Youth Survey**

Throughout this chapter, data is used from the Healthy Youth Survey (HYS). Due to COVID-19, administration of the Healthy Youth Survey was delayed from 2020 until 2021. Due to concerns about the impacts of survey administration changes in 2021 and COVID-19, we recommend using caution when analyzing changes from previous years.

Several factors may or may not have had an impact on 2021 data:

1. The vast majority of students took the survey in person at school, though a small number did take the survey remotely; the potential impact of having students complete the survey remotely is still being assessed.

2. Delaying the survey by a year also means a change in the cohort of students being surveyed.

The HYS data below represents a simple random sample of responses for Washington state estimates and a census of responses (all responses) for Kitsap, as recommended by the Washington Department of Health. For more information about the HYS and to review student participation rates, please refer to the *Methods* chapter.
YOUTH DEPRESSION

“We’ve seen more suicidal patients in my time in the last two years than I’ve ever remembered seeing in my whole career before, and it’s affecting the kids in a really bad way.”

— Organizational leader

Youth depressive feelings

The pandemic and other current events have raised concerns regarding depression and suicidal ideation in youth. In the HYS, depression is assessed by asking students, “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?” Although this question is not sufficient to diagnose depression, it can be used as a proxy measure for students experiencing symptoms associated with depression.

In 2021, more than one third of 10th graders (39%, 593 students) and nearly half of 12th graders (47%, 571 students) who participated in the HYS reported experiencing depressive feelings during the past year, similar to Washington overall (Figure 1).

From 2012 to 2021, there was no statistically significant trend in the percentage of 10th graders experiencing depressive feelings (Figure 1). For 12th graders, the percentage of students experiencing depressive feelings increased from 2012 to 2021 (Figure 2).

![Graph showing the percentage of students reporting depressive feelings in Kitsap County and Washington State from 2012 to 2021.](https://via.placeholder.com/150)

*Figure 1. 10th grade students who reported experiencing depressive feelings in the past 12 months, 2012-2021*

*Data source: Washington State Healthy Youth Survey (HYS)*
In 2021, among 10th and 12th graders combined, some student populations reported experiencing depressive feelings more than others, including students who identified as female and students from Bremerton and Central Kitsap school districts (Figure 3).

One in two (50%) students who identified as female reported experiencing depressive feelings, compared to 30% of students who identified as male.

**Figure 3.** 10th and 12th grade students who reported experiencing depressive feelings in the past 12 months by subgroup, 2021

*Data source: Washington State Healthy Youth Survey (HYS)*
The percentage of 10th and 12th grade students experiencing depressive feelings varied by geographic region, from 35% in Bainbridge Island to 48% in Bremerton and 49% in Central Kitsap.

Many lesbian, gay, bisexual, transgender, and questioning (LGBTQ+) youth face social stigma about their sexual choices or identities. Stigma can take many forms, such as discrimination, harassment, family rejection, social rejection, or violence. For LGBTQ+ youth, these experiences can put their health at risk.8

Among Kitsap 10th and 12th grade students in 2021:

- Seven in ten (71%) students who identified as transgender, questioning, or something else fits better reported experiencing depressive feelings — far more than students who identified as female (50%) or male (30%).
- Additionally, about two-thirds (64%) of students who identified as lesbian, gay, bisexual, or other reported experiencing depressive feelings — far more than students who identified as heterosexual (33%)

Although no statistically significant differences were observed by race/ethnicity (Figure 3), the percentage of students who reported experiencing depressive feelings ranged from 36% among students who identified as Native Hawaiian or Pacific Islander to 49% among students who selected more than one race (multiracial).

**Youth suicide ideation**

In 2021, about one in five 10th graders (22%, 329 students) and about one in five 12th graders (23%, 279 students) reported they had seriously considered attempting suicide in the past year. From 2012 to 2021, there was no statistically significant trend in the percentage of 10th graders or 12th graders seriously considering suicide (Figure 4). However, in 2021, the percentage of 12th graders seriously considering suicide was higher in Kitsap (23%) than Washington (20%); this difference was statistically significant (Figure 5).

**Figure 4.** 10th grade students who reported they had seriously considered attempting suicide in the past 12 months, 2012-2021

**Data source:** Washington State Healthy Youth Survey (HYS)
Among 10th and 12th graders combined, some student populations reported they had seriously considered attempting suicide more than others, including students who identified as female and students who identified as LGBTQ+: 

- Nearly one in four (24%) students who identified as female reported they had seriously contemplated suicide, compared to 13.5% of students who identified as male.
- Two in five (40%) students who identified as lesbian, gay, bisexual, or other reported they had seriously contemplated suicide — far more than students who identified as heterosexual (6%).
- More than half (51%) of students who identified as transgender, questioning, or something else fits better reported they had seriously contemplated suicide, compared to 24% of students who identified as female and 13.5% of students who identified as male.
- Although no statistically significant differences were observed by race/ethnicity, the percentage of students who reported seriously considering suicide was highest among students who selected more than one race (multiracial), with more than one in four (26%) reporting suicide contemplation.

**Youth suicide attempt**

Healthy People 2030 aims to reduce the percentage of adolescents in grades 9 through 12 who attempt suicide to less than 2%. In 2021, 9% of 10th graders (66 students) and 8% of 12th graders (50 students) reported they had attempted suicide at least once in the past year, similar to Washington state overall. From 2012 to 2021, there was no statistically significant trend in the percentage of 10th or 12th graders seriously considering suicide (Figure 6).
Similar to the indicators above for youth depression and suicide ideation, 10th and 12th grade students who identified as LGBTQ+ and students who identified as female reported higher percentages of attempted suicide in 2021:

- Nearly one in ten (9%) students who identified as female reported they had attempted suicide, compared to 5% of students who identified as male.

- One in six (17%) students who identified as lesbian, gay, bisexual, or other reported they had attempted suicide, far more than students who identified as heterosexual (5%).

- One in five (20%) students who identified as transgender, questioning, or something else fits better reported they had attempted suicide, compared to 9% of students who identified as female and 5% of students who identified as male.
YOUTH ISOLATION & SOCIAL SUPPORT

Bullying

Creating a safe learning environment is critical for a student’s academic achievement. When students feel safe at school, they are more likely to have higher grades than students who do not feel safe at school.\textsuperscript{10}

In the HYS, bullying is defined as when one or more students threaten, spread rumors about, hit, shove, or otherwise hurt another student repeatedly and includes electronic forms of bullying, known as cyberbullying. It is not bullying when two students of about the same strength or power argue or fight or tease each other in a friendly way. The survey then asks, “In the last 30 days, how often have you been bullied?”

\textbf{Figure 7.} 10\textsuperscript{th} (top charts) and 12th grade (bottom charts) students who reported they had been bullied in the last 30 days, 2012-2021

\textit{Data source: Washington State Healthy Youth Survey (HYS)}

In 2021, 16% of 10th graders (250 students) and 13% of 12th graders (161 students) in Kitsap reported they had been bullied at least once in the past 30 days, similar to Washington state overall. For 10th graders, the percentage of students reporting they had been bullied decreased from 2012 to 2021 (Figure 7).
From 2012 to 2021, there was no statistically significant trend in 12th graders who reported they had been bullied. Among 10th and 12th graders, some student populations reported higher percentages of being bullied than others, including students who identified as female, students who identified as LGBTQ+, and students from Bremerton, Central Kitsap, and North Kitsap school districts.

- 17% of students who identified as female reported they had been bullied, compared to 9% of students who identified as male.
- 24% of students who identified as lesbian, gay, bisexual, or other reported they had been bullied, compared to 11% of students who identified as heterosexual.
- 30% of students who identified as transgender, questioning, or something else fits better reported they had been bullied, compared to 17% of students who identified as female and 9% of students who identified as male.
- Across regions in Kitsap, 20% of students from Bremerton, 16% of students from Central Kitsap, and 17% of students from North Kitsap reported the highest percentages of students being bullied. When compared to the reference group of Bainbridge Island (9%), these differences were statistically significant.
- Although no statistically significant differences were observed by race/ethnicity, the percentage of students who reported being bullied was highest among students who identified as Black or African American, with nearly one in five (19%) reporting they had been bullied.

**Adults to turn to when feeling sad or hopeless**

Caring adults, including parents, school staff, coaches, and faith leaders, can support youth. Educating caring adults on how to recognize mental health conditions, increase social connectedness, and work with youth on resiliency skills can expand support systems to help prevent suicide among our youth population.

In 2021, 14% of 10th graders (101 students) and 13% of 12th graders (81 students) felt they did not have an adult to turn to when they felt sad or hopeless, similar to Washington overall. From 2012 to 2021, there was no statistically significant trend in the percentage of 10th or 12th graders who reported they did not have adult support (Figure 8). Among 10th and 12th graders, some student populations reported they did not have adult support more than others (Figure 8), including students who identified as male, students who identified as LGBTQ+, and students who selected more than one race (multiracial).

- 17% of students who identified as male and 20% of students who identified as transgender, questioning, or something else fits better felt they did not have adult support, compared to 9% of students who identified as female.
- 21% of students who identified as lesbian, gay, bisexual, or other felt they did not have adult support, compared to 10% of students who identified as heterosexual.
- Among multiracial students, 21% felt they did not have adult support -- the highest percentage of any race/ethnicity. The lowest percentage was among students who identified as white (11%). When comparing these two groups, this difference was statistically significant.
- Although no statistically significant differences were observed by region, the percentage of students who felt they did not have adult support ranged from 10% (Bainbridge Island) to 17% (Central Kitsap).
**Figure 8:** 10th (top charts) and 12th grade (bottom charts) students who felt they did not have an adult to turn to when they felt sad or hopeless, 2012-2021

**Data source:** Washington State Healthy Youth Survey (HYS)

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**Community members’ experiences with youth social support**

Community members in several of the 2022 Kitsap Community Resources focus group discussions spoke of difficulties they faced in finding mental health providers for their children, particularly those who were accepting new patients. As one participant shared:

“\[I\] probably spent a couple hours on at least three different days calling, leaving messages, researching, going online, and looking at who took our healthcare, and then checking reviews. And I mean probably six to eight hours at least just for a counselor for my son."

— Community member
MENTAL HEALTH & WELLBEING

ADULT DEPRESSION

Depression diagnoses in adults are self-reported to the Behavioral Risk Factor Surveillance Survey (BRFSS), a yearly survey that measures changes in the health of people in the U.S. Adult estimates of depression are not directly comparable to youth estimates due to different questions being asked and survey methods being used.

In 2021, an estimated 29% of Kitsap adults (18 years and older) reported they had been told they had a depressive disorder — including depression, major depression, dysthymia, or minor depression — at some point in their lifetime, which was similar to Washington state overall (Figure 9). From 2011-2021, there was no statistically significant trend in the estimated percentage of Kitsap adults reporting they had a depressive disorder.

![Figure 9. Estimated percentage of adults (18+) with a depressive disorder, 2011-2021](image)

**Data source:** Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)

Not all community members may be able to access mental health services to receive a depressive disorder diagnosis. For example, in 2022, the estimated rate of mental health providers in Kitsap (417 per 100,000 residents) was lower than the estimated rate in Washington state overall (457 per 100,000 residents). This indicates there could be a lack of mental health professionals in Kitsap.

Barriers to a mental health diagnosis can include difficulties in accessing support, concerns about confidentiality and trust, a preference for informal sources of health, and stigma, among others. For additional data on healthcare service availability in Kitsap, please refer to the Healthcare Access chapter.

To assess adult depression among Kitsap subgroups, we combine years of BRFSS data (2011-2022) to increase sample size and improve statistical reliability. From 2011 to 2022 Kitsap data indicated (Figure 10):

- A higher estimated percentage of adults (18 years or older) who identified as female reported having ever received a depression diagnosis (33%), compared to male adults (18%).
• Adults (18 years or older) with the two lowest reported incomes (less than $25,000 and $25,000 to less than $50,000) reported having received a depression diagnosis more frequently than any other income group (46% and 28%, respectively).

![Figure 10: Estimated percentage of adults with depressive disorder in Kitsap County by sex and income, 2011-2021](image)

**Data source:** Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)

### Adult mental distress

Mental distress is self-reported to BRFSS in response to how many days in the past 30 days respondents felt their mental health was “not good.” Those who answered “more than 14 days” were categorized as experiencing mental distress.

In 2021, an estimated 13% of Kitsap adults (18 years and older) reported having more than 14 “not good” mental health days in the last month, similar to the estimated percentage of Washington adults (15%, Figure 11). From 2011 to 2021, there was no statistically significant trend in the percentage of Kitsap adults reporting mental distress.

![Figure 11: Estimated percentage of adults with mental distress, 2011-2021](image)

**Data source:** Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)
MENTAL HEALTH & WELLBEING

From 2011 to 2021, estimates indicate that some populations were more heavily affected than others, including community members who identify as LGBTQ+, community members with lower household incomes, and younger age groups (18-44 years old). No statistically significant differences were observed by race/ethnicity or by sex (Figure 12).

- From 2011 to 2021, more than one in three (34%) adults (18+) who identified as lesbian, gay, bisexual, or other reported they had 14 or more days of “not good” mental health, far more than adults who identified as heterosexual (11%).

- From 2011 to 2021, adults (18 years and older) with the two lowest reported incomes (less than $25,000 and $25,000 to less than $50,000) reported 14 or more days of “not good” mental health more frequently than any other income group (24% and 14%, respectively).

- From 2011 to 2021, adults (18 years and older) in the younger age groups (18-44 years old) reported 14 or more days of “not good” mental health more frequently than older age groups (45 years and older).

Figure 12: Estimated percentage of adults with mental distress in Kitsap by subgroup, 2011-2021

Data source: Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)

Note: *The estimate has an elevated relative standard error (RSE) greater than 25% and does not meet KPHD reliability standards. Geographic region is based on ZIP code rollup.
Impact of COVID-19 on community member wellbeing

In the 2021 Kitsap County Community Health and Wellbeing Survey, participants were asked how things had changed for them over the course of the COVID-19 pandemic as of May 2021:

- More than one in two (56%, 3,420 survey participants) reported they were experiencing more anxiety, and nearly four in ten (38%, 2,314 participants) reported they were experiencing more depression.
- Nearly four in ten (39%, 2,395 survey participants) reported they had experienced at least one major life change.
MENTAL HEALTH & WELLBEING

ADULT ISOLATION & SOCIAL SUPPORT

“People who are struggling with substances and mental illness are the ones who are not able to reach out or engage in some of the services that already exist out there. Even when they're trying to seek care, if they're not already plugged into Peninsula Community Health or to Kitsap Mental Health, there's a barrier to getting their immediate needs met...”

— Organizational leader

Seniors (65 or older) living alone

While living alone does not inevitably lead to social isolation, it can be a risk factor. Social contacts tend to decrease as people age for a variety of reasons, including retirement, the death of friends and family, and lack of mobility.

Social isolation and loneliness in seniors have been linked with adverse health effects, including increased risk for hospital readmission, dementia, increased risk of falls, and death. According to the ACS, from 2017 to 2021, an estimated 11,102 seniors were living alone, which was about one in every five (20%) seniors in Kitsap.

Community members’ experiences seeking mental health support

Community members in the 2022 KCR focus group discussions shared their own ongoing personal experiences with mental health issues that they felt had been exacerbated by the COVID-19 pandemic. Many expressed that they were unsure where to go for care. As one community member put it, “I don't even know what resources are available to me.”

Participants also identified youth, low-income elderly, and people struggling with co-occurring mental illness and substance use disorders as those most impacted by what was described as an inadequate behavioral healthcare system in Kitsap County.

In the 2022 KCR Community Survey, about one in six (17%, 559 survey participants) were concerned about their emotional wellbeing more than half of the past 30 days (10%) or nearly every day (7%). Among all survey participants, wait times were the primary barrier to getting needed mental health counseling (44%, 361 participants), followed by cost (23%, 186 participants), and not knowing how to find a counselor (19%, 160 participants).

- Three in five (60%, 71 participants) Central Kitsap residents said long appointment wait times were a barrier to mental health counseling, a higher proportion than any other Kitsap County region.
- Overall, those younger than 35 had higher percentages of participants reporting needing mental healthcare, but not being able to get it (52%, 243 participants), compared to those 65 and older (16%, 93 participants).
MENTAL HEALTH & WELLBEING

HOSPITALIZATIONS & MORTALITY

Self-inflicted injury hospitalization rate (age-adjusted)

The self-inflicted injury hospitalization rate is an important indicator of potential suicide attempts and mental health status in a community. It includes all non-fatal hospitalizations where self-inflicted injury was a contributing cause of the hospitalization.

In 2019, there were 39 hospitalizations due to self-inflicted injury per 100,000 residents in Kitsap after adjusting for age (Figures 13). See the Methods chapter for more information about adjusting for age.

In 2019, Kitsap’s rate was lower than the rate of hospitalizations for every 100,000 residents in Washington (47 per 100,000) and this difference was statistically significant.

In 2019, nearly two in three (64%) self-inflicted injury hospitalizations in Kitsap were due to drug poisoning, and nearly one in five (17%) were due to cutting — using a sharp object like a razorblade, knife, or scissors to make marks, cuts, or scratches on one’s own body.

Figure 13: Self-inflicted injury hospitalization rate per 100,000 population, age-adjusted, 2000-2019

Data sources: Washington Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS), Washington State Department of Health; Community Health Assessment Tool (CHAT), Washington State Department of Health

Suicide rate (age-adjusted)

In the U.S., suicide has increased fastest among people of color, younger individuals, and people who live in rural areas, making it a serious public health concern. According to recent data from the CDC, suicide is among the leading causes of death in the U.S. In Kitsap, suicide was the 10th leading cause of death in 2021 (49 deaths). For additional information on leading causes of death, refer to the Injuries, Hospitalizations, and Deaths chapter.

In 2021, there were 17 deaths due to self-inflicted injury for every 100,000 residents in Kitsap, similar to the rate for Washington state overall (15 per 100,000, Figure 14). More than one in two (53%) Kitsap suicide deaths were by
discharge of firearms in 2021, down from 66% in 2020. From 2010 to 2021, there has been a statistically significant increasing trend in the suicide mortality rate in Kitsap.

When breaking down available data by subgroups (Figure 15), the suicide rate:

- was higher among males (26 per 100,000 residents) than among females (9 per 100,000 residents).
- was higher among adult age groups (18 or older) than youth (0-17 years of age).

**Figure 14:** Suicide rate per 100,000 population, age-adjusted, 2010-2021

**Figure 15:** Suicide rate per 100,000 across Kitsap subgroups, 2017-2021 (age-adjusted)

**Data source:** Washington State Department of Health, Center for Health Statistics, Death Certificate Data, Community Health Assessment Tool (CHAT)
COMMUNITY ASSETS

There are many community members and organizations working directly to improve the health of our community by working to support mental health and wellbeing.

Many more are working on underlying issues that influence our ability to have good mental health, such as access to safe housing. Below is a short list of those working directly on support mental health and wellbeing:

988 Suicide and Crisis Lifeline, Coffee Oasis Teen Text Line, Volunteers of America Crisis Call Line, Salish Regional Crisis Line and Veterans Crisis Line provide 24/7, free and confidential support for people in distress, and prevention and crisis resources for individuals and families.

Catholic Community Services provides an array of services, including counseling, case management, information and referral, chemical dependency services, mental health services and family support services to people in need.

Community and senior centers, such as Bainbridge Island Senior Center, Bremerton Senior Center, Givens Community Center, North Kitsap Senior Center, and Village Green Community Center, offer social activity programs for seniors.

Community health navigators, housed within agencies like Bainbridge Island Police Department and Port Orchard Police Department, Central Kitsap Fire and Rescue CARES program, and the Poulsbo Fire CARES program help provide a more integrated approach between first responders, mental health, and social services.

Crisis Clinic of the Peninsulas provides over-the-phone crisis intervention, information referral and a supportive listening ear to people in our community who are experiencing situational distress.

Fishline began providing free mental health services in 2022 for those in need in North Kitsap.

Forefront is a research organization based at the University of Washington, that is training health professionals to develop and sharpen their skills in the assessment, management, and treatment of suicide risk.

Institute on Aging’s Friendship Line is available 24/7 for lonely older adults and adults living with disabilities.

Kitsap County Suicide Awareness and Prevention group increases awareness of—and access to—suicide prevention support and resources for all ages, with the goal of reducing suicide in our community.

Kitsap Mental Health Services (KMHS) is a private, not-for-profit community mental health center that provides mental health and behavioral health care services to children, families, adults and seniors.

Kitsap Strong is a collective impact initiative with public and private partners, committed to reducing childhood adversity, reducing intergenerational poverty and building resiliency.

National Alliance on Mental Illness (NAMI) improves quality of life for individuals with severe mental illnesses.

Suquamish Tribe’s Wellness Center and Port Gamble S’Klallam Tribe’s Wellness Program help community members address chemical dependency and mental health issues through prevention and outreach services.

The 1/10 of 1% Mental Health-Chemical Dependency-Therapeutic Courts Tax provides funding for diverse projects focused on mental health and chemical dependency prevention and treatment.

The Trevor Project provides a confidential hotline for LGBTQ youth in crisis, feeling suicidal, or in need of a safe, judgement-free place to talk. Teen Link is a program of Crisis Connections that serves youth in Washington State, providing a phone hotline and text chat.
ENDNOTES


2 Centers for Disease Control and Prevention (CDC), About Mental Health, https://www.cdc.gov/mentalhealth/learn/index.htm

3 Centers for Disease Control and Prevention (CDC), Prioritizing Minority Mental Health, https://www.cdc.gov/healthequity/features/minority-mental-health/index.html#:~:text=Mental%20health%20equity%20is%20the,health%20and%20emotional%20well%2Dbeing


8 Centers for Disease Control and Prevention (CDC), LGBTQ+ Youth: Addressing Health Disparities with a School-Based Approach, https://www.cdc.gov/lgbthealth/youth.htm


DATA SOURCES

- Washington State Department of Health, Washington State Office of the Superintendent of Public Instruction, Department of Social and Health Services, and the Liquor and Cannabis Board, Healthy Youth Survey (HYS), analyzed by Kitsap Public Health District, Assessment & Epidemiology Program
- Washington State Department of Health, Center for Health Statistics, Behavioral Risk Factor Surveillance System (BRFSS), analyzed by Kitsap Public Health District, Assessment & Epidemiology Program
- Kitsap Public Health District, Community Health and Wellbeing Survey, 2021
- U.S. Census Bureau, American Community Survey (ACS), accessed at data.census.gov
- Kitsap Community Resources (KCR) Community Survey, 2022. To explore the data further, please visit: ow.ly/tbvZ50Naanp.
- Washington Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS), Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT), Aug 2021
- Washington State Department of Health, Center for Health Statistics, Death Certificate Data, Community Health Assessment Tool (CHAT), April 2023
- Washington State Population Interim Estimates (PIE), December 2022
Health behaviors are health-related practices that can impact – for better or worse – the health of community members. They also can be behaviors that lower or raise the risk of developing certain conditions or outcomes. Health behaviors are impacted by the physical environment and are often determined by the choices available in the places where people live, learn, work and play, such as food security and housing.

**TOPIC OVERVIEW**

Not everyone has the money, access and privilege needed to make healthy choices. Shifting the lens from individual responsibility to the responsibility of societal organizations and the many institutions, structures, inequalities, and ideologies that influence and often determine health behavior in individuals has proved a valuable framework for promoting positive health behaviors and the prevention of adverse outcomes from negative health behaviors.

While crime and violence can affect anyone, some groups are more likely to be exposed, directly or indirectly. For example, low-income neighborhoods are more likely to be affected by crime than high-income neighborhoods. This exposure can lead to detrimental health effects, which can occur at any age. Because of this, crime often contributes to and widens health inequities seen in our society.

**Note:** There are many interrelated behaviors that affect health and wellbeing that could be included in this chapter. Instead, health behaviors related to a specific topic will be discussed in the chapter directly related to that topic. This chapter focuses on substance use and behaviors related to safety.

Trends for violence and substance use worsened during the COVID-19 pandemic. According to the CDC, by June 2020, 13% of Americans reported increasing or starting substance use as a way of coping with stress. During the first few months of 2020, there was an 18% increase nationwide in opioid overdoses compared to the same months in 2019. This trend continued through 2020 with more than 40 states, including Washington, reporting increased opioid deaths.

Similarly, violent crime was up about 4.7% in the U.S. in 2020 compared to 2019. It then fell by about 3% in 2021. Property crime steadily decreased from 2012 to 2021. Despite the overall decrease in 2021 in violent crime, the homicide rate rose in 2020 and 2021.

**KEY FINDINGS**

The following priority areas were identified from available public health data; these were selected based on changes over time for Kitsap residents, differences between Kitsap and Washington, and Kitsap resident input. They include:

**Opioids**

- Kitsap had an increasing opioid-related death rate from 2018 to 2022. Opioids accounted for more than three in four drug-related deaths in 2022. Non-fatal opioid hospitalizations and emergency room visits did not increase.
- Fentanyl was increasingly reported as the opioid causing visits to the emergency department in 2021 and 2022, overtaking heroin.
Alcohol

- The alcohol-related death rate increased in Kitsap from 2018 to 2021. Very little investigation into the effects of the COVID-19 pandemic or other contributing factors to this increasing death rate has been conducted.

- In Kitsap Community Resource’s 2022 survey, alcohol was the most widely used substance in a given week. One in three (33%) reported weekly use.

Firearms

- The percentage of households that have a gun in or around their house in 2020 was higher in Kitsap (42%) than in the state (32%). More than one in 15 Kitsap residents (6.5%) had a loaded and unlocked firearm in or around their house.

E-cigarettes

- Trends in e-cigarette use among public high school students are unchanged over time; higher percentages of students reported vaping compared to smoking cigarettes in 2021. Anecdotally, e-cigarette use in school has been expressed as a concern of parents, teachers, and staff in our school districts.

Crime

- In general, crime appears to be decreasing in Kitsap. However, more serious offenses, such as the category of Group A crime, increased in 2022 in every jurisdiction in the county after years of decreasing rates. Group A crime includes 49 offenses grouped into 23 crime categories, such as murder, robbery, and arson.

- Domestic violence, child abuse and neglect referrals, sexual assault crimes, and homicides increased in 2021.

KEY DISPARITIES

While the findings from this report provide evidence of disparities in Kitsap County across multiple indicators, the following were identified as the most significant and are not a complete list of all disparities:

Sex and gender

- **Male and female**
  - Compared to females, males had a higher death rate due to alcohol from 2012 to 2021, a higher opioid overdose non-fatal emergency department visit rate in 2022, and a higher death rate due to firearms (including self-inflicted) from 2017 to 2019.
  - Among Kitsap youth, female 10th and 12th grade students reported higher percentages drinking alcohol, binge drinking, and vaping than males in 2021.

- **Sexual orientation and gender identity**
  - In 2021, higher percentages of 10th and 12th grade students reported smoking cigarettes and vaping among those who reported a sexual orientation of gay, lesbian, bisexual or something other than heterosexual and among those who identified with a gender other than male or female.
  - In 2021, higher percentages of 10th and 12th grade students reported using marijuana among those who reported a sexual orientation of gay, lesbian, bisexual or something other than heterosexual.

Geography

- Bainbridge and North Kitsap 10th and 12th grade students reported higher percentages drinking alcohol and using marijuana in 2021, while Bremerton students reported the lowest alcohol use and Bremerton and South Kitsap students reported the lowest marijuana use. Bainbridge students also reported the highest percentages binge drinking, while South Kitsap reported the lowest.

- Bremerton had the highest rate of accepted referrals for child abuse and neglect, while Bainbridge had the lowest rate in 2021.

- Bremerton and South Kitsap adults reported the highest percentages of adults currently smoking from 2011 to 2021, while Bainbridge Island and North Kitsap reported the lowest percentages.

Educational attainment

- From 2011 to 2021, decreasing percentages of adults reported currently smoking as level of educational attainment increased.
SUBSTANCE USE

Alcohol, drugs, and medications, when not used appropriately or in moderation, can lead to substance use concerns. Substances of concern include tobacco, vape products, marijuana, alcohol, and opioids, among others. Resulting health issues can affect the individual, such as dental problems, cancer, chronic illness, and death, or our community. Concerns for our community include driving under the influence of substances, the ongoing negative consequences of dependency, and the potential long-term influences on youth.

Whether or not dependency and substance use issues develop is influenced by a variety of societal, environmental, and individual risk factors, including income level, peer group, adverse childhood experiences (ACEs), mental and physical health, employment status, genetic predisposition to addiction, exposure before birth, and early use.\(^5\)

Prevention and early intervention are key; however, when prevention isn’t effective, our community needs to ensure an adequate system to assist individuals with substance abuse and dependency issues. Substance use disorder (SUD) is a treatable mental disorder that affects a person’s brain and behavior, leading to an inability to control their use of substances. Addiction is the most severe form of SUD. People with SUD may also have other mental health disorders, making prevention of common risk factors and co-occurring issues important.\(^6\)

Nationally, while binge drinking has declined for younger adults over the past 10 years, adults 35 to 50 years old reported the highest percentages binge drinking ever reported for this age group.\(^7\)

While there isn’t sufficient data to clarify whether this trend also holds true in Kitsap, it is reflective of outcomes affected by the current national, social, economic, political, and physical environmental challenges. In the Kitsap County Community Health and Wellbeing Survey conducted by Kitsap Public Health District in 2021, 16% of respondents said their alcohol drinking and other substance use increased during the COVID-19 pandemic.

In the 2022 community survey conducted by Kitsap Community Resources (KCR), alcohol was the most widely used substance in an average week by respondents. One third of respondents (33%) said they used alcohol.

Nationally, use of marijuana and hallucinogens by adults 35 to 50 years old continued a long-term upward trend to reach all-time highs in 2022. Adults 19 to 30 years old have also had significant increases in the past five years, with marijuana use and vaping at the highest historic levels for this age group.\(^8\)

In the 2022 community survey conducted by KCR, one in ten respondents said they used marijuana (10%) in an average week. Cigarettes were next, with 7% of the respondents, followed by vape products (5%), chewing tobacco (3%), and other drugs (1%).

In the Kitsap County Community Health and Wellbeing Survey conducted by Kitsap Public Health District in 2021, 84 respondents said that they needed mental health and substance use resources but hadn’t been able to find them in the community.

**Alcohol**

The alcohol-related death rate has been increasing in Kitsap from 2018 to 2021, and the trend is statistically significant (Figure 1). In 2021, there were 24 deaths related to alcohol use for every 100,000 residents in Kitsap, after adjusting for age. See the **Methods** chapter for more information about adjusting for age.
This rate was similar to the state’s rate. The rate is higher among males (19 per 100,000) than among females (10 per 100,000). Among races and ethnicities, American Indian and Alaska Native residents had the highest rate (63 per 100,000).

![Figure 1](image1.png)

**Data source:** Washington State Department of Health, Death Certificate Data

Binge drinking for adults is defined as a man aged 18 or older reporting having five or more alcoholic drinks (by serving size) on one occasion in the past 30 days, or a woman aged 18 or older having four or more alcoholic drinks on one occasion in the past 30 days. This indicator combines data for men and women.

Kitsap has had no increasing or decreasing trend in adults binge drinking over time from 2011 to 2021. Kitsap’s percentage in 2021 (13.9%) was approximately the same as the state’s percentage (15.2%). From 2011 to 2021, a higher percentage of males reported binge drinking (20.6%) compared to females (14.6%). Across the same period, binge drinking decreases as age group increases (Figure 2).

![Figure 2](image2.png)

**Data source:** Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)
In Kitsap, the percentage of 12th grade students indicating drinking alcohol in the past 30 days had a decreasing trend from 2012 to 2021. This trend was statistically significant. The percentage of 10th grade students reporting drinking alcohol decreased between 2018 (19.1%) and 2021 (7.7%), however the trend was not statistically significant.

Among 10th and 12th graders combined, a statistically significantly higher percentage of female students reported drinking alcohol in the past 30 days (14.2%) compared to male students (10.1%, Figure 3). However, there is no longer a statistically significant difference between males and females when students were allowed to define their gender identity. Bainbridge Island had a statistically significantly higher percentage of youth who drank alcohol in the past 30 days compared to all other geographic areas of Kitsap.

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**Figure 3.** Kitsap 10th and 12th graders drinking alcohol in the past 30 days by subgroup, 2021

**Data source:** Washington State Healthy Youth Survey (HYS)

**Notes:** *The estimate has an elevated relative standard error (RSE) greater than 25% and does not meet KPHD reliability standards. Geographic region is based on school district.

Binge drinking for public school students is having five or more alcoholic drinks in a row at some point in the past two weeks. The percentage of students reporting this has a decreasing trend that is statistically significant for 8th graders, 10th graders and 12th graders. However, in 2021, one in twenty (5.2%) 10th graders and one in ten (10.6%) 12th graders reported binge drinking. Among 10th and 12th graders combined, higher percentages reported binge drinking among females (9.5%) compared to males (5.5%).

10th and 12th graders on Bainbridge Island also reported higher percentages binge drinking (14.5%) compared to South Kitsap (5.3%). Students in Central Kitsap had the second highest percentage (7.7%), followed by Bremerton (6.4%) and North Kitsap (5.4%).

**Tobacco and vapor products**

Regarding vapor and tobacco products, there have been many changes to Washington state law in the past 10 years to protect the health of youth and the general public. In 2016, laws went into effect restricting the sale and distribution of vapor products to people under the age of 18 with requirements for child-resistant packaging and labeling of vapor...
products. Starting Jan. 1, 2020, the minimum legal age to buy tobacco and vapor products in Washington was raised to 21 years of age.\textsuperscript{9}

\begin{figure}[h]
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\includegraphics[width=\textwidth]{chart}
\caption{Adults reporting currently smoking}
\end{figure}

\textbf{Data source:} Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)

\textbf{Tobacco} — After years of a decreasing trend, more than one in ten adults in Kitsap County (11\%) reported currently smoking in 2021 (Figure 4). This percentage was similar to the state’s percentage (11\%) and was the lowest percentage seen in Kitsap since at least 2011.

There were differences by age, with young adults aged 25 to 34 having the highest percentage reporting currently smoking (27\%, Figure 5). Percentages decreased with each increasing age group after age 25-34; 24\% for age 35-44, 21\% for age 45-54, 16\% for age 55-64, and 10\% for age 65 and older. The youngest adults in Kitsap, age 18-24, reported 19\% currently smoking.

Across Kitsap, Bremerton residents reported the highest percentage currently smoking (24\%), followed by South Kitsap (22\%), Central Kitsap (18\%), North Kitsap (13\%), and Bainbridge Island (12\%).

There were also decreasing percentages of residents reporting currently smoking as the level of educational attainment increased. From 2011 to 2021, there were 36\% of those who did not graduate high school currently smoking, 23\% of those who graduated high school, but had no further education, 20\% of those who had some college or technical school, but did not graduate, and 7\% of those who graduated college or technical school (Figure 5).

Income also played a roll, with those with the lowest income (<$25,000) reporting the highest percentages of currently smoking (35\%).
In Kitsap, the percentages of 8th grade students and 12th grade students indicating they had smoked cigarettes in the past 30 days have decreased statistically significantly from 2012 to 2021. The percentage of 10th grade students reporting smoking has decreased as well, however the trend was not statistically significant. In 2021, about one in twenty 12th graders (5.3%) and only 2.4% of 10th graders reported smoking.

Among 10th and 12th graders combined, higher percentages of students reported smoking among students with a sexual orientation of gay, lesbian, bisexual or something other than heterosexual (6.3%), and among those who identify with a gender other than male or female (7.7%). These higher percentages were statistically significantly different (Figure 6).
**E-cigarettes** — Also known as electronic cigarettes, vaping, and vape products, e-cigarettes are particularly dangerous to kids, teens, and young adults. A recent Health Impact Review by the Washington State Board of Health highlighted research findings that propylene glycol and glycerin, the most common solvents in vapor products, are toxic when aerosolized through the vaping process. In addition, research has also shown flavor chemicals, specifically benzaldehyde (used in cherry-flavored products) and 2, 5-dimethyprazine (used in chocolate-flavored products), to be toxic both in e-liquid and aerosol forms.

In addition to flavorings and other potential health risks, most e-cigarettes contain nicotine, the addictive drug commonly in cigarettes. Nicotine can harm the parts of the brain that control attention, learning, mood, and impulse control and change the way the brain develops. For public school students, there has been no statistically significant trend over time for any grade in the percentage of students reporting using electronic cigarettes, e-cigs, or vape pens in the past 30 days. However, in 2021, about 7.9% of 10th grade students and 16.2% of 12th grade students reported using electronic cigarettes. Like smoking cigarettes, among 10th and 12th graders combined, higher percentages of students reported vaping among students with a sexual orientation of gay, lesbian, bisexual or something other than heterosexual (15.2%), and among those who identify with a gender other than male or female (16.3%). These higher percentages were statistically significantly different.

For vaping, however, higher percentages were also seen among students who were female sex at birth (14.2%) and those who identified as female (13.3%), compared to males (9.0%) and those who identified as male (9.0%). These differences were statistically significant.

**Marijuana**

Purchasing cannabis is legal in Washington State for adults aged 21 and older from licensed cannabis retail stores. In addition, the Cannabis Patient Protection Act allows specific types of healthcare professionals to authorize cannabis for medical use. Data on marijuana use among adults is not addressed in this report. The major public health concern for marijuana is use by youth, where marijuana may harm the developing brain.

In Kitsap, there has been no statistically significant trend in marijuana use from 2012 to 2021 for any grade, but there were decreases seen from 2018 to 2021 in every grade. For 8th grade students, the percentage reporting marijuana use decreased from 18.3% in 2018 to 7.8% in 2021. For 12th grade students, the percentage reporting marijuana use decreased from 28.2% in 2018 to 17.6% in 2021. Similar decreases were seen in Washington state.
Among 10th and 12th graders combined, higher percentages of students reported using marijuana among students with a sexual orientation of gay, lesbian, bisexual or something other than heterosexual (16.5%). This higher percentage was statistically significantly different.

A higher percentage was also seen among students on Bainbridge Island (14.6%), compared to South Kitsap (9.3%).

**Opioids and other drugs**

Drug addiction is a chronic disease characterized by drug seeking and use that is uncontrollable, despite harmful consequences.\textsuperscript{15} Drug use in Kitsap is a major concern because of increasing overdose death rates. The number of deaths in Kitsap where drugs were a contributing cause has doubled in preliminary data from 2022, compared to the 5-year average from 2014 to 2018.

In 2022, there were 73 drug overdose deaths in Kitsap County, an age-adjusted rate of about 27 for every 100,000 residents.\textsuperscript{16} See the Methods chapter for more information about adjusting for age.

This number has been increasing every year since 2019, and the increasing trend from 2019 to 2022 is statistically significant. Kitsap’s rate in 2022 is similar to the state’s rate overall.

Unlike deaths, non-fatal hospitalizations for drug overdose have had no statistically significant trend since at least 2000. In preliminary data for 2022, there were approximately 149 hospitalizations for drug overdose in Kitsap, an age-adjusted rate of 53 hospitalizations for every 100,000 residents. Kitsap’s rate is similar to the state’s rate.

More than three in four drug-related deaths (78%) in Kitsap in 2022 were due to opioids, a class of drugs that include heroin, synthetic opioids like fentanyl and pain relievers available by prescription, such as oxycodone.\textsuperscript{17}

![Graph showing rate of opioid overdose deaths in Kitsap County and Washington state from 2018 to 2022.](figure7.png)

**Figure 7.** Rate of opioid overdose deaths per 100,000 population

**Data source:** Washington State Department of Health, Opioid and Drug Overdose Data Dashboard
In preliminary data from 2022, there were 57 deaths where an opioid was a contributing cause of death, a rate of 22 deaths due to opioids for every 100,000 residents. Kitsap’s rate has been increasing from 2018 to 2022 and the trend is statistically significant. Kitsap’s rate in 2022 was similar to Washington. (Figure 7)

Non-fatal opioid hospitalizations have remained unchanged from 2005 to 2022 in Kitsap. There were about 15 hospitalizations where any opioid was a contributing cause per 100,000 Kitsap residents in 2022. This rate was similar to the state’s rate.

Non-fatal emergency department (ED) visits for drug overdose have remained unchanged from the first quarter of 2019 (71 per 10,000 ED visits) to the fourth quarter of 2022 (84 per 10,000 ED visits). The rate of drug overdose ED visits in Kitsap increases with increasing age group. The highest rate is among youth aged 11 to 17 (225 per 10,000 visits), followed by those 18 to 34 (114 per 10,000 visits), those 35 to 64 (100 per 10,000 visits), and those 65 or older (39 per 10,000 visits). The rate is higher among males (119 per 10,000 visits) than females (72 per 10,000 visits).

In the fourth quarter of 2022, only 32% of non-fatal ED visits for drug overdose in Kitsap were due to any opioid. The rate of non-fatal ED visits for opioids was 27 per 10,000 visits in Kitsap in the fourth quarter of 2022. These visits have been increasingly for fentanyl during the last half of 2021 and 2022. Visits due to heroin have been decreasing during that same period, while visits for other types of opioids have remained stable.

In 2022, the highest rates for non-fatal ED visits for opioids have been among those 35 to 64 (37 per 10,000 ED visits) and those 18 to 34 (32 per 10,000 ED visits), followed by those 65 and older (18 per 10,000 visits) and those 11 to 17 (less than 10 visits). Males had a higher rate (39 per 10,000 visits) than females (22 per 10,000 visits).

From 2015 to 2022, the number of patients that are prescribed any opioid has been decreasing, from 96 patients per 1,000 residents in the first quarter of 2015 to 46 patients per 1,000 residents in the fourth quarter of 2022. This decrease is seen most steeply in the younger population, but the rate has been decreasing for all age groups. At the same time, patients prescribed at least one opioid use disorder formulary buprenorphine prescription has been increasing, from 1.3 patients per 1,000 in the first quarter of 2015 to 4.0 patients per 1,000 in the fourth quarter of 2022.

The increase in deaths due to opioids combined with no corresponding increase in hospitalizations or ED visits may indicate an increase in fatality of opioid use rather than increased overall opioid use in Kitsap. Fentanyl has been increasingly reported as the opioid related to visits to the emergency department in 2021 and 2022, replacing heroin. More investigation into drug use, types of drugs used and consequences, and drug treatment availability in Kitsap is needed.
Indicators of community safety and violence encompass public safety, incarceration, and exposure to crime or violence in the home and community settings. Violence and unsafe conditions can lead to injury and chronic health conditions, as well as poor mental health and toxic stress (stress that is prolonged, severe, or chronic, and creates additional challenges for a person’s functioning).2021

**Total crime and Group A and B crime**

Based on analysis by the Washington State Office of Financial Management, in 2021, there were about 47 crimes for every 1,000 Kitsap residents (Figure 8). This rate has been decreasing from at least 2012 through 2021 and the decreasing trend is statistically significant. Kitsap’s rate in 2021 is lower than Washington’s rate.

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**Figure 8. Total crime rate per 1,000 residents**


Compared to 2020 (4.3 per 1,000), society crime, like drug and weapon violations, decreased in 2021 to 1.7 per 1,000. Much of the decrease in society crime is a decrease in drug violations, likely due to the recent changes in Washington laws on drug possession, and the uncertainty following the Washington Supreme Court case State v. Blake.22

Property crimes, like robbery, theft and arson, decreased slightly from 31.6 per 1,000 to 30.3 per 1,000, while person crimes, like murder, rape and kidnapping, increased slightly from 14.1 per 1,000 to 14.9 per 1,000 (Figure 9).

In data reported directly from the Washington Association of Sheriffs and Police Chiefs, there was a decrease each year from 2016 to 2021 in Group A crime, which includes 49 offenses grouped in 23 crime categories, such as murder, robbery, prostitution, and arson. In 2022, however, the rate of Group A crimes increased from 47 per 1,000 residents to 59 per 1,000 residents (Figure 10).

This increase in Group A crime between 2021 and 2022 was seen in every jurisdiction in Kitsap: by the Kitsap Sheriff’s Office, the Bainbridge Island Police Department, the Bremerton Police Department, the Port Orchard Police Department and the Poulsbo Police Department. The Port Orchard Police Department had an increasing trend from 2019 to 2022 that was statistically significant, with increases every year.
Figure 9. Crime rate per 1,000 residents by type


Figure 10. Group A crime rates per 1,000 Kitsap residents

Data source: Washington Association of Sheriffs & Police Chiefs, Uniform Crime Report
**Domestic violence**

Domestic violence or intimate partner violence is abuse or aggression that occurs between romantic partners, such as spouses or dating partners. Domestic violence can have long-term, negative effects on families and the communities in which they live.

Adult survivors can experience chronic health problems as a result, such as heart disease, chronic pain, stress disorders and increased health care costs. Witnessing violence committed against a parent can affect a child’s attachment and trust of people. Strategies to promote healthy, respectful, and nonviolent relationship skills are an important part of prevention.

In data from Washington Department of Social and Health Services, domestic violence offenses are reported incidents based on any violence of one family member against another family member, where family can include spouses and former spouses, parents with children in common, adults living in the same household, and parents and children. Incidents are not arrests and are based on the victim, so that there is one report per victim.

From 2004 to 2021, there was no statistically significant increasing or decreasing trend in domestic violence reports, however there was a prolonged period of decreasing rates from 2015 to 2020 with only one year of increase in rate during that time (Figure 11). Kitsap’s trend has not mirrored Washington, which has shown a statistically significant increasing trend from 2008 to 2021, and Kitsap’s rate in 2021 (4.8 per 1,000) was lower than Washington (8.7 per 1,000). The difference was statistically significant.

![Figure 11. Domestic violence offense rate per 1,000 residents](image)

**Data source:** Washington State Office of Financial Management, Statistical Analysis Center, Washington State County Criminal Justice Data Book

It is difficult to place data from law enforcement jurisdictions to specific areas of the county, however Bremerton Police Department aligns relatively well with the Bremerton area. This makes it clear that Bremerton had a higher domestic violence offense rate (6.6 per 1,000) compared to Kitsap overall. The difference is statistically significant.
**Child abuse and neglect**

The Centers for Disease Control and Prevention estimate that at least one in seven children in the U.S. have experienced child abuse or neglect in the past year. Experiencing poverty can place a lot of stress on families, which increases the risk for child abuse and neglect. Nationally, rates of child abuse and neglect are five times higher for children in families with low socioeconomic status.\(^{24}\)

Children’s early experiences impact them throughout life. Kids that are raised in safe, stable, nurturing relationships and environments are more likely to enjoy good physical and mental health and succeed academically and socially.\(^ {25}\) Consequences of child abuse and neglect can lead to poor mental and physical health well into adulthood.

In data from the Washington Department of Social and Health Services, child abuse and neglect referrals reflect the number of children age birth to 17 identified as victims of suspected child abuse in reports to CPS that were accepted for further action, for every 1,000 children age birth to 17.

Similar to domestic violence, there was an increase in the child abuse and neglect referral rate between 2020 and 2021. From 2006 to 2021, there was no statistically significant increasing or decreasing trend in Kitsap.

In 2021, there were 33 referrals for child abuse and neglect for every 1,000 Kitsap residents, which was a lower rate than Washington State (36 per 1,000, Figure 12). The difference was statistically significant.

**Figure 12.** Child abuse and neglect referral rate per 1,000 children

***Data source:*** Washington Department of Social and Health Services, Risk & Protection Profile for Substance Abuse Prevention

In 2021 there were statistically significant differences by subcounty geography in Kitsap. Bremerton (56.7 per 1,000) had a higher rate than either South Kitsap (36.9 per 1,000) or Central Kitsap (31.7 per 1,000), which in turn had higher rates than North Kitsap (22.9 per 1,000). North Kitsap’s rate is also statistically significantly higher than the rate for Bainbridge Island (6.6 per 1,000).
**HEALTH BEHAVIORS**

**Sexual assault**

Based on analysis by the Washington State Office of Financial Management, in 2021, there were about 97 sexual assault crimes for every 100,000 Kitsap residents. Sexual assault crimes include all forcible sex crimes, such as forcible rape, forcible sodomy, sexual assault with an object and forcible fondling. They do not include commercial sex acts, human trafficking, prostitution, incest, or statutory rape.

Similar to domestic violence and child abuse, there was a decrease in rate in 2020 in both Kitsap and Washington, followed by an increase in rate in 2021, however there was no statistically significant trend from 2012 to 2021 in Kitsap (Figure 13). Unlike child abuse and domestic violence, which both have lower rates than the state, Kitsap’s rate of sexual assault (97 per 100,000) was higher than Washington (75 per 100,000) in 2021, and the difference was statistically significant.

**Figure 13**: Sexual assault crimes per 100,000 residents


**Homicide and intentional injuries**

From 2019 to 2021, there were 22 murders or homicides of Kitsap residents, which is a rate of about 3 for every 100,000 residents over the 3-year period, after adjusting for age (Figure 14). The rate was increasing from 2013-15 to 2019-21, and the trend was statistically significant. Kitsap’s rate in 2019-21 was similar to the state’s rate of 4 per 100,000. There were approximately 54 intentional injury hospitalizations for every 100,000 Kitsap residents in 2019, after adjusting for age. Intentional injuries in this data included assaults on another person and self-inflicted injuries. No trend was identified from 2016 to 2019, however Kitsap’s rate in 2019 was lower than the state’s rate (68 per 100,000, Figure 15).
There were no statistically significant differences by sex or geographic area of the county. Adults 65 and older had the lowest rate of intentional injuries of any age group, with 17 per 100,000 (Figure 15). Children aged 0 to 17 were next lowest (45 per 100,000), followed by those aged 18 to 34 (73 per 100,000).
HEALTH BEHAVIORS

**FIREARMS**

Four in ten adults in the US say they live in a household with a gun, and at the same time, almost half (48%) of US adults see gun violence as a very big problem in our country today, according to the Pew Research Center. Having firearms in the home are associated with an increased risk of firearm homicide and firearm suicide in the home. In Washington, legislature was passed in April 2023 meant to address gun violence, including laws banning certain semi-automatic weapons, imposing waiting periods, and clearing the way for lawsuits against gun makers and sellers in certain cases. Washington is the 10th state to prohibit the sale of certain semi-automatic weapons.

**Firearm ownership**

In Kitsap, approximately 42% of Kitsap residents had a gun in or around their home in 2020, according to the Behavioral Risk Factor Surveillance System (BRFSS). This percentage has not changed since at least 2013 and was higher than the state’s percentage (32%) in 2020. Out of the entire population, more than one in twenty residents (6.5%) in Kitsap report having a loaded and unlocked firearm in or around their house.

**Firearm deaths**

In 2021, there were 30 deaths that occurred in Kitsap from firearm-related causes. After adjusting for age, the rate in Kitsap was 9.7 for every 100,000 residents, similar to the state’s rate overall (11.2 per 100,000). Kitsap’s rate has had no increasing or decreasing trend in firearm-related deaths since at least 2010. Males have a higher rate (19.2 per 100,000) compared to females (2.6 per 100,000).

**Firearm hospitalizations**

From 2017 to 2019, there were approximately 20 hospitalizations due to firearm-related causes in Kitsap residents, which is a rate of 2.4 per 100,000 residents. Kitsap’s rate is lower the state’s rate (6.4 per 100,000) in 2017-19 and the difference is statistically significant.
COMMUNITY ASSETS

There are many community members and organizations striving to improve the health of our community by working to prevent substance use and crime. Many more are working on underlying issues that influence the underlying influences behind substance use and crime, such as economic stability and mental health.

Substance use prevention

Kitsap County Substance Abuse Prevention Coalitions in Bremerton, North Kitsap and South Kitsap are grassroots volunteer organizations formed for the purpose of preventing and reducing youth substance abuse.

Kitsap County Board of Health and Public Health District’s Secure Medicine Return Regulation, Smoking/Vaping in Public Places Laws, and Marijuana and Tobacco Prevention Programs are aimed at minimizing harmful effects of legal substance use. The District also provides information on substance use prevention, naloxone, syringe services, and tobacco cessation.

People’s Harm Reduction Alliance provides harm reduction and other health services to people who use drugs, including their Ostrich Bay (Kitsap) mobile syringe exchange program.

Kitsap Recovery Center in Port Orchard provides both inpatient and outpatient substance abuse treatment services, primarily for low-income and Medicaid-eligible clients.

West Sound Treatment Center, Peninsula Community Health Services, and Cascadia Treatment Center provide substance use disorder treatment and are dedicated to substance use disorder recovery through education and support services. Coffee Oasis provides treatment resources for youth.

The BAART Program in Bremerton is an Opioid Treatment Program (OTP) that provides comprehensive services including case management, lab services, medication-assisted treatment, and counseling.

Agape Unlimited is a non-profit, state-certified, outpatient chemical dependency treatment program, supplemented by a range of support services.

Olympic Educational Services District (OESD 114) Student Assistance Program addresses non-academic barriers to learning by providing mental health and substance use prevention and intervention counseling support and student dropout intervention services.

The Washington State Department of Health Overdose Education and Naloxone Distribution program provides information and distributes naloxone. University of Washington’s Stopoverdose.org also provides information and resources on opioids, treatment, naloxone, and other topics.

The Washington State Department of Health’s Commercial Tobacco Prevention Program (including vaping products) provides information and programs such as the Washington State Quitline, 2Morrow Health (a free, anonymous, self-guided app-based program that teaches you how to deal with unhelpful thoughts, urges, and cravings caused by nicotine) and This is Quitting, a text-to-quit vaping program for young people ages 13-24.

Washington’s Safe Medication Return program lets people dispose of household over-the-counter, and prescription medications (including medications for household pets).
**HEALTH BEHAVIORS**

**NEXT Distro** is online and mail-based **harm reduction service** designed to reduce opioid overdose death, prevent injection-related disease transmission, and improve the lives of people who use drugs.

The **National Syringe Exchange Network** has a map of syringe exchange programs across the United States.

**Safety, injury, and violence**

**Child Protective Services** is a state agency that investigates reports of child abuse and neglect. **Adult Protective Services** investigates reports about abuse, abandonment, neglect, exploitation and self-neglect of vulnerable adults in Washington State.

St. Michael Medical Center’s **Sexual Assault Nurse Examiner (SANE) program** is designed to assure compassionate care for victims, assist law enforcement in the prosecution of crimes and provide sexual assault education to the community.

**Kitsap Support, Advocacy, and Counseling (KSAC)** offers free confidential advocacy and therapy services that are open to sexual assault/crime victim survivors and their non-offending family members.

**Kitsap Special Assault Investigation and Victim’s Services** coordinate and enhance our community agencies’ approach to sexual assault, domestic violence, child abuse, human trafficking, and exploitation of vulnerable adults.

Kitsap County Clerk’s office proves a pamphlet on different civil protection orders, including those related to domestic violence, anti-harassment, and sexual assault.

**YWCA Kitsap County** offers programs such as crisis intervention, safety planning, case management supportive housing, emergency shelters, legal advocacy, support groups, and programs to survivors of domestic violence.

**Scarlet Road** provides holistic support services to survivors of sex trafficking, community prevention and awareness training, community provider training, and other related services.

King County’s **Lock It Up** program offers information and resources on safe gun storage.

**Washington State Department of Health’s Injury and Violence Prevention Program** has initiatives that addresses topics such as pedestrian and motor vehicle safety, child injury, suicide prevention, and traumatic brain injury.

The Washington State Chamber of Commerce’s **Office of Crime Victims Advocacy**’s programs use advocacy, prevention, education, treatment and law enforcement to stop violence, substance abuse, and their social impacts so that Washington’s communities are the best places to work and live.

**The Compassionate Friends** provides highly personal comfort, hope, and support to every family experiencing the death of a son or a daughter, a brother or a sister, or a grandchild, and helps others better assist the grieving family.

**Mothers Against Drunk Driving** aims to end drunk driving, help fight drugged driving, support the victims of these violent crimes, and prevent underage drinking.

**Naval Base Kitsap Family Advocacy Program** is responsible for the prevention and response to child abuse and neglect and domestic abuse and intimate partner violence in military families.
HEALTH BEHAVIORS

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DATA SOURCES

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• Washington State Department of Health, Washington State Office of the Superintendent of Public Instruction, Department of Social and Health Services, and the Liquor and Cannabis Board, Healthy Youth Survey (HYS), analyzed by Kitsap Public Health District, Assessment & Epidemiology Program


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• Washington Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS), Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT), Aug 2021

• Washington State Population Interim Estimates (PIE), December 2022
Communicable diseases — or infectious diseases — are diseases caused by organisms such as bacteria, viruses, parasites, or fungi. They can be transmitted from person to person, or from animals, insects, contaminated food or water, or organisms naturally occurring in the environment. Washington Administrative Code (WAC) Chapter 246-101 requires the reporting of over 70 communicable diseases of public health importance.

INTRODUCTION

Preventing and controlling the spread of disease underlies almost all public health work. Understanding what communicable diseases look like in our community, and understanding how they overlap with other fields (policies, environment, socio-economic factors, etc.) is key to helping keep our community healthy and safe.

This chapter divides communicable disease topics into four main areas:
- Emerging Infections and Outbreak Response
- Reportable Communicable (Infectious) Diseases
- Immunizations and Vaccine-Preventable Diseases
- Sexually Transmitted Infections

KEY FINDINGS

The following are areas that stand out as being highly concerning and observed from changes over time for Kitsap residents, differences between Kitsap and Washington, and from Kitsap resident input, based on available data:

Emerging infections and outbreak response

Weekly rate of Kitsap County COVID-19 cases per 100,000 population, 2020-2022

- The first reported COVID-19 case in Kitsap County was tested on March 6, 2020.
- 4,219 COVID-19 cases were reported in the week ending Jan. 17, 2022, a rate of 1,550 cases per 100,000 population.

- From the beginning of the COVID-19 pandemic in March 2020 through the end of national public health emergency on May 11, 2023, Kitsap County reported more than 54,000 laboratory-confirmed COVID-19 cases and nearly 3,000 hospitalizations. COVID-19 has contributed to more than 400 Kitsap resident deaths.
**Reportable communicable diseases**

- From 2013 through 2022, Kitsap identified 31 active tuberculosis (TB) cases, including two deaths caused by TB. Multiple cases in the past five years have exposed some concerning gaps in TB identification in Kitsap. In particular, the two deaths involved patients presenting to multiple healthcare facilities with severe coughing and unexplained weight loss. Both cases had spent more than 20 years in countries with high TB burdens. In both cases, multiple points were identified across several facilities where opportunities for intervention were missed.

- About 100 to 300 new chronic hepatitis C diagnoses and up to four acute cases are reported each year in Kitsap. While most new diagnoses are reported in people in their 50s and 60s, an increasing proportion are among people in their 20s and 30s, mirroring a national trend.
  - Although hepatitis C patients often require complex “whole health” person-based care, resources are seldom available to communities to accomplish this.
  - Although almost all people infected with hepatitis C can be essentially cured with medication, the CDC estimates that fewer than one-third of newly diagnosed cases were initiated on antiviral treatment.

**Immunizations & Vaccine-Preventable Diseases**

- According to data reported by Kitsap County schools at the beginning of the 2022-23 school year:
  - 1,433 (4%) Kitsap K-12 students were not complete on their age-appropriate immunizations and did not have exemptions.
  - Seven public schools’ kindergarten cohorts reported less than 90% of their students complete on MMR.
  - 352 (14%) public school seventh graders did not have a recorded Tdap or an exemption.
  - 14 of 66 (21%) Kitsap public schools reported overall immunization rates below 90%. This includes three home school programs, five elementary schools, two middle schools, two high schools, and two K-12 programs.

- Kitsap Public Health District estimates that 37% to 48% of all Kitsap residents received an influenza vaccine in the 2022-23 flu season. In Washington, coverage tends to be higher in older age groups. Additionally, national data showed that people who were uninsured were 60% less likely to report having a seasonal flu vaccine.

- Beginning in 2020 (during the COVID-19 pandemic) Kitsap and the U.S. as a whole have seen an increasing proportion of adults opting to receive immunizations at pharmacies, instead of a provider’s office.

- Kitsap typically has between three and 20 influenza-associated deaths each flu season.

**Sexually Transmitted Infections (STIs)**

- In 2022, there were 1,011 chlamydia, 275 gonorrhea, 80 syphilis, and 10 new HIV diagnoses reported in Kitsap. There are about 345 Kitsap residents living with HIV.

**In 2022, Kitsap reported:**

- **Chlamydia**: 1,011 cases
- **Gonorrhea**: 275 cases
- **Syphilis**: 80 cases

- Syphilis cases have risen dramatically in recent years; in 2017 there were 33 reported cases, compared to 80 in 2022. Syphilis is the only STI for which Kitsap reports rates above the U.S. Department of Health and Human Services (DHHS) National Strategic Plan target.

- A large proportion of Kitsap STI cases receive care outside Kitsap. According to 2022 surveillance data, more than 20% of chlamydia, 32% of gonorrhea and 38% of syphilis cases in Kitsap residents were tested outside of the county; in fact, 12 cases were tested and treated by other jurisdictions’ health departments.

*Note: This chapter incorporates data from local, regional and national data sources. Additionally, this chapter includes context and insights drawn from discussions with Kitsap Public Health District program staff whose work addresses communicable diseases.*
EMERGING INFECTIONS AND OUTBREAK RESPONSE

Overview

One of the important functions of public health is the ability to respond to new issues that can impact the health of a community. In relation to communicable disease, this entails (a) responding when a new disease or a new outbreak of a disease enters the community, and (b) developing and maintaining frameworks to mitigate risk and ensure timely and effective public health response.

It goes without saying that the 2019 Novel Coronavirus (2019-nCoV, COVID-19) global pandemic has been by far the most immense and far-reaching public health event in recent memory, completely transforming everyday life. It continues to trigger repercussions for the years ahead.

In Kitsap County, over 32,000 laboratory-confirmed cases, 1,500 hospitalizations, 330 deaths, and 561 outbreaks were reported in the first 24 months. Schools, businesses, and many public and social services were suspended, and travel and normal social interaction were largely discouraged. Healthcare across the board was overwhelmed, resulting in delay of care, discouragement of healthcare seeking, and challenges to long-term care and assisted living facilities. Almost everyone in Kitsap County was impacted in some way, many in ways that were life-changing.

Public health departments plan for and respond to emerging infections and disease outbreaks (such as foodborne disease potentially linked to a local restaurant or influenza transmission occurring at a long-term care facility). In recent years, Kitsap Public Health District responded to a norovirus outbreak at Horseshoe Lake, foodborne illnesses, avian influenza, and mpox; and planned for potential Ebola.

Data

COVID-19 (March 2020 – Present) — The first U.S. case associated with the 2019 Novel Coronavirus (2019-nCoV, COVID-19) outbreak was identified in Snohomish County, Washington, on Jan 21, 2020. On February 19, 2020, Gov. Jay Inslee declared a state of emergency in Washington. The first case in Kitsap County was reported in March 2020. From the beginning of the pandemic through the end of national public health emergency on May 11, 2023, Kitsap reported over 54,000 laboratory-confirmed cases and nearly 3,000 hospitalizations. COVID-19 has contributed to over 400 deaths in Kitsap, and nearly 7 million deaths worldwide.

At the epidemic’s peak (January 2022), Kitsap County reported over 4,200 cases per week, or one in every 67 Kitsap residents. St. Michael Medical Center (SMMC) struggled to meet healthcare needs, with intensive care units (ICUs) at or above capacity and several months when over 20% of hospitalized patients were COVID-19 cases.

Outbreaks in long-term care facilities, which help describe COVID-19’s impact on one of the most sensitive sections of the community, peaked at the beginning of 2022, aligning with county’s peak in reported COVID-19 cases, and continued at elevated levels through May 2023, with between five and 16 new outbreaks reported each month to the health department during this time.

Figure 1 summarizes COVID-19 associated deaths in Kitsap County residents by pandemic period, illustrating the evolution of the epidemic across the waves of different dominant virus variants.
## COVID-19 pandemic period

<table>
<thead>
<tr>
<th>Period</th>
<th>Number of deaths</th>
<th>Average deaths per month</th>
<th>Median age</th>
<th>% of decedents under age 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early pandemic (Mar 2020 - Feb 2021)</td>
<td>91</td>
<td>7.6</td>
<td>80</td>
<td>20.9%</td>
</tr>
<tr>
<td>Alpha wave (Mar - Jun 2021)</td>
<td>30</td>
<td>7.5</td>
<td>68.5</td>
<td>56.7%</td>
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<tr>
<td>Delta wave (Jul - Nov 2021)</td>
<td>137</td>
<td>27.4</td>
<td>74</td>
<td>43.1%</td>
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<tr>
<td>Omicron peak (Dec 2021 - Feb 2022)</td>
<td>72</td>
<td>24.0</td>
<td>76</td>
<td>30.6%</td>
</tr>
<tr>
<td>Late omicron and subvariants (Mar 2022 - May 2023)</td>
<td>104</td>
<td>6.9</td>
<td>80</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

Figure 1. COVID-19-associated deaths in Kitsap residents, March 2020 – May 2023


**COVID-19 vaccine** — The first Moderna and Pfizer vaccines against COVID-19 were licensed in the U.S. in December 2020, and mass vaccination began in the U.S. using a phased roll-out to prioritize people at higher risk of exposure or disease. Kitsap Public Health District and Kitsap County Department of Emergency Management held their first community vaccination clinic on Jan. 26, 2021. As of July 2023, an estimated 71.9% of the Kitsap County population have completed a COVID-19 primary series, and over 64,000 people (23.2% of the population, or 35.6% of people who are eligible) have received a bivalent booster.

Kitsap facilities (excluding military) administered over 400,000 doses of COVID-19 vaccine in the first 12 months of vaccine roll-out. Around 50% were administered at commercial pharmacies, 39% were administered at provider offices or clinics, 9% were administered by public health, and around 3% by tribal health partners. Additionally, regional Naval medical staff vaccinated nearly all locally stationed active-duty military.

Kitsap Public Health employed multiple strategies for equitable distribution of COVID-19 vaccine. The District published data dashboards to track vaccine distribution to identify and respond to inequities in distribution. Additional strategies included bilingual phone access, interpretation services, and dose allocations for community members disproportionately impacted by COVID-19 and/or with high barriers to accessing vaccine. The District also convened a Vaccine Equity Collaborative comprised of community organizations, residents and healthcare providers to help inform and improve equity in local vaccination efforts and support communities disproportionately impacted by the COVID-19 pandemic with reliable information and access to vaccines.

**Mpox** — On May 6, 2022, the United Kingdom reported a case of mpox (formerly “monkeypox”) in a UK resident with recent travel to Nigeria, where mpox is endemic. Within seven days, two additional cases were identified with no reported travel and no link to the index case, and within three weeks, there were 38 cases in seven European countries. Unlike mpox epidemiology in endemic regions, where transmission is similar to hand foot and mouth or other person-to-person childhood illnesses, the new cases appeared to be occurring mostly among adult males reporting recent sex with
On May 17, the first U.S. mpox case was reported in Massachusetts. One week later, King County reported a case who had reported recent international travel. Over the next two months, cases increased dramatically in non-endemic countries, and on July 23, the World Health Organization declared mpox a public health emergency, which ended on May 11, 2023.

The first case in Kitsap was reported on July 24, 2022. Kitsap Public Health educated providers, mobilized resources (such as vaccine and KPHD response staff) and developed protocols and response roles to ensure that Kitsap would be able to effectively respond to the emerging epidemic. A total of five cases and 18 close contacts (the majority of which were linked to cases outside Kitsap) were identified in Kitsap over the next three months.

Approximately 270 doses of mpox vaccine were administered in Kitsap.

**Other outbreak response and prevention** — In 2022, the KPHD’s Food and Living Environment program conducted 2,136 routine food establishment inspections, and 77 foodborne illness complaint investigations.

In 2022, KPHD’s Water Pollution Identification & Correction program collected thousands of water samples from 69 streams and 17 lakes across Kitsap County for safety monitoring. In 2022, the PIC team issued one stream advisory and six lake advisories (see the Environmental Health chapter for more information).

**Disparities**

Existing disparities are exacerbated during an epidemic. By nature, large outbreaks and their response tend to exacerbate the disparities and inequalities already present in our community and our response systems. This includes the different factors which put people at a higher level of risk for exposure, for becoming infected, for becoming seriously ill, for accessing treatment, and for being able to easily follow public health guidelines.

A 2021 analysis of county-level COVID-19 mortality in Pennsylvania found statistically significant associations between higher COVID-19 mortality and higher poverty levels, higher prevalence of disability, and smaller county population size. In Washington, significant and substantial differences in mortality have been observed across race and ethnicity groups, with Native Hawaiians and Pacific Islanders experiencing a death rate over four times the state aggregate rate, and almost twice as high as any other group after adjusting for age. (Figure 2) See the Methods chapter for more information about adjusting for age. American Indians and Alaska Natives experienced a death rate over two times as high as the state aggregate rate, and Hispanics and Blacks roughly 80% and 50% higher respectively.

It is important to examine the potential reasons for this, as it is almost certainly related to socioeconomic factors correlated with race and ethnicity, rather than biology. Possibilities include likelihood and comfort of seeking medical care, higher prevalence and medical management of chronic medical conditions, accurate knowledge about COVID-19, income level, health literacy and/or vaccine uptake and community coverage.
Figure 2. Age-adjusted death rate among Washington COVID-19 cases per 100,000, March 1, 2020 through July 29, 2023

Data source: Washington State Department of Health, COVID-19 morbidity and mortality by race, ethnicity and spoken language in Washington (2023)

Cumulative incidence of COVID-19 deaths was lower in Kitsap than in Washington as a whole, however COVID-19 deaths were not evenly distributed across Kitsap regions, with the cumulative age-adjusted death rate twice as high in South Kitsap (190.6 deaths per 100,000 population) as in North Kitsap (89.5 deaths per 100,000). (Figure 3)
Unsurprisingly, there was some correlation observed between COVID-19 deaths and regional prevalence of poverty, as well as with the proportion of the population living without health insurance.

The table below lists additional examples of disparities observed by various responders during the COVID-19 epidemic, including KPHD employees active in the Kitsap County COVID-19 response, as well as examples of groups identified by needs assessments and the CDC/ATSDR Social Vulnerability Index as potentially disproportionately impacted.

<table>
<thead>
<tr>
<th>Area</th>
<th>Groups disproportionately impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ability to isolate</strong></td>
<td>• People in congregate living settings, such as long-term care facilities, barracks, corrections facilities, dormitories, shelters, agricultural migrant housing facilities, etc. (~7,900 in Kitsap County; source: U.S. Census Bureau)</td>
</tr>
<tr>
<td></td>
<td>• People living in crowded housing</td>
</tr>
<tr>
<td></td>
<td>• People who are unable to get groceries on their own.</td>
</tr>
<tr>
<td><strong>Ability to work from home</strong></td>
<td>• Workers in certain sectors, including grocery stores, manufacturing, retail, healthcare (including long-term care facilities), public transportation, homeless shelters, construction¹⁹ (&gt;40,000 in Kitsap County; source: WA Employment Security Department)</td>
</tr>
<tr>
<td><strong>Access to benefits</strong></td>
<td>• Residents who are not documented</td>
</tr>
<tr>
<td></td>
<td>• People with limited or no English</td>
</tr>
<tr>
<td></td>
<td>• People without access to the internet</td>
</tr>
</tbody>
</table>
Crowdsourced funding to fill economic gaps

- People in less affluent zip codes and people of color were found to be less able to raise funds through crowdsourcing funding such as GoFundMe.\textsuperscript{20, 21}

Education

- Children with special needs
- School districts with less resources
- Children in crowded living situations

Employment and Business

- Accommodations and food services, arts/entertainment/recreation, small and medium-sized businesses\textsuperscript{22}

Health and medical

- People without health insurance (including those who lost their jobs during the pandemic)
- People without a primary care provider
- People with preexisting health conditions who are more susceptible to severe illness

Information

- People with limited or no English (~6,200 in Kitsap County)
- People without access to the internet

Psychological

- People with existing or newly-onset mental health needs
- People directly impacted by the pandemic, including people losing family members or whose living situation changes
- First-line responders
- People who are isolated

Transportation

- People without access to a vehicle (~4,600 people in Kitsap County)
- Residents of areas further from the urban core or from healthcare facilities
- People with mobility issues
- People who are not allowed to drive

\textbf{Figure 4.} Examples of disparities observed during the COVID-19 pandemic, 2020-2022

Other examples of emerging infections and outbreaks disproportionately impacting subsections of the community include mpox in Washington and the United States (2022) predominately affecting gay and bisexual men, and Zika virus (2015-16) in parts of the United States occurring disproportionately among Hispanics and people born outside the U.S.\textsuperscript{23-24}

In an emerging infection or outbreak response, it is important to identify where disproportionate impact is occurring, to examine upstream gaps which may be contributing to and/or worsening these gaps, and to tailor community-informed responses, while avoiding creating or amplifying stigmatization of members within our communities.

\textbf{Emerging issues}
Information becomes critical consideration — In a 2019 study on social media and health misinformation, Wang and colleagues observed, “misinformation, generated intentionally or unintentionally, spreads rapidly. Although affecting all areas of life, it poses particular problems in the health arena, where it can delay or prevent effective care, in some cases threatening the lives of individuals.”

Although public health has long been familiar with challenges in information and misinformation, the COVID-19 pandemic presented public health with a challenge of unprecedented scale in navigating and correcting health misinformation. 

There are two interconnected public health issues stemming from this topic: (1) the rapid dissemination and amplification of misinformation, and (2) understanding the dynamics of how different segments of the community receive public health information. (Figure 5)

![Figure 5](image.png)

**Figure 5.** Survey responses to: “How reliable do you think the information is that comes from the following sources?” by COVID-19 vaccine perception (6,119 respondents)

**Data source:** Kitsap Public Health District, Community Health and Wellbeing Survey, 2021

**Notes:** Blue = 80% or more found this source reliable, Green = 60-79% found this source reliable; Yellow = 40-59% found this source reliable, Orange = 20-39% found this source reliable; Red = <20% found this source reliable

COVID-19 pandemic “aftershocks” — Arguably one of the most substantial impacts of the COVID-19 pandemic was the massive disruption to healthcare, employment, and social interaction.

More immediate impacts were explored in KPHD’s 2021 Kitsap County Community Health and Wellbeing Survey, including:
• More than one-third of respondents felt that their general quality of life had worsened over the course of the pandemic (just under half reported that it stayed the same).
• 52% said physical fitness got worse.
• 31% thought their overall health got worse.
• 56% reported more anxiety.

Figure 6 displays a summary of selected community indicators routinely reviewed by the KPHD Epidemiology Team, comparing pre-pandemic values to the years during or following the pandemic.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Change</th>
<th>Years compared</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opioid mortality rate</strong>*</td>
<td>+248%</td>
<td>2022 vs. 2019</td>
</tr>
<tr>
<td><strong>Students experiencing homelessness (rate)</strong>*</td>
<td>+28%</td>
<td>2020-21 cohort vs. 2018-19 cohort</td>
</tr>
<tr>
<td>Proportion of population living below federal</td>
<td>+24%</td>
<td>2021 vs. 2019</td>
</tr>
<tr>
<td>poverty level</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adults (19+) without health insurance</strong></td>
<td>+20%</td>
<td>2021 vs. 2019</td>
</tr>
<tr>
<td><strong>Overcrowded housing units</strong></td>
<td>+14%</td>
<td>2021 vs. 2019</td>
</tr>
<tr>
<td><strong>Unemployment</strong>*</td>
<td>+11%</td>
<td>2021 vs. 2019</td>
</tr>
<tr>
<td><strong>Homeless population (point-in-time)</strong></td>
<td>+11%</td>
<td>2022 vs. 2019</td>
</tr>
<tr>
<td><strong>Four-year high school graduation rate</strong>*</td>
<td>-4%</td>
<td>2020-21 cohort vs. 2018-19 cohort</td>
</tr>
</tbody>
</table>

These indicators should be monitored over the next five years to identify issues that are not improving, and to help inform strategies to bridge gaps as our community continues to recover from the pandemic.

**Wastewater as a tool for passive surveillance** — Previously used as a tool for identifying and quantifying prescribed pharmaceutical metabolites and illicit substance use in geographically defined populations, the adaptation of wastewater-based surveillance for communicable disease epidemiology expanded rapidly during the COVID-19 pandemic.29 30

Proponents of this methodology assert that wastewater surveillance, when carefully adapted, is a low-resource disease surveillance tool which can potentially avoid some of the biases inherent in disease notification surveillance, such as the requirement of laboratory-based testing, and over- or under sampling of specific populations.

Wastewater data have been used to monitor relative COVID-19 circulation levels and molecular characterization31 32 33,
to supplement mpox surveillance\textsuperscript{34}, and to detect circulating polio virus relating to a confirmed case in New York.\textsuperscript{35} Washington State Department of Health currently tests wastewater for COVID-19, influenza A and B, respiratory syncytial virus (RSV), mpox, carbapenemase-producing organisms, and Candida auris.\textsuperscript{36}

The hope is that wastewater-based surveillance can supplement existing communicable disease surveillance mechanisms and can serve as an early warning system for an infectious disease in the community. Wastewater-based epidemiology is a developing field, and there is not yet established guidance on data interpretation, which limits the current use of this methodology, but this field is likely to expand in the next 10 years as additional data are collected and evaluated.

At the time of writing, there are 21 wastewater treatment plants in ten counties participating in the Washington State Wastewater-Based Epidemiology program, with the nearest site to Kitsap County located in neighboring Jefferson County (Port Townsend).

Moving from pandemic to endemic — The end of the COVID-19 public health emergency was declared May 11, 2023. This has a number of implications to public health and to the community at-large:

- There will be a change in public health role from emergency response to routine COVID-19 disease control and prevention.
- The end of emergency funding for COVID-19 vaccines and treatments and COVID-19-related public health funds will decrease the capacity of public health to respond and may leave uninsured Kitsap residents without preventive or treatment services in 2025.
- The recommendations for COVID-19 vaccines are still evolving.

Climate change and local infectious disease epidemiology — One of the prominent emerging public health issues gaining attention is the need to better understand and prepare for the impact of climate change on human health. Changes in global and local climate are expected to alter communicable disease epidemiology in a number of ways\textsuperscript{37}:

- **Increase in range in disease vectors:** The Pacific Northwest is largely free of mosquito-borne (dengue virus, malaria) and tick-borne (Lyme disease, rickettsia) diseases which circulate in other parts of the country and continent. Changes in climate patterns are expected to expand areas at risk for vector-borne diseases northward in the northern hemisphere, as well as increase the length of seasonal disease transmission.\textsuperscript{38 39} Warmer temperatures are also expected to impact mosquito abundance, as well as the rate at which viruses such as West Nile can replicate.\textsuperscript{40}

- **Evolution of more favorable conditions for ‘warm weather’ organisms:** Warming water and land temperatures can influence the spread and proliferation of disease-causing organisms that exist in the environment. Two local concerns include:
  - The recent emergence in the Pacific Northwest of locally acquired coccidioidomycosis:
    Coccidioidomycosis, or Valley Fever, is an often-serious pulmonary infection caused by inhalation of spores from the environmental fungus Coccidioides. Most seen in hot, dry climates such as the U.S. Southwest, Washington had two cases reported in 2010 in residents with no travel outside of the state; since then, there have been around 20 total cases (around two each year), where the most likely exposure occurred in south-central Washington state.\textsuperscript{41 42}
- **Increased proliferation of Vibrio bacteria species:** Vibrio bacteria are marine species found naturally in coastal waters, and can cause severe diarrhea, skin infections and, in extreme cases, sepsis and death. Higher surface water temperatures exponentially increase the number of Vibrio bacteria which replicate in an hour, and increases habitat suitability of more dangerous Vibrio species, such as Vibrio vulnificus.\(^{43}\) V. vulnificus is relatively common in the U.S. Southeast and carries a 20% case fatality rate\(^ {44}\); although rare on the West Coast, V. vulnificus has been sporadically detected in Washington waters.
  - A 2023 analysis of V. vulnificus illnesses in the eastern U.S. illustrates how dramatically the bacteria has expanded its range along the East Coast in the past 30 years: they found that the northern geographic bound (defined as the degree of latitude below which 95% of non-foodborne V. vulnificus infections occurred) moved northward by around 660 miles, or the distance from Tacoma to San Francisco.\(^ {45}\)

- **Impacts associated with increased extreme weather events:** Extreme weather events and associated environmental events such as heat domes, heavy snow, floods, wildfires, landslides, tornados and powerful storms can have direct impacts on infectious disease (such as waterborne illnesses spread through flooding and contamination from agriculture and sewerage (leptospirosis, giardiasis, norovirus, Escherichia coli species), as well as indirect impacts (such as bad air quality increasing sensitive people’s susceptibility to airborne and respiratory infections, or the close quarters of an emergency shelter increasing the risk of disease outbreak). Extreme events can also cause supply chain disruptions by shutting down transport routes, or damaging facilities of key health resources, such as the recent national drug shortage caused by extensive tornado damage to a Pfizer manufacturing facility in North Carolina.\(^ {46}\)

- **Change in land use alters local animal reservoirs:** As changes in climate and water resources alter the suitability of land for agriculture and urban development, transition from one land use to another can displace or increase local animal vectors and increase the likelihood of interaction with humans. For example, transforming natural areas into agricultural areas creates food sources for rodents and lagomorphs, who can carry diseases such as hantavirus, tularemia or rickettsia.\(^ {47}\)
REPORTABLE COMMUNICABLE DISEASES

Overview

Public health agencies are responsible for monitoring and investigating over 100 reportable conditions defined by Washington Administrative Code (WAC) chapter 246-101. In general, these represent infectious diseases which (a) either present the potential for an outbreak or (b) may indicate a larger-scale exposure where additional people are at risk.

This section includes reportable communicable diseases not otherwise included in the emerging infections, sexually transmitted infections, or immunizations and vaccine-preventable diseases sections.

CDC National Tuberculosis Program objectives and targets for 2025 — The CDC National TB program sets out nationwide objectives for reducing TB incidence, case management and treatment, laboratory reporting, contact investigations, examination of immigrants and refugees, data reporting, TB program evaluation, and human resources development. (Figure 7)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Target (2025)</th>
<th>U.S. (2022)</th>
<th>WA (2020-2022, avg.)</th>
<th>Kitsap (2020-2022, avg.4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce the incidence of TB disease (per 100,000 population)</strong></td>
<td>1.3</td>
<td>2.5</td>
<td>2.6</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>For patients with newly diagnosed TB disease for whom 12 months or less of treatment is indicated, increase the proportion who complete treatment within 12 months. (%)</strong></td>
<td>95%</td>
<td>Not available</td>
<td>Not available</td>
<td>91.7%</td>
</tr>
</tbody>
</table>

*Figure 7. Selected CDC National TB Program objectives and performance targets for 2025*

*Data source: Centers for Disease Control and Prevention, Division of Tuberculosis Elimination*

*Note: A three-year average was used for Washington state and Kitsap County to accommodate small numbers in Kitsap incident TB cases.*

Data

A table of reportable conditions in Kitsap County from 2018 through 2022 can be found here. A small subset of these conditions is summarized below.

**Tuberculosis (TB)** — From 2013 through 2022, Kitsap County identified 31 active TB cases (from one to six each year), including two deaths caused by tuberculosis. Of these:

- Over three-quarters of Kitsap TB cases were born or spent substantial time in regions with much higher TB burdens; however, at least half of these had been living in the U.S. ten or more years prior to becoming ill.
- Around 50% were tested and diagnosed because they had symptoms consistent with active tuberculosis.
infection; the remainder were detected through abnormal TB lab or chest x-ray or were identified as a contact to a known case.

- Kitsap County has had two cases of TB that were resistant to first-line drugs, both occurring in 2022. Multi-drug-resistant TB cases require two to three times more follow-up time and incur nine times the cost of a non-drug-resistant case.49

In Washington, TB has held relatively steady over the past ten years, with around 200 cases reported per year. However, in 2022, this jumped up to 251, with around two-thirds of cases reported in King, Snohomish, and Pierce counties.50 (Figure 8)

![Figure 8. TB cases reported in 2022 by county](image)

**Data source:** Washington State Department of Health, TB Summary Brief, 2022

From July 2021 through March 2023, Washington experienced a statewide outbreak associated with two correctional facilities (both outside of Kitsap County). A total of 27 cases were linked to this outbreak between July 2021 – March 2023), and a total of 3,075 contacts were identified and referred to local health jurisdictions for follow-up evaluation.51

**Hepatitis C** — After COVID-19, chlamydia and gonorrhea, hepatitis C is the fourth most reported infection to Kitsap Public Health District. Kitsap receives around 100 – 300 new chronic hepatitis C diagnoses reported per year, and up to four acute cases. Figure 9 shows the age distribution of Kitsap County chronic hepatitis C cases newly reported from 2018 through 2022, and the distribution by sex at birth for people diagnosed under age 50 versus age 50 and over.

- While the majority of new diagnoses are reported in people in their 50s and 60s, an increasing proportion of new diagnoses are among people in their 20s and 30s, mirroring a trend observed nationwide.52

- Around 57% of new diagnoses were male, and the male-to-female ratio tended to be slightly more pronounced (though not significantly) among older diagnoses than younger diagnoses.
Figure 9. (a) Age distribution and (b) Sex at birth by age cohort of Kitsap County chronic hepatitis C cases diagnosed 2018 – 2022

Data source: Washington Disease Reporting System (WDRS)

Because chronic hepatitis C can be a long-lasting infection, the date of a person’s diagnosis – which is what is reported to public health – does not indicate when that person may have been infected. Because of this, relative changes in case numbers often tell us more about changes in testing rather than changes in transmission patterns. For this reason, acute cases are more useful in helping to describe local disease transmission.

In Washington state, there have been around 120 acute hepatitis C cases reported per year, with over 60% among people aged 19 to 35 years, and over half of cases reported in King, Pierce, and Spokane counties.53

Recent injection drug use was determined to be a risk factor in 77% of cases. Washington DOH has observed a 60% increase in the rate of acute infections between 2017 and 2021.

Approximately 20 – 25% of acute hepatitis C infections will spontaneously clear the infection, but, untreated, the remainder will go onto to develop chronic hepatitis C infection.54 In the past five years, 0 – 6 acute hepatitis C cases have been reported in Kitsap County annually.

Seasonal respiratory illness — Seasonal respiratory illnesses such as influenza and respiratory syncytial virus (RSV) represent an annually occurring community outbreak of infectious disease; it remains to be seen whether COVID-19 will adopt a similar seasonality. Seasonal respiratory illnesses are of public health interest because of their recurring potential to cause epidemic spread and excess hospitalizations and deaths. Influenza and respiratory syncytial virus tend to peak during winter months, with little or no detectable activity from around March to October.

Figure 10 shows annual flu season cycles in Kitsap County from the 2018-19 flu season through April 2023, juxtaposed with COVID-19 activity for comparison; both show laboratory results reported by Kitsap sentinel respiratory reporting laboratories. The timing of peak influenza activity tends to vary from season to season, but generally occurs somewhere between late November and February (March 2019 was somewhat of an outlier).

Similar to the U.S., Kitsap County saw very little flu activity during the first two years of the COVID-19 pandemic, but
later saw most seasonal flu indicators return to pre-COVID baselines at the end of 2022.

Figure 10. Influenza and COVID-19 labs reported by Kitsap sentinel respiratory reporting labs, Oct. 2018 – Apr. 2023

Data source: Washington Disease Reporting System (WDRS); Kitsap sentinel respiratory lab reporting data

Kitsap County typically has anywhere between three and twenty influenza-associated deaths reported each flu season; however, between April 2020 and November 2022 – the height of the COVID-19 pandemic – there were none.
## Disparities

Disparities in communicable diseases can occur in multiple places; examples include:

<table>
<thead>
<tr>
<th>Where disparity occurs</th>
<th>Contributing factors</th>
<th>Examples</th>
</tr>
</thead>
</table>
| **Exposure to pathogen** | • Living or working conditions  
• Ability to take measures to avoid exposure  
• Ability to travel  
• Access to preventative measures, such as personal protective equipment (PPE) | • People living in run-down buildings may be more likely to be exposed to bacteria in rodent droppings.  
• Congregate housing or other high-density living conditions is a more conducive environment for communicable disease transmission.  
• Small children are less able to follow hand hygiene recommendations.  
• People experiencing homelessness are less able to control living conditions to prevent exposure.  
• During COVID-19, several occupation classes were not able to self-isolate. |
| **Vulnerability to infection or severe illness** | • Pre-existing conditions (and ability to medically manage these conditions)  
• Immunization status | • People living with HIV that is not medically managed or undergoing chemotherapy are at increased risk of becoming ill from organisms common in the environment, such as histoplasmosis or coccidioidomycosis.  
• Infants under 12 months old are too young to receive measles-containing vaccine.  
• People with mental health conditions may be less able to care for themselves to prevent severe illness. |
| **Access to diagnosis and treatment** | • Insurance coverage  
• Geographic location  
• Transportation  
• Availability of specialists  
• Language | • People who are uninsured or underinsured may wait until symptoms are more severe before seeking medical care.  
• People living in rural areas may have to travel farther to receive medical care.  
• People with less fluency in English may have difficulty in communicating with a provider or finding health information. |
| **Impact of illness / ability to recover** | • Income  
• Social safety net  
• Stigma | • People in some jobs may not have sick leave to cover an extended illness such as tuberculosis, and may not be able to negotiate keeping their position.  
• Stigmatizing attitudes about an illness may cause lasting rifts with friends, coworkers, and family. |
Tuberculosis tends to disproportionately impact people who are most vulnerable and the most difficult to reach. In Washington state, there are three main risk groups for tuberculosis infection: (1) people experiencing homelessness; (2) people who are incarcerated; and (3) people who were born in countries with high TB burden.

TB also disproportionately impacts people who have additional challenges, including language barriers, unstable housing or overpopulated housing, lack of transport, vulnerability to stigma, and unfamiliarity with the U.S. healthcare system; this requires public health to formulate multiple, scalable strategies.

**Hepatitis C and its history of underfunding** — Chronic hepatitis C is often compared to HIV because it is a long-term infection which tends to disproportionately impact people in marginalized segments of the population. Hepatitis C was listed as an underlying or contributing cause of death of around 14,200 people in the United States in 2019, compared to 5,500 HIV deaths in 2017 (most recent report). However, in terms of funding, there is no comparison: the Washington State Department of Health reports a four to ten times lower annual budget for their hepatitis C program compared to their HIV program. This severely limits the amount of case management and treatment navigation that health departments can engage in, and many local health jurisdictions are unable to even perform basic case investigations on new cases. In the United States, many health jurisdictions rely on special grant funding – which is not consistent – to support hepatitis work.

**Reaching people experiencing homelessness** — For cases without stable housing, case workers and providers often encounter difficulty when attempting to contact a case or close contact who may require treatment or post-exposure prophylaxis. People experiencing homelessness may not have working telephones and may frequently move locations (including outside of Kitsap County). Locating such cases and contacts requires a disproportionate amount of resources and poses a risk for ongoing transmission. Alternate solutions should be explored to improve strategies for public health contact with people experiencing homelessness.

**Emerging issues**

**The need for more provider awareness around tuberculosis** — The educational tagline for CDC’s TB outreach campaign is “Think TB.” Tuberculosis can present in a number of seemingly unconnected symptoms and syndromes, involving different systems of the body, and can easily be missed by a provider who is not “thinking TB”.

Multiple TB cases in the past five years have exposed some worrying gaps in TB identification and in notification to Public Health. Two TB-related deaths reported in 2019 involved patients presenting to multiple healthcare facilities with severe coughing and unexplained weight loss; both had spent >20 years in countries with high TB burdens. In both cases, multiple points were identified across several facilities where opportunities for intervention were missed.

**Global programs affected by COVID-19** — In their 2022 annual report, the World Health Organization (WHO) warned, “The COVID-19 pandemic continues to have a damaging impact on access to TB diagnosis and treatment and the burden of TB disease. Progress made in the years up to 2019 has slowed, stalled, or reversed, and global TB targets are off track.”

High TB-burden countries rely on organized, community-integrated TB case finding and case management programs, which use teams of community health workers regularly visiting homes and actively monitoring TB treatment and identifying new cases. During the COVID-19 pandemic, movement restrictions, self-isolation and overburdening of healthcare systems drastically interrupted these protocols in many countries.

These impacts are already visible in global TB surveillance data: case finding decreased drastically during 2020,
particularly in the South-East Asia and the Western Pacific WHO regions. This means people with TB were not identified and treated, and many were confined at home where they then exposed other confined household members. In 2021, TB deaths shot up to 2017 levels, undoing long-term gains made in global TB morbidity and mortality. WHO posited that disruptions to global TB programs caused by the COVID-19 epidemic has set us back 10 years in TB elimination.58

Historically, over 75% of Kitsap TB cases had likely contracted their infection in high-burden TB regions outside the continental U.S. The impact of the post-COVID TB surge globally will likely contribute to increased cases detected in future cohorts of Washington state and Kitsap County residents.

Only a fraction receiving treatment — Almost all people infected with hepatitis C can be essentially cured with medication59 60 61, but only a small fraction of those infected are even offered treatment. CDC estimates that only approximately 34% of people diagnosed with hepatitis C between 2013 and 2022 had evidence of viral clearance (either treatment-induced or spontaneous) – meaning that fewer than one in three newly diagnosed cases are thought to have been initiated on treatment.62 63

The Viral Hepatitis National Strategic Plan for the United States aims to increase the proportion of people who have cleared hepatitis C infection to ≥80% by 2030.

Antibiotic/antimicrobial resistance — Increasing antibiotic resistance has been an emerging concern for the past couple decades. This is a multi-faceted issue that involves healthcare, the pharmaceutical industry, agriculture, and veterinary medicine. According to the CDC, resistant organisms caused more than 2.8 million infections and 35,000 deaths in the U.S. in 2019.64 Circumspect antibiotic stewardship is key to ensure that treatment options remain available against evolving pathogens.

There is particular concern for bacteria which can manufacture enzymes that can break down antibiotics in the carbapenem class, a key antibiotic therapy relied on for highly antibiotic-resistant organisms. Infections from these carbapenemase- (antibiotic-resistant enzyme) producing organisms have been increasing steadily in Washington state over the past ten years and are particular concern to healthcare and long-term care facilities, where they can spread among particularly susceptible patients and residents. (Figure 12)

Local outbreaks have been reported in association with healthcare facilities, the most recent occurring in at Virginia Mason Medical Center in King County from November 2022 through May 2023, causing over 30 cases and seven deaths.65 In Kitsap County, there are around 5 – 16 suspected cases reported and investigated each year; of these, only one or two are found to be carbapenemase-producing organisms. There were three total cases reported in Kitsap County in 2021 and 2022.
Two additional organisms recently in the public health eye for antimicrobial resistance concerns are the pathogenic yeast Candida auris and the diarrheal bacteria Shigella. C. auris is a recently emerging multidrug resistant yeast which can cause invasive healthcare-associated infections with high mortality. Pierce County reported the first locally acquired case in Washington State in July 2023, indicating that this is now present locally, and a concern to local healthcare and long-term care facilities. The CDC has also been concerned about the increasing proportion of Shigella infections that are resistant to all commonly recommended empiric and alternative antibiotics, termed “extremely drug-resistant (XDR) Shigella”. According to the CDC health advisory issued February 24, 2023, the percentage of shigellosis infections that were found to be XDR strains increased from 0% in 2015 to 5% in 2022.

The two main strategies for combatting resistant infections are preventing people from becoming infected in the first place and slowing the development of antimicrobial resistance.

**Responding to a decrease in injection use** — Multiple counties in the Puget Sound region have reported a recent dramatic decrease in community utilization of syringe services programs, hypothesizing this to be related to substance use patterns shifting from injecting drugs to smoking them. This, on one hand, can be viewed as a positive change, as it reduces the risk of bloodborne and wound infections such as hepatitis C and wound botulism.

However, this change in behavior also necessitates a strategy change from public health and community programs working with people who use substances. Syringe services providers have traditionally been leveraged as an entry point with this highly vulnerable and difficult-to-reach population to offer additional health services such as linkage to wraparound services, STI screening and immunizations. As syringe use declines, alternative and potentially more resource-intensive strategies will need to be explored.

**Loss of Medicaid coverage** — Thousands of Kitsap residents may have lost their Medicaid coverage with the end of the COVID-19 public health emergency. See the **Healthcare Access** chapter for more information.
IMMUNIZATIONS AND VACCINE-PREVENTABLE DISEASES

Overview

One of the most important and effective public health strategies for protecting people against infectious diseases is immunizations. By providing individual protection to the majority of people, a community can drastically reduce the circulation of a large number of serious diseases.

Public health’s role in vaccine-preventable diseases (VPDs) and immunizations is two-fold: (1) disease prevention through promoting and facilitating appropriate immunization in the community, and (2) responding to disease reports to limit spread and protect vulnerable people. Public health professionals do this through communicating and educating providers and community members about immunization requirements, providing technical assistance to providers for vaccine acquisition, identifying and addressing immunization gaps, providing reliable information to the community about vaccine risks and benefits, and mobilize resources.

The CDC’s Advisory Committee on Immunization Practices (ACIP) has developed evidence-based vaccine recommendations for people by age group and by specific needs, such as pregnancy or travel. These groups include:

- **Routine vaccines for infants and children**: The ACIP has developed guidelines on recommended vaccine series to protect infants and children with developing immune systems from serious disease that previously caused epidemics and early deaths in small children.

- **Routine vaccines for adults**: Tetanus vaccine boosters are recommended every ten years to maintain protection against the pathogenic toxin produced by the bacteria Clostridium tetani, which naturally occurs in the environment. Annual influenza vaccines help protect against seasonal circulating influenza viruses.

- **Vaccines for aging populations**: As people age, they may become at higher risk of becoming ill or developing serious complications from pathogens less likely to impact younger, healthier people. Examples include pneumococcal and shingles vaccines, as well as higher-dose flu vaccines and additional COVID-19 boosters.

- **Vaccines during pregnancy**: The ACIP has developed a special set of recommendations around pregnancy to minimize risk to the mother and infant before, during and after birth. These include ensuring the mother is up to date on routine immunizations (including seasonal influenza and COVID-19), as well as supplemental dose of pertussis-containing vaccine during the 27th through 36th week of each pregnancy.

- **Vaccines for international travelers**: People traveling abroad may be exposed to serious vaccine-preventable diseases that are uncommon in the Pacific Northwest, such as typhoid or Japanese encephalitis. Some countries require proof of yellow fever vaccine for entry or transit. Travelers should also make sure they are up to date on all routine vaccines, such as MMR and Tdap, as their likelihood of exposure to diseases like measles or diphtheria may be higher at their travel destination.

- **Vaccines for refugees, immigrants, and international adoptions**: There are specific recommendations and requirements for evaluation and/or proof of vaccination for some specialized groups seeking residence in the United States.

- **Vaccines for some job categories**:
  - Healthcare workers (including clinical laboratory workers)
  - Active-duty military (managed by U.S. Department of Defense)
- **Vaccines mobilized during outbreak response or exposure to a confirmed or suspected case:** For some diseases, vaccination is recommended for preventing illness or minimizing the likelihood of epidemic spread in people who may have been exposed. This may entail verifying vaccination status of exposed individuals, providing people with a new or booster dose of a vaccine, or “catching up” under-vaccinated populations.

Vaccine safety is a paramount concern to communities and public health officials. Most vaccines have been administered to several million recipients worldwide with several years of follow-up. Federal regulatory bodies constantly monitor and evaluate the safety and effectiveness of its recommended vaccines and immunization series. The U.S. Health and Human Services Department monitors reports of adverse events associated with vaccines through the Vaccine Adverse Event Reporting System (VAERS). Researchers and specialist teams investigate identified concerns, and, on rare occasions, may halt or revise a vaccine recommendation if they identify a risk of adverse event, observed reduced effectiveness, or if they find that equivalent protection can be achieved with fewer doses. This helps to ensure that populations gain the most benefit from as little risk as possible.

**Healthy People 2030 objectives** — The U.S. Health and Human Services (HHS) has developed a set of public health targets around immunizations and vaccine-preventable diseases in their Healthy People 2030 Objectives. Figure 12 includes a subset of immunizations and vaccine-preventable disease (VPD) objectives, and where we stand at a national and local level.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Target</th>
<th>U.S.</th>
<th>WA</th>
<th>Kitsap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain the vaccination coverage level of 1 dose of the MMR vaccine in children by age 2 years</td>
<td>90.8% (NIS, 2019)</td>
<td>91.0% (NIS, 2019)</td>
<td>92.0% (NIS, 2019)</td>
<td>88.7 – 91.6% (WA IIS, 2022)</td>
</tr>
<tr>
<td>Maintain the vaccination coverage level of 2 doses of the MMR vaccine for children in kindergarten</td>
<td>95% (Annual School Assessments Report, 2021-22)</td>
<td>93.0% (DOH School Immunizations Data, 2022-23)</td>
<td>91.4% (DOH School Immunizations Data, 2022-23)</td>
<td>92.3% (DOH School Immunizations Data, 2022-23)</td>
</tr>
<tr>
<td>Maintain the elimination of measles, rubella, congenital rubella syndrome, &amp; polio</td>
<td>0 endemic cases through 2022 (CDC NDSS)</td>
<td>0 endemic cases through 2022 (CDC NDSS)</td>
<td>0 endemic cases through 2022</td>
<td>0 endemic cases through 2022</td>
</tr>
<tr>
<td>Increase the proportion of people who get the flu vaccine every year</td>
<td>70% (aged 5+) (NIS, 2021-22)</td>
<td>51.4% (aged 5+) (NIS, 2021-22)</td>
<td>55.9% (aged 5+) (NIS, 2021-22)</td>
<td>49.0% (18+) (BRFSS, 2021-22)</td>
</tr>
</tbody>
</table>

Figure 12. Selected Healthy People 2030 objectives, targets, and current status

**Data source:** Healthy People 2030

**Notes:** As of Aug. 10, 2023, there were 8,396 Kitsap residents who were three to five years old on 12/31/2022 who had received 1 dose of MMR by their second birthday. WA IIS estimates a denominator population of 9,466, whereas interim population estimates based on the 2020 U.S. Census estimate a denominator of 9,164. Additionally, National Immunization Survey data is only available down to the state level; Kitsap estimates are obtained from the CDC’s Behavioral Risk Factor Surveillance System (BRFSS).
Data

Most recommended vaccines have extremely high demonstrated efficacy, particularly those for the more severe diseases (measles, tetanus, polio, hepatitis A, and rubella). Vaccine coverage across Kitsap County public schools is generally high, but dips below 95% for tetanus, diphtheria and pertussis (DTaP or Tdap vaccines), likely due to missing documented dose of Tdap, which is due at 11-12 years old. In the 2022-23 school year, around 330 seventh graders were out of compliance for this requirement. (Figure 13)

Most vaccine-preventable diseases occur very rarely in the present day – thanks largely to very high immunity levels in the community from routine vaccination. Some, such as pertussis and mumps, rise periodically in localized outbreaks.

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles</td>
<td>93% after 1 dose, 97% after 2 doses&lt;sup&gt;79&lt;/sup&gt;</td>
<td>97.0%</td>
<td>2011</td>
<td>0</td>
<td>102</td>
</tr>
<tr>
<td>Mumps</td>
<td>78% after 1 dose, 88% after 2 doses</td>
<td>97.0%</td>
<td>2020</td>
<td>10</td>
<td>897</td>
</tr>
<tr>
<td>Rubella</td>
<td>97% after 1 dose</td>
<td>97.0%</td>
<td>None in past 20 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tetanus</td>
<td>100% after series completion&lt;sup&gt;80&lt;/sup&gt;</td>
<td>94.2%</td>
<td>None in past 20 years</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Pertussis</td>
<td>98% of children within the year following the last dose ~71% of children 5 years after getting the last dose of DTaP ~73% of adolescents in the first year after vaccination</td>
<td>94.5%</td>
<td>2020</td>
<td>27</td>
<td>2,227</td>
</tr>
<tr>
<td>Diphtheria (toxigenic)</td>
<td>97% after series completion</td>
<td>94.2%</td>
<td>None in past 20 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>&gt;90% after 1 dose, ~100% after 2 doses&lt;sup&gt;81&lt;/sup&gt;</td>
<td>Not reported</td>
<td>2023</td>
<td>12</td>
<td>546</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>~98% of infants after 3-dose series &gt;90% of adults &lt;40 years old after 2 doses&lt;sup&gt;82&lt;/sup&gt;</td>
<td>96.0%</td>
<td>None in past 20 years (perinatal) 2021 (acute)</td>
<td>0 perinatal cases 2 acute cases</td>
<td>2 perinatal cases 213 acute cases</td>
</tr>
</tbody>
</table>
**Table:**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Vaccine Efficacy</th>
<th>Not Reportable</th>
<th>Not Reportable</th>
<th>Not Reportable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varicella (chickenpox)</td>
<td>80-85% after 1 dose, higher after 2 doses&lt;sup&gt;83&lt;/sup&gt;</td>
<td>95.9%</td>
<td>Not reportable</td>
<td>Not reportable</td>
</tr>
<tr>
<td>Polio</td>
<td>99% after 2 doses, 99% after 3 doses</td>
<td>96.0%</td>
<td>None in past 20 years</td>
<td>0</td>
</tr>
<tr>
<td>Human papillomavirus (HPV)</td>
<td>prevents more than 90% of HPV-attributable cancers&lt;sup&gt;84&lt;/sup&gt;</td>
<td>Not reported</td>
<td>Not reportable</td>
<td>Not reportable</td>
</tr>
</tbody>
</table>

*Figure 13. Selected vaccine-preventable disease (VPDs), vaccine efficacy, and number of cases reported in Washington and in Kitsap County, 2018 - 2022*

*Data source:* Washington State Department of Health, School Immunization Data; Washington Disease Reporting System (WDRS)

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**Vaccine coverage in K-12 schools** — Each year, Washington K-12 schools governed by the Washington Office of Superintendent of Public Instruction (OSPI) report the number of enrolled students who fall into the following categories for nine key immunizations: (1) compliant (up-to-date for their age), (2) exempt (medical, religious or personal belief), (3) conditional (the student has an agreed plan for getting up-to-date in the next few months), or (d) out of compliance. Kindergarten and seventh grade cohorts are reported as individual substrata to allow for age-specific analyses.

Findings from data provided for the 2022-23 school year include:

- 1,433 (4%) Kitsap K-12 students were not complete on their age-appropriate immunizations and did not have recorded exemptions.
- Seven public schools’ kindergarten cohorts reported <90% of their students complete on MMR.
- Nine public schools seventh grade cohorts reported <90% of their students having received a Tdap. Two schools reported <50%. A total of 352 (14%) public school seventh graders did not have a recorded Tdap or a recorded exemption.
- 14 of 66 (21%) Kitsap Public Schools reported overall immunization rates <90%. This includes three home school programs, five elementary schools, two middles schools, two high schools, and two K-12 programs.

**Seasonal flu vaccination coverage:** Washington DOH uses vaccine information entered into the Washington state Immunization Information System (WA IIS) to roughly estimate annual seasonal flu vaccine coverage across the state.

Over the past four flu seasons (generally measured from the beginning of October through the end of the following September to align with winter respiratory disease seasonality), DOH has estimated that around 34% - 38% of Kitsap residents (all ages) received a seasonal flu vaccine dose at some time during the 52-week flu year.

DOH does not count flu vaccines administered by military providers, so KPHD estimates actual coverage to be 3% - 8% higher, based on internal data. (Figure 14) This “amended” estimate is supported by data from the Behavioral Risk Factor Surveillance System (BRFSS), a national CDC-administered telephone survey of randomized population samples (and therefore not dependent on the dose being recorded in WA IIS), which estimates that self-reported flu vaccine coverage for the 2021-22 flu year was around 49% for adults aged 18 and older.
Figure 14. Estimated flu vaccine coverage in Kitsap County (all ages), October 2019 – August 2023

Data source: Washington State Department of Health, Immunization Information System (WA IIS); Kitsap Public Health District public health surveillance data

For COVID-19 vaccination coverage information, see the Emerging Infections and Outbreak Response section of this chapter.

Vaccine coverage in active-duty military — In general, immunizations administered by the Department of Defense are not included in coverage estimates, as they are not recorded in WA IIS. Active duty military personnel are considered to be one of the most highly immunized populations due to stringent requirements and frequent review necessitated by the unique and often high-risk nature of their work.85

Disparities
Some people can’t be protected by vaccines, even if they want to be. A small portion of our communities are unable to have personal protection from a given vaccine, either because of contraindications (they are not old enough, or they have a serious allergy to a vaccine component), or because they are immunocompromised or immunosuppressed due to a health condition; people in these categories rely on the people around them to minimize the risk of disease transmission through a combination of immunization and good infection prevention practices.

Older adults are 77% more likely to get a seasonal flu vaccine. Receipt of seasonal flu vaccine varies greatly by age. In Washington State, 76.2% of adults 65 years and older reported having received a flu vaccine for the current season, compared to 43.1% of adults aged 18 to 49 years. (Figure 15) Reasons for this may include cost coverage by Medicare, more frequent routine engagement with a healthcare provider, higher perception of risk from seasonal influenza illness, and specific public health messaging aimed at adults aged 65 and older.86 Nationally and statewide, coverage tends to be consistently higher among white individuals compared to either Black or Hispanic individuals.87
Insurance status matters in whether or not adults are up-to-date on their recommended immunizations. According to 2021 estimates, over 13,000 Kitsap residents aged 19 and older were living without health insurance. A recent analysis of 2018 National Health Interview Survey data showed that compared to insured adults, adults with no health insurance were over 60% less likely to have received an influenza vaccine in the past 12 months, and 50% less likely to be up-to-date on their Tdap vaccine series.88

Emerging issues

Upcoming budget cuts to immunization programs — The Washington State Department of Health has relayed that federal budgets cuts to state immunization programs are expected to be around $2.5 million, or 20% of the state budget for immunization work.89 This deficit may create gaps in community immunization work which will require additional strategies.

Early data show disruptions caused by COVID-19 may have caused a large number of people to delay, miss routine vaccines. CDC has reported two consecutive years of falling vaccine coverage rates among the nation’s kindergartners90, a pattern which is echoed in the two-year decline in number of childhood vaccine doses administered in Washington.91 Kitsap shows small declines in coverage rates among kindergarteners in the most recently reported school year (2022-23) compared to prior to the pandemic, and a larger drop in private schools. (Figure 16) In 2022, 258 (9%) of 3,280 Kitsap Community Resources Survey respondents reported that they had been unable to get needed immunizations in the previous 12 months.
Figure 16. Percent of Kitsap kindergarteners up to date on all required immunizations, pre- and post-COVID-19 school years

Data source: Washington State Department of Health, School immunization data

Note: Comparisons of school vaccine coverage rates to the 2020-21 school year should be viewed with caution, as there may be exaggerated selection bias towards children who are up to date on immunizations in school enrollment due to the COVID-19 pandemic.

Politization of the COVID-19 vaccine could seep into existing routine vaccines — With the intense politicization imbued in the COVID-19 vaccine, there is concern in public health that this attachment of ideologies may expand into routine childhood immunizations, undermining community-level protection against serious epidemic-causing illnesses. A national survey conducted by KFF in late 2022 suggested this may be the case, though perhaps not dramatically so. They found that in 2022 around 20% of parents of children under age 18 believed that the benefit of the MMR vaccine did not outweigh its risks, an increase from 17% in 2019.92 School immunization from the 2022-23 school year show a 45% increase in the number of students with non-medical exemptions to the MMR 2023, compared to 2019-20.

Increase in the role of pharmacies in adult immunization administration — During the COVID-19 endemic, Kitsap County (and the U.S. as a whole) has seen a shift in where adults are receiving their recommended immunizations. According to vaccine administration data, prior to COVID-19 around 50% of U.S adults received their flu vaccines in pharmacies (like CVS or Walmart). Since 2021, over 60% have received flu vaccines at pharmacies.93 This trend has persisted through the present, and may represent a shift in how public health strategizes adult vaccine delivery.
Sexually transmitted infections (STIs) and human immunodeficiency virus (HIV) represent a core area of communicable disease work, accounting for over three-quarters of disease reports received by KPHD (excluding COVID-19).

STIs – sometimes referred to as STDs (sexually transmitted diseases) – are infections that are spread primarily through person-to-person sexual contact. STIs are often asymptomatic, facilitating onward transmission without the infected person being aware. Some STIs can also be passed from mother to child during pregnancy and childbirth. STIs can have serious complications and consequences, and can result in infertility, increased risk of cancer and other STIs, and adverse birth outcomes.94

Addressing STIs in the community is often challenged by stigma, insufficient access to sexual health resources, and the additional need of identifying and treating sexual partners of cases. Although the category of STIs contains infections caused by over 30 organisms, only seven are reportable in Washington state.95 This report will focus on four STIs: chlamydia, gonorrhea, HIV and syphilis.

U.S. DHHS National Implementation Plan Goals — The U.S. Department of Health and Human Services (DHHS) set out national STI priorities and targets in its 2020 STI National Strategic Plan for the United States.9697 The five broad national goals are: (1) prevent new STIs; (2) improve the health of people by reducing adverse outcomes of STIs; (3) accelerate progress in STI research, technology and innovation; (4) reduce STI-related health disparities and health inequalities; and (5) achieve integrated, coordinated effort that address health inequities.

Figure 18 summarizes a subset of objectives set out by the STI National Strategic Plan, along with the most recent year of data for the U.S., Washington, and Kitsap.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Sexually active high school students who used a condom at last sexual encounter98 99</td>
<td>53.5%</td>
<td>56.5%</td>
<td>51.3%</td>
<td>56.8%</td>
<td>62.9%</td>
</tr>
<tr>
<td>Reduce P&amp;S syphilis rate (per 100,000 population)100 101</td>
<td>13.2</td>
<td>12.2</td>
<td>15.6</td>
<td>24.4</td>
<td>13.9</td>
</tr>
<tr>
<td>Reduce gonorrhea rates (per 100,000 population)</td>
<td>215.3</td>
<td>199.7</td>
<td>209.8</td>
<td>144.9</td>
<td>97.9</td>
</tr>
<tr>
<td>Reduce congenital syphilis rate (per 100,000 live births)102</td>
<td>57.6</td>
<td>33.9</td>
<td>77.9</td>
<td>63.2</td>
<td>No cases</td>
</tr>
</tbody>
</table>

Figure 17. Selected 2020 STI National Strategic Plan objectives for the United States targets
**Data sources:** Centers for Disease Control and Prevention Youth Risk Behavior Surveillance System; Healthy Youth Survey; Washington State Department of Health, Office of Infectious Disease, 2022 Preliminary Washington State STI Data; Centers for Disease Control and Prevention Sexually Transmitted Disease Surveillance, 2021

**Notes:** Syphilis cases are reported as either total syphilis cases, or as primary and secondary syphilis cases only. “Primary” and “secondary” refer to the stage at which the case was diagnosed and reported based on clinical presentation, laboratory results, and patient history; cases can also be staged as “tertiary”, “late or infection of unknown duration”, or “latent”. Cases staged as primary or secondary most likely indicate infection within the previous six months. For this reason, some surveillance reports limit figures to these two stages to identify recent cases, and to estimate incidence. Note that in many investigations, there is insufficient information to be able to stage cases, and these would therefore not be counted in this indicator.

**Data**

After COVID-19, sexually transmitted infectious make up the highest volume of reports to most health departments. In 2022, Kitsap Public Health reported 1,011 chlamydia cases, 275 gonorrhea cases, 80 syphilis cases, and 10 new HIV diagnoses.103 (Figure 18)

**Chlamydia** — Chlamydia is the most commonly reported STI in Kitsap County, with 1,011 cases reported in 2022.

- Many cases detected through women’s health visits: Around 60% of cases were female, and an estimated 50% of cases were asymptomatic and tested as part of a routine screening. This may be due to women being more likely to have healthcare visits for birth control or prenatal care.
- Cases tend to occur in young adults: Almost 80% of cases were under age 30, and around 20% were under age 20. Median age for females was 22 years, and 24 years for males.
- Post-COVID drop-in rates in Kitsap County: Chlamydia rates in Kitsap had been rising steadily prior to COVID-19, but in 2020, they dropped by 22%, and have been steadily declining since then.
- Comparing rates at the state, national levels: Kitsap County’s chlamydia rates are similar to the overall state rate (356.0 per 100,000 in 2022), but significantly lower than the national rate (490.4 per 100,000 population in 2021).
- Chlamydia by gender: Where information was available, around 70% of cases in 2022 were women who have sex with men (WSM), 25% were men who have sex with women (MSW), and 6% were men who have sex with men or men who have sex with men and women (MSM, MSMW).

**Gonorrhea** — The DHHS National Strategic Plan’s ten-year target for gonorrhea is 199.7 cases per 100,000 population. Both Kitsap County and the state of Washington have been meeting this target by a considerable margin and have consistently reported rates far below the U.S. national average and the Washington state average.

In 2022, Kitsap reported a total of 275 gonorrhea cases, or 97.9 cases per 100,000 population; although the rate has fluctuated a bit over the past seven years, there has been no statistically significant change.
### Communicable Disease

**Table 1. Summary of Chlamydia, Gonorrhea, Syphilis, and HIV Surveillance Data in Washington State, 2022**

<table>
<thead>
<tr>
<th></th>
<th>Chlamydia</th>
<th>Gonorrhea</th>
<th>Syphilis (Total)</th>
<th>HIV, new diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cases, 2022</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(rate per 100,000)</td>
<td>1,011 (359.9)</td>
<td>275 (97.9)</td>
<td>80 (28.5)</td>
<td>10 (3.6)</td>
</tr>
<tr>
<td><strong>Cases, 2017-2021 avg.</strong></td>
<td>1,135 (416.4)</td>
<td>268 (98.1)</td>
<td>38 (13.9)</td>
<td>7.2 (*)</td>
</tr>
<tr>
<td><strong>Rate per 100,000 by sex at birth, 2022</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rate per 100,000, by age (years), 2022</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Percent of reported cases by sex at birth of case and sex partner, 2022</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 18. Summary of chlamydia, gonorrhea, syphilis and HIV surveillance data in Washington state*

**Data source:** Public Health Information Management System (PHIMS)

**Notes:** Data points marked with an asterisk were not calculated due to small numbers. Additionally, 510 chlamydia cases, 100 gonorrhea cases and 10 syphilis had insufficient information to determine sexual preference category and were excluded.
Syphilis — The DHHS national strategic plan’s ten-year target for syphilis is 12.2 primary and secondary cases per 100,000 population; although both Kitsap County and Washington State had been comfortably below this prior to the COVID-19 pandemic, dramatic upsurges in the past couple of years have pushed local transmission above the target threshold. (Figure 19)

- In 2022, Kitsap reported 80 total syphilis cases, including 39 which were staged as primary or secondary.
- Over 75% of cases in 2022 were male; over 70% of cases were aged 30 and older, and 40% of cases were 40 and older. In 2022, median age for female cases was 30 years and median age for males was 35 years.
- In 2022, almost 60% of cases were MSM or MSMW, and 21% MSW and 20% WSM.

Figure 19. Syphilis cases (primary and secondary only) per 100,000 population, 2016 – 2022


Note: Washington’s health department does not report total syphilis case counts, only those staged as primary or secondary (P&S). Similarly, the federal health department uses this measure because it captures recent infection instead of the total syphilis burden. Therefore, for analyses comparing Kitsap rates to state rates and national targets, the subset of P&S cases is used by necessity. This is an incomplete measure of syphilis in our community; all confirmed cases are reported in other analyses in this chapter.

One of the major public health concerns for syphilis is the potential for vertical transmission from mother to infant (congenital syphilis). Infection in a pregnant person can result in miscarriage, stillbirth, and adverse birth outcomes in the infant, such as bone deformities or brain and nerve problems, including blindness and deafness.\(^{104}\)

In the past few years, the number of reported congenital syphilis cases reported in Washington has skyrocketed, going from fewer than 20 annual cases prior to 2021, up to 53 cases in 2021 and 54 cases in 2022. Although Kitsap County has so far not reported any congenital syphilis cases, neighboring Pierce County has observed a recent surge, reporting 14 congenital syphilis cases in 2021.\(^{105}\) (Figure 20)
HIV — Since 2016, Kitsap County has received between four and ten reports of new HIV diagnoses per year. As of 2019, there are an estimated 345 people living with HIV in Kitsap County. Statewide, there are an estimated 14,517 people living with HIV, with around two-thirds living in King, Pierce and Snohomish counties.\(^\text{106}\)

COVID-19 and STIs — A combination of social restrictions and distancing and decreased availability of sexual health services and primary care correlated with a noticeable change in number of STI cases reported to health departments.\(^\text{107}\)

During the first 12 months of the COVID-19 epidemic, Kitsap Public Health saw overall decreases in chlamydia and syphilis cases (19% and 28%, respectively, Figure 21). Although decreased transmission was very likely occurring due to reduced social interactions, difficulty in obtaining routine sexual health services during COVID-19 was almost certainly a factor.\(^\text{108}\) This is visible in data from gonorrhea case reports: while the number of symptomatic cases decreased by 25% during the first 12 months of COVID, the number of cases detected through routine screening dropped by almost 50%. Data from other jurisdictions found STI screening visits during 2020 reduced most in patients who were uninsured.\(^\text{109}\)

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**Figure 20.** Congenital syphilis cases reported in Washington State, 2016 – 2022

*Data source:* Washington State Department of Health, Office of Infectious Disease, 2022 Preliminary Washington State STI Data

**Figure 21.** Average annual chlamydia, gonorrhea, and syphilis case reports received in the 24 months before COVID-19 (“before”), the first 12 months of COVID-19 (“during”), and in the second and third years after the start of COVID-19 (24 months or “after”)

*Data source:* Public Health Information Management System (PHIMS)
In the 24 months after the first year of the pandemic (March 2021 – February 2023), as some activities resumed and services became more available again, chlamydia and gonorrhea remained lower than in the pre-COVID period; however, syphilis diagnoses more than doubled, and appears to be continuing to rise at the time of writing.

**Disparities**

The CDC identifies three segments of the population nationally which experience a disproportionate burden of STIs: gay and bisexual men, young people aged 15-24 years, and individuals who are non-white.  

- Gay and bisexual men make up a disproportionately large percent of gonorrhea, syphilis and HIV cases. In 2022, 6% of chlamydia cases, 20% of gonorrhea and 59% of syphilis cases in Kitsap County were among gay and bisexual men. DOH estimates that around 63% of new cases diagnosed in Washington from 2015 to 2019 were among gay and bisexual men.

- Incidence of chlamydia and gonorrhea is highest among young adults aged 15 – 24. In 2022, 725 (57% ) of 1,281 reported chlamydia, gonorrhea and syphilis cases in Kitsap County occurred in people aged 15-24 years old. This age group accounts for 62% chlamydia, 32% of gonorrhea and 16% of syphilis cases.

- Reported chlamydia, gonorrhea and syphilis rates are higher among some people of some racial and ethnic groups. Over the past five years in Washington, chlamydia, gonorrhea and syphilis have been disproportionately reported in people who are Black, non-Hispanic, and in people who are Native Hawaiian or Pacific Islander.

Additionally, homelessness, addiction and trauma can increase a person’s risk for STIs (including HIV). Previous studies have found housing instability and homelessness severity to be associated with sexual risk factors, including intimate partner violence, and injection and non-injection substance use. CDC states that young adults who used an illicit drug in the previous 12 months were three times more likely to become infected with an STI. Childhood trauma, including physical, emotional and sexual abuse, as well as parental incarceration and the presence of violence in the household, has also been associated with STIs in young adults.

Finally, pregnant people are a priority population for STI programs. Because STIs can cross the placenta and can result in miscarriage, stillbirth, and potentially life-threatening complications in an unborn infant, it is very important to test, treat and prevent STIs in pregnant people, and to ensure they have appropriate clinical care to minimize risk to the baby. In 2022, 65 reported chlamydia, gonorrhea and syphilis cases occurred among patients who were pregnant.

**Emerging issues**

**Local sexual health services do not meet community needs.** In July 2023, the Kitsap County Board of Health declared healthcare costs and inadequate access to services public health crises. There are few more compelling examples of this than in sexual health services and the availability and accessibility of STI testing and treatment. Compared to surrounding counties, Kitsap County has very few available sexual health services, relying instead on primary care; while in theory this may be a beneficial community health strategy, it also presents a barrier to care for people who do not have a primary care provider (PCP), or whose insurance requires an unaffordable co-pay.

- The large worry is the people who are not seeking care, and who may be continuing to pass on the infection to their partner or partners. In addition, in cases of syphilis and HIV symptoms may abate naturally, leading the patient to think they’ve cleared the infection, when in reality they remain infected and can progress to more a more severe form of the disease. Prompt detection and treatment is critical to reducing STIs in the community.
Among those who do seek care, a large number are doing so outside of Kitsap’s primary and urgent care networks. According to 2022 Kitsap Kitsap Public Health District surveillance data, over 20% of chlamydia, 32% of gonorrhea and 38% of syphilis cases in Kitsap County residents were tested outside of Kitsap County; in fact, 12 cases were tested and treated by other jurisdictions’ health departments.

Additionally, around one in seven STIs in Kitsap County were diagnosed at an emergency department. This adds additional challenges to clinical management, since the diagnosing provider is likely not familiar with the case’s medical history and because it is often difficult to contact the patient after the patient leaves the facility.

At least 32 STI cases in 2022 were reported by direct-to-consumer STI testing laboratories (sometimes referred to as “online STI testing”); the number is likely higher due to incomplete capture of these data. Difficulty in accessing clinical STI care may increase use of these services moving forward. This topic is discussed more in depth in the Emerging Issues section.

Disconnections in the continuum of care makes it difficult to ensure treatment in the most vulnerable STI cases. For people with additional challenges such as housing instability, substance dependencies, interpersonal violence and psychological health needs, treating an STI without addressing cases’ other needs can be difficult and unsustainable for the case. A “whole health” model which includes provision of wraparound services could greatly improve outcomes for these patients; however, this type of case management is not frequently available or offered.

A second population affected by gaps in the continuum of care are people diagnosed while in jail. Medicaid coverage is suspended once a person is booked. While in jail, the jail will cover the costs of testing and treatment; however, once the patient is released, they must take steps to reenroll in Medicaid to avoid being responsible for covering their own costs. This may result in default of treatment, and thus unresolved infection and potential ongoing transmission.

There is an increased interest in applying an integrated case management (“whole health”, “syndemic”) model. National, state and local public health agencies have been increasingly encouraging a less “siloed” approach to addressing STIs, noting that in many STI cases, the infection itself is often inextricably linked with numerous other needs that also need to be tackled.

The DHHS Sexually Transmitted Infections National Strategic Plan includes three separate objectives aimed at better integrating STIs into a “whole health” strategy, creating a model which holistically addresses patients’ needs, including STIS and HIV, family planning, viral hepatitis, substance use disorders, and mental health, and better integrates points of care, including primary healthcare, emergency departments, correctional facilities, and school-based centers.

A similar “whole health” model has been used for years in many HIV case management programs. It should be noted that while a large number of STI cases do face a complex set of needs, this likely represents a minority of total STI cases (albeit the most vulnerable group), and care should be taken to avoid conflating STIs with substance abuse and other behaviors or traits which may alienate or stigmatize people that public health are trying to reach.

The epidemiology of syphilis is changing. Syphilis has been rapidly increasing locally, nationally, and in many other locations throughout the world. In Washington, the epidemic has also been shifting from predominantly occurring among gay and bisexual men to more frequent occurrence among heterosexual people. This shift is also being observed in Kitsap County, though to a lower degree (around 25% cases were among heterosexual people in 2017 vs.
around 40% in 2022). This shift potentially requires the adapting of existing public health strategies to educate the public and reduce transmission of syphilis.

**Doxy-PEP offers a new prevention strategy (pending formal approval by CDC).** Data presented at the 2022 AIDS Conference showed that participants receiving a prophylactic regimen of the antibiotic doxycycline (“doxy-PEP”) had a 65% overall reduction in bacterial STIs per quarter of follow-up compared to participants in the control group, with higher protective effects observed against chlamydia and syphilis. However, CDC has been hesitant to endorse this as a policy due to concerns for equity, and for its potential impact on antibiotic resistance.

- At the time of writing, CDC acknowledges the benefits of this strategy, but has not yet officially endorsed it, and doxy-PEP effectively remains off-label; however, some health departments, including San Francisco Department of Public Health, Public Health – Seattle and King County, and Santa Clara County Public Health have implemented this as an STI prevention strategy.

**Direct-to-Consumer (DTC) STI testing is becoming more popular.** Direct-to-Consumer (DTC) STI testing (also referred to as “online testing”, “home testing”, and “self testing”) is a relatively new option for community members to get tested for various STIs, including chlamydia, gonorrhea, syphilis and HIV. Private companies such as Everlywell, STDCheck.com, and QuestDirect allow consumers to order test kits online, self-collect specimens at home, return specimens by mail or at a collection point, and receive results electronically or by mail. While, on the one hand, this offers a more accessible testing pathway for many people, it also presents some new challenges from a public health perspective.

- First, testing is not connected to a clinician, so there is no clinical evaluation of the patient or direct connection to treatment. This is especially important for infections like HIV and syphilis, where confirmatory testing is necessary, and treatment should be started as soon as possible. There is also no opportunity to identify and treat sexual partners, and relies on the patient notifying their partners and encouraging them to get tested.
- Second, this type of testing is not FDA-approved for diagnosis, as specimens are not collected under the supervision of a clinician, nor is there any assurance that appropriate tests are being performed.
- Third, the majority of DTC STI testing labs are based outside of Washington, and several do not consistently report results mandated by WAC 246-101.
- Fourth, DTC STI testing presents a few concerns for equity, including out-of-pocket costs, challenges for people without a stable address or who live with controlling partners or parents, and the reliance on a higher level of health literacy from the patient.
- In 2021, the American Sexually Transmitted Disease Association published a summary of the current situation, and a list of policy-level recommendation for how to adapt this testing option moving forward, but it may take some time and some national policy-level motivation to move these forward. With the current shortfall of sexual health services in Kitsap County, DTC STI testing serves as both a low-barrier testing option as well as a gap filler for traditional STI clinical visits.

**A lot of people are looking information about STIs online – and there is a lot of misinformation.** As mentioned in discussion of COVID-19, online information plays a similarly substantial – and potentially pitfall-laden – role in STIs.

- A 2019 research letter tallied nearly 17,000 posts in reddit’s STD forum (“subreddit”), r/STD, with the number increasingly rapidly in the more recent years. In a random sample of these posts, investigators found that nearly 60% were requesting a crowd-diagnosis for a suspected STI, and, of those, 20% had already received a diagnosis from a medical provider and were seeking a second opinion from the online community.
• The allure of online forums is that they can provide free, fast and anonymous consultation on sensitive health questions. The worrying reality is that responders are seldom health professionals and do not consistently provide correct information. Some providers have acknowledged that the popularity of STI forums reflects the needs of people in our communities. As health professionals, we may need to adapt our strategies.126
COMMUNITY ASSETS

Emerging Infections and Outbreak Response

There are many community members and organizations working to improve the health of our pregnancies and babies:

ESF8: Emergency Support Functions (ESFs) are a national framework for “grouping...governmental and certain private sector capabilities into an organizational structure to provide support, resources, program implementation, and services that are most likely needed to save lives, protect property and the environment, restore essential services and critical infrastructure, and help victims and communities return to normal following domestic incidents. ESF #8 pertains to Public Health and Medical Services. The Kitsap County ESF8 committee, co-managed by Public Health and the Kitsap County Department of Emergency Management, regularly convene and actively develop strategies and protocols for “...[bringing]...together the Healthcare, Public Health, Emergency Response, First Responders, Vet Care Responders in Kitsap County to prepare for and respond to emergencies that impact healthcare public health, vet, and mortuary.

The Suquamish and Port Gamble S’Klallam Tribes are important community leaders and are key partners in a community public health response. During the COVID-19 pandemic, the Port Gamble S’Klallam and Suquamish tribes mobilized early vaccine resources and provided over 6,100 vaccine doses to Kitsap community members, including a large number of people from outside the Tribes.

Naval Hospital Bremerton and military health partners. U.S. Naval medical services provide healthcare to a large section of the Kitsap community.

Bainbridge Prepares is a grant- and donation-funded non-profit who, in partnership with government and other community organizations, leads community-mobilized response efforts, including working with schools and other important community stakeholders.

The Kitsap Regional Library has partnered with Kitsap Public Health District during emergency public health responses by coordinating distribution of information and materials with a focus on community equity.

The Kitsap County Medical Reserve Corps (MRC) is a network of hundreds of volunteers with medical and non-medical backgrounds, who are a pre-trained group available for immediate deployment during an emergency. The MCR is joint-managed by the Kitsap County Department of Emergency Management (KCDEM) and the Kitsap Public Health District.

The CDC One Health initiative is a collaborative, multisectoral, and transdisciplinary approach—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.

The University of Washington Climate Impacts Group builds climate resilience by advancing understanding of climate risks & enabling science-based action to manage those risks. We are widely recognized for scientific discovery, as an experienced creator of impartial & actionable science and as a catalyst for building regional climate resilience.

The Tribal Climate Change Project began as a collaborative project between the University of Oregon Environmental Studies Program and the USDA Forest Service Pacific Northwest Research Station in 2009. The Project is now supported by diverse partners, including the Affiliated Tribes of Northwest Indians, the Bureau of Indian Affairs, the Northwest Climate Adaptation Science Center, the Oregon Climate Change Research Institute, and the USDA Forest Service Pacific Northwest Research Station.
Reportable communicable diseases

**TB Project ECHO**® and **Hep C Project ECHO**® (Extension for Community Healthcare Outcomes) are a collaborative model of medical education and care management that provides healthcare professionals with the knowledge and support they need to manage patients with TB or hepatitis C infection through weekly multi-state consultation forums and didactics, mentoring from ID specialists, and continuing education.

The **Washington Integrated Food Safety Center of Excellence** is a grant-funded collaboration between the University of Washington and the Washington State Department of Health which serves as a resource for other state and local public health partners to help build capacity in public health for foodborne illness surveillance and response, provide guidance on best practices for foodborne outbreak responses and to curate tools and resources relating to foodborne and enteric illnesses.

Immunizations and vaccine-preventable diseases

**The Vaccines For Children (VFC) Program** is a federally funded program that provides vaccines at no cost to children who might not otherwise be vaccinated because of inability to pay. The CDC buys vaccine at a discounted rate for distribution to registered VFC providers.

Washington DOH’s **Vaccine Provider Locator** tool can help residents locate **Care-A-Van Mobile Health Services** is a mobile health clinic that serves people across Washington state by working closely with community partners and local health departments to increase access to health services for priority communities. Upon availability, the Care-a-Van offers COVID-19 vaccines, flu vaccines, Mpox vaccines, childhood vaccines, blood pressure screenings, and blood glucose screenings.

Several **commercial pharmacies** offer travel health consultations and can arrange travel immunizations and prescriptions. Many will work with insurance carriers to cover some of the cost.

The **KPHD Immunization Program** protects and promotes the health of all people in Kitsap County by providing up-to-date vaccine information to the public, supporting providers with training, education, and resources, and responding to vaccine-preventable disease outbreaks.

State and local **Perinatal Hepatitis B programs (PHBPP)** monitor pregnancies in people infected with hepatitis B, and ensure recommended vaccination and testing procedures are followed with the infant to minimize the likelihood of infection in the child.

**Project Frontline** is a nationwide project supported by Centers for Disease Control and Prevention (CDC) and the Washington State Department of Health to provide frontline healthcare workers with infection prevention and control education. They offer training, education and resources for frontline healthcare workers and healthcare facilities to improve and further infection prevention and control in Washington.

Sexually transmitted infections (STIs)

**Planned Parenthood/Bremerton Health Center** provides STI testing and treatment, pregnancy testing and counseling, birth control prescriptions, and sex education. Planned Parenthood offers low- or no-cost services.

**University of Washington Madison Clinic** provides medical care and social services for persons living with HIV/AIDS regardless of sexual orientation, gender identity, race, or ability to pay. The Madison Clinic also provides medical care to HIV-negative persons who might benefit from having an HIV/AIDS expert involved in their medical care, including persons who are interested in Pre-Exposure Prophylaxis (PrEP) for HIV prevention.
Peninsula Community Health Clinic Mobile Medical Clinic extends access to medical care to patients with transportation or other access issues. The mobile clinic has the latest in medical equipment and technical support and has wheelchair access. Walk-ins are welcome; appointments are encouraged.

Peninsula Community Health Clinic Stand by Me project is a care coordination effort in partnership with the Salvation Army. This model aims to remove barriers to healthcare, allowing many to access essential health services conveniently on-site at the Salvation Army.

The Folx Foundation is a nonprofit organization focused on providing free HIV and STD testing to all. People can request free, confidential STI test kits sent to their house.

People’s Harm Reduction Alliance is a regional non-profit organization with mobile outreach teams who provide safer sex supplies, including condoms, pregnancy tests and Plan B, as well as safer injection supplies and naloxone.

Kaiser Permanente has a specialty HIV program aimed both at PLWH and people interested in PrEP.

The Washington State Department of Health PrEP DAP is a drug assistance program for HIV-negative people who have risk factors that expose them to HIV. PrEP DAP pays for certain medications on the list of covered services for enrollees who go to a contracted pharmacy.

The KPHD HIV Medical Case Management program is a collaborative process in which persons living with HIV/AIDS work with KPHD case managers to determine the medical care and other services they need. The aim to help clients live as independently as possible, maintain and improve their health and quality of life, and gain access to resources and services to meet their needs, including primary medical care, medications, referral to “wraparound services”, peer navigation, and counseling to reduce behaviors that put themselves or others at risk for AIDS and secondary infections.

The Mountain West AIDS Training & Education Center (MWAETC) HIV ECHO project builds the confidence and skills of healthcare providers (HCPs) in the MWAETC region to provide high quality HIV care to patients. Using interactive video, the weekly online sessions include a short clinical HIV update followed by real-time clinical case discussions with community providers and a multidisciplinary panel of HIV experts from infectious disease, addiction medicine, psychiatry, family medicine, pharmacy, social work and case management. Using this model, MWAETC HIV ECHO fosters mentoring relationships between the HIV expert panel and HCPs and builds peer learning and support networks across the region.

The KPHD Jail Testing project worked in coordination with Kitsap County Jail, EverHealth, and DOH, to hold three half-day opt-out testing events for HIV, syphilis and hepatitis C. Clinics were held in the Q2 of 2023, and over 200 individuals were tested and provided their results, where possible.

The FOCUS Project is a grant-funded public health screening program primarily located in the St Michael Medical Center Emergency Department that aims to address the persistence of HIV, hepatitis C, and syphilis in Kitsap county and surrounding communities. The program’s primary focus is on screening for previously undiagnosed infections and connecting these patients to care while strengthening community networks around public health and "syndemic" treatment through education.
ENDNOTES


3 Kitsap Public Health District, First positive test for COVID-19 reported for Kitsap County, https://content.govdelivery.com/accounts/WAKITSAP/bulletins/27fbefd


6 Total completing primary series includes both state and Department of Defense (DoD) data; DoD data were not available for bivalent doses, so the second estimate excludes people vaccinated through the military and is therefore an underestimate. “Completed a COVID-19 primary series” includes any series that was recommended at the time of vaccine administration.

7 As of August 2023, people aged six months and older are eligible for the COVID-19 primary series; people aged five years and over are eligible for the COVID-19 bivalent booster. For more information: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html


10 Kitsap Public Health District, 2022 Kitsap Water Quality Report, https://storymaps.arcgis.com/stories/25400948c63e4388b048bb763b1b32a0


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83 Centers for Disease Control and Prevention, Ask the Experts: Varicella (Chickenpox), https://www.immunize.org/askexperts/experts_var.asp


98 Centers for Disease Control and Prevention, Youth Risk Behavior Surveillance System, https://www.cdc.gov/healthyyouth/data/yrbs/overview.htm

100 Centers for Disease Control and Prevention, Division of STD Prevention, National Center for HIV, Viral Hepatitis, STD, and TB Prevention. Accessed 5/19/2023.


103 “New HIV diagnoses” indicate that this is the first time a person was reported to a U.S. health department with a confirmed HIV infection.


105 Tacoma-Pierce County Health Department, Health Advisory: Congenital syphilis increasing in Pierce County, 28 Feb 2022, https://www.tpchd.org/Home/Components/Topic/Topic/11607/544?backlist=%2fhealthy-people%2fprovider-resources%2fhealth-news-and-alerts


110 Centers for Disease Control and Prevention. Reported STDs Reach All-time High for 6th Consecutive Year. CDC; 2021 April 13, https://www.cdc.gov/media/releases/2021/p0413-stds.html


122 Centers for Disease Control and Prevention, Sexually Transmitted Infections Treatment Guidelines, 2021, Primary Prevention Methods, Doxycycline as STI PEP, updated 2 Oct 2023, https://www.cdc.gov/std/treatment-guidelines/clinical-primary.htm#CautionsForDoxyPEP


Consistent with nationwide trends, chronic illnesses are among the leading causes of death and hospitalization in Kitsap County. Chronic diseases place physical, social, emotional, and economic burdens on affected residents, as well as the healthcare systems that serve them.

**TOPIC OVERVIEW**

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.\(^1\)\(^2\)

Nationally, chronic diseases are the leading causes of death and disability, according to the Centers for Disease Control and Prevention (CDC), and they are also a leading driver of health care costs. Six in 10 Americans live with at least one chronic disease.

Many environmental factors, such as the ability to walk or bike to work or school, and access to nutritious food, can contribute to risk behaviors, such as not getting enough physical activity, poor nutrition, and smoking. This can lead to risk conditions, such as obesity, high cholesterol, and high blood pressure, resulting in chronic diseases, such as heart disease, stroke, and diabetes.

Certain behaviors, genetics, financial factors, environment, healthcare access, caregiving, support structures, mental health, and many other factors all play a role in increasing an individual’s risk of developing chronic illnesses.\(^3\)

Many prevention interventions focus on key behaviors, such as eating a variety of nutritious foods and drinks, being physically active, avoiding tobacco and excessive alcohol consumption, and getting regular health screenings. However, increasingly public health models that encompass the broader set of risk and protective factors contributing to chronic disease are being used as frameworks for developing more effective prevention strategies that meet community needs.\(^4\)\(^5\)\(^6\)

This chapter will cover heart disease, diabetes, obesity, and cancer. Other diseases that are often chronic, such as mental and behavioral health conditions, will be covered in other chapters in this report.

### FACTORS CONTRIBUTING TO CHRONIC DISEASE RISK

<table>
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<tr>
<th>Environmental factors</th>
<th>Ability to bike or walk to school</th>
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<td>Risk behaviors</td>
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<td>High cholesterol</td>
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<tr>
<td>Chronic diseases</td>
<td>Heart disease</td>
<td>Diabetes</td>
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</table>
KEY FINDINGS

Three main priority areas were identified from available public health data; these were selected based on changes over time for Kitsap residents, differences between Kitsap and Washington, and Kitsap resident input. They include:

Heart disease

In 2021, more than one in three Kitsap adult residents (35%) reported having been diagnosed with high blood pressure, one of the risk factors for heart disease. More than one in three (34%) reported having been diagnosed with high cholesterol, another risk factor.

Heart disease was the second leading cause of death in Kitsap in 2021 and among the top three for all adult age groups (18-34, 35-64, and 65 and older), making it a key focus area for prevention.

Weight

From 2010 to 2021, there have been increasing trends in the percentage of Kitsap adults and 10th graders who classify as overweight or obese.

In 2021, two in three Kitsap County adults (66%) and more than one in four 10th graders (29%) reported a height and weight that classified as overweight or obese.

Cancer

Cancer, in its many forms, has been the leading cause of death and premature death in Kitsap every year since at least 2000. This makes it a key candidate for prevention initiatives.

However, none of the three cancers reviewed (breast, cervical or colorectal) had concerning trends or comparisons to statewide rates. More investigation into the role that each of these cancers plays as a cause of death would be beneficial.

KEY DISPARITIES

While the findings from this report provide evidence of disparities in Kitsap County across multiple indicators, the following were identified as the most significant and are not a complete list of all disparities:

Income level and educational attainment

- Disparities exist along economic lines (such as income level and educational attainment) for many chronic disease metrics in Kitsap, similar to published findings from other areas of the United States.
  - In Kitsap, these differences were seen across heart disease, diabetes and weight indicators, including high blood pressure diagnosis (education and income), high cholesterol diagnosis (education), diabetes (education and income), physical activity levels in adults (education and income), and overweight and obesity in adults (education).
  - Although economic subgroup data was not available for youth, physical activity and overweight/obesity in youth differed between higher median income areas such as Bainbridge Island and lower median income areas such as Bremerton.

- Another economic disparity is suggested by differences in cancer screening rates for cervical, breast and colorectal cancer between Medicaid beneficiaries and the general population. Unfortunately, general population screening data, collected through weighted survey responses, are not collected in the same way that Medicaid screening data is collected (through claims data), so they are not comparable. More information and investigation into these suggested differences is needed.

Note: Several social and economic factors that can affect screening rates and access to preventive and treatment services, such as healthcare access, insurance coverage and transportation, also factor into these disparities.
BACKGROUND & DEMOGRAPHICS

Like the rest of the United States, chronic diseases, such as heart disease, stroke, cancer, and diabetes, impact Kitsap residents. In 2021, chronic diseases contributed to at least seven of the top 10 leading causes of death in Kitsap residents.

Cancer and heart disease have topped the list of leading causes of death and premature death (before the age of 65) in Kitsap for more than 10 years. Other chronic diseases in the top 10 causes of death locally include Alzheimer’s disease, stroke, chronic lower respiratory diseases, diabetes, and chronic liver disease.

In addition, there are chronic conditions and long-standing functional disabilities, such as mental health conditions and dental disease, that may not be directly associated with causing death but place additional burden on our community.9

There are many chronic diseases and conditions not mentioned, or mentioned only briefly, in this chapter, such as Alzheimer’s disease and asthma. Within a broad definition of chronic disease, there are many areas where further investigation would be beneficial in determining more and different avenues for improving the health of Kitsap residents.10 11

HEART DISEASE

Heart disease is the first leading cause of death in the United States, affecting more than 877,500 Americans every year.12 For Kitsap residents, heart disease was the second leading cause of death in 2021 and in the top three for all adult age groups (18-34, 35-64 and 65 and older). Often seen as a disease of the elderly, heart disease affects younger adults in Kitsap as well as older adults, ranking as the third leading cause of premature death (before the age of 65) for Kitsap residents.

There are several direct and indirect causes of heart disease that make its prevention complicated to understand. The leading risk factors for heart disease are heredity, age, high blood pressure, high low-density lipoprotein (LDL) cholesterol, diabetes, smoking and secondhand smoke exposure, obesity, unhealthy diet, and physical inactivity. 13 14 No model of heart disease would be complete without considering the many upstream elements that influence the development of these risk factors, such as mental health, economic factors, access to affordable healthcare, and many others.

High blood pressure

The CDC names high blood pressure as the leading cause of heart disease because it damages the lining of the arteries, making them more susceptible to buildup of plaque, narrowing the arteries that lead to the heart. Nationwide, almost one in two U.S. adults have high blood pressure.15

In 2021, more than a third (35%) of adults in Kitsap County reported ever being told by a doctor, nurse, or other health professional that they had high blood pressure, similar to Washington state’s rate. Kitsap’s rate has not statistically significantly increased or decreased over time since 2011.

Disparities in high blood pressure diagnosis by a healthcare professional existed, especially along economic lines (Figure 1), which make it important to note that there are several social and economic factors that can affect screening rates for high blood pressure.
In data from 2011 to 2021, a disparity existed between those who did not graduate high school and those who graduated from college or technical school, with about 45% of those who did not graduate high school reporting having ever had high blood pressure compared to 28% of those who graduated from college or technical school.

Those with household incomes less than $25,000 also had a higher percentage reporting high blood pressure (42%). The difference in reported high blood pressure between those with household incomes less than $25,000 and those with household incomes of $75,000 to $100,000 (26%) was statistically significant.

Disparities exist by geography as well (Figure 2). The geographic area of the county with the lowest percentage of residents reporting high blood pressure was North Kitsap, with about a quarter (25%), while South Kitsap had a statistically significant difference, with 41% reporting high blood pressure. Bainbridge Island, Bremerton and Central Kitsap had about a third (36%, 33% and 33% respectively) reporting high blood pressure.

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**Figure 1**: Kitsap adults reporting high blood pressure by education and income level, 2011-21

**Data source**: Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)

Disparities exist by geography as well (Figure 2). The geographic area of the county with the lowest percentage of residents reporting high blood pressure was North Kitsap, with about a quarter (25%), while South Kitsap had a statistically significant difference, with 41% reporting high blood pressure. Bainbridge Island, Bremerton and Central Kitsap had about a third (36%, 33% and 33% respectively) reporting high blood pressure.

**Figure 2**: Kitsap adults reporting high blood pressure by subcounty region, 2011-21

**Data source**: Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)

**Note**: Geographic region is based on ZIP code rollup.
High cholesterol

High low-density lipoprotein (LDL) cholesterol can double a person’s risk of heart disease because excess cholesterol builds up in the walls of arteries and limits blood flow to a person’s heart, brain, kidneys, other organs, and legs. The CDC estimates that only about half (55%) of the US adults who could benefit from cholesterol medication are currently on it.16 Eating a healthy diet that is low in sodium, being physically active and maintaining a healthy weight can also improve cholesterol levels.

In 2021, about a third (34%) of adults in Kitsap reported ever being told by a doctor, nurse or other health professional that they had high cholesterol. This was similar to Washington State’s rate and had a decreasing trend since at least 2011.

Similar to high blood pressure, disparities in high cholesterol diagnosis by a healthcare professional existed, especially along economic lines (Figure 3). In data from 2011 to 2021, a disparity existed between those who did not graduate high school and those who did, with almost two-thirds of those who did not graduate high school (63%) reporting having ever had high cholesterol compared to only one third of those who graduated from college or technical school (33%). There were small differences in high cholesterol seen by household income level, but the differences are not statistically significant.

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<tr>
<td>$75K - &lt;100K</td>
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<tr>
<td>$100K+</td>
<td></td>
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</table>

**Figure 3:** Adults reporting high cholesterol by educational attainment and income level, 2011-21

**Data source:** Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)
DIABETES

Diabetes is a chronic health condition that affects how your body turns food into energy. A person with diabetes cannot make enough insulin or cannot use insulin as well as they should. This section combines data for type 1 and type 2 diabetes but does not include gestational diabetes.

In 2021, 11% of adults in Kitsap reported ever being told by a doctor, nurse or other health professional that they had diabetes. Overall, from 2011 to 2021, there was no statistically significant trend in Kitsap, and Kitsap’s rate in 2021 was similar to the state’s rate (9%).

Like metrics for high blood pressure and high cholesterol, disparities in diabetes diagnosis by a healthcare professional existed along economic lines (Figure 4). From 2011 to 2021, the lowest rates of diabetes were in those who graduated from college or technical school (7%) and the highest were among those who did not graduate high school (14%).

In addition, for each increasing household income bracket, there was a lower percentage of respondents reporting diabetes diagnosis, from 17% for those with less than $25,000, to 11% for those $25,000 to less than $50,000, to 10% for those $50,000 to less than $75,000, to 7% for those $75,000 to less than $100,000, and 5% for those who reported household incomes of $100,000 or more.

Figure 4: Kitsap adults reporting being told they have diabetes by household income level, 2011-21

Data source: Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)

The CDC recommends that people diagnosed with diabetes receive a Hemoglobin A1c (HbA1c) test at least twice per year to monitor blood sugar levels. Commonly called simply an A1c test, an HbA1c test is used to diagnose diabetes and then, once diagnosed, to monitor how well diabetes treatment is working over time. From July 2021 to June 2022, nearly one in five Kitsap Medicaid beneficiaries aged 18 to 75 who had been diagnosed with type 1 or type 2 diabetes (18%) did not receive any HbA1c testing. This percentage was slightly lower than Washington’s percentage (20%), however the difference was not statistically significant.
WEIGHT

Maintaining a healthy weight and engaging in regular exercise are important to help prevent and control many physical diseases and conditions, as well as providing mental health benefits. Many chronic diseases are heavily affected by weight and share the same root causes, such as high-calorie diets with low nutritional value and a lack of physical activity. Many other factors can contribute to a person’s weight, including environment, family history and genetics, metabolism, behaviors and habits.

A variety of outdoor and community activities are available in Kitsap, many of which help to keep our residents active and healthy. In the Kitsap Community Resources 2022 survey, almost one in five residents (18%) reported having found community activities for families, such as parks, recreation sports and children’s sports programs, helpful for them in the past year. Additionally, 5% of respondents found after-school activities, such as school sports, Parent-Teacher Association (PTA) and clubs, helpful.

Social and economic factors can greatly affect a person’s ability to take advantage of physical activity and healthy eating recommendations. See the Demographics & Social Determinants of Health chapter for more information about housing and food insecurity. Our built environment and accessibility to activities, organizations, food options and free time all play a role in our ability to live healthy lives.

When talking about weight and obesity, it’s important to note the limitations of the measure most used to determine healthy weight limits, the body mass index (BMI). BMI is an estimate of body fat and a gauge of risk for diseases that can occur with more body fat, however it is not a perfect measure for all individuals. In June 2023, the American Medical Association (AMA) adopted new policy clarifying the use of the BMI in medicine. It notes that the BMI is “significantly correlated with the amount of fat mass in the general population but loses predictability when applied on the individual level.”

The BMI does not adequately account for differences within and between demographic groups, such as race and ethnicity, age, and gender. BMI may also overestimate body fat in athletes and those with muscular build and underestimate body fat in older people or people who have lost muscle. Most of our data is based on BMI calculations, because of the ease of collection of that data and the lack of a good alternative measure of healthy weight. Because of the limitations, data based on BMI, including the following data, should be reviewed and shared with care, especially subgroup data.

Physical activity in adults

In 2019, 63% of Kitsap residents responding to the Behavioral Health Risk Factor Surveillance System (BRFSS) survey reported getting at least two and a half hours of physical activity outside of their regular job each week. There was no statistically significant trend from 2011 to 2019 and Kitsap’s rate was similar to Washington’s in 2019.

From 2011-2019, Kitsap respondents aged 65 and older had a higher percentage reporting at least two and a half hours of physical activity weekly (68%) compared to those aged 18 to 34 (56%). This difference was statistically significant.

Like the metrics for high blood pressure, high cholesterol and diabetes, disparities in reported physical activity existed along economic lines (Figure 5). Those who graduated from college or technical school had higher percentages (71%) compared to those who did not have any education after graduating high school (51%).
Those in the highest household income bracket (more than $100,000) had the highest percentage (81%) and each step down in income bracket had a lower percentage, with 49% of respondents in the less than $25,000 group reporting at least 2.5 hours of physical activity weekly. The difference between those in the more than $100,000 group and all other income groups was statistically significant. (Figure 5)

Geographic differences exist as well. Those in the Bainbridge Island geographic region reported the highest percentage in Kitsap (77%). The difference between Bainbridge Island and each of the other geographic regions was statistically significant, with the lowest percentage in Bremerton (55%).

<table>
<thead>
<tr>
<th>Income</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>&lt; $25K</td>
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</tr>
<tr>
<td>$25K - &lt;50K</td>
<td>59.2%</td>
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<td>64.4%</td>
</tr>
<tr>
<td>$100K+</td>
<td>80.5%</td>
</tr>
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</table>

*Figure 5: Kitsap adults who report at least 2.5 hours of physical activity weekly by income level, 2011-19*

*Data source: Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)*

**Physical activity in youth**

Interestingly, among public school students in 2021, the percentage of students reporting at least 60 minutes of physical activity on at least five days a week was about the same across grade levels. More than half of 6th graders (51%), 52% of 8th graders, 47% of 10th graders, and 46% of 12th graders reported this level of physical activity. There were no statistically significant trends or differences from Washington State for any of the grades.

For the combined group of 6th, 8th, 10th and 12th graders in 2021, there were many differences across subgroups. The only statistically significant difference by race and ethnicity was for students identifying as multiracial, who had the highest percentage (54%), compared to students identifying as Hispanic or Latino, who had the lowest percentage (43%). There was a statistically significant difference between Bainbridge Island students (61%) and all other geographies (50% for Central Kitsap and North Kitsap, 46% for Bremerton and 45% for South Kitsap).

Students who identified as gay, lesbian, bisexual or something other than heterosexual reported lower percentages being physically active (37% compared to 55% for students who identified as heterosexual).

Students who identified their gender as female had lower percentages (45%) compared to students who identified as males (56%), while those who identified as transgender, questioning or something other than male or female had the lowest percentage (34%).

**Overweight, obese classifications in adults**

In 2021, about two-thirds (66%) of adults in Kitsap County were classified as overweight or obese, which was defined as a body mass index (BMI) of 25.0 or more. BMI is calculated based on a person’s height and weight. Kitsap’s rate had an increasing trend from 2011 to 2021 and was about the same as Washington’s rate (64%) in 2021.
In data from 2011 to 2021 combined, the educational level with the lowest rate of overweight and obese was those who had graduated from college or technical school.

Among race and ethnic groups, those who identified as Asian had a lower percentage reporting a height and weight associated with overweight or obesity (45%) compared to those who identified as white (66%) and Hispanic or Latino (69%). These differences were statistically significant.

Residents of Bainbridge Island had the lowest rate geographically, with 50% reporting a height and weight classified as obese or overweight (Figure 6). Statistically significant differences existed between Bainbridge Island residents and residents of Bremerton (65%), Central Kitsap (66%) and South Kitsap (69%). A statistically significant difference existed between male (72%) and female (59%) respondents as well.

**Table:**

<table>
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<th>Region</th>
<th>Bainbridge</th>
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<th>Central Kitsap</th>
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<td>50.3%</td>
<td>64.7%</td>
<td>66.3%</td>
<td>57.7%</td>
<td>69.0%</td>
</tr>
</tbody>
</table>

*Figure 6:* Kitsap adults classified as overweight or obese by sub-county geography, 2011-21

*Data source:* Washington Department of Health, Behavioral Risk Factor Surveillance System (BRFSS)

*Note:* Geographic region is based on ZIP code rollup.

**Overweight, obese classifications in youth**

Public school students whose self-reported height and weight responses on the Healthy Youth Survey were in the top 15% for BMI by age and gender based on growth charts developed by the Centers for Disease Control and Prevention were classified as overweight or obese.

**Table:**

<table>
<thead>
<tr>
<th>Region</th>
<th>Bainbridge Island</th>
<th>Bremerton</th>
<th>Central Kitsap</th>
<th>North Kitsap</th>
<th>South Kitsap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12.8%</td>
<td>38.7%</td>
<td>29.3%</td>
<td>28.2%</td>
<td>33.5%</td>
</tr>
</tbody>
</table>

*Figure 7:* Kitsap 8th, 10th, and 12th graders classified as overweight or obese by subcounty, 2021

*Data source:* Washington State Healthy Youth Survey (HYS)

*Note:* Geographic region is based on school district.

In 2021, 29% of Kitsap 8th grade students were considered overweight or obese. This percentage was approximately the same each year the survey was asked from 2010 to 2021 and similar to Washington’s percentage (33%). For both 10th and 12th grade students, the percentage has been increasing from 2010 to 2021 in a statistically significant trend. A very
A similar percentage of 10th and 12th graders in Kitsap (29% and 28% respectively) was considered overweight or obese compared to Washington (30% and 30% respectively).

For 10th grade students in 2021, white students had the lowest percentage reporting a height and weight classified as overweight or obese (26%), compared to 47% for students identifying as Native Hawaiian or Pacific Islander, who had the highest percentage.

Students on Bainbridge Island had the lowest percentage (13%), statistically significantly lower than any other geographic region (Figure 7). Bremerton students had the highest percentage (39%), followed by South Kitsap (34%), Central Kitsap (29%), and North Kitsap (28%).
CANCER

Cancer, in its many forms, has been the leading cause of death in Kitsap every year since at least 2000. Cancer is also the leading cause of premature death, causing 121 premature deaths in Kitsap in 2021 and resulting in almost 1,000 years of life lost (the hypothetical number of years a person would have lived if they had not died prematurely, assuming they would have lived to age 65.)

Engaging in healthy practices, such as abstaining from tobacco use, eating a healthy diet, maintaining a healthy weight, wearing sun protection, and vaccination when appropriate, can help lower the risk of cancer. Completing all recommended screening tests is the best way to ensure early detection of cancer during the time when treatments work best and screening tests can sometimes allow for removal of precancerous lesions before cancer develops.24

Arguably one of the most substantial impacts of the COVID-19 pandemic were the massive disruptions to health care, employment, and social interaction. One specific area where this can already be observed is cancer. Multiple studies observed delays in cancer diagnosis and treatment, as well as disruptions in cancer treatments, during the first year of the COVID-19 pandemic.25 26 An analysis of Veterans Affairs data showed a 45% decrease in colonoscopies and a 30% decrease in prostate biopsies in 2020 compared to the previous two years; further, they found that incidence of cancer diagnoses paralleled these screening data, supporting the hypothesis that decrease in cancer incidence may be an artifact of decreased screening.27

Later and missed diagnoses can result in poorer prognosis and fewer treatment options, which may result in a higher incidence of cancer-related death in the coming years. Missed diagnoses and more aggressive treatments can also reduce an individual’s immune response, rendering them more susceptible to infections.

Cervical cancer

A Pap smear, or Pap test, is a procedure to test for cervical cancer in women. When combining the years 2018 and 2020, over three quarters of female Kitsap residents between the ages of 21 and 65 reported having a Pap test in the past three years (76%). There was no statistically significant change from 2014/2016 to 2018/2020 and no difference compared to Washington State.

There was a statistically significant difference between residents whose highest educational attainment was graduating from high school (73.1%) and those who had graduated from college or technical school (86.4%).

From July 2021 to June 2022, fewer than half (48%) of Kitsap’s female Medicaid beneficiaries aged 21 to 64 were screened for cervical cancer, which was slightly — but statistically significantly – above the overall state rate (46%).

After adjusting for age differences, there were approximately six cases of cervical cancer newly diagnosed from 2018 to 2020 in Kitsap females for every 100,000 female residents. There was no statistically significant trend over time from 2002-04 to 2018-20, and Kitsap’s rate (6.3) in 2018-20 was similar to the state’s rate (6.6). See the Methods chapter for more information about adjusting for age.

Breast cancer

When combining the years 2018 and 2020, 74% of females between the ages of 50 and 74 in Kitsap reported having a mammogram in the past two years. This percentage was similar to Washington State’s percentage (75%) and has shown
no statistically significant change from 2014-2016 to 2018-2020. From July 2021 to June 2022, 47% of Kitsap female residents aged 50 to 74 using Medicaid had received a mammogram to screen for breast cancer, a percentage that is higher than Washington State’s percentage of 43%. This difference is statistically significant.

After adjusting for age differences, there were 133 newly diagnosed cases of breast cancer in 2020 in Kitsap females for every 100,000 female Kitsap residents. There has been a statistically significant decreasing trend over time from 2000 to 2020, and Kitsap’s rate in 2020 was similar to the state’s rate (151 per 100,000).

Across racial and ethnic groupings, the lowest rate was seen in those who identified as multiracial (65 per 100,000). Differences that were statistically significant were seen in those who identified as Native Hawaiian or Pacific Islander (263 per 100,000) and white (160 per 100,000). Central Kitsap residents had the lowest rate geographically (138 per 100,000), followed by Bremerton (141), South Kitsap (151), North Kitsap (170) and Bainbridge Island (197).

**Colorectal cancer**

In 2020, the guidelines for colorectal cancer screening were expanded to include recent advances in screening technologies and the recommendation to begin screening at age 45 rather than 50 for residents with an average risk of colorectal cancer.28

Colorectal cancer screening rates for people aged 50 to 75 have remained unchanged since at least 2014 and are similar to rates reported in Washington state. In 2018, approximately 76% of respondents to the BRFSS survey aged 50 to 75 reported having been screened by one of the recommended methods within the recommended timeframe. With the increased methods recommended in 2020, that percentage increased but due to the small number of respondents was less reliable and therefore suppressed.

From July 2021 to June 2022, only 38% of Kitsap residents aged 50 to 75 using Medicaid had an appropriate screening for colorectal cancer (similar to Washington state).

Colorectal cancer incidence has been decreasing in Kitsap from 2000 to 2020, a trend that is statistically significant. In 2020, Kitsap County reported 29 cases of colorectal cancer per 100,000 residents, and Washington state reported 30 per 100,000.
COMMUNITY ASSETS

There are many community members and organizations striving to improve the health of our community by working directly on chronic diseases. Many more are working on underlying issues. The following is a short list of those working directly on preventing chronic diseases:

**Heart disease**

[Heart.org](http://Heart.org) provides information about cardiovascular disease and congenital heart disease resources for individuals, families and caregivers in Washington State.

**Cancer**

[Kitsap Cancer Services](http://KitsapCancerServices) provides services to cancer patients and their families in Kitsap County by promoting financial, emotional, and physical wellbeing.

The [American Cancer Society](http://AmericanCancerSociety) has programs and services to help patients manage cancer treatment and recovery and find needed emotional support.

The [Susan G. Komen Foundation](http://SusanGKomenFoundation) provides breast cancer education, financial assistance for patients, and a breast care helpline that also connects patients to local resources.


[Virginia Mason Franciscan Health (VMFH)](http://VirginiaMasonFranciscanHealth) has outpatient services that include support groups, spiritual support and survivorship planning.

**Nutrition and healthy living**

[Kitsap Community Resources](http://KitsapCommunityResources) houses the [Women, Infants and Children (WIC)](http://WomenInfantsChildrenWIC) program, which provides support for pregnant women, nursing moms, and children under five to improve access to healthy foods, receive health education and screening services, increase breast feeding and access other health and social services.

The [Kitsap County Division of Aging and Long-Term Care](http://KitsapCountyDivisionofAgingAndLongTermCare) provides various nutrition services for older adults, including providing meals at regular sites around the county, the Senior Farmers’ Market Nutrition Program (SFMNP) which provides nutrition education and vouchers to authorized farmers’ markets, and contracts with [Meals on Wheels Kitsap](http://MealsOnWheelsKitsap) for Senior Nutrition Services to provide home-delivered meal services in our county. They also provide the [Senior Information and Assistance line](http://SeniorInformationAndAssistance), which a general resource for older adults that can help them find not only food, but social activities like physical activity programs.

Food banks and food-related resources can be found at [North Kitsap Fishline, Central Kitsap Food Bank, ShareNet](http://NorthKitsapFishline, CentralKitsapFoodBank, ShareNet) (Kingston and surrounding areas), [South Kitsap Helpline, Helpline House](http://SouthKitsapHelpline, HelplineHouse) (Bainbridge Island), [Bremerton Foodline, Salvation Army](http://BremertonFoodline, SalvationArmy), and [St. Vincent de Paul. Fishline Foodbank and Comprehensive Services](http://StVincentdePaul, FishlineFoodbankAndComprehensiveServices) provides a Healthy Foods Market, stocked with fresh fruits and vegetables, meat, dairy, and dry/canned goods, as well as healthy recipes.

The [Washington State SNAP-Ed program](http://WashingtonStateSNAPEd) improves health equity through projects and interventions that support healthy lifestyle behaviors, prevent obesity, and increase of food security. Kitsap County is a participating county.

There are [farmers markets](http://farmersmarkets) in Poulsbo, Bainbridge Island, Bremerton and Port Orchard, and many accept EBT cards, WIC.
checks, and senior electronic benefits. Some markets participate in SNAP Market Match, a program that matches up to $25 at select farmers markets and Farm Stands per day.

Kitsap Fresh is a food hub and producer-owned cooperative providing an online marketplace where local farmers and producers sell and customers access source-identified products on the Kitsap Peninsula.

Kitsap Community Food Co-op is a cooperatively owned grocery store that connects our local community with quality food, products and access to information that promotes healthy living and a healthy environment.

The Franciscan Diabetes & Nutrition Associates at St. Michael Medical Center, Peninsula Community Health Services, and Puget Sound Kidney Centers offer nutrition education and other related services.

The YMCA of Pierce and Kitsap Counties has a variety of healthy living programs, including a diabetes prevention program, LIVESTRONG at the YWCA for cancer patients, and ACT! (a youth and family obesity prevention program).

The Kitsap Healthy Eating, Active Living (HEAL) Coalition is a community-based initiative in Kitsap County that promotes the accessibility and affordability of healthy food and physical activity for all, organizing activities such as Kitsap Moves.

Kitsap Conservation District provides community gardening classes and plant started to food banks so that individuals can grow their own produce. Link to activity calendar:

Kitsap Regional Library often offers opportunities to engage in healthy eating, active living educational experiences, including book/story walks or learning about planting seeds.

The Cities of Bainbridge Island, Bremerton, Port Orchard, and Poulsbo, Kitsap County, and the Great Peninsula Conservancy, all have information on parks and trails.

The Move Your Way campaign provides tools, videos and fact sheets, with tips that make it easier to get a little more active.
ENDNOTES

1 Centers for Disease Control and Prevention (CDC), About Chronic Diseases, https://www.cdc.gov/chronicdisease/about/index.htm


5 Centers for Disease Control and Prevention (CDC), Family Health History and Chronic Disease, https://www.cdc.gov/genomics/famhistory/famhist_chronic_disease.htm#:~:text=If%20you%20have%20a%20family,it%20early%20if%20it%20develops


12 Centers for Disease Control and Prevention (CDC), Heart Disease and Stroke, https://www.cdc.gov/chronicdisease/resources/publications/factsheets/heart-disease-stroke.htm#:~:text=The%20Nation's%20Risk%20Factors%20and,unhealthy%20diet%2C%20and%20physical%20inactivity

13 Centers for Disease Control and Prevention (CDC), Heart Disease and Stroke, https://www.cdc.gov/chronicdisease/resources/publications/factsheets/heart-disease-stroke.htm#:~:text=The%20Nation's%20Risk%20Factors%20and,unhealthy%20diet%2C%20and%20physical%20inactivity


15 Centers for Disease Control and Prevention (CDC), Heart Disease and Stroke, https://www.cdc.gov/chronicdisease/resources/publications/factsheets/heart-disease-stroke.htm#:~:text=The%20Nation's%20Risk%20Factors%20and,unhealthy%20diet%2C%20and%20physical%20inactivity

16 Centers for Disease Control and Prevention (CDC), Heart Disease and Stroke, https://www.cdc.gov/chronicdisease/resources/publications/factsheets/heart-disease-stroke.htm#:~:text=The%20Nation's%20Risk%20Factors%20and,unhealthy%20diet%2C%20and%20physical%20inactivity

17 Centers for Disease Control and Prevention (CDC), What is Diabetes?, https://www.cdc.gov/diabetes/basics/diabetes.html


22 National Heart, Lung, and Blood Institute, Aim for a Healthy Weight, https://www.nhlbi.nih.gov/health/educational/lose_wt/risk.htm


DATA SOURCES

- Washington State Department of Health, Center for Health Statistics, Behavioral Risk Factor Surveillance System (BRFSS), analyzed by Kitsap Public Health District, Assessment & Epidemiology Program

- Washington State Department of Health, Washington State Office of the Superintendent of Public Instruction, Department of Social and Health Services, and the Liquor and Cannabis Board, Healthy Youth Survey (HYS), analyzed by Kitsap Public Health District, Assessment & Epidemiology Program

- Washington State Department of Health, Washington State Cancer Registry, Community Health Assessment Tool (CHAT), June 2023


- Washington State Population Interim Estimates (PIE), December 2022
Understanding disparities in risk factors and health outcomes, like injuries, can help community organizations and policy makers better identify contributing issues and target the response. It is evident that more investigation and analysis is needed into the risk factors and causes affecting disparities in injuries, hospitalizations, and deaths in Kitsap. In particular, qualitative data on injuries, hospitalizations, and deaths in Kitsap County is lacking.

**TOPIC OVERVIEW**

In public health practice, injury is damage to the body resulting in harm or destruction of health. Injuries can result from motor vehicle crashes, falls, near drownings, burns, poisoning, and acts of violence against oneself or others, among other causes. Injuries sometimes result in hospitalizations and can potentially lead to lifelong disability or death.

In 2021, there was a 12% increase in preventable injury-related deaths in the U.S. compared to the previous year and a 159% increase over the past 29 years. In 2021, preventable injuries ranked as the third leading cause of death for the U.S. population (all ages), behind heart disease and cancer.

The number of non-fatal preventable injuries is much higher; about one in five U.S. residents sought medical treatment for an injury in 2021. Comparing 2021 to 2020, preventable injury deaths occurring at home increased 13%, those in motor vehicles increased 11%, those in public increased almost 11%, and those at work increased 9%.

Accidents, or incidents that happen unintentionally, can also result in injury. In Kitsap, accidents increased from the fifth leading cause of death in 2020 to the fourth in 2021. From 2017 to 2021, accidents were the leading cause of death for residents aged 18 to 34 and in the top three causes for those birth to 17 and 35 to 64. Accidents contributed to more years of potential life lost* than any other cause in Kitsap — more than 1,800 years lost in 2021.

Accidents have also been in the top ten leading causes of hospitalization in Kitsap from 2016 to 2019.

This chapter discusses the leading causes of hospitalization and death in Kitsap County, as well as injuries like falls and motor vehicle traffic accidents. Injury prevention often includes substance use overdose prevention and suicide. These topics are discussed in more detail in the Health Behaviors and Wellbeing chapters respectively.

Cancer, heart disease, COVID-19, and accidents were all identified in the top five causes of death and premature death in Kitsap, as well as in the top five causes of years of potential life lost* before age 65. Suicide also ranked high in the leading causes of premature death and years of potential life lost. Accidents almost exclusively included substance use poisoning, fall injury, and motor vehicle traffic-related injury.

*Years of potential life lost are the hypothetical number of years of life a person would have lived if they had not died early, assuming they would have lived to age 65.
KEY FINDINGS

The main findings from this chapter are based on the leading causes of hospitalization and death, which give insight into the most important areas to address in preventing hospitalization and death. These data are specific to Kitsap County.

Top causes of death

The top five causes of death in Kitsap in 2021 were:

- **Cancer**: 517 deaths
- **Heart disease**: 497 deaths
- **COVID-19**: 193 deaths
- **Accidents**: 144 deaths
- **Alzheimer’s Disease**: 137 deaths

Accidental deaths

The top three causes of accidental death in Kitsap in 2021 were:

- **Poisoning**: 53 deaths
- **Falls**: 53 deaths
- **Motor-vehicle accidents**: 14 deaths

Premature death

The top causes of premature death (deaths among people younger than 65) in Kitsap in 2021 were:

- **Cancer**: 121 premature deaths
- **Accidents**: 77 premature deaths
- **Heart disease**: 67 premature deaths
- **COVID-19**: 52 premature deaths
- **Suicide**: 35 premature deaths
- **Cirrhosis**: 35 premature deaths

KEY DISPARITIES

While the findings from this report provide evidence of disparities in Kitsap County across multiple indicators, the following were identified as the most significant and are not a complete list of all disparities:

Disparities by sex

- Life expectancy was shorter in males compared to females from 2016 to 2020.
- The premature death rate (deaths before age 65) was higher in males compared to females from 2017 to 2021.

Disparities by geographic region

- From 2016 to 2020, life expectancy was higher in Bainbridge Island compared to all other sub-county geographies.

Disparities by race/ethnicity

- From 2016 to 2020, life expectancy was shortest in Native Hawaiian or Pacific Islanders, American Indian or Alaska Natives, and Black or African Americans. It was highest among Asian or Asian Americans and Hispanic or Latinos.
- Premature death rates in Black or African American residents and Native Hawaiian or Pacific Islander residents were higher than rates in white residents and Hispanic or Latino residents. These were, in turn, higher than rates in Asian or Asian American residents.
LEADING CAUSES OF HOSPITALIZATION AND DEATH

Hospitalizations and deaths occur due to a wide array of health issues; injuries come about intentionally (such as through self-harm) or unintentionally (such as an auto accident). Understanding the main issues that lead to hospitalization and death are crucial to prioritizing how we allocate resources, what types of actions we undertake, and where we focus resources to help our population live longer, healthier lives.

Life expectancy

Life expectancy is the average number of years a person at birth can expect to live given current death rates for each age group. Life expectancy can be used to evaluate mortality trends over time to help determine when excessive death is occurring in a population to identify prevention actions that will help people live longer, healthier lives.

There are many factors during an individual’s lifetime that affect mortality, and therefore life expectancy, such as childhood conditions, environmental and material living conditions, education level, and income. Behavioral risk factors, such as substance use, nutrition and exercise, and factors that affect an individual’s ability to influence those risk factors all contribute to life expectancy. Social and economic determinants of health are discussed in more detail in the Demographics and Social Determinants of Health chapter.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Female</th>
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</tr>
</thead>
<tbody>
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<td>Race/Ethnicity (Races exclude Hispanic)</td>
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<tr>
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<td>80.5</td>
</tr>
</tbody>
</table>

Figure 1. Kitsap County life expectancy in years by sex, race/ethnicity and geographic region, 2016-20

Data source: Washington State Department of Health, Linked Birth & Death Certificate Data

Notes: It appears that, for persons who have died that identified as multiple races, death rates are biased low and life expectancy is biased high. Still, the Center for Health Statistics recommends against using multiple race deaths data until further notice. Additionally, geographic region is based on ZIP Code rollup.

Life expectancy has been increasing statistically significantly in Kitsap County since at least 2000. In Kitsap, based on current death rates, a baby born in 2020 can expect to live about 83 years. However, some populations within Kitsap County have statistically significantly lower life expectancies when compared to other populations (Figure 1). Men have
lower life expectancies than women by more than four years. This difference is present in Kitsap and similar differences by sex are seen nationally and in many other countries around the world.\textsuperscript{4, 5}

Life expectancy also varies by race and ethnicity and geographic area of residence. Native Hawaiian and Pacific Islanders have the lowest life expectancies in Kitsap, followed by American Indian and Alaska Natives, and Black and African Americans. Residents of Bremerton and South Kitsap (80.5 years) have statistically significantly shorter life expectancies than residents of Bainbridge Island (87 years).

**All-cause death rate**

The rate of death for Kitsap residents has been statistically significantly decreasing from 2010 to 2021, after adjusting for age (Figure 2). See the Methods chapter for more information about adjusting for age.

Although there was an increase in death rate from 2020 to 2021, this increase was not statistically significant. In 2021, there were an estimated 706 deaths in Kitsap County for every 100,000 residents. This rate was statistically significantly lower than Washington’s rate.

![Figure 2. All-cause death rate per 100,000 population (age-adjusted)](image)

*Data source: Washington State Department of Health, Death Certificate Data*

In 2021, the death rate in Kitsap by age was higher with each increasing age group (Figure 3). The death rate in males (826 per 100,000) was higher than in females (598 per 100,000). Disparities were also seen across races and ethnicities. Kitsap residents who identified as American Indian or Alaska Native (1,552 per 100,000) and as Native Hawaiian or Pacific Islander (1,417 per 100,000) had statistically significantly higher rates than those who identified as white (701 per 100,000) and Asian or Asian American (574 per 100,000).

Similar to life expectancy, social, economic, and environmental factors, such as income, housing, education and safety, are associated with differences in death rates across racial and ethnic subgroups.\textsuperscript{6, 7, 8}

For more information about these factors, see the chapter on Demographics and Social Determinants of Health.
INJURIES, HOSPITALIZATIONS, AND DEATHS

Figure 3: Kitsap County all-cause death rate per 100,000 population by subgroup, 2021 (age-adjusted)

Data source: Washington State Department of Health, Death Certificate Data

Note: Age group data is age-specific and not age-adjusted.

Leading causes of death

Over the past century, Americans have been living longer due to improvements in many areas of healthcare, such as the availability of vaccinations and antibiotics. During this same time, the leading causes of death have been increasingly chronic health conditions (cancer, heart disease and cerebrovascular diseases, like stroke).

Cancer was the leading cause of death in 2021 in Kitsap County, with 186 deaths for every 100,000 people (Figure 4). Heart disease was the second leading cause and the only other cause with a rate above 150 deaths per 100,000 residents (179 deaths per 100,000). There is a large decrease in the number of deaths from the second cause to the third, COVID-19. COVID-19 accounted for 70 deaths per 100,000 residents in 2021, after being the tenth leading cause in 2020 (17 per 100,000).

Accidents, Alzheimer’s disease, and cerebrovascular disease all had about 50 deaths per 100,000. Chronic lower respiratory disease was seventh and diabetes mellitus was eighth. Chronic liver disease and suicide were ninth and tenth respectively.

From 2017 to 2021, leading causes of death were very similar between the sexes, with cancer and heart disease being the first and second leading causes for both males and females (Figure 5). The third leading cause was accidents for males and Alzheimer’s disease for females. During the same period, the top two causes of death were cancer and heart disease for all racial and ethnic groups. Cancer was the leading cause for Native Hawaiian or Pacific Islander, white, multiracial, and Hispanic or Latino residents, followed by heart disease. For American Indian or Alaska Native, Asian or Asian American, and Black or African American residents, heart disease was the leading cause, followed by cancer.
INJURIES, HOSPITALIZATIONS, AND DEATHS

Figure 4. Leading causes of death for Kitsap County, rate per 100,000

Data source: Washington State Department of Health, Death Certificate Data

Notes: Leading causes are based on the NCHS 113 selected leading causes of death. These rates are not age-adjusted in order to show the biggest causes of death in Kitsap regardless of age.

Accidents were the third leading cause of death for American Indian, Black, multiracial and Hispanic subgroups. Alzheimer’s disease was the third leading cause for whites, cerebrovascular disease (stroke) for Asians, and diabetes for those who identified as Native Hawaiian or Pacific Islander.

Leading causes of death were very different by age group (Figure 5). The top leading causes of death for children under the age of 18 were perinatal conditions. Congenital and chromosomal abnormalities (such as Down syndrome, cerebral palsy and heart defects) and accidents (unintentional injuries) tied for second in this age group. Accidents were the first leading cause for those aged 18 to 34 and the third leading cause for those 35 to 64. Suicide was the second leading cause of death among those aged 18 to 34. Cancer and heart disease are the top two leading causes for both those aged 35 to 64 and 65 and older.
### Figure 5. Leading causes of death for Kitsap County by sex, race/ethnicity and age group, rate per 100,000 population, 2017-21

**Data source:** Washington State Department of Health, Death Certificate Data

**Notes:** Leading causes are based on the NCHS 113 selected leading causes of death. These rates are not age-adjusted in order to show the biggest causes of death in Kitsap regardless of age.
INJURIES, HOSPITALIZATIONS, AND DEATHS

**Premature death**

Premature death is the number of deaths that occur prior to the deceased’s 65th birthday out of every 100,000 residents in Kitsap. After adjusting for age, there were approximately 216 premature deaths of Kitsap residents for every 100,000 residents in 2021. There has been no statistically significant change in this rate since at least 2010, and Kitsap’s rate is lower than Washington state’s rate overall of 241 deaths per 100,000.

Differences are seen by subgroups in Kitsap from 2017 to 2021 (Figure 7). The rate of premature death in males (231 per 100,000) was statistically significantly higher than in females (154 per 100,000). Premature death rates in Black or African American residents and Native Hawaiian or Pacific Islander residents were statistically significantly higher than rates in white residents and Hispanic or Latino residents. In turn, these rates were statistically significantly higher than rates in Asian or Asian American residents.

![Figure 6. Kitsap County premature death rate per 100,000 by sex and race/ethnicity, 2017-21 (age-adjusted)](image)

**Data source:** Washington State Department of Health, Death Certificate Data

**Note:** Geographic regions are based on school districts.

The top three leading causes of premature death in 2021 were cancer, accidents, and heart disease. In 2021, accidents replaced heart disease as the second leading cause of premature death, and COVID-19 replaced suicide as the fourth leading cause. Suicide and chronic liver disease/cirrhosis both had the same rate and ranking as the fifth leading cause.

**Years of potential life lost before the age of 65**

Years of potential life lost, or YPLL, is the hypothetical number of years of life that a person would have had if they had not died early (assuming they would have lived to age 65). It is calculated by subtracting the age at death from 65 for each person. The YPLL adds up all the lost years, divided by the total number of residents and multiplied by 100,000; this is the number of years lost for every 100,000 residents.
The causes that accumulated the most life years lost for Kitsap residents in 2021 were accidents (824 years lost per 100,000), cancer (427 years lost per 100,000) and suicide (404 years lost per 100,000). Heart disease (255 years lost per 100,000) was the fourth leading cause and COVID-19 (254 years lost per 100,000) replaced chronic liver disease as the fifth leading cause of years of potential life lost before the age of 65 in Kitsap in 2021.

There has been some variation in the ranking of the causes in the past five years, but accidents, cancer, suicide and heart disease have remained the top four causes in Kitsap since 2015.
UNINTENTIONAL INJURIES

Accidental injury was the fourth leading cause of death in the U.S. in 2019, with about 68 deaths for every 100,000 people. It was also the fourth leading cause of death in Kitsap County in 2021, with 52 deaths for every 100,000 residents. Accidents were the leading cause of death among those 18 to 34 from 2017 to 2021 in Kitsap, and the second and third leading cause of death among those 0 to 17 and 35 to 64, respectively.

The three major types of accidents causing death in Kitsap County in 2021 were drug and substance use poisoning (37% of all accidental deaths), falls (37%), and motor-vehicle traffic-related accidents (10%).

Drug and substance use, including substance use poisoning, are addressed in the Health Behaviors chapter.

Figure 7. Leading causes of unintentional injury deaths by sex, race/ethnicity, and age, 2017-21

Data source: Washington State Department of Health, Death Certificate Data

Notes: Data are not age adjusted. Causes with less than 10 deaths are ranked, but the rate is not shown. Care should be taken in interpreting the rankings because of the very small numbers. When two causes have the same number of deaths, they will have the same ranking.
Deaths due to accidental falls

Falls were the leading cause of accidental deaths from 2010 to 2019. Accidental falls dropped to the second leading cause of accidental death in Kitsap in 2020 and were tied with substance use poisoning as the leading causes of accidental death in Kitsap residents in 2021, causing 53 deaths.

Falls are the leading cause of accidental death in residents who identify as white and Asian or Asian American. They are the third leading cause of accidental death in American Indian or Alaska Natives, Black or African Americans and Hispanic or Latinos. Falls are the leading cause of accidental death for those 65 and older (all genders) and for females in Kitsap. They are the second leading cause of accidental death in males.

There were approximately 96 fall-related accidental deaths for every 100,000 residents aged 65 and older in Kitsap in 2021 after adjusting for age (Figure 8). Although there was an increase from 2020 to 2021, Kitsap’s rate has been statistically significantly decreasing from 2014 to 2021. Kitsap’s rate in 2021 was about the same as Washington’s rate (105 per 100,000).

![Figure 8](image.png)

Figure 8. 65 years and older fall-related death rate per 100,000 (age-adjusted)

Data source: Washington State Department of Health, Death Certificate Data

Adults over the age of 85 have a statistically significantly higher fall rate (389 per 100,000) than those 65 to 74 (83 per 100,000) and those 75 to 84 (85 per 100,000). There is no statistically significant difference between males and females.

Although accidental deaths due to falls occurred in populations 65 and older in all racial and ethnic groupings in Kitsap from 2017 to 2021, the only race or ethnicity with 10 or more accidental deaths due to falls in those aged 65 and older was white (88 per 100,000). Because of this, differences by race and ethnicity were unable to be evaluated.

Fall-related hospitalizations in older adults (age 65 and older)

The rate of falls resulting in hospitalizations is age-adjusted to account for differences in the age distribution between Kitsap and Washington.
There were 1,152 fall-related hospitalizations in Kitsap for every 100,000 residents aged 65 and older in 2019 (Figure 9). This rate remained stable from 2016 to 2019 and was lower than Washington’s rate overall in 2019. Residents in Bainbridge Island (1,410 per 100,000) and South Kitsap (1,419 per 100,000) had higher rates of fall-related hospitalizations among those aged 65 and older, compared to North Kitsap (1,127 per 100,000).

<table>
<thead>
<tr>
<th>Age Group**</th>
<th>65-74</th>
<th>75-84</th>
<th>85+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bainbridge Island</td>
<td>1,409.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bremerton</td>
<td>1,318.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Kitsap</td>
<td>1,389.0</td>
<td></td>
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</tr>
<tr>
<td>North Kitsap</td>
<td>1,127.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Kitsap</td>
<td>1,419.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 9. 65 years and older fall-related hospitalization rate per 100,000, 2016-19 (data by region are age-adjusted)*

**Data sources:** Washington Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS), Washington State Department of Health; Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT); Health Care Authority (HCA) Medicaid Enrollment and Claims Data

**Note:** Age-specific rate, not age-adjusted.

**Motor vehicle injury-related hospitalizations**

This indicator is the annual number of motor vehicle traffic-related hospitalizations for every 100,000 residents in Kitsap. It is based on the residence of the injured person, not the location of the injury or hospitalization. The rate is age-adjusted to account for differences in age distribution between Kitsap and Washington residents. It includes fatal and nonfatal hospitalization discharges.

After adjusting for age, there were approximately 42 motor vehicle traffic-related hospitalizations for every 100,000 Kitsap residents in 2019. This rate is not statistically different from Washington’s rate and there was no statistically significant trend identified from 2016 to 2019. During the same period, males had a statistically significantly higher rate (59 per 100,000) than females (28 per 100,000).

Children ages 0 to 17 had the lowest rate (11 per 100,000). Young adults aged 18 to 34 (61 per 100,000) had the highest rate by age. The rate decreased slightly with each increasing adult age group. Among county regions, South Kitsap had the highest rate (56 per 100,000), statistically significantly higher than residents of Central Kitsap, who had the lowest rate (31 per 100,000).
COMMUNITY ASSETS

There are many community members and organizations working to improve prevent injuries, hospitalizations and deaths:

**Kitsap Brain Injury** support groups are open to anyone with a brain injury, their caregivers, family members, and loved ones.

**Kitsap Division Aging and Long-Term Care** and the YMCA of Kitsap and Pierce Counties have partnered to provide Enhance Fitness fall prevention classes.

Community and senior centers, such as Bainbridge Island Senior Center, Bremerton Senior Center, and Village Green Community Center, offer physical activity programs for seniors.

**Northwest Region EMS and Trauma Care Council** works in collaboration with agencies in the region to provide injury prevention resources.

**Safe Kids Washington** implements evidence-based programs, such as car-seat checkups, safety workshops and sports clinics, that help parents and caregivers prevent childhood injuries.

**Harborview Injury Prevention and Research Center** conducts research, trains scientists, educates public health practitioners, and implements prevention programs to achieve injury-related health equity across the lifespan.

Washington State Department of Health’s **Older Adult Falls Prevention Program** implements a state action plan to address fall prevention, shared informational resources and programs like the self-directed **Walk With Ease** program, and partners with the National Council on Aging to coordinate the Washington State Falls Prevention Coalition.

**ThinkFirst National Injury Prevention Foundation** has award-winning evidence-based programs to help people learn to reduce their risk for injury.
ENDNOTES


2 National Safety Council, Injury Facts, All Injuries, https://injuryfacts.nsc.org/all-injuries/overview/#:~:text=The%20number%20of%20nonfatal%20preventable(record%2C%2034.0%20per%20100%2C000


5 QuickStats: Life Expectancy at Birth, by Sex — National Vital Statistics System, United States, 2019–2021. MMWR Morb Mortal Wkly Rep 2023;72:775. DOI: http://dx.doi.org/10.15585/mmwr.mm7228a5, https://www.cdc.gov/mmwr/volumes/72/wr/mm7228a5.htm#:~:text=For%20males%2C%20life%20expectancy%20declined%2C%20to%205.8%20years%20per%2020years%20of%2020in%202021.&text=Reported%20by%3A%20Jiaquan%20Xu%20MD%2C%20Arialdi%20Minino%2C%20MD


9 Centers for Disease Control and Prevention (CDC), Accidents or Unintentional Injuries, https://www.cdc.gov/nchs/fastats/accidental-injury.htm
DATA SOURCES

- Washington State Department of Health, Center for Health Statistics, Linked Birth & Death Certificate Data, Community Health Assessment Tool (CHAT), March 2021

- Washington State Department of Health, Center for Health Statistics, Death Certificate Data, Community Health Assessment Tool (CHAT), April 2023

- Washington Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS), Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT), Aug 2021

- Washington State Population Interim Estimates (PIE), December 2022