

COMMUNICABLE DISEASE



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:

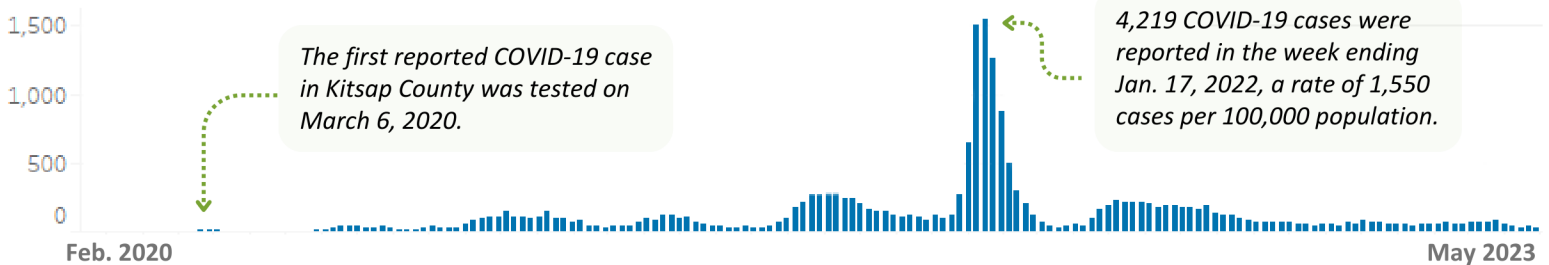
- Emerging Infections and Outbreak Response
- Reportable Communicable (Infectious) Diseases
- Immunizations and Vaccine-Preventable Diseases
- Sexually Transmitted Infections

! 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



- 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

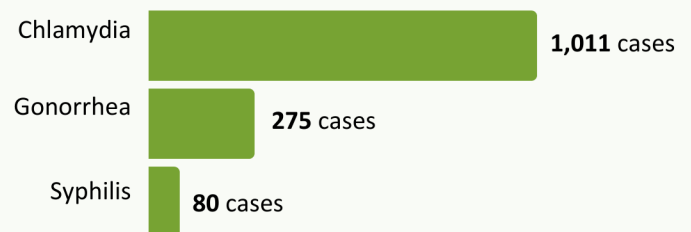
- According to data reported by Kitsap County schools at the beginning of the 2022-23 school year:
 - 1,433 (4%) Kitsap K-12 students were not complete on their age-appropriate immunizations and did not have exemptions.
 - Seven public schools’ kindergarten cohorts reported less than 90% of their students 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:



- 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, 2020.¹ On February 19, 2020, Gov. Jay Inslee declared a state of emergency in Washington.² The first case in Kitsap County was reported in March 2020.³ 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.^{4 5}

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.

<i>COVID-19 pandemic period</i>	Number of deaths	Average deaths per month	Median age	% of decedents under age 70
<i>Early pandemic (Mar 2020 - Feb 2021 (12 months))</i>	91	7.6	80	20.9%
<i>Alpha wave (Mar - Jun 2021 (4 months))</i>	30	7.5	68.5	56.7%
<i>Delta wave (Jul - Nov 2021 (5 months))</i>	137	27.4	74	43.1%
<i>Omicron peak (Dec 2021 - Feb 2022 (3 months))</i>	72	24.0	76	30.6%
<i>Late omicron and subvariants (Mar 2022 - May 2023 (15 months))</i>	104	6.9	80	15.4%

Figure 1. COVID-19-associated deaths in Kitsap residents, March 2020 – May 2023

Data source: Washington Disease Reporting System (WDRS), accessed August 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.⁶⁷

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

men.⁸

On May 17, the first U.S. mpox case was reported in Massachusetts.⁹ 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).¹⁰

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.¹¹ 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.¹²

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.^{13 14 15 16 17 18}

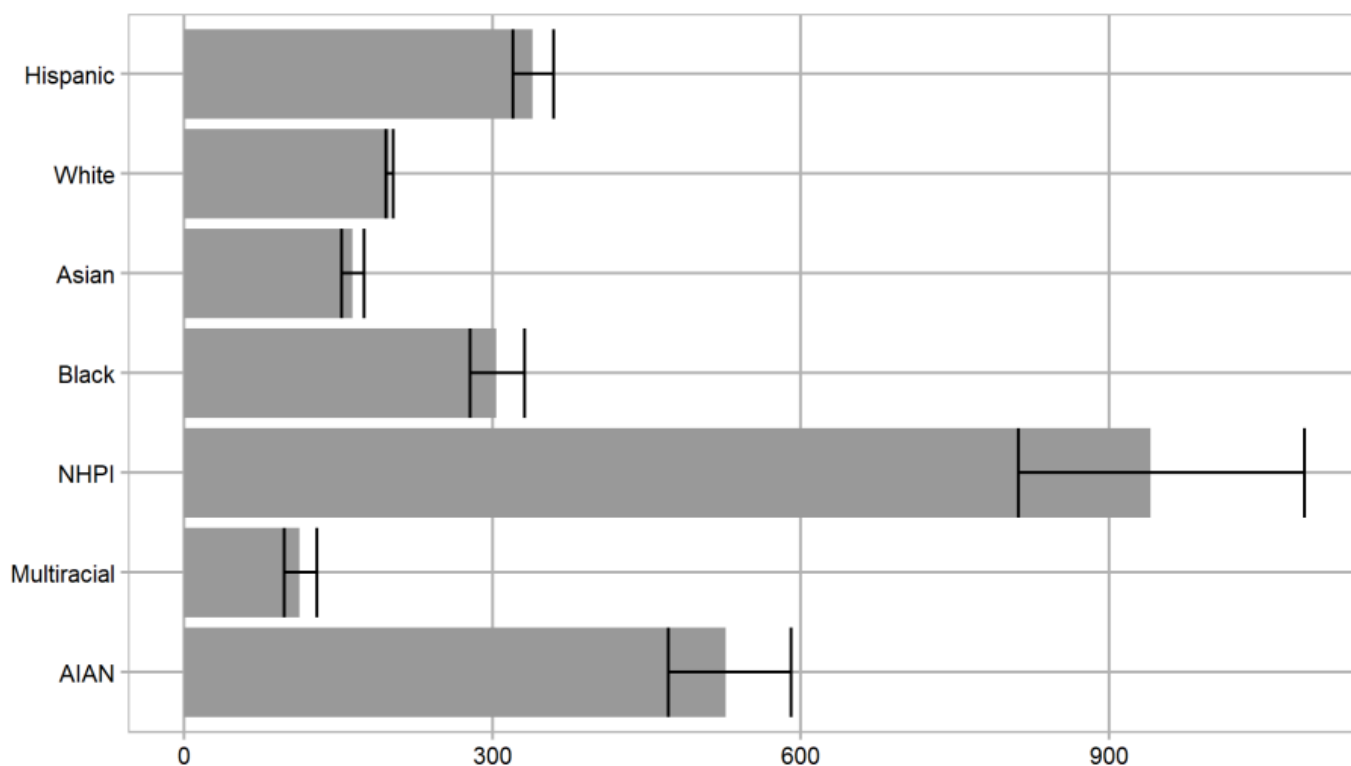


Figure 2. Age-adjusted death rate among Washington COVID-19 cases per 100,000, March 1, 2020 through July 29, 2023

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)

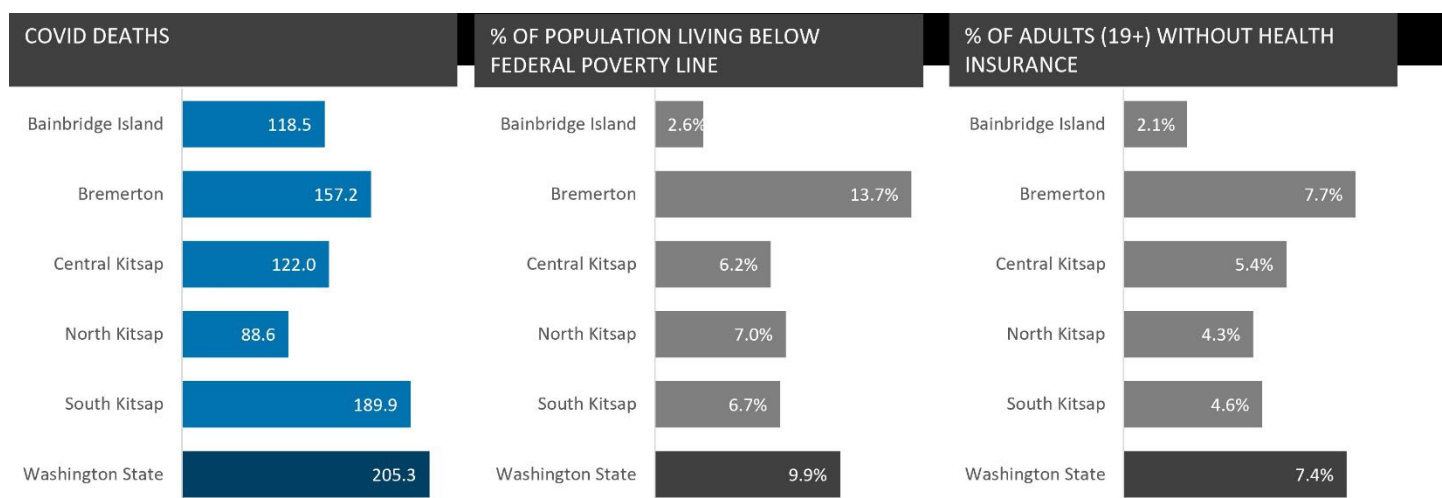


Figure 3. (a) Age-adjusted cumulative COVID-19 death rate, March 2020 – June 2023; (b) percent of population living below federal poverty line, 2021; (c) percent of adults aged 19 and older without health insurance

Data source: Washington Disease Reporting System (WDRS); U.S. Census Bureau, American Community Survey (ACS)

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.

Area	Groups disproportionately impacted
<i>Ability to isolate</i>	<ul style="list-style-type: none"> • 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) • People living in crowded housing • People who are unable to get groceries on their own.
<i>Ability to work from home</i>	<ul style="list-style-type: none"> • Workers in certain sectors, including grocery stores, manufacturing, retail, healthcare (including long-term care facilities), public transportation, homeless shelters, construction¹⁹ (>40,000 in Kitsap County; source: WA Employment Security Department)
<i>Access to benefits</i>	<ul style="list-style-type: none"> • Residents who are not documented • People with limited or no English • People without access to the internet

<i>Crowdsourced funding to fill economic gaps</i>	<ul style="list-style-type: none"> • People in less affluent zip codes and people of color were found to be less able to raise funds through crowdsources funding such as GoFundMe.^{20 21}
<i>Education</i>	<ul style="list-style-type: none"> • Children with special needs • School districts with less resources • Children in crowded living situations
<i>Employment and Business</i>	<ul style="list-style-type: none"> • Accommodations and food services, arts/entertainment/recreation, small and medium-sized businesses²²
<i>Health and medical</i>	<ul style="list-style-type: none"> • 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
<i>Information</i>	<ul style="list-style-type: none"> • People with limited or no English (~6,200 in Kitsap County) • People without access to the internet
<i>Psychological</i>	<ul style="list-style-type: none"> • 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
<i>Transportation</i>	<ul style="list-style-type: none"> • 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

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.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.

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.”²⁵

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.^{26 27}

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)

	Already vaccinated	Vaccine-hesitant	Not planning on vaccinating
Health organizations (CDC, WHO, etc.)	😊	😐	😐
My doctor(s)	😊	😊	😊
Friends and relatives	😊	😐	😐
WA DOH and KPHD	😊	😊	😐
Schools or school staff	😊	😞	😞
Community service providers (library, food bank)	😊	😐	😞
Facebook, Twitter, Instagram	😞	😞	❌
Other social media	😞	😞	❌
Organizations I belong to	😊	😐	😊
Network TV stations or news articles	😊	😞	❌

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 Survey²⁸, 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.

Indicator	Change	Years compared
<i>Opioid mortality rate*</i>	+248%	2022 vs. 2019
<i>Students experiencing homelessness (rate)*</i>	+28%	2020-21 cohort vs. 2018-19 cohort
<i>Proportion of population living below federal poverty level</i>	+24%	2021 vs, 2019
<i>Adults (19+) without health insurance</i>	+20%	2021 vs. 2019
<i>Overcrowded housing units</i>	+14%	2021 vs. 2019
<i>Unemployment*</i>	+11%	2021 vs. 2019
<i>Homeless population (point-in-time)</i>	+11%	2022 vs. 2019

Indicator	Change	Years compared
<i>Four-year high school graduation rate*</i>	-4%	2020-21 cohort vs. 2018-19 cohort

Figure 6. Selected community indicators, compared at pre-pandemic timepoint and most current available year

Data Sources: U.S. Census Bureau, American Community Survey (ACS); Washington State Office of the Superintendent of Public Instruction (OSPI); Washington State Department of Health, Opioid and Drug Overdose Data Dashboard; Washington State Department of Commerce, Kitsap County Department of Human Services, Annual Point in Time Count Results; U.S. Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS)

Note: Asterisk (*) indicates difference is statistically significant.

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 characterization^{31 32 33},

to supplement mpox surveillance³⁴, and to detect circulating polio virus relating to a confirmed case in New York.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*.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 ways³⁷:

- **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.^{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.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.^{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 rate⁴⁴; 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)

<i>Objective</i>	Target (2025)	U.S. (2022)⁴⁸	WA (2020-2022, avg.)	Kitsap (2020-2022, avg.⁴)
<i>Reduce the incidence of TB disease (per 100,000 population)</i>	1.3	2.5	2.6	1.2
<i>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. (%)</i>	95%	Not available	Not available	91.7%

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

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.

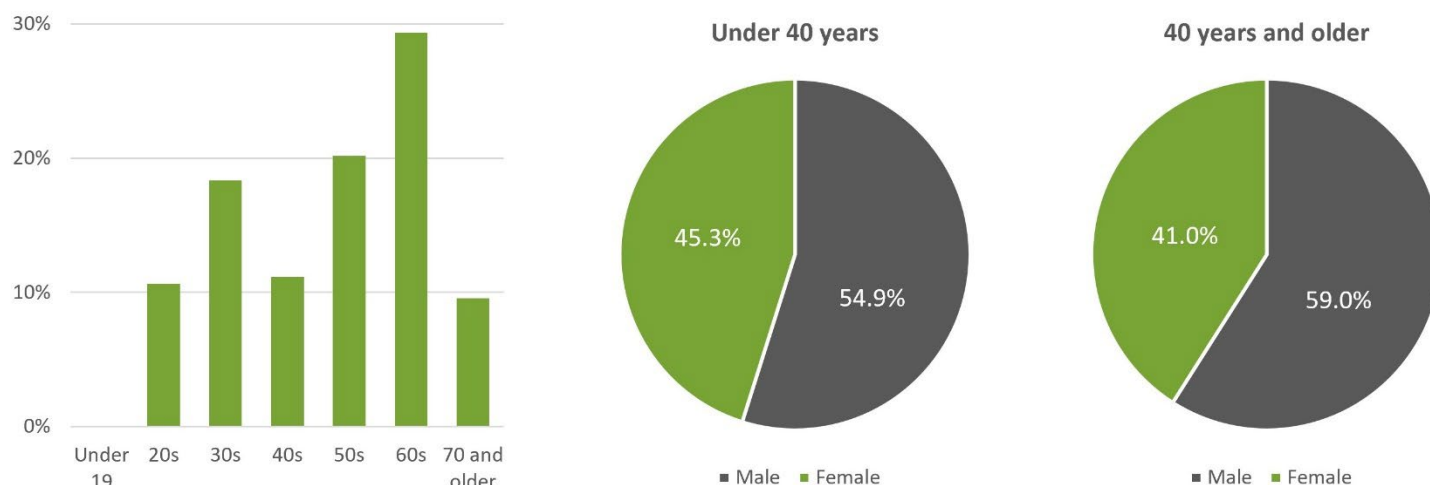


Figure 9. (a) Age distribution and (b) Sex at birth by age cohort of Kitsap County chronic hepatitis C cases diagnosed 2018 – 2022

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.

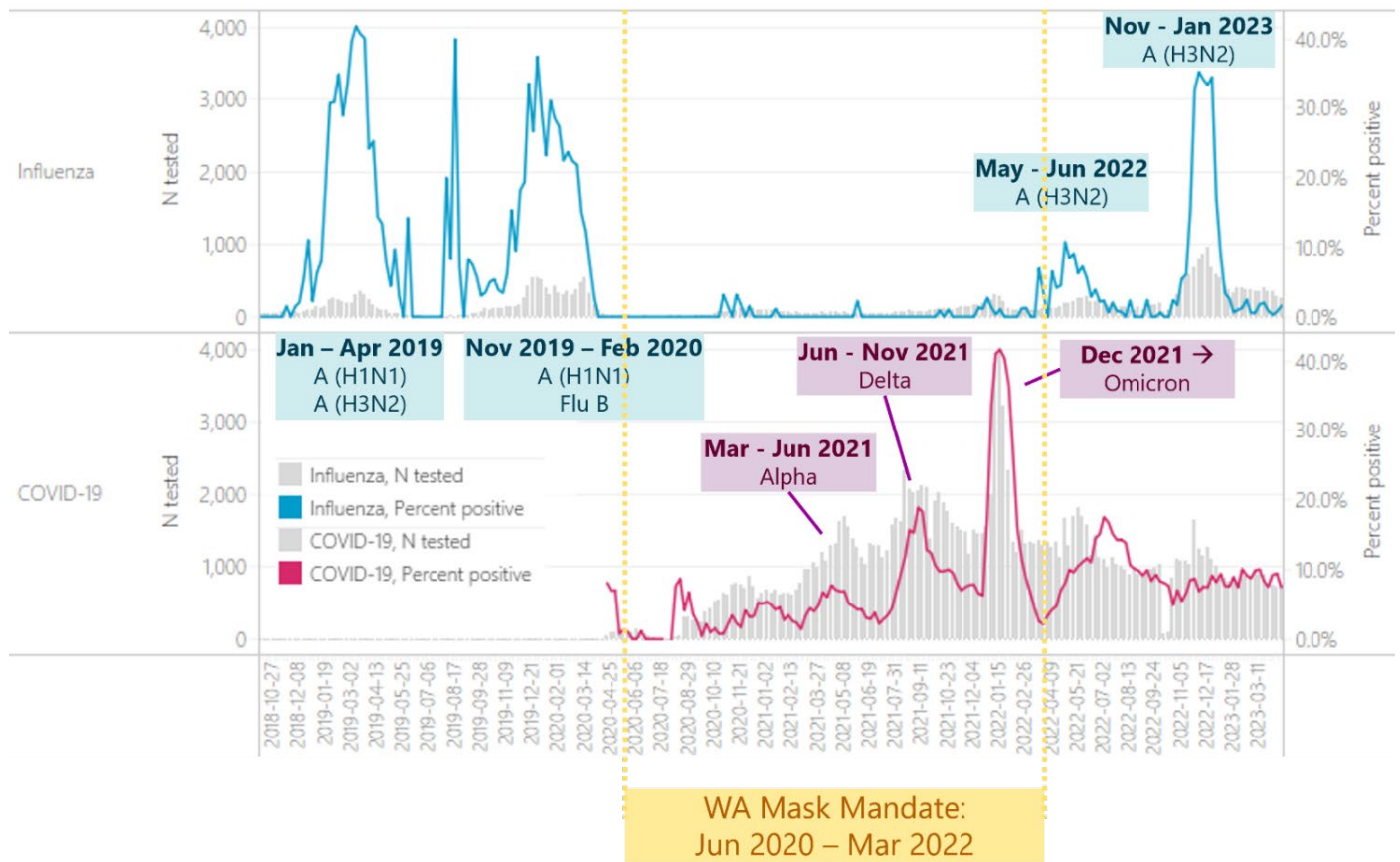


Figure 10. Influenza and COVID-19 labs reported by Kitsap sentinel respiratory reporting labs, Oct. 2018 – Apr. 2023

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:

Where disparity occurs	Contributing factors	Examples
<i>Exposure to pathogen</i>	<ul style="list-style-type: none"> • Living or working conditions • Ability to take measures to avoid exposure • Ability to travel • Access to preventative measures, such as personal protective equipment (PPE) 	<ul style="list-style-type: none"> • 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.
<i>Vulnerability to infection or severe illness</i>	<ul style="list-style-type: none"> • Pre-existing conditions (and ability to medically manage these conditions) • Immunization status 	<ul style="list-style-type: none"> • 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.
<i>Access to diagnosis and treatment</i>	<ul style="list-style-type: none"> • Insurance coverage • Geographic location • Transportation • Availability of specialists • Language 	<ul style="list-style-type: none"> • 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.
<i>Impact of illness / ability to recover</i>	<ul style="list-style-type: none"> • Income • Social safety net • Stigma 	<ul style="list-style-type: none"> • 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).^{55 56}

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.⁵⁷ 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 medication^{59 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 $\geq 80\%$ 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.

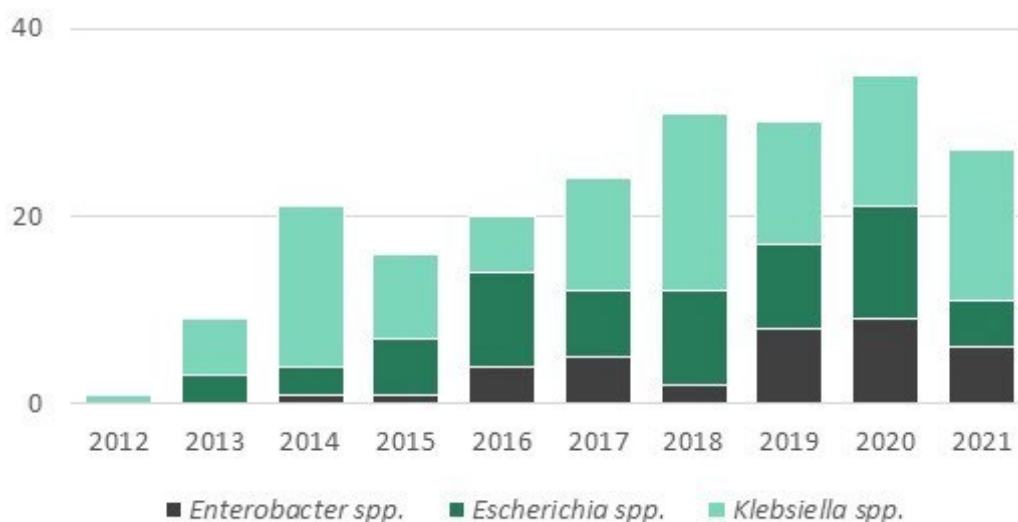


Figure 11. Infections from carbapenemase-producing organisms in Washington state, 2012 – 2021

Data source: DOH 2021 Communicable Disease Report

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 children⁶⁶:** 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 adults⁶⁷:** 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 populations⁶⁸:** 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 pregnancy⁶⁹:** 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.⁷⁰
- **Vaccines for international travelers⁷¹:** 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 adoptions⁷²:** 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)⁷³

- 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 event⁷⁴, observed reduced effectiveness⁷⁵, or if they find that equivalent protection can be achieved with fewer doses⁷⁶. 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.

Objective	Target	U.S.	WA	Kitsap
Maintain the vaccination coverage level of 1 dose of the MMR vaccine in children by age 2 years	90.8%	91.0% (NIS, 2019)	92.0% (NIS, 2019)	88.7 – 91.6% ⁶ (WA IIS, 2022)
Maintain the vaccination coverage level of 2 doses of the MMR vaccine for children in kindergarten	95%	93.0% ⁷⁷ (Annual School Assessments Report, 2021-22)	91.4% (DOH School Immunizations Data, 2022-23)	92.3% (DOH School Immunizations Data, 2022-23)
Maintain the elimination of measles, rubella, congenital rubella syndrome, & polio	0 endemic cases	0 endemic cases through 2022 (CDC NDSS)	0 endemic cases through 2022 (CDC NDSS)	0 endemic cases through 2022
Increase the proportion of people who get the flu vaccine every year	70%	51.4% (aged 5+) (NIS, 2021-22)	55.9% (aged 5+) (NIS, 2021-22)	49.0% (18+) (BRFSS, 2021-22) ⁷⁸

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.

<i>Disease</i>	Protection from vaccine	Estimated vaccine coverage, Kitsap K-12 public schools (2022-23)	Last case in Kitsap	Kitsap cases, 2018-2022 (5yr)	Total Washington cases, 2018-2022 (5yr)
<i>Measles</i>	93% after 1 dose, 97% after 2 doses ⁷⁹	97.0%	2011	0	102
<i>Mumps</i>	78% after 1 dose, 88% after 2 doses	97.0%	2020	10	897
<i>Rubella</i>	97% after 1 dose	97.0%	None in past 20 years	0	0
<i>Tetanus</i>	100% after series completion ⁸⁰	94.2%	None in past 20 years	0	6
<i>Pertussis</i>	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	94.5%	2020	27	2,227
<i>Diphtheria (toxigenic)</i>	97% after series completion	94.2%	None in past 20 years	0	0
<i>Hepatitis A</i>	>90% after 1 dose, ~100% after 2 doses ⁸¹	<i>Not reported</i>	2023	12	546
<i>Hepatitis B</i>	~98% of infants after 3-dose series >90% of adults <40 years old after 2 doses ⁸²	96.0%	None in past 20 years (perinatal) 2021 (acute)	0 perinatal cases 2 acute cases	2 perinatal cases 213 acute cases

<i>Varicella (chickenpox)</i>	80-85% after 1 dose, higher after 2 doses ⁸³	95.9%	<i>Not reportable</i>	<i>Not reportable</i>	<i>Not reportable</i>
<i>Polio</i>	99% after 2 doses, 99% after 3 doses	96.0%	None in past 20 years	0	0
<i>Human papillomavirus (HPV)</i>	prevents more than 90% of HPV-attributable cancers ⁸⁴	<i>Not reported</i>	<i>Not reportable</i>	<i>Not reportable</i>	<i>Not reportable</i>

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)

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.

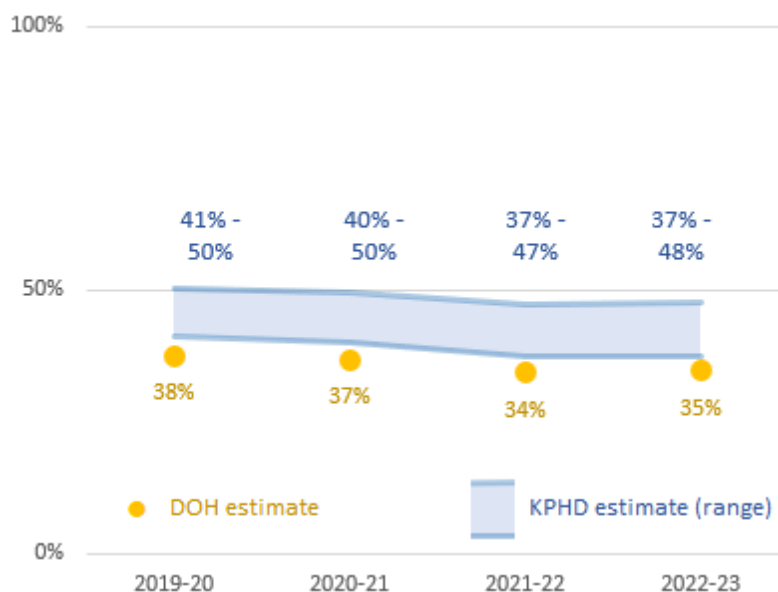


Figure 14. Estimated flu vaccine coverage in Kitsap County (all ages), October 2019 – August 2023

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

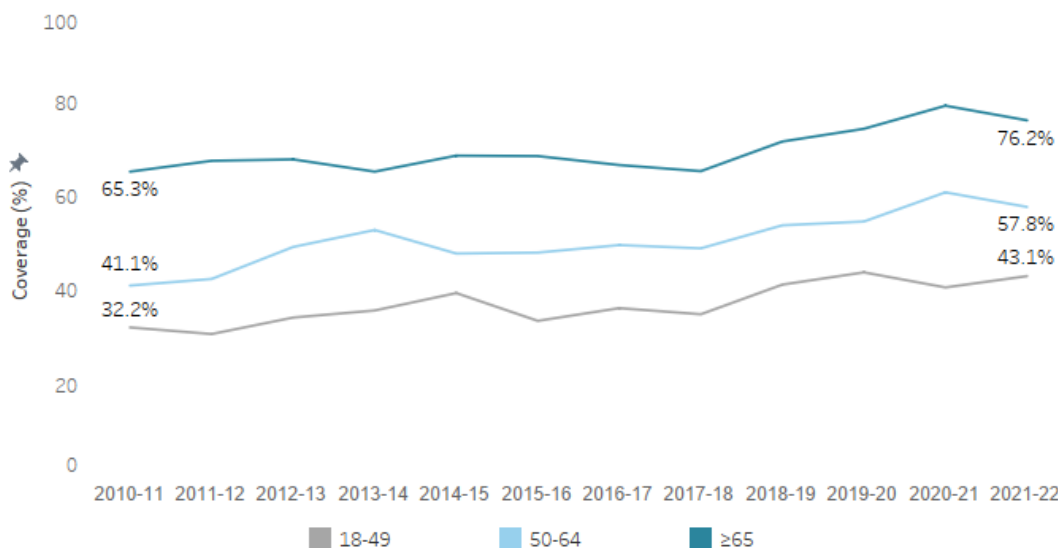


Figure 15. End-of-season influenza vaccine coverage in Washington

Data source: Centers for Disease Control and Prevention, National Immunization Surveys

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.

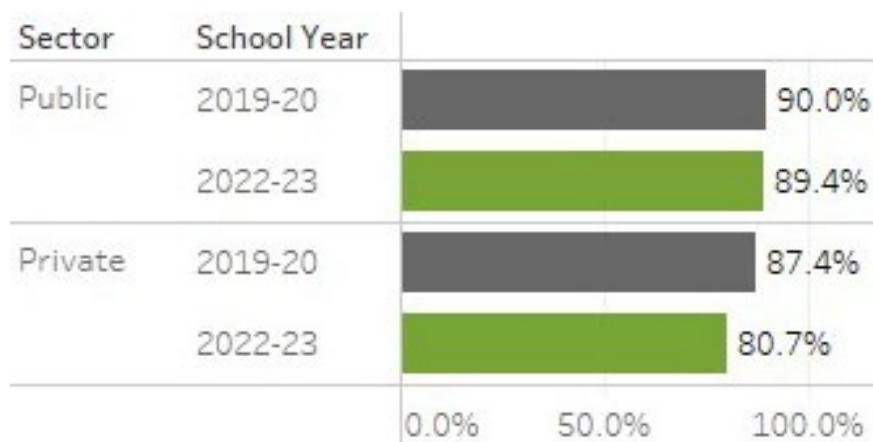


Figure 16. Percent of Kitsap kindergarteners up to date on all required immunizations, pre- and post-COVID-19 school years

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.

Politicization 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)

Overview

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*.^{96,97} 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.

Objective	5-year target	10-year target	U.S. (2021)	WA (2022)	Kitsap (2022)
Sexually active high school students who used a condom at last sexual encounter ^{98 99}	53.5%	56.5%	51.3%	56.8%	62.9%
Reduce P&S syphilis rate (per 100,000 population) ^{100 101}	13.2	12.2	15.6	24.4	13.9
Reduce gonorrhea rates (per 100,000 population)	215.3	199.7	209.8	144.9	97.9
Reduce congenital syphilis rate (per 100,000 live births) ¹⁰²	57.6	33.9	77.9	63.2	No cases

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.

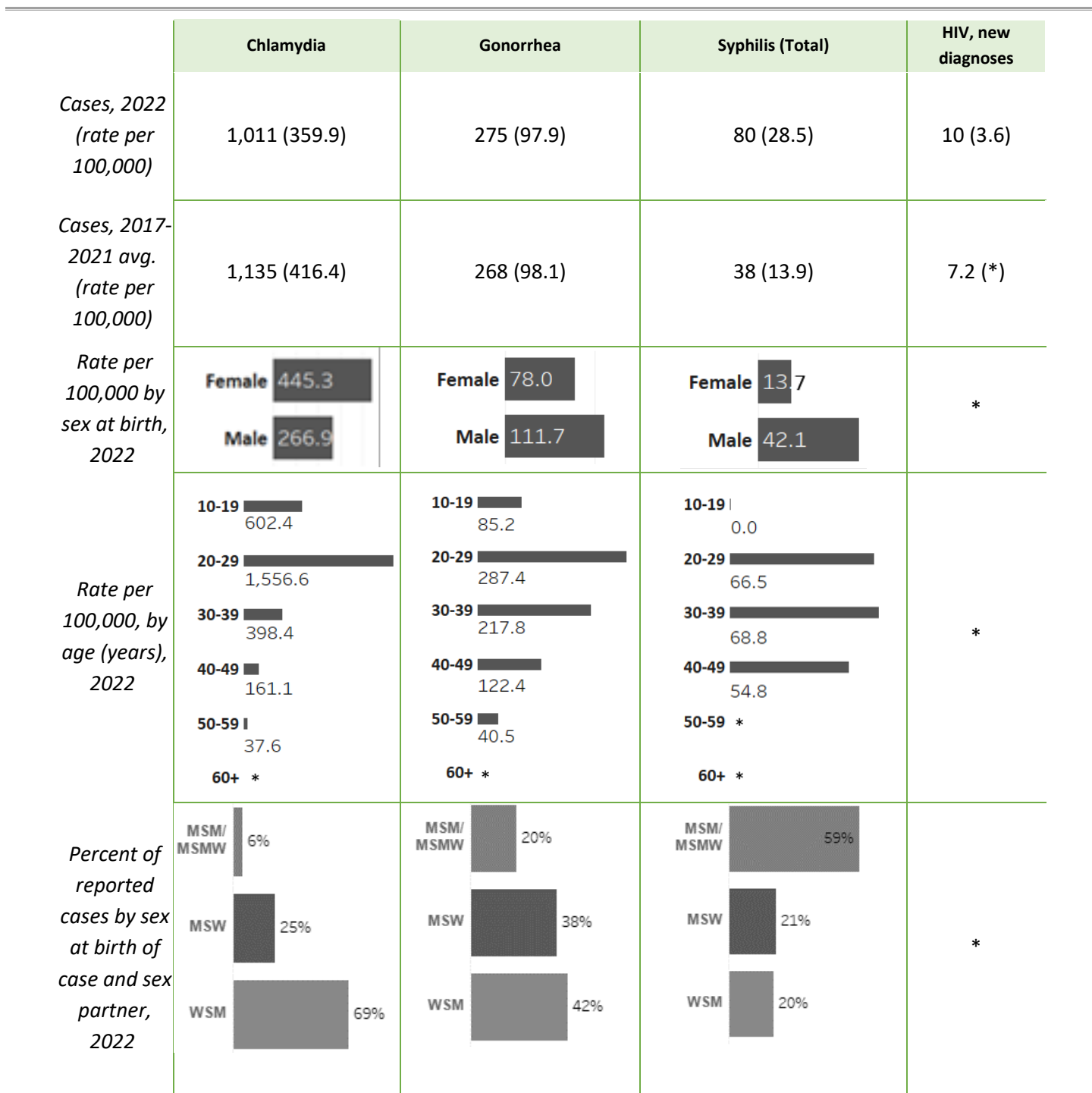


Figure 18. Summary of chlamydia, gonorrhea, syphilis and HIV surveillance data in Washington state

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.

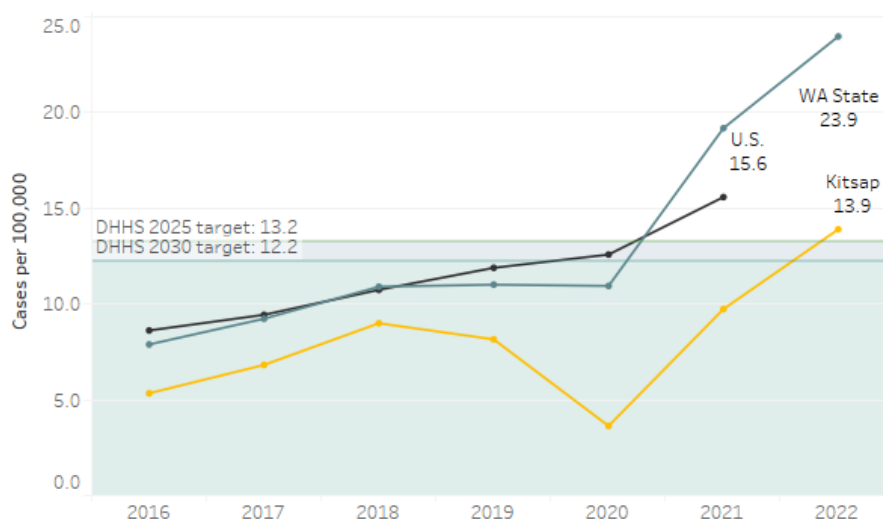


Figure 19. Syphilis cases (primary and secondary only) per 100,000 population, 2016 – 2022

Data sources: 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. Data accessed 10/5/2023

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)

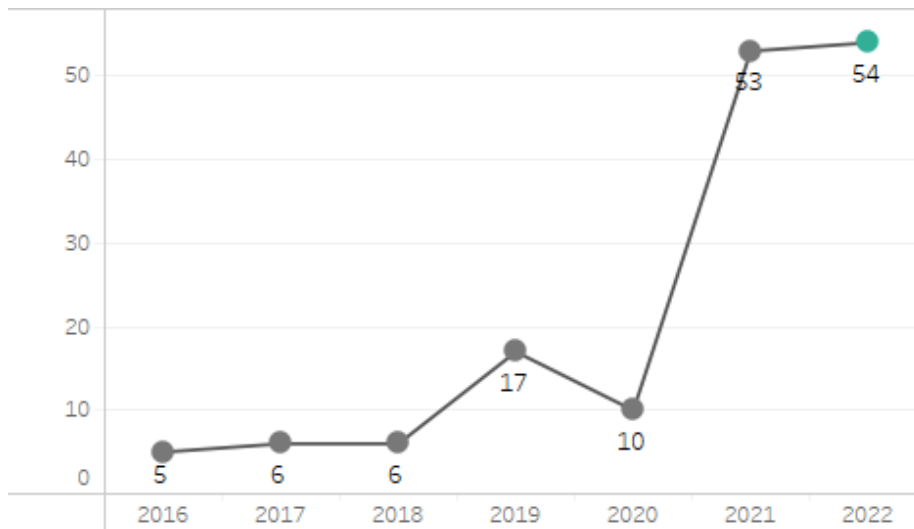


Figure 20. Congenital syphilis cases reported in Washington State, 2016 – 2022

Data source: Washington State Department of Health, Office of Infectious Disease, 2022 Preliminary Washington State STI Data

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.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.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.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.¹⁰⁹

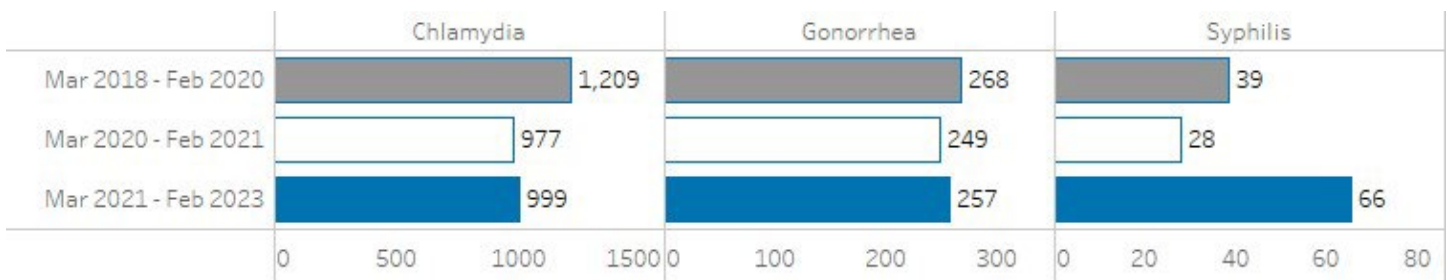


Figure 21. Average annual chlamydia, gonorrhea, and syphilis case reports received in the 24 months before COVID-19 (“before”), the first 12 months of COVID-19 (“during”), and in the second and third years after the start of COVID-19 (24 months or “after”)

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.¹¹⁰

- 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.¹¹¹
- 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.¹¹²

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.¹¹³ 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.¹¹⁴ 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.¹¹⁵

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 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.¹¹⁶ 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 “siloe” 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.¹¹⁷

- 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.¹¹⁸
- 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.¹¹⁹ In Washington, the epidemic has also been shifting from predominantly occurring among gay and bisexual men to more frequent occurrence among heterosexual people.¹²⁰ 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.¹²¹ However, CDC has been hesitant to endorse this as a policy due to concerns for equity, and for its potential impact on antibiotic resistance.¹²²

- 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.^{123,124}

- 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.¹²⁵

- 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 MRC 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

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- ⁴ Washington State Department of Health COVID-19 Data Dashboard. Accessed 6/30/2023; URL: <https://doh.wa.gov/emergencies/covid-19/data-dashboard>
- ⁵ World Health Organization Coronavirus (COVID-19) Dashboard. Accessed 6/30/2023; URL: <https://covid19.who.int/>
- 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>
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