MultiCare Health System Mary Bridge Children's Hospital Community Health Needs Assessment

2019

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Pierce County Accountable Communities of Health, Community Advisory Council

Bates Technical College

City of Tacoma

City of Lakewood

City of Puyallup

Community Health Care

Exceptional Families Network

Foundation for Healthy Generations, Community Health Advocates

Graham Community Coalition

Korean Women's Association

Pacific Lutheran University

Pierce College

Pierce County

Pierce County Cities and Towns Association

Pierce County Human Services Department

Pierce County Community Health Workers Collaborative

Pierce County Library System

Pierce Transit

Rainbow Center

Tacoma-Pierce County Health Department, Black Infant Health program

Tacoma Pierce County League of Women Voters

University of Puget Sound

University of Washington Tacoma

Executive Summary

MultiCare Health System and Catholic Health Initiatives (CHI) Franciscan in collaboration with Tacoma-Pierce County Health Department (TPCHD) has conducted a Community Health Needs Assessment (CHNA) to identify key health issues based on current data. This CHNA includes the results of a comprehensive review of key health indicator data along with community input, to understand and address the needs of this service area.

Within this report, the term "community" refers to residents who live in this hospital's predefined service area.

This CHNA fulfills Section 9007 of the Affordable Care Act, as well as Washington state CHNA requirements, and presents data on:

- **Demographics of the community**
- **Life expectancy and leading causes of death**
- **Chronic illness, including behavioral health**
- **Injury and violence**

Additionally, the CHNA process included asking community members about the health of their community, what they need in their neighborhoods to be healthy and what they think could be improved. These community engagement activities included ten community workshops with residents, ten interviews with local organizational leaders and an online community survey. MultiCare Health System, CHI Franciscan and TPCHD pledge to engage community stakeholders throughout the CHNA process not simply as sources of input but as equal partners with shared accountability and investment in addressing health concerns.

COMMITMENT TO HEALTH EQUITY

Throughout the CHNA process, social determinants of health provided the framework for both the community engagement process and as a way to focus attention on the importance of neighborhood and community conditions. Income, education, housing and transportation create opportunities or barriers to health. Health should not be determined by zip code, income, race or any other factor. Healthy choices should be easy choices for everyone in Pierce County.

Executive Summary

Continued

PRIORITY HEALTH NEEDS

Based on results from this CHNA, priority health needs within the Mary Bridge Children's Hospital community emerged. These priorities resulted from applying a prioritization process and criteria to the health indicator data and community engagement themes included in this report.

- **Mental health**
- **Access to prenatal care**
- **Obesity**

What Makes Us Healthy?

20% Health Behaviors
20% Clinical Care
5% Genes and Biology
55% Social, Economic and Environmental Factors

Adapted from http://www.cdc.gov/socialdeterminants/FAQ.html

Introduction

MultiCare Health System contracted with the Tacoma-Pierce County Health Department to conduct a comprehensive Community Health Needs Assessment (CHNA). The process included quantitative analysis and qualitative interviews and focus groups with community leaders and residents of Pierce County representing many sectors and population groups, including low-income residents and others affected by health disparities.

HISTORY

MultiCare Health System is a not-for-profit health care organization with more than 18,000 team members caring for the community since 1882. This is the third CHNA developed by TPCHD and MultiCare Health System to describe health issues, what impacts those issues have and how to address these concerns.

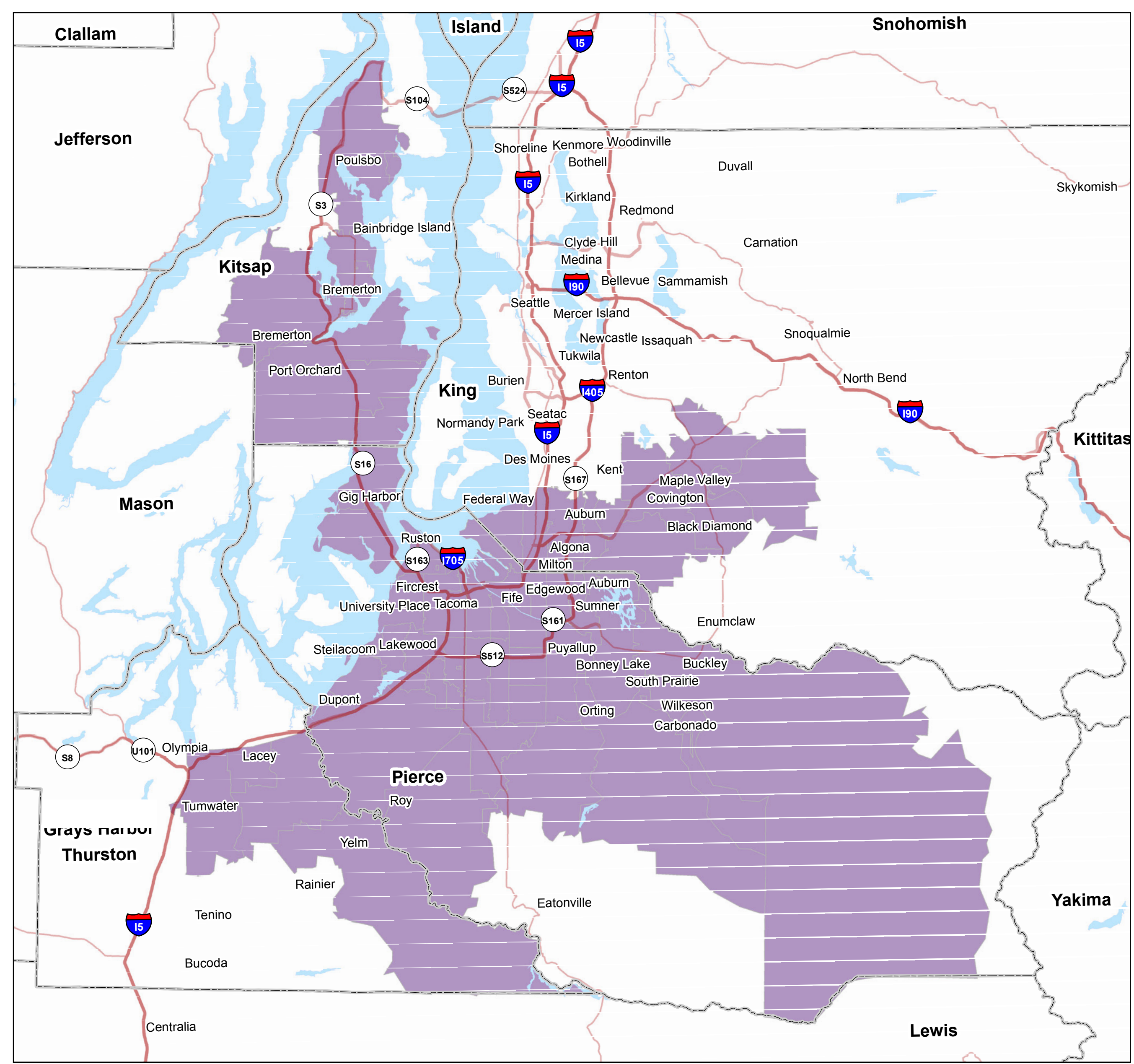
PURPOSE

The purpose of this report is to share the emerging health needs of the Mary Bridge Children's Hospital community, including:

- What residents have to say about health
- Health behaviors and health outcomes of residents
- Assets and resources

This report contains information that can be used to respond to an evolving community and new challenges.

Mary Bridge Children's Hospital Service Area



METHODS

To develop this report, an array of data sources was analyzed to describe the health of the Mary Bridge Children's Hospital community. These include:

- Selected health indicators collected through surveys, vital statistics records, hospital data sets and health registries
- Main themes emerging from community workshops attended by Pierce County residents, including those from the Mary Bridge Children's Hospital service area
- Results from the 2018 Pierce County Community Survey (online)
- Transcripts from interviews with stakeholders from different sectors, including the Mary Bridge Children's Hospital service area

CHNA partners intentionally engaged residents to have an active role in community engagement activities. For example, residents reviewed questions used for workshops and the online community survey. To ensure accuracy of the data, they also reviewed the summary of results from the interviews and workshops they participated in. Some residents were trained to conduct workshops in their own communities.

This report summarizes:

1. **Community characteristics**
2. **Life expectancy**
3. **Leading causes of death**
4. **Leading causes of hospitalizations**
5. **Levels of chronic illness**
6. **Access to health care, use of preventive services and oral health**
7. **Maternal and child health**
8. **Injury and violence prevention**
9. **Behavioral health**

Assets and resources available to the community are at the end of each section, as applicable.

More details about data sources and methods used to develop this report are in the Supplement.

COMMUNITY WORKSHOPS

The purpose of the community workshops was to hear directly from residents. Ten community workshops were held throughout Pierce County and facilitated by trained community residents and Health Department staff.

Community residents were trained to facilitate workshops using a curriculum developed by Health Department staff in collaboration with Community Science (funded by the U.S. Department of Health and Human Services, Office of Minority Health). The training curriculum was tested with members of the East Tacoma Collaborative in 2017. Members of Pierce County Accountable Community of Health's Community Advisory Council and the Pierce County Community Health Worker Collaborative participated in the training and facilitated community workshops.

Health Department staff selected workshop locations from geographic areas with poorer health outcomes and readiness to work collectively to improve these outcomes. In addition, specific populations were invited to participate in the workshops based on their geographic location and/or health outcomes. Those populations included:

- Residents who are housing insecure or who have lower household incomes
- Lesbian, gay, bisexual and transgender residents
- Black residents
- Native Hawaiian and Other Pacific Islander residents

Analysts considered literature on stakeholder selection produced by the Health Research and Educational Trust, in partnership with Hospitals in Pursuit of Excellence. The Health Department recruited participants and, in some cases, participants invited others to attend (i.e., snowball sampling method). Those who attended workshops were promised confidentiality and consented to participate by attending the workshop.

Data analysis of workshop notes was performed simultaneously by the workshop group facilitator and an analyst using coding to identify emergent themes. Analyses were then compared, and themes were mutually identified.

Introduction

Continued

KEY STAKEHOLDER INTERVIEWS

Ten interviews were conducted with 12 Pierce County organizational leaders across seven sectors (see selection criteria below). Interviews were approximately 60 minutes in length and conducted in person. Two interviews included multiple participants, though each interview was considered one unit of measurable data. When available, interviews were audio recorded with consent.

MultiCare and CHI Franciscan provided the Health Department with more than 30 names of suggested local leaders. Ten participants were selected based on the following criteria:

1. Represented key sectors of business, non-profit, education, transportation, health and human services, local government and law enforcement/first responders

2. Not interviewed for the last CHNA in 2015 (to avoid redundancy in data and to promote diversity)

3. Availability within the project timeline

Health Department staff then analyzed data using open and axial coding[1] to discover patterns and recurring themes across all interviews. NVivo qualitative data analysis software was used to organize data. If three or more interviews (≥ 30%) contributed the same data point, the data point was considered an emerging theme.

2018 PIERCE COUNTY COMMUNITY SURVEY

The CHNA partners drafted, distributed and promoted the online 2018 Pierce County Community Survey via Survey Monkey®. The survey was available in English, Spanish and Korean.

Professional translation services were used to provide survey drafts in Korean and Spanish. The drafts were then shared with community members who speak Korean and Spanish natively to confirm contextual accuracy.

Survey links were distributed to multiple organizations throughout Pierce County. Participants completed the survey between March and August 2018.

[1]Open coding – usually performed first to generate categories or main themes in data and their properties; Axial coding –used to systematically develop categories and link them with subcategories.

LIMITATIONS

For this report, community engagement data come from focus groups, interviews and surveys. While some survey results can be weighted to improve generalizability, focus group and interview results are not entirely generalizable, and limitations to the strength of the conclusions exist. For example, we were not able to conduct a community workshop with Native American/Alaska Native residents, even though we know they often have worse health outcomes; this population was also underrepresented in the online survey.

In addition, survey data often have issues arising from how, where and from whom the data were collected. For example, stratifying estimates by race sometimes cannot be done due to small sample sizes.

Health indicator data also come from a variety of sources, each with its own set of limitations. A description of the limitations for each data set can be found in the Supplement.

Due to space limitations, the list of assets in this report is not comprehensive. For a more thorough and continuously updated statewide database of health and human services and referrals, please refer to https://resourcehouse.info/win211/index.

Community Engagement Results

Three methods of community engagement were used to hear from Pierce County residents, including those in the Mary Bridge Children's Hospital service area: ten community workshops with residents, ten key stakeholder interviews and an online survey available in English, Spanish and Korean languages. Top findings across the three community engagement activities included several issues.[2]

Residents identified three community characteristics as vital to their health:

- Equitable access to community resources (information, services, activities, parks)
- Celebration of diversity
- People working together

[2]*Note: The results from community engagement activities reflect all of Pierce County and are not specific to this hospital service area.*

Residents need the following for their neighborhood or community to be healthy:

- Affordable housing
- Access to healthy food
- Transportation
- Access to health care (emphasizing behavioral health services)

COMMUNITY WORKSHOPS

Community workshop participants shared their thoughts on what makes their community healthy, what they need in their neighborhoods to be healthier and what they think could be improved. Main findings for each question asked at the community workshops are shown below.

Community Engagement Results

Continued

What do you think makes an "ideal" community or neighborhood?

Social Support
Diversity is Valued
Community Resources
Willingness to Partner

- **Opportunities to give and receive social support.**

Workshop participants talked about a community where people know and care for each other. Participants also valued communities where members care about and are engaged in neighborhood issues and where people often volunteer to help the neighborhood.

"At least one person at your door in five minutes."

- **Diversity is valued.**

Community members talked about all people being accepted in an ideal neighborhood. Everyone is respected based on the value they bring to the community. Community members also valued celebration of ethnic and cultural diversity and sharing of cultural knowledge and traditions.

"It's not necessary to leave the community to celebrate my ethnic background."

- **Community resources.**

Workshop participants sought reliable sources of community information. They also valued parks, other opportunities for physical activity and access to behavioral health services and support.

"Easy access to resources that promote an active lifestyle – parks, trails and local gyms."

- **Organizations and groups willing to partner.**

Workshop participants mentioned groups, coalitions and others who provide active leadership within their communities. They wanted regular feedback to help build consensus and questions answered in layman's terms.

"Everyone is encouraged to be involved, power isn't isolated to the very few. . . no one is excluded."

Community Engagement Results

Continued

What needs to change about your community or neighborhood?

Sidewalks/Trails
Buses/Bus Stops
Healthy Food
Actvities

- **Safe sidewalks and trails.**
Trails for biking and walking, ADA compliant sidewalks and trails and connections to schools and services were identified by workshop participants as needed infrastructure.

"Safe walking paths and sidewalks from schools to neighborhoods."

- **Buses that meet people where they live, learn, work and shop.**
Community members wanted more public transportation, free bus passes for those who need it and more frequent bus stops.

"Late bus for after-school activities."

- **Access to healthy food.**
Grocery stores, education on healthy eating, cooking classes and farmers markets were desired assets for neighborhoods.

"Affordable food is sometimes too far away, and stores offer inconsistent quality."

- **Opportunities for physical and social activities.**
Community members identified a need for more parks, the sharing of cultural knowledge, opportunities for music, dance and drama and teen-friendly places.

"Unless we have people to fellowship with, nothing else matters."

Community Engagement Results

Continued

KEY STAKEHOLDER INTERVIEWS

Main findings for each question asked during the ten interviews are listed below.

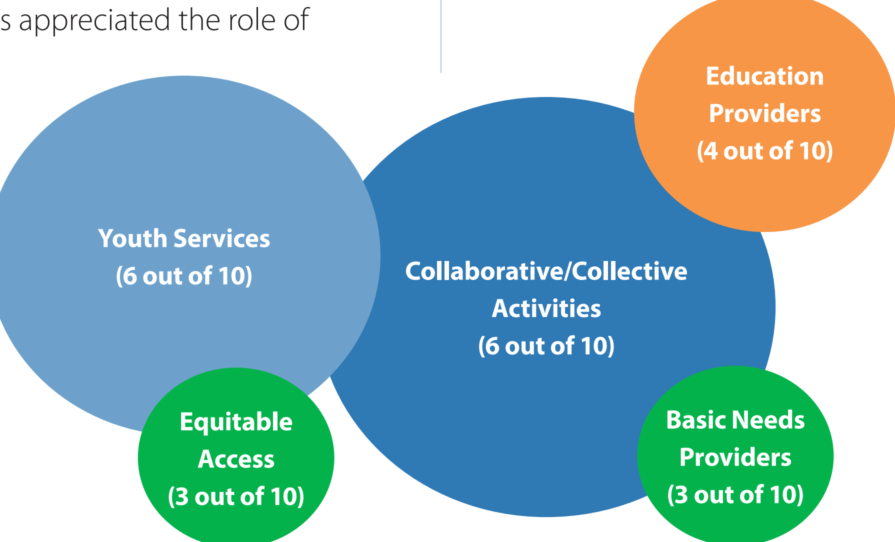
What are some noteworthy people, places and activities that you feel make your community healthy, safe and equitable?

Participants cited the importance of people working together collaboratively to get things done, with an emphasis placed on activities started and run by community members.

Participants also mentioned activities that support youth and students. Specifically discussed were services addressing food, housing insecurity and education. Participants appreciated the role of schools being on the "front lines" to help people feel healthy, safe and equitable. Examples included higher education institutions and high school programs that help make college more approachable to students, as well as public school districts that provide additional resources to improve civic engagement, health, safety and food access for their students.

Lastly, participants mentioned Pierce County organizations that use an equity approach to help make communities healthy. For example, some organizations are intentional about addressing accessibility, so that their services meet the needs of all they serve.

Note: Text in parentheses indicates the number of interviews during which each theme was mentioned.



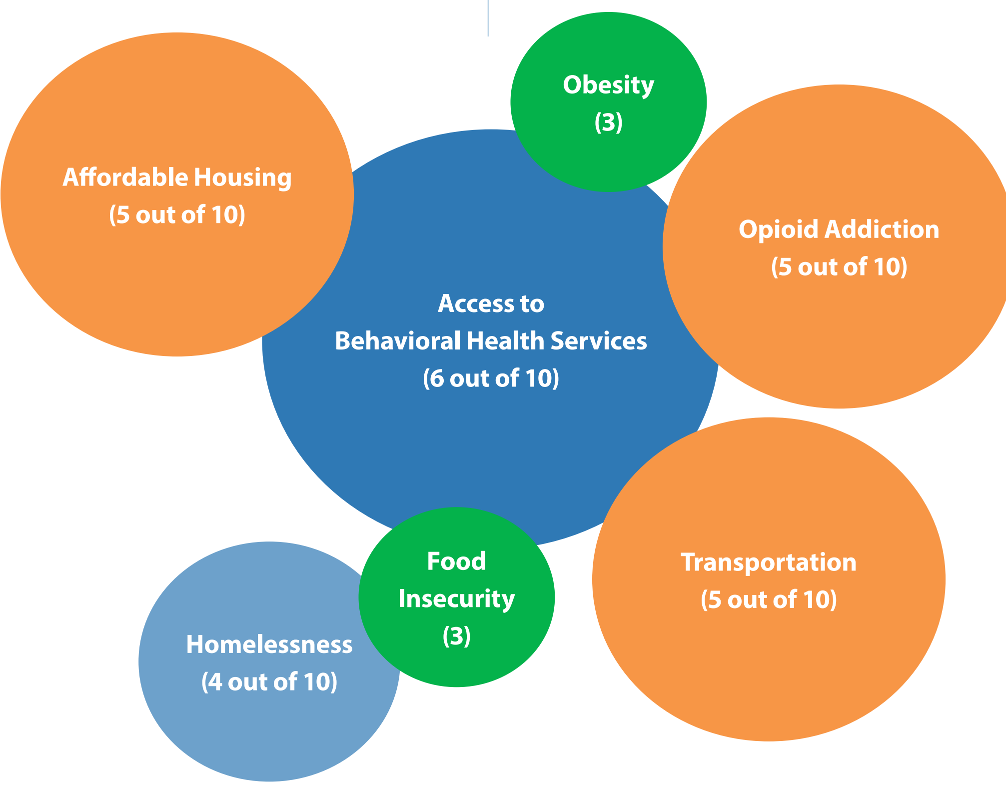
Community Engagement Results

Continued

What are some concerns you or your organization has/have about the conditions that impact the health of Pierce County residents right now?

Stakeholders named both social determinants of health (root causes of health, such as income and housing) and results of these poor conditions as the issues they are most concerned about. Examples include the need for expanded access to medication assisted treatment for those experiencing opioid use disorder, availability of affordable housing and the impacts of gentrification and food insecurity faced by children and youth.

Note: Text in parentheses indicates the number of interviews during which each theme was mentioned.



In your opinion, how can health care systems partner in addressing the issues you have identified?

Note: Text in parentheses indicates the number of interviews during which each theme was mentioned.

1. Mobile/Satellite Clinics (5 out of 10) – Participants emphasized medical outreach, such as more satellite clinics where low-income people live and gather, as well as the need for more providers. One participant suggested building a full-service clinic on the Key Peninsula or in Gig Harbor. Another suggested offering onsite nutrition counseling and health screening at local colleges.

"Our free clinic needs doctors… I'm afraid we're going to lose the one medical center we have due to a doctor retiring."

2. Creative Partnerships (4 out of 10) - Participants suggested hospitals build creative service partnerships to reach more people. For example:

- Pop-up blood pressure stations or vaccine services at the park or pool (in partnership with local parks and recreation departments)
- Food relief at bus stops, transit centers, or health care workers on buses (in partnership with Pierce Transit)
- Health services at local homeless encampments (in partnership with local government)
- Social services embedded in hospitals for discharge solutions, home care and case management (in partnership with Pierce County)

"It's about convenience and how do we provide good access… that's the key." (to bringing services to those on the streets)

Community Engagement Results

Continued

3. Policy and Advocacy (5 out of 10) – Participants discussed the value of hospital systems acting to advocate for healthy policies and raising awareness of those issues. One participant suggested health care partners could use their authority to increase knowledge about firearm injury prevention. Another participant suggested hospitals lobby to see insurance premiums reduced and look into current laws around interest being charged upon hospital arrival (contributing to medical debt).

"[Health care partners] could raise awareness of particular issues, like how ACES [Adverse Childhood Experiences] lead to health care expenditures."

4. Community Outreach (5 out of 10) – Participants appreciated continued community engagement and investments. One participant suggested hospitals could best help communities by supporting and constructing housing. Another participant suggested focusing on improving social determinants of health—such as education and housing—to prevent unnecessary hospitalizations.

"The community gave tax dollars to build the new (behavioral health) hospital. It's important that communities see that the hospital is helping them, and the money is being returned in the form of mental health care and continued community engagement."

5. Improve Access to Care (5 out of 10) – Participants expressed the need to improve clinical care programs and provide additional resources to patients.

"Train ER staff to improve stigmatized treatment of substance abuse population."

6. Education (3 out of 10) – Participants suggested continued and enhanced focus on youth and student development with health sciences education and job training.

"Invest in health sciences education to create a more diverse population of providers to improve access to care."

Community Engagement Results

Continued

COMMUNITY SURVEY

More than 1600 Pierce County residents responded to the community survey.[3] Nearly two-thirds of those who participated selected safe neighborhoods and affordable housing as their most important community needs. Almost one-third of participants said access to health care services was one of the most important community needs. When asked about resources available to meet these needs, 62.9 percent of residents identified parks and outdoor spaces, 55.2 percent identified easily accessible grocery stores and markets, and 34.3 percent said safety resources such as street lighting and police presence.

Survey participants were also asked what is lacking to meet identified needs. From a list of what might be lacking, residents selected policies that address local needs (40.8%), accessible public transit (40.6%) and community resources that contribute to safety such as street lighting, police presence and neighborhood watches (37.8%). Residents also indicated that policies to protect air and water quality are needed.

Residents reported that the top issues facing children and youth include exposure to crime and violence (67.2%), poverty (49.3%) and lack of positive relationships (40.5%).

Most Important Community Needs

Question	Responses	Percent
What are the three most important needs in your community?	1. Safe neighborhoods	61.1%
	2. Affordable housing	59.6%
	3. Access to health care services	30.8%
What resources are currently available in your community to help meet these needs?	1. Parks and places to enjoy the outdoors	62.9%
	2. Grocery stores and markets nearby	55.2%
	3. Resources that make neighborhoods safe (street lights, neighborhood watch, police presence, etc.)	34.3%
What is not available in your community to address these needs?	1. Local policies that address the needs of the community	40.8%
	2. Accessible public transit (buses, trains, light rail, etc.)	40.6%
	3. Resources that make neighborhoods safe (street lights, neighborhood watch, police presence, etc.)	37.8%
What are the top three issues facing children and youth in your community?	1. Exposure to crime or violence (including bullying)	67.2%
	2. Poverty	49.3%
	3. Lack of positive relationships	40.5%

[3] Community Survey respondents by language: English-1565, Korean-41, Spanish-14

Community Engagement Results

Continued

Most survey respondents said their community was healthy or somewhat healthy (78.9%) and were very or somewhat satisfied with their community (74.8%). Another 19.1% of respondents said their community was somewhat or very unhealthy, while 13.4% were very or somewhat unsatisfied with their community.

Social connections—that is, the number of support systems a person has in the community—contributes to healthy people and places, so the survey also asked how connected people felt to their community. Most respondents (68.1%) said they felt very or somewhat connected to their community, while about one in six respondents said they either were neutral in their response (16.0%) or felt very or somewhat unconnected (15.9%).

Community Perceptions

Question	Responses				
How would you rate your community's overall health?	Very healthy 2.7%	Healthy 27.0%	Somewhat healthy 51.9%	Somewhat unhealthy 17.1%	very unhealthy 2.0%

Question	Responses				
How satisfied are you with your community?	Very satisfied 28.8%	Somewhat satisfied 46.0%	Neutral 11.8%	Somewhat unsatisfied 10.4%	Very unsatisfied 3.0%

Question	Responses				
How connected do you feel to your community?	Very connected 22.5%	Somewhat connected 45.6%	Neutral 16.0%	Somewhat unconnected 10.5%	Very unconnected 5.4%

Community Engagement Results

Continued

The most common zip codes of survey participants included:

- 98405 and 98406 (Central & North Tacoma) each representing 6% of all respondents.
- 98391 (Lake Tapps, Bonney Lake) representing 5% of all respondents.
- 98404 (East Tacoma) representing 5% of all respondents.
- 98407 (North Tacoma, Ruston) representing 5% of all respondents.

While efforts were made to distribute the survey to a representative sample of Pierce County residents, survey participants were disproportionately White, female and between 30-60 years of age. Asian and Hispanic residents were underrepresented.

Demographics of Survey Respondents (n=1620)

	Percent
Gender	
Male	14.4%
Female	81.7%
Transgender male	0.2%
Transgender female	0.1%
Genderqueer – not exclusively male or female	0.6%
Choose not to answer	3.1%
Other	0.2%
Age	
18-29	8.5%
30-44	34.2%
45-59	34.5%
60+	22.8%
Hispanic/Latino	
Yes	6.0%
No	94.0%
Race	
American Indian or Alaska Native (AIAN)	1.3%
Asian	3.8%
Native Hawaiian or Pacific Islander (NHOPI)	1.6%
Black or African American	5.3%
White	75.3%
Multiracial	5.3%
Choose not to answer	6.7%
Other	3.3%

Description of the Community

This section describes the Mary Bridge Children's Hospital community through demographic and socioeconomic characteristics of the residents within this hospital service area.

This community included 992,116 residents of all ages mostly White, Hispanic, Black, Asian and Multiracial. Immigrants in the area originate from Asia, Latin America (Mexico, Central America and South America) and Europe predominantly.

Mary Bridge Children's Hospital serves a wide population of children including within Pierce County, South King County and parts of Kitsap County. About a third of residents were children under the age of 18 (333,894).

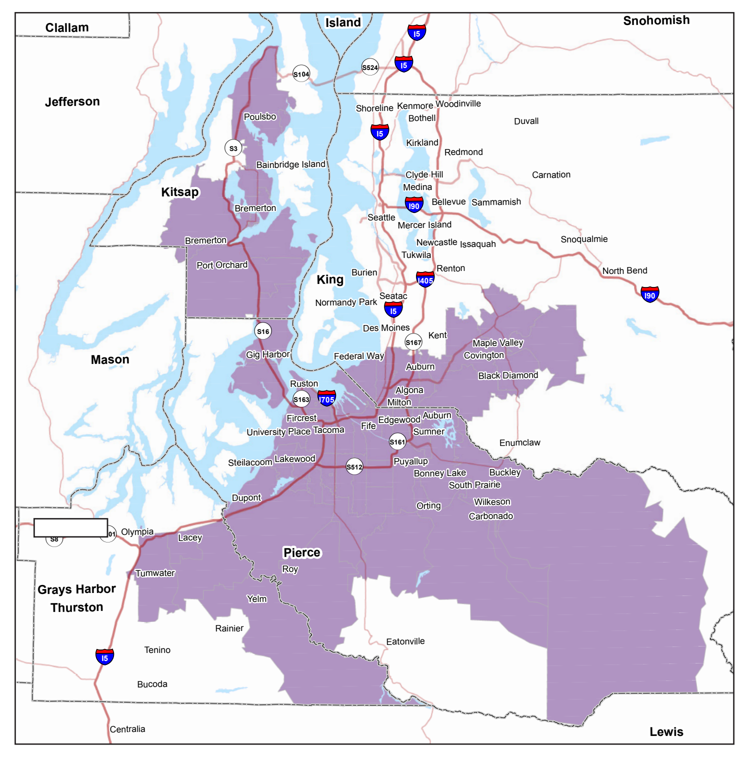
The poverty rate in this community (12%) is lower than Pierce County (12.7%) and lower than the state (13%).

On-time high-school graduation rates in this community (84.7%) are higher than state rates (79.3%), and the number of students eligible for free or reduced-price lunches is slightly lower compared to Pierce County and the state.

DEMOGRAPHIC CHARACTERISTICS

The characteristics of a community inform what health behaviors and outcomes may be future concerns. They also help us further understand existing population health issues.

Mary Bridge Children's Hospital Service Area



Description of the Community

Continued

Race and Ethnicity

The Mary Bridge Children's Hospital community has changed since 2005. Since 2005, the White population in this community has decreased by 6.4%, and the Hispanic population in this community has increased by 3.1%.

Age and Sex

There are over 300,000 children in the Mary Bridge Children's Hospital service area. Slightly more male children than female children live in the community.

Demographics of Children 0-17 Years (%)

Mary Bridge Children's Hospital Service Area, 2016

	Count	Percent
Race and Ethnicity		
White	932167	67.2%
Black	83863	6.0%
AIAN	16534	1.2%
Asian	102324	7.4%
NHOPI	20925	1.5%
Multiracial	83342	6.0%
Hispanic	148675	10.7%
All	1387830	100.0%
Sex		
Male	170801	51%
Female	163052	49%
Age (years)		
Under 1	18673	6%
1-4	75272	23%
5-9	93841	28%
10-14	91289	27%
15-17	54779	16%

Source: American Community Survey

Description of the Community

Continued

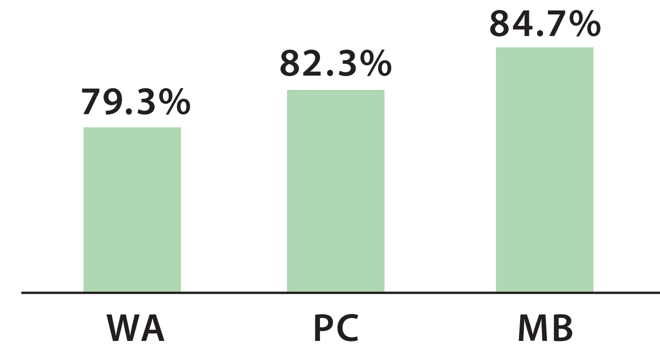
SOCIOECONOMIC CHARACTERISTICS

The social and economic characteristics of a community help public health stakeholders understand available resources and improve community health. Poverty, homelessness and the cost of housing are some examples of important socioeconomic characteristics.

On-Time Graduation

The graduation rate helps describe the educational well-being of a community. A higher educational level helps people to take advantage of employment opportunities and earn higher incomes, which helps to diminish the burden of poverty on a community. The 2017 four-year graduation rate in Pierce County was higher (82.3%) than the state of Washington (79.3%). Graduation rates in the Mary Bridge Children's Hospital community (84.7%) were higher than both.

On-Time Graduation Rate



Source: Office of the Superintendent of Public Instruction (OSPI), 2016-2017

Description of the Community

Continued

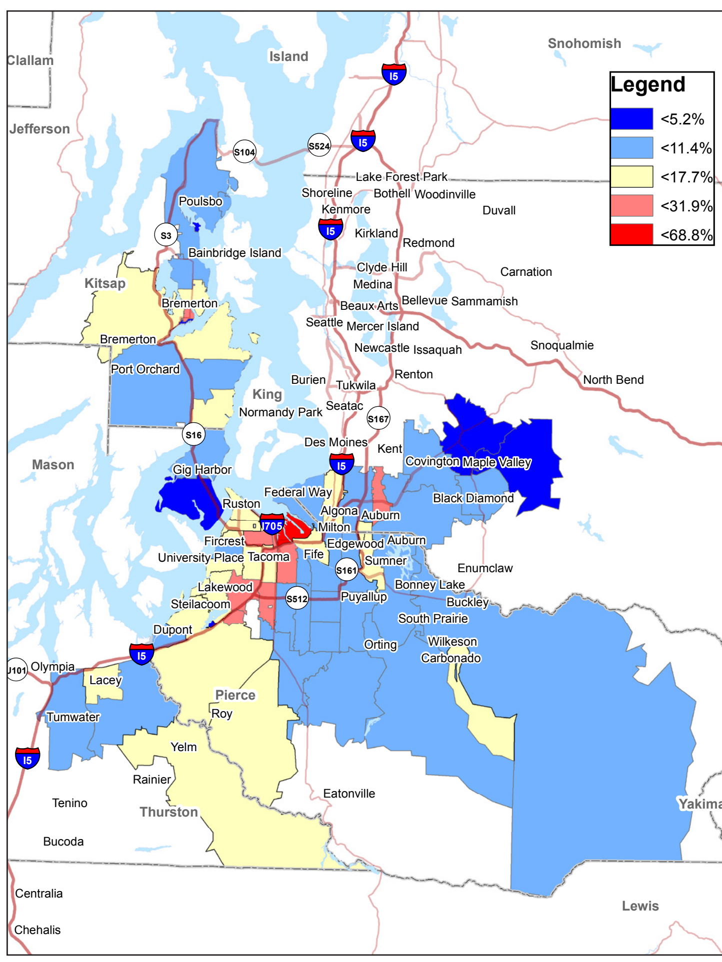
Poverty and Near Poverty

Poverty (household income less than 100% of the federal poverty limit) and near poverty (household income less than 200% of federal poverty limit) is a burden on households and communities, hindering access to resources promoting good health.

- In the Mary Bridge Children's Hospital community, 12% of all residents were in poverty, compared to 13% statewide.
- American Indian/Alaska Native and Hispanic residents, as well as people who identified as "other race," had higher rates of poverty compared to other race/ethnicity groups.

Poverty

Mary Bridge Children's Hospital Service Area, 2016



Data Source: U.S. Census Bureau, 2016 American Community Survey (ACS) 5-year estimates, S1701

Description of the Community

Continued

High Housing Costs

Seattle was one of the fastest growing U.S. cities in 2018[4] – driving up housing prices and displacing lower-income residents throughout the area, including in Tacoma and Pierce County. A housing cost greater than 30% of household income can be a particular hardship on individuals and families, especially as persistent poverty continues to be an issue amidst rising property costs. Housing costs are more frequently burdensome among renters.

Poverty and Housing Costs (%)

Mary Bridge Children's Hospital Service Area, 2016

	Count	Percent
Poverty (<100% FPL) & Near Poverty (<200% FPL)		
Poverty	170116	12%
Near Poverty	396266	28%
Poverty – Racial Breakdown		
AIAN	4246	24%
Asian	11196	12%
Black	14495	18%
Hispanic	32295	22%
Multiracial	15507	16%
NHOPI	3821	20%
Other	9941	24%
White	110910	11%
Population with burdensome housing costs		
Renters	96831	52%
Owners w/ mortgage	79381	33%
Owners w/o mortgage	11883	14%

Data Source: U.S. Census Bureau, 2016 American Community Survey (ACS) 5-year estimates, S1701 & DP04

Homelessness

In 2017 the City of Tacoma declared a state of public health emergency relating to homelessness. Tacoma joined other west coast cities in this emergency declaration, including Seattle, Portland and Los Angeles. The Homelessness Housing and Assistance Act requires each county in the state to conduct an annual Point in Time count of sheltered and unsheltered homeless persons to estimate the number of people experiencing homelessness.

- Overall in Pierce County, 1,628 homeless people were counted.
- The top three zip codes where homeless were found included 98405 (n=200, 28%), 98402 (n=151, 21%) and 98372 (n=58, 8%). These are areas primarily north of I-5 in the Central Tacoma and Hilltop areas and Puyallup/Sumner/Bonney Lake.

[4]*https://www.census.gov/newsroom/press-releases/2018/estimates-cities.html*

Description of the Community

Continued

Free and Reduced-Price Lunch

A free and reduced-price meal program is a federal program for students whose household income is less than or equal to 130% of the federal poverty limit (free) or between 130% and 185% of the federal poverty limit (reduced-price). This program helps to ensure that children have access to food with adequate nutritional value.

- In the Mary Bridge Children's Hospital community, 41.7% of students in the 2016-2017 school year were eligible for free or reduced-price lunch.
- The rate of free and reduced-price lunch in the Mary Bridge Children's Hospital community was lower than the state (42.3%).

Foster Care

Foster care placement and support services are both provided to children who need short term or temporary protection because they are abused, neglected or involved in family conflict. Foster care placement services are served exclusively out of home, while support services may be in the child's own home or outside of the home.

- Of the total 6,200 children who entered out-of-home care in Washington state in 2017, 1,009 were in Pierce County, making it the county with the highest number of children entering care.
- Within Pierce County, the rate of children living in out-of-home care was 7.4 per 1,000, which was 35% higher than the state rate of 5.5 kids per 1,000.[5]

[5]Placement and support services are both provided to children who need short-term or temporary protection because they are abused, neglected or involved in family conflict. Placement services are served exclusively out of home, while support services may be in their own home or out of home

Description of the Community

Continued

Immigrants (Foreign-Born)

Immigrants are a sizable proportion of Washington's population, contributing to diverse community demographics. Estimates of the number of immigrants currently in the United States vary widely depending on their immigration status. Data collected as part of the U.S. Census help estimate this number.

Foreign-born Residents (%)

Mary Bridge Children's Hospital Service Area, 2012-2016

Region of Birth	Count	Estimate	95% CI
Asia	66930	44.4%	(42.9% - 45.9%)
Latin America^	40144	26.7%	(25.3% - 28.1%)
Europe	28367	18.8%	(17.8% - 19.9%)
North America	5857	3.9%	(3.5% - 4.3%)
Africa	5493	3.7%	(3.1% - 4.2%)
Oceania^^	3798	2.5%	(2.1% - 3.0%)
Total *	150589	10.9%	NA

** Percent of Total Population in Hospital Service Area*
Data Source: U.S. Census Bureau, 2016 American Community Survey (ACS) 5-year estimates, DP02 (foreign-born population excluding those born at sea)
^ Latin America includes Mexico, Central America and South America.
^^ Oceania is the southeast section of the Asia-Pacific region and includes 14 countries, the largest of which are Australia, Papua New Guinea and New Zealand."

Languages Spoken

English continues to be the most common language spoken by community members in the Mary Bridge Children's Hospital community, (n=757,180, 84.3%), followed by Spanish and an array of languages shown below.

Top 10 Languages Spoken (%)

Mary Bridge Children's Hospital Service Area, 2012-2016

Language	Estimate	95% CI
English	84.3%	(83.7% - 84.8%)
Spanish	6.1%	(5.8% - 6.4%)
Korean	1.3%	(1.2% - 1.4%)
Tagalog	1.2%	(1.1% - 1.3%)
Vietnamese	0.9%	(0.8% - 1.0%)
Russian	0.8%	(0.7% - 1.0%)
Other Pacific Islands	0.8%	(0.7% - 0.9%)
German	0.7%	(0.6% - 0.7%)
Other Slavic	0.6%	(0.5% - 0.7%)
Chinese	0.5%	(0.4% - 0.6%)

Data Source: U.S. Census Bureau, 2016 American Community Survey (ACS) 5-year estimates, B16001

Description of the Community

Continued

Limited English Proficiency

While many individuals are multilingual (speak a language other than English), some report that they either do not speak English or speak English "less than very well." In the community, 6% speak English "less than very well." In comparison, 6% in Pierce County and 8% statewide report speaking English "less than very well."

Speaks English "Less Than Very Well" by Primary Language Spoken (%)

Mary Bridge Children's Hospital Service Area, 2012-2016

Language	Estimate	95% CI
Vietnamese	63.2%	(55.9% - 70.4%)
Korean	57.9%	(52.5% - 63.2%)
Thai	56.1%	(27.5% - 84.7%)
Arabic	54.3%	(27.6% - 81.0%)
Chinese	50.3%	(41.0% - 59.7%)
Other Slavic	45.3%	(37.1% - 53.5%)
Russian	41.3%	(35.2% - 47.4%)
Other Indo-European	40.8%	(24.4% - 57.1%)
Mon-Khmer, Cambodian	40.7%	(31.1% - 50.2%)
Japanese	39.9%	(32.2% - 47.6%)

Data Source: U.S. Census Bureau, 2016 American Community Survey (ACS) 5-year estimates, B16001

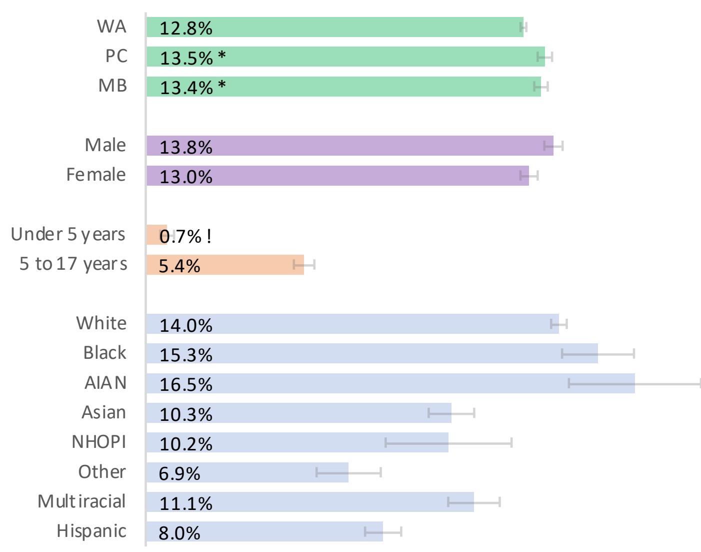
Disability

Disabilities can involve or relate to any of five functions: hearing, vision, cognition, ambulatory self-care and independence.

Disability rates in this community were similar to the county and slightly higher than the state. Disability was higher among males than females. The percentage of disability was highest among White, Black and American Indian/Alaska Native residents of this service area.

Disabled (%)

Mary Bridge Children's Hospital Service Area, 2012-2016



(*) value different from WA state
(!) relative standard error greater than 30%
Source: U.S. Census Bureau, American Community Survey (ACS) 5-year estimates, S1810: Disability Characteristics

Leading Causes of Death

The leading causes of death in a community are important in planning future public health solutions. Life expectancy is another important indicator of the health of a community.[6]

The leading causes of death among youth in the community served by Mary Bridge Children's Hospital include conditions originating around the time of birth and conditions related to birth defects. As age increases, accidents, suicide, homicide and cancer risk increases.

The leading causes of hospitalization were due to injuries, poisonings and cancer across all age groups beyond infancy. Life expectancy in this service area was lower than the state but is higher than Pierce County.

Lymphoma (cancer of the lymph nodes) incidence in Black children (5 new cases per/100,000 per year) was twice as high than that of White children (2 new cases per/100,000) and was higher than the state rate.

Although overall youth asthma occurrence in this area was not different than county and state averages, asthma disproportionately affects Black (27%) and Multiracial children (27%) at a higher rate than the state (21%).

[6] *Dwyer-Lindgren L, Bertozzi-Villa A, Stubbs RW, et al. Inequalities in Life Expectancy Among US Counties, 1980 to 2014 Temporal Trends and Key Drivers. JAMA Intern Med. 2017;177(7):1003–1011.*

Leading Causes of Death

Continued

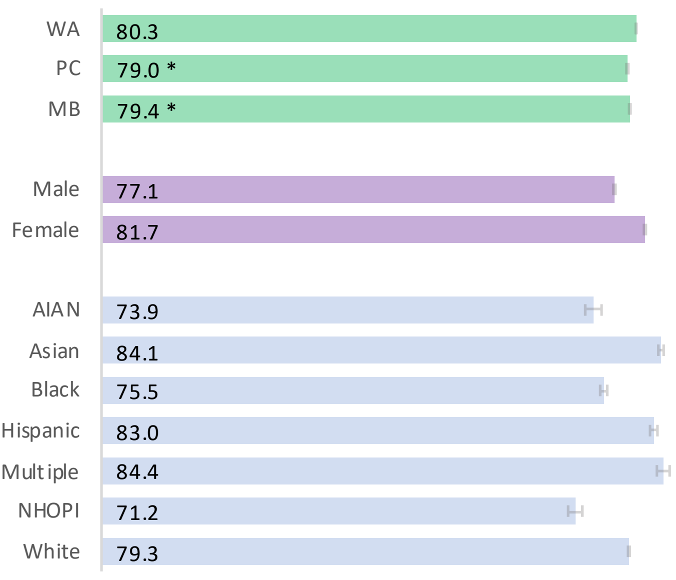
LIFE EXPECTANCY

Life expectancy - the average number of years a person at birth can expect to live, given current death rates - is a widely used measure of the overall health of a population.

Life expectancy in the Mary Bridge Hospital community varies from a high of 85.7 years (range of 81.5 to 90.0) in Keyport in Kitsap County to a low of 74.6 years (range of 71.8 to 77.4) in the Woodbrook neighborhood of Lakewood.

Life Expectancy (years)

Mary Bridge Children's Hospital Service Area, 2012-2016



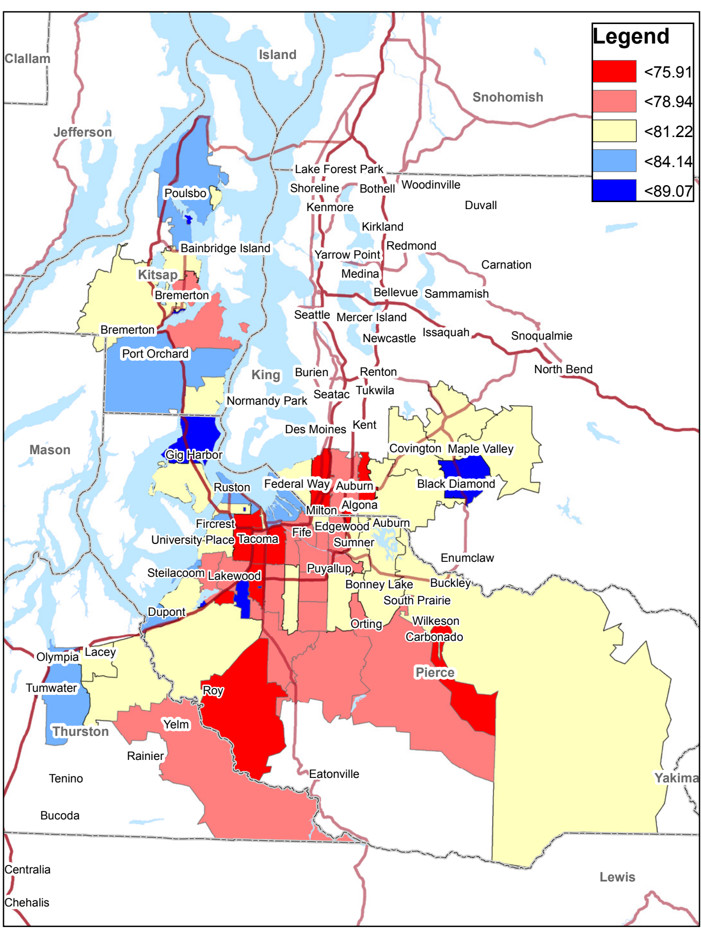
(*) value different from WA state
Data Source: Washington State Department of Health, Center for Health Statistics, Death Certificate Data, 1990-2016, Community Health Assessment Tool (CHAT), October 2017.

Leading Causes of Death

Continued

Life Expectancy

Mary Bridge Children's Hospital Service Area, 2012-2016



Data Source: Washington State Department of Health, Center for Health Statistics, Death Certificate Data, 1990-2016, Community Health Assessment Tool (CHAT), October 2017.

CHILDHOOD AND ADOLESCENT CAUSES OF DEATH

The leading causes of death among youth include conditions originating around the time of birth and conditions related to birth defects. As age increases, accidents, suicide, homicide and cancer risk increases.

Leading Causes of Death – Under 18 Years

Mary Bridge Children's Hospital Service Area, 2012-2016

OVERALL	Rate*
Perinatal conditions	15.6
Birth defects	7.2
Unintentional injuries	5.3
Cancer	2.6
Suicide	2.1
Homicide	1.8

**Age-adjusted death rate per 100,000 people*
Source: Washington State Department of Health, Center for Health Statistics, Death Certificate Data, 1990-2016, Community Health Assessment Tool (CHAT), October 2017.

- Perinatal conditions (related to pregnancy and birth) was the leading cause of death for residents under 18 years. Birth defects and unintentional injuries were the next most common.

Leading Causes of Death

Continued

Leading Causes of Death by Gender – Under 18 Years

Mary Bridge Children's Hospital Service Area, 2012-2016

MALE	Rate*
Perinatal conditions	15.6
Birth defects	7.3
Unintentional injuries	7.2
Suicide	2.6
Homicide	2.5

FEMALE	Rate*
Perinatal conditions	15.4
Birth defects	7.0
Unintentional injuries	3.3
Cancer	2.9
Suicide	1.6

**Age-adjusted death rate per 100,000 people*
Source: Washington State Department of Health, Center for Health Statistics, Death Certificate Data, 1990-2016, Community Health Assessment Tool (CHAT), October 2017.

- Male children had a higher rate of unintentional injuries and homicides — more than double — than female children.

Top 10 Causes of Death by Age

Mary Bridge Children's Hospital Service Area, 2012-2016

0-14 years	Rate*
Perinatal conditions	18.7
Birth defects	8.6
Unintentional injuries	4.9
Cancer	2.1

15-18 years	Rate*
Unintentional injuries	11.9
Suicide	11.9
Cancer	4.8
Homicide	4.0

**Age-specific death rate per 100,000 people*
Source: Washington State Department of Health, Center for Health Statistics, Death Certificate Data, 1990-2016, Community Health Assessment Tool (CHAT), October 2017.

- Older children age 15 to 18 years had higher rates of unintentional injury deaths, suicide, cancer deaths and homicides compared to younger children age 0-14 years.
- Younger children had higher death rates from perinatal conditions and birth defects.

LEADING CAUSES OF HOSPITALIZATIONS

Hospitalizations occur due to a wide array of health concerns. Understanding these hospitalizations is crucial to prioritizing how we allocate resources, what types of interventions are undertaken and where these interventions should be focused.

Injuries, poisonings and cancer were major causes of hospitalization across all age groups beyond infancy. Chronic disease rates, including cancer and asthma, did not differ from state and county averages.

Top 10 Leading Causes of Hospitialization

Mary Bridge Children's Hospital Service Area, 2011-2015

1-4 years	Rate*
Perinatal conditions	85065.6
Diseases of the respiratory system	1820.0
Birth defects	1070.3
Diseases of the digestive system	503.5

1-4 years	Rate*
Diseases of the respiratory system	560.8
Injuries	201.6
Diseases of the nervous system	183.7
Diseases of the digestive system	140.3

5-9 years	Rate*
Diseases of the respiratory system	176.6
Diseases of the digestive system	147.2
Injuries	122.1
Diseases of the nervous system	102.4

10-14 years	Rate*
Diseases of the digestive system	205.5
Injuries	165.3
Mental illness	145.0
Cancer	96.5

15-18 years	Rate*
Complications of pregnancy	703.0
Mental illness	454.4
Injuries	328.3
Diseases of the digestive system	301.3

**Age-specific rate per 100,000 people*
Source: Washington Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS)

Leading Causes of Death

Continued

CHRONIC DISEASE

Chronic diseases and conditions encompass many of the most common, costly and preventable health concerns in our communities. For children, cancers and asthma top the list.

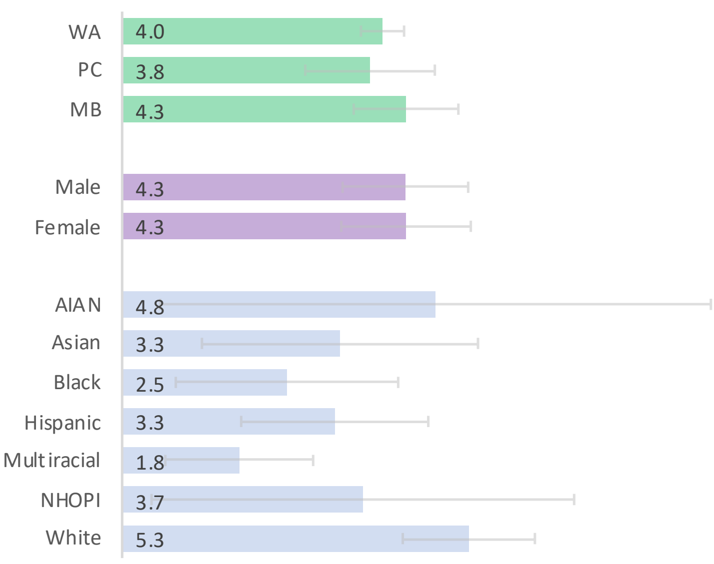
Brain and Other Nervous System Cancers

The most common type of cancer among youth age 0-17 years was cancer of the brain and other nervous system tissue.

White youth had a a higher rate of this type of cancer compared to Multiracial and Black youth. There was no difference by gender.

Brain and Other Nervous System Cancer Incidence

Mary Bridge Children's Hospital Service Area, 2006-2015



Rate: New cancer cases per 100,000 residents
Source: Washington State Cancer Registry

Leading Causes of Death

Continued

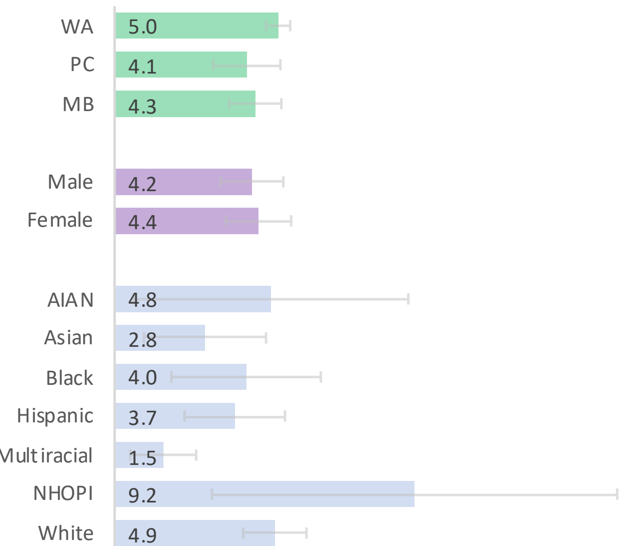
Leukemia

Leukemia, or cancer of the body's blood-forming tissue, has the second highest incidence in the Mary Bridge Children's Hospital community among youth ages 1-17 years.

Leukemia incidence was no different in this community than the state or Pierce County. Multiracial youth had lower leukemia rates compared to American Indian/Alaska Native, Native Hawaiian and Other Pacific Islander and White youth.

Leukemia Incidence

Mary Bridge Children's Hospital Service Area, 2006-2015



Rate: New cancer cases per 100,000 residents
Source: Washington State Cancer Registry

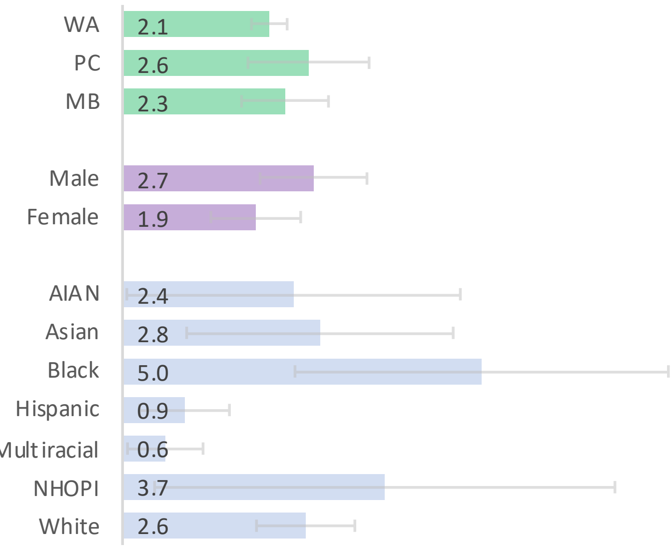
Lymphomas

Lymphoma, or cancer beginning in infection-fighting cells of the immune system, is the third most common cancer in the Mary Bridge Children's Hospital community among youth ages 1-17 years.

Lymphoma rates were about the same among females and males. Lymphoma rates among Hispanic and Multiracial youth were lower than that of Black and White youth.

Lymphomas

Mary Bridge Children's Hospital Service Area, 2006-2015



Rate: New cancer cases per 100,000 residents
Source: Washington State Cancer Registry

Leading Causes of Death

Continued

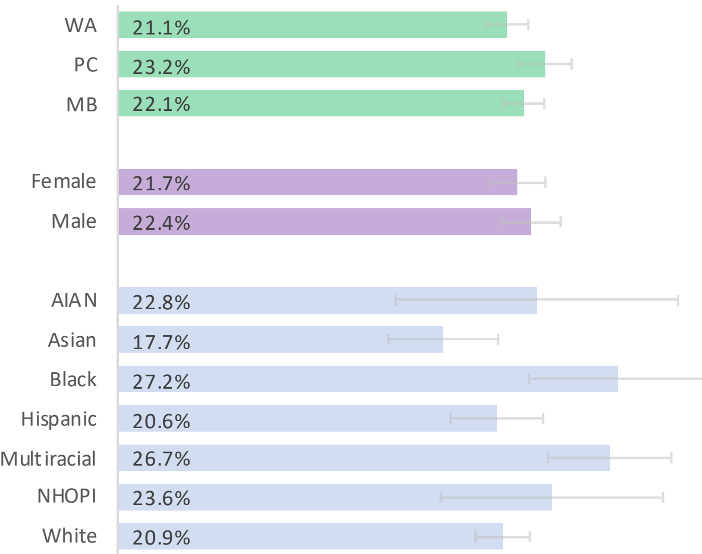
Asthma – Youth

Asthma affects people of all ages, but most often starts in childhood. Asthma among children in Washington is estimated using the Healthy Youth Survey, where students report if a doctor had ever diagnosed them with asthma.

Youth asthma rates in this community were not different than the state or Pierce County. Asthma was more common among Black and Multiracial youth compared to Asian youth.

Youth Who Currently Have Asthma (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Health Behaviors

A healthy and active lifestyle has been shown to have a positive impact on youth development. A healthy diet and regular physical activity are protective factors promoting health & well-being, while tobacco use may lead to negative health outcomes.

Nationally, obesity disproportionately affects racial and ethnic minorities.[7] In this community, Native Hawaiian and other Pacific Islander children lead in terms of obesity (27%) followed by Hispanic, Multiracial and Black children (all 16%). These children are disproportionately burdened by obesity, signaling a need for prevention of associated chronic illness in adulthood.

Children in the Mary Bridge Children's Hospital community engaged in less physical activity overall than their peers in Washington.

Black youth and males consumed more sugar-sweetened beverages than other children.

While cigarette and e-cigarette usage is not different than Pierce County and state rates, the percent of youth using cigarettes and e-cigarettes in this community was highest among American Indian/Alaska Native youth.

[7]*Ogden CL, Carroll MD, Kit BK, Flegal KM JAMA. 2014 Feb 26; 311(8):806-14.*

OBESITY, PHYSICAL ACTIVITY AND NUTRITION

Many chronic diseases later in life are impacted by physical activity levels and nutrition. Negative behaviors (risk factors) balanced with the positive behaviors (protective factors) over the life course of an individual have a profound role in the development of chronic disease. These behaviors are typically developed during childhood, making them important for this report.

Health Behaviors

Continued

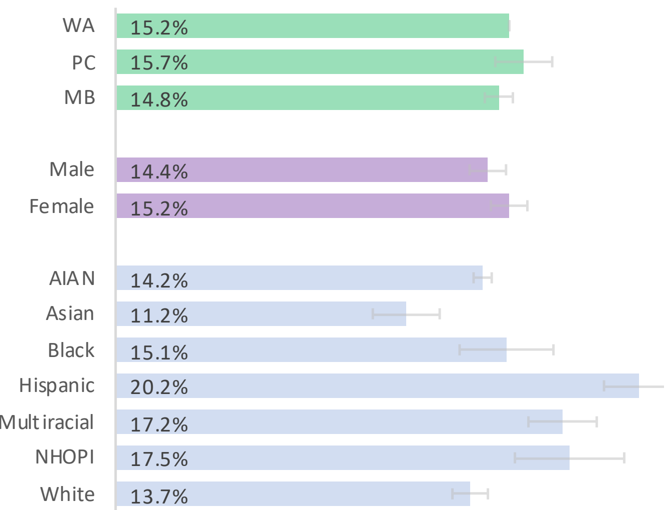
Overweight – Youth

Youth Body Mass Index (BMI) groups are determined using Healthy Youth Survey responses from 6th through 12th graders. "Overweight" includes students who are in the top 15% for BMI by age and gender, but not the top 5%, based on growth charts from the Centers for Disease Control and Prevention.

The occurrence of overweight youth in this service area was not different from the state or Pierce County. Within this community, Hispanic, Multiracial and Native Hawaiian and Other Pacific Islander youth had higher rates of overweight compared to Asian and White youth.

Overweight Youth (%)

Mary Bridge Children's Hospital Service Area, 2016



Groups excluded if number less than 10
Source: Healthy Youth Survey (10th graders)

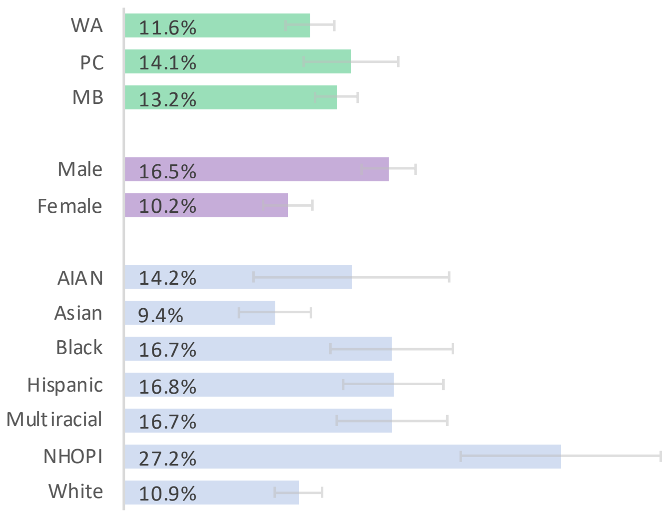
Obesity – Youth

Youth are classified as obese when they are in the top 5% for BMI by age and gender based on growth charts developed by the CDC.

Youth obesity in the Mary Bridge Children's Hospital community was not different from the state or Pierce County. Obesity was more common among males compared to females. Obesity was lowest among Asian and White youth compared to most other race/ethnicities.

Youth Obesity (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Health Behaviors

Continued

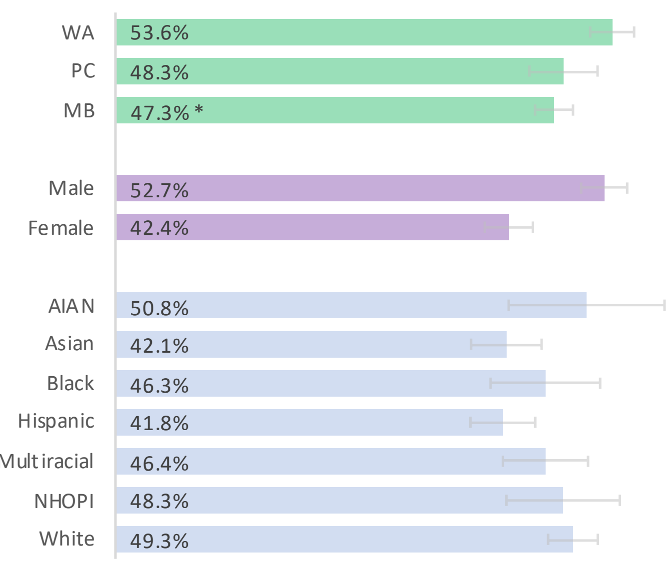
Physical Activity – Youth

Engaging in physical activity in youth is important for developing a healthy lifestyle as an adult.

Physical activity among youth in the Mary Bridge service area was less common than the rest of the state. Males were more likely to engage in physical activity.

One Hour of Activity Five Days/Week (%)

Mary Bridge Children's Hospital Service Area, 2016



(*) value different from WA state
Source: Healthy Youth Survey (10th graders)

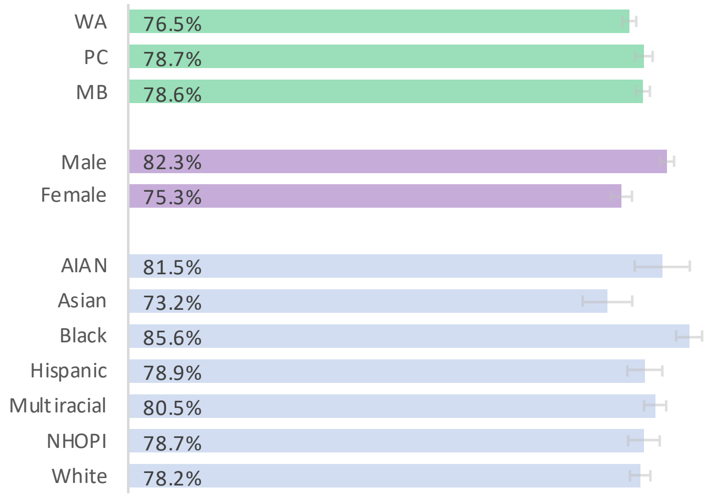
Sugar-Sweetened Beverages – Youth

The availability and consumption of sugar-sweetened beverages (SSB) by youth can lead to the development of unhealthy behaviors and chronic disease later in life.

SSB consumption in this service area was not different than the state or Pierce County. Males consume more SSB than females. Asian youth were the least likely group to consume SSB.

No SSB Consumption (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Health Behaviors

Continued

Tobacco

Tobacco use remains one of the most common risky behaviors in communities across the United States, despite a robust body of evidence that tobacco use increases the risk of heart disease, cancer and many other negative health outcomes. Despite a general trend of decreasing tobacco use, an increase in electronic cigarette availability, attempts to replace traditional cigarettes with electronic cigarettes and vaping product popularity among youth continue to be a concern.

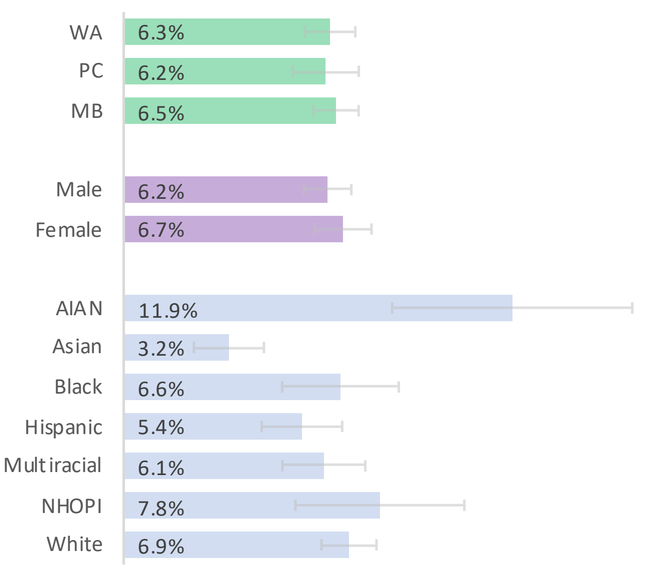
Current Cigarette Use – Youth

Preventing youth from forming a smoking habit reduces the risk of that individual smoking into adulthood.

Cigarette use in the Mary Bridge service area was not different than the state or Pierce County. The percent of youth using cigarettes was highest among American Indian and Alaska Native youth.

Cigarette Use, Past 30 Days (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Health Behaviors

Continued

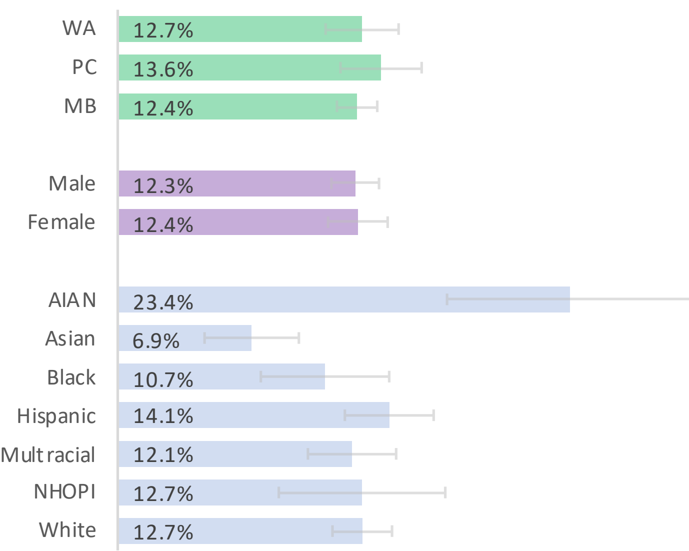
Current E-Cigarette Use – Youth

Although cigarette use has declined nationwide, a new public health concern is the increasing occurrence of e-cigarette use among youth. Long-term effects of e-cigarette use are unknown.

E-cigarette use in this service area was not different than the state or Pierce County. American Indian and Alaska Native youth had the most e-cigarette use.

E-Cigarette Use, Past 30 Days (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Health Behaviors

Continued

ASSETS & RESOURCES

Food banks, Farmer's Markets and other feeding programs, sponsored by faith-based organizations, are working to provide healthier options to their customers.

Metro Parks Tacoma manages local parks, community centers and public places for physical activities. Some locations offer programs such as single-gender swim times and scholarships for children.

MultiCare Center for Health Equity and Wellness offers many community programs and services, including:

- corporate wellness
- health equity
- healthy cooking
- sports nutrition
- tobacco cessation
- weight management

MultiCare Community Partnership Fund is a funding source that supports activities for health improvement, economic well-being, education and other community determinants of health. The Fund contributes to not-for-profit organizations in the Puget Sound region.

Ready Set Go! 5210 is a community-based initiative in Pierce County to promote healthy lifestyle choices for children, youth and families.

SNAP-Ed (Supplemental Nutrition Assistance Program Education) is a federal food assistance program also referred to as Basic Foods or Food Stamps.

Washington State Tobacco Cessation Quitline offers free resources to help smokers quit smoking.

The Women Infant and Children Supplemental Nutrition program helps pregnant women, new mothers and young children eat well, learn about nutrition and stay healthy.

YMCA of Pierce and Kitsap Counties:

- Diabetes Prevention Program
- ACT! Actively Changing Together

Access to Care, Use of Clinical Preventive Services and Oral Health

Access to comprehensive, high-quality health care services is vital for building healthier communities. Factors limiting access to health care make it more difficult to reach our full health and well-being potential. These barriers include inadequate insurance coverage, high costs of care and gaps in service availability. Addressing these barriers increases the likelihood we continue to have a healthy and vibrant community.

This section includes information about access to care such as percentages of residents who have medical insurance and statistics on oral healthcare and vaccinations.

Black and White 3rd graders were at a lower risk of childhood cavities than any other race or ethnicity. 3rd graders eligible for free and reduced-price lunch were more likely to have untreated cavities. Native Hawaiian and Pacific Islander youth were the least likely to obtain a routine dental checkup, while Asian and White youth were the most likely.

Children (and adolescents) in this community obtained vaccinations more frequently than their Pierce County counterparts, yet slightly less frequently than state averages.

Access to Care, Use of Clinical Preventive Services and Oral Health

Continued

ACCESS TO CARE

Children with health insurance coverage showed improved health indicators such as having access to a usual source of care or well-child visits, dental visits, doctor visits, and unmet health needs.[8] Additionally, research showed that students who had Children's Medicaid (CHIP) coverage were more likely to complete high school and graduate from college.[9] Uninsured rates for children in the US declined from 12.1% in 2000 to 5.3% in 2014. Unfortunately, segments of our population continue to be uninsured and experience difficulty accessing care.

[8]*Trends in Access to Health Care Services for US Children: 2000–2014. Kandyce Larson, William L. Cull, Andrew D. Racine, Lynn M. Olson. Pediatrics Dec 2016, 138 (6)*

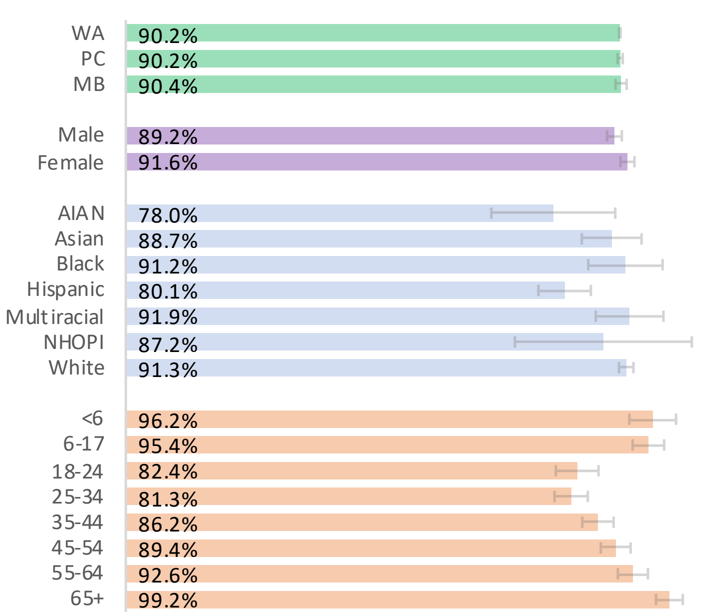
[9]*National Center for Chronic Disease Prevention and Health Promotion. Division of Population Health. Health Insurance for Children: How Schools Can Help, 2017.*

INSURANCE COVERAGE

Insurance coverage in this service area was not different than the state or Pierce County. Youth under the age of 18 were more likely than those 18-54 years to be covered in this service area. Hispanic residents had lower rates of insurance coverage compared to White residents.

Insurance Coverage (%)

Mary Bridge Children's Hospital Service Area, 2012-2016



Source: U.S. Census, 2012-2016, 5-year estimates, American Community Survey, S2701

Access to Care, Use of Clinical Preventive Services and Oral Health

Continued

ORAL HEALTH

Oral health is an oft-overlooked component of a robust public health system. Regular dental checkups have a crucial role in preventing childhood cavities, as well as reducing the risk of chronic diseases.

Childhood Cavities – The occurrence of childhood cavities, untreated and treated, help us understand the burden of oral health conditions on our community.

Dental Checkups – Regular dental checkups for youth help to promote proper oral hygiene practices and address acute and chronic oral health conditions.

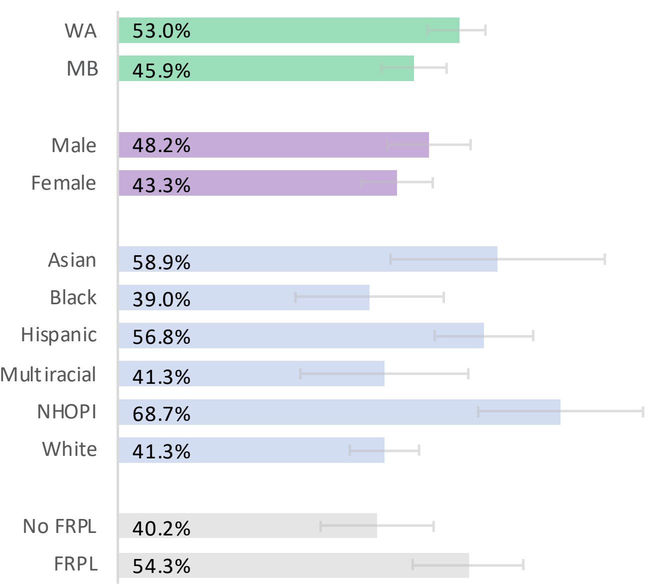
TOTAL CHILDHOOD CAVITIES

One of the most important indicators families can use to inform the quality of their diet and dental health care is the number of total childhood cavities. In this service area, 46% of 3rd graders had a history of cavities.

Black or White 3rd graders were at a lower risk of childhood cavities than any other race or ethnicity. Youth who qualified for free and reduced-price lunch also had a higher occurrence of cavities.

Total Childhood Cavities (%)

Mary Bridge Children's Hospital Service Area, 2016



(*) value different from WA state
Source: SMILE Oral Health Survey (3rd grade)

Access to Care, Use of Clinical Preventive Services and Oral Health

Continued

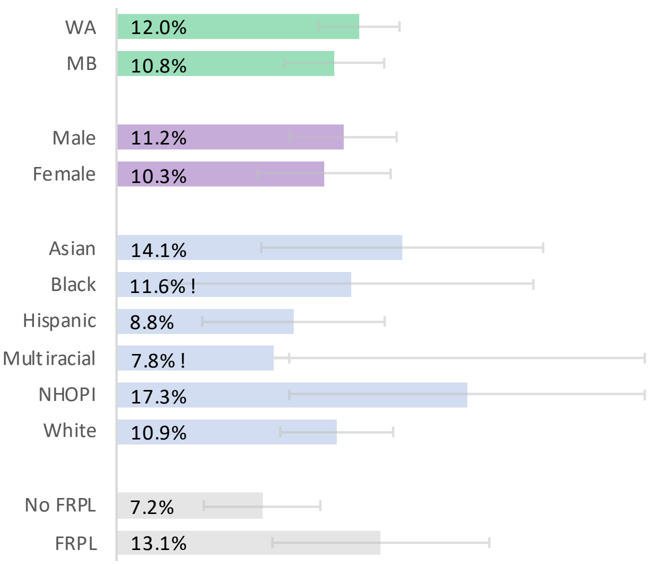
UNTREATED CHILDHOOD CAVITIES

Although childhood cavities are a warning sign for oral health concerns that would continue into adulthood, obtaining adequate dental care can help to minimize the continued damage of poor oral health. In this service area, 11% of 3rd graders had untreated cavities.

There were no statistically differences by race, ethnicity, or gender, but 3rd graders eligible for free and reduced-price lunch were more likely to have untreated cavities.

Untreated Childhood Cavities (%)

Mary Bridge Children's Hospital Service Area, 2016



(!) relative standard error greater than 30%
Source: SMILE Oral Health Survey (3rd grade)

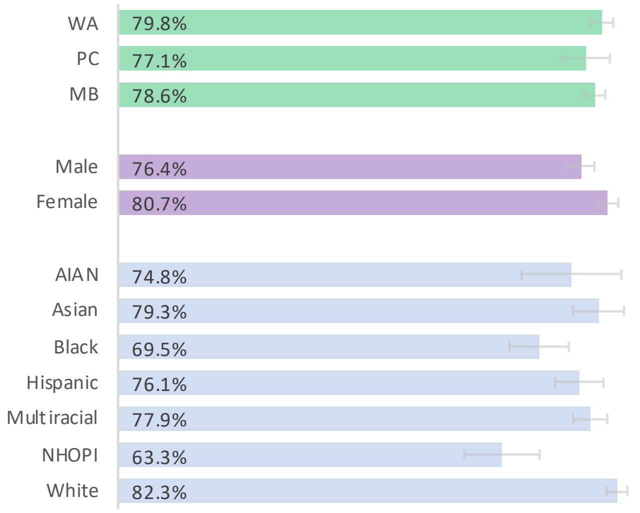
ROUTINE DENTAL CHECKUP – YOUTH

To prevent cavities and promote healthy dental hygiene practices, it is important to be routinely screened by a dental professional.

In the community served by Mary Bridge Children's Hospital, the percent of youth who had a routine dental checkup in the past year was about the same as the state average. White and Asian youth were more likely to have a dental checkup in the past year compared to Black and Native Hawaiian and Other Pacific Islander youth.

Routine Dental Checkup, Past Year (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Access to Care, Use of Clinical Preventive Services and Oral Health

Continued

CLINICAL PREVENTIVE SERVICES

Clinical services focused on disease prevention and detection make important contributions to reducing the prevalence of disease. One of the greatest public health successes of clinical preventive services - immunizations - has reduced the burden of infectious disease worldwide and continues to do so. Understanding clinical preventive services in our community is key to maintaining a healthy community.

Vaccinations – The Advisory Committee on Immunization Practices (ACIP) provides advice and guidance on effective control of vaccine-preventable diseases in the U.S. civilian population. In this report, vaccination rates are estimated using data from the Washington State Immunization Information System for 15-39 months and adolescents (15-17 years).

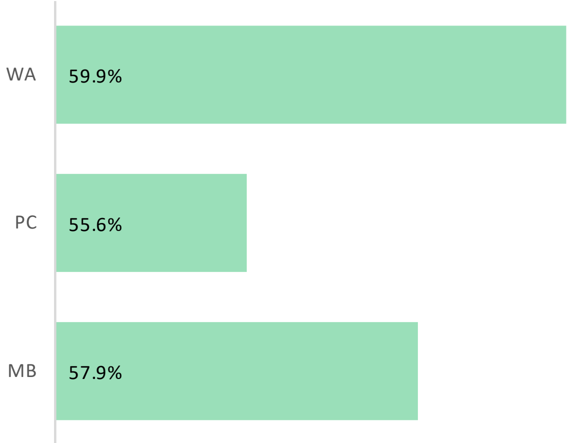
VACCINATIONS (19-35 MONTHS)

Obtaining the recommended vaccinations early in childhood, particularly for children between 19 and 35 months old, has been successful in reducing the burden of infectious disease among youth.

Recommended vaccinations for children ages 19-35 months in the Mary Bridge service area were obtained more frequently than Pierce County, but less frequently than the state.

Recommended Vaccine Series Completed (%)

19-35 months, 4313314 HEDIS series



Source: Washington State Immunization Information System, December 2017

Access to Care, Use of Clinical Preventive Services and Oral Health

Continued

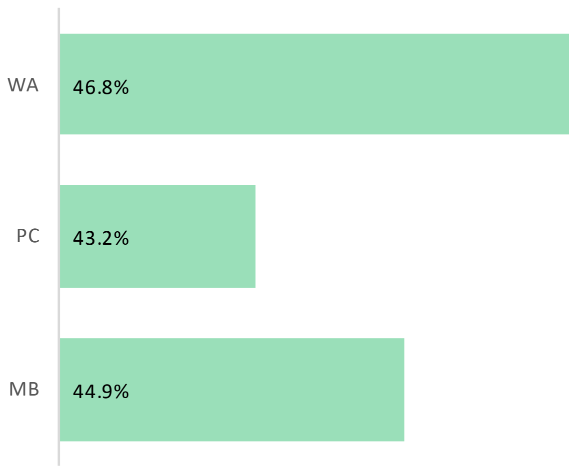
VACCINATIONS (15-17 YEARS)

Later in childhood, adolescents aged 15-17 years are recommended to have the HPV, Tdap and Meningococcal vaccines.

Completing the HPV series among adolescents aged 15-17 years in this service area was more common than Pierce County, but less common than the state.

HPV Series Completed (%)

Adolescents, 15-17 years



Source: Washington State Immunization Information System, December 2017

Access to Care, Use of Clinical Preventive Services and Oral Health

Continued

ASSETS & RESOURCES

Bates Dental Clinic provides low-cost preventive care and accepts Apple Health insurance for adults.

Community Health Care (CHC) is a private, nonprofit organization that operates clinics throughout Pierce County that offer primary medical and dental care services to uninsured and low-income individuals.

Federally Qualified Health Centers (FQHCs) offer primary, preventive and supportive health services without regard to economic or insurance status.

Lindquist Dental Clinic provides accessible, compassionate and effective dental care to Puget Sound children in need at local clinics, schools and dental outreach events.

Medical Teams International offers free or low-cost urgent dental care services through its Mobile Dental Program.

Neighborhood Clinic provides free urgent medical care to patients who cannot afford or access health care.

Pierce College Dental Hygiene Clinic provides low-cost preventive care for low-income and uninsired families and seniors.

Potentially Preventable Hospitalizations Initiative is a pilot program led by a coalition of health service providers, including MultiCare Health System. Clinics in a six-zip code area are working to increase the number of residents who receive pneumonia and flu shots and who are screened for alcohol, tobacco and other drug use and for depression.

Project Access collaborates with providers to deliver medical and dental care for uninsured and low-income individuals. Project Access also offers premium assistance for individuals on the health exchange.

Puyallup Tribal Health Authority provides medical and dental care to Puyallup tribe members and Pierce County residents who are enrolled members of other tribes.

Sea Mar Community Health Center, specializes in primary care medicine, including preventive health exams, urgent care visits, minor procedures, health education, follow-up care from hospital visits and referrals for other medical services. In addition to these services, Sea Mar provides comprehensive health services for the entire family, including dental, behavioral health and preventive health services.

Access to Care, Use of Clinical Preventive Services and Oral Health

Continued

Statewide Health Insurance Benefits Advisors (SHIBA) can help explain health care coverage options and rights; find affordable health care coverage; and evaluate and compare health insurance plans. Provides free, unbiased and confidential assistance with Medicare and health care choices.

Tacoma-Pierce County Health Department Family Support Centers assist families in finding resources and applying for DSHS benefits, including SNAP (food stamps), medical and dental benefits. In addition, the Family Support Centers connect families to low-cost and/or free resources in the community, including pregnancy, parenting and maternity support; infant case management; services for children with special needs; and services for behavioral health care needs.

Trinity Clinic serves Tacoma residents without insurance at the Trinity Presbyterian Church.

Maternal and Child Health

Improving the well-being of mothers, infants and children determines the starting point of health for families in our community. Protecting and promoting positive behaviors, such as early and adequate prenatal care and breastfeeding directly impacts the health of children in the Mary Bridge service area.

The percentage of women who received inadequate prenatal care in this area (and in Pierce County as a whole) was higher than the state rate. Native Hawaiian and Pacific Islanders and American Indians or Alaska Natives were the most likely to receive inadequate prenatal care.

In this community, the occurrence of low birth weight was highest among women ages 40-44 years and Black mothers. In this service area Black babies were born at a low birth weight (less than 5.5 lbs.) at almost twice the rate of White babies. The infant mortality rate was higher than that of Washington state. The infant mortality rate was also twice as high among Black babies compared to White babies, and three times as high among Native Hawaiian or Pacific Islander babies compared to White babies, revealing an urgent need to address racial disparities in areas such as breastfeeding initiation and duration, and obtaining early and adequate prenatal care.

PREGNANCY

Pregnancy is a complex and life-changing experience that lays the foundation for a community's future. Many factors impact the likelihood of poor pregnancy outcomes. Early and adequate prenatal care may prevent pregnancy-related complications, help mothers as they navigate a high-risk pregnancy or assist them in connecting to tobacco cessation resources.

Prenatal Care – Obtaining early and adequate prenatal care is important to ensure that mothers address any acute or chronic health conditions that may lead to poor pregnancy outcomes

PRENATAL CARE

The adequacy of prenatal care is measured using Kotelchuck's Adequacy of Prenatal Care Utilization (APCU) index. Prenatal care is considered adequate based on when prenatal care is initiated (the earlier the better) and how many of the expected visits are completed.

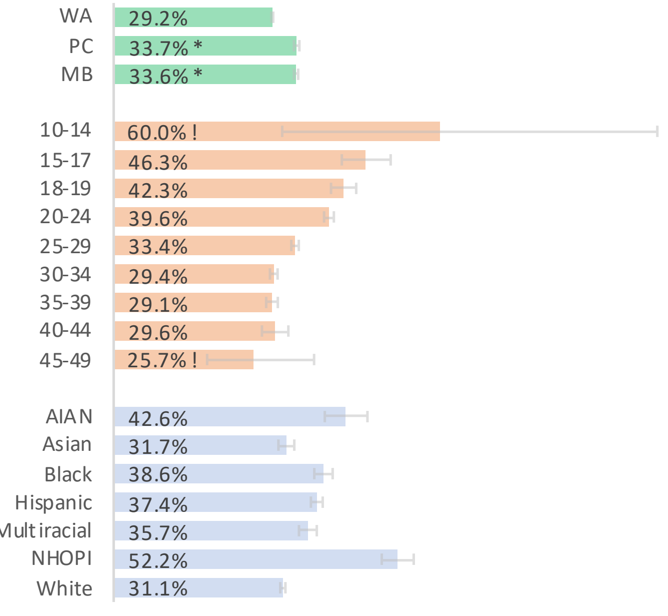
The percentage of women who received inadequate prenatal care was higher in this community compared to the state but was not different than Pierce County. Native Hawaiian and Pacific Islanders and American Indians or Alaska Natives were the most likely to receive inadequate prenatal care in this community.

Maternal and Child Health

Continued

Inadequate Prenatal Care (%)

Mary Bridge Children's Hospital Service Area, 2012-2016



(*) value different from WA state
(!) relative standard error greater than 30%
Source: Washington State Department of Health, Center for Health Statistics (CHS), Birth Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

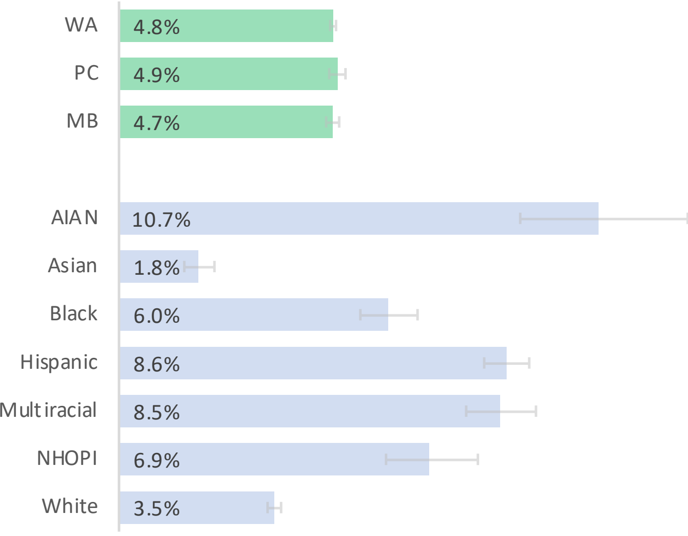
TEENAGE PREGNANCY

Pregnancies at young ages are at a higher risk for poor health outcomes. Teenage pregnancy, also known as adolescent pregnancy, is pregnancy in females under the age of 20.

The percent of pregnancies with mothers under the age of 20 in this service area was not different from the county or state. Teenage pregnancies were most likely among American Indians and Alaska Natives.

Teenage Pregnancy (%)

Mary Bridge Children's Hospital Service Area, 2012-2016



Source: Washington State Department of Health, Center for Health Statistics (CHS), Birth Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

Maternal and Child Health

Continued

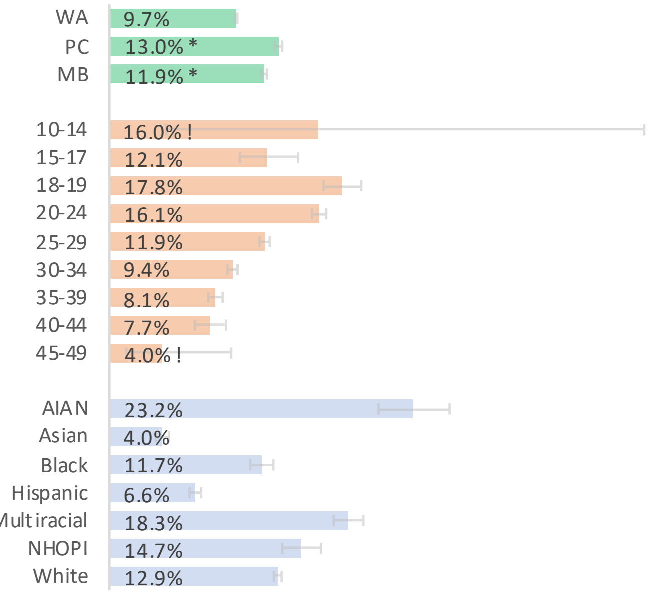
SMOKING IN PREGNANCY

Tobacco use is a well-documented risk factor for poor birth outcomes. Smoking tobacco is one of the most understood risks. Smoking in pregnancy was more common in the Mary Bridge service area than the state.

Mothers ages 18-19 years and American Indian and Alaska Native mothers had the highest occurrence of smoking during pregnancy.

Smoking in Pregnancy (%)

Mary Bridge Children's Hospital Service Area, 2012-2016



(*) value different from WA state
(!) relative standard error greater than 30%
Source: Washington State Department of Health, Center for Health Statistics (CHS), Birth Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

INFANCY

The first year of life, or infancy, is an important time in child development. Infant mortality, including Sudden Infant Death Syndrome (SIDS), is a concern in all populations.

Infant Mortality – The number of infant deaths per 1,000 live births is generated using birth certificate data and represents the infant mortality rate (IMR).

Low Birth Weight – A birthweight under 2500 grams is low birthweight, while very low birthweight is a birthweight under 1500 grams.

SIDS – Sudden infant death syndrome (SIDS) is unexplained death before the 1st birthday.

Maternal and Child Health

Continued

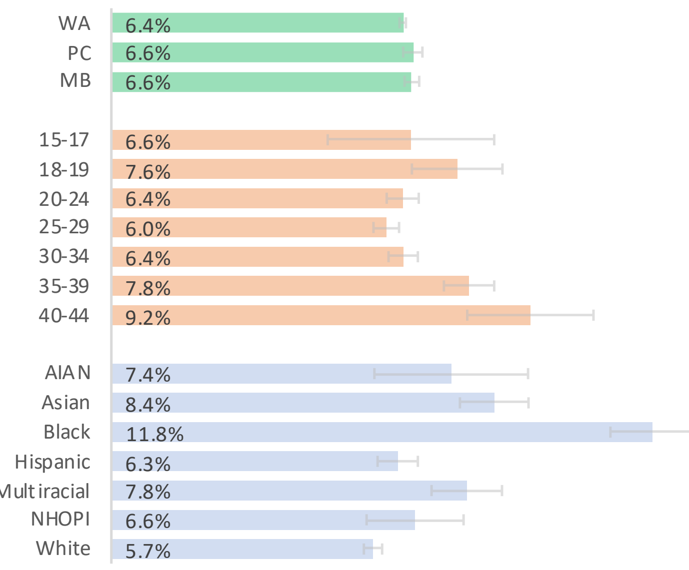
LOW BIRTH WEIGHT

The proportion of births with a low birthweight (less than 2500 grams) or a very low birthweight (less than 1500 grams) is an important risk factor for the well-being of newborns.

Low birth weight in the Mary Bridge service area was not different than the county or state. The occurrence of low birth weight was highest among women ages 40-44 years and Black mothers.

Low Birth Weight, ≤2500 grams (%)

Mary Bridge Children's Hospital Service Area, 2012-2016



Source: Washington State Department of Health, Center for Health Statistics (CHS), Birth Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

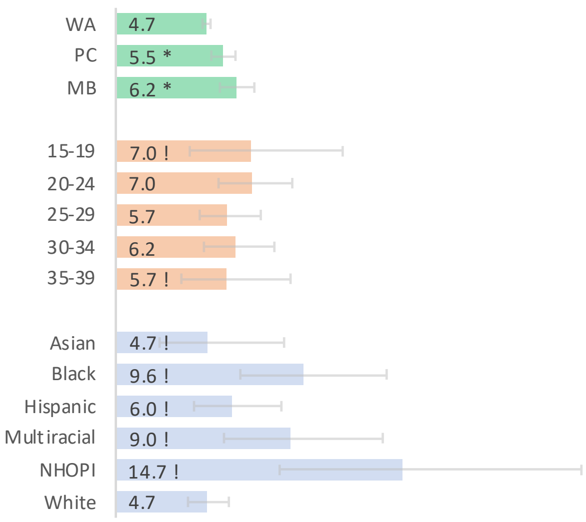
INFANT MORTALITY

Infant mortality refers to the child's death less than 365 days after birth. As prenatal care has improved, infant mortality has become less common, but disparities continue to exist. Infant mortality was higher in the Mary Bridge service area than the state, but not the county.

The mortality rate among Black and Native Hawaiian and Pacific Islander infants was higher than among White infants.

Infant Mortality Rate (IMR)

Mary Bridge Children's Hospital Service Area, 2012-2016



AIAN excluded due to sample size limitations
IMR: Infant deaths per 1,000 live births
(*) value different from WA state
(!) relative standard error greater than 30%
Source: Washington State Department of Health, Center for Health Statistics (CHS), Birth Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

Maternal and Child Health

Continued

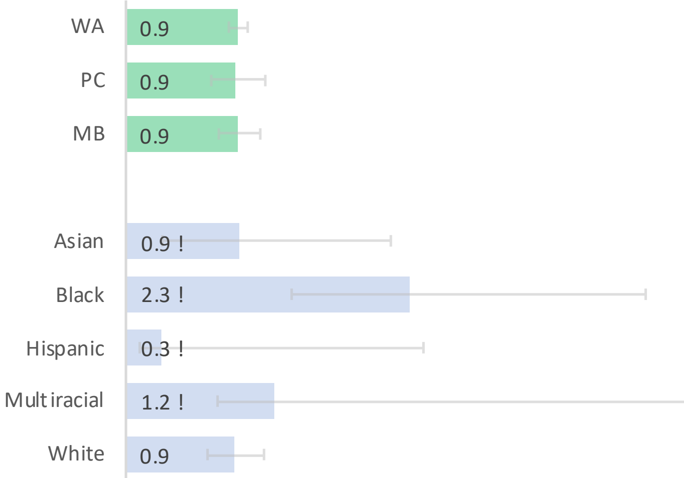
SUDDEN INFANT DEATH SYNDROME

The unexpected death of an infant before their first birthday is known as sudden infant death syndrome (SIDS). SIDS rates in the Mary Bridge service area were not different than the state or county.

Black infants had a higher rate of SIDS compared to White infants.

Sudden Infant Death Syndrome (SIDS)

Mary Bridge Children's Hospital Service Area, 2012-2016



AIAN, NHOPI excluded due to sample size limitations
SIDS deaths per 1,000 live births
(!) relative standard error greater than 30%
Source: Washington State Department of Health, Center for Health Statistics (CHS), Birth Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

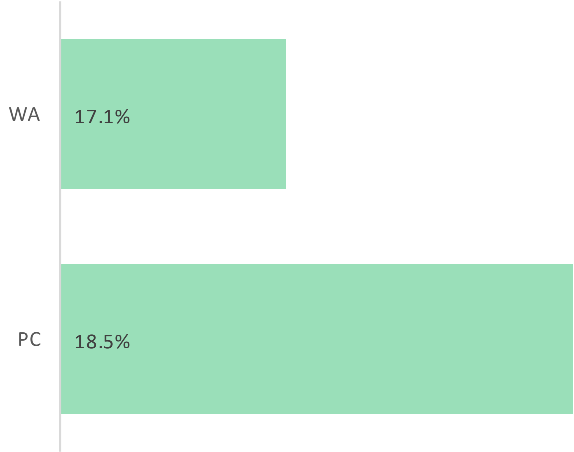
BREASTFEEDING

Breastfeeding is an important behavior that helps promote the social-emotional and physical development of newborns and infants. Exclusive breastfeeding through 6 months is an important measure of a community's adoption of this behavior.

The occurrence of exclusive breastfeeding at 6 months was higher in Pierce County than the rest of the state.[10]

Exclusive 6-Month Breastfeeding (%)

Mary Bridge Children's Hospital Service Area, 2012-2016



Source: WIC Fiscal Year 09/01/16-09/30/17

[10]Breastfeeding data below county level unavailable

Maternal and Child Health

Continued

ASSETS & RESOURCES

Black Infant Health educates pregnant black women and their families about pregnancy and infant health through a partnership with local African American churches, community groups and TPCHD.

Equal Start Community Coalition brings together leaders of nearly 30 organizations to promote healthy mothers, families and communities and seeks to reduce infant mortality.

Maternity Support Services (MSS) includes preventive health and education services for Medicaid enrolled pregnant women and their infants.

MOMs Plus is a program for high-risk pregnant and parenting women.

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

Nurse-Family Partnership is a home visiting program available to support families through pregnancy and a child's second birthday.

Our Lady of Guadalupe Maternity Center at St Vincent de Paul (Lakewood) offers free of charge car seats, diapers, formula and clothing for babies and young children.

Perinatal Collaborative of Pierce County (PCPC) is a local non-profit dedicated to improving the health of Pierce County mothers and infants. PCPC provides opportunities to learn about best practices in caring for mothers and infants in our community.

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

Pregnancy Aid is a Tacoma social service agency that provides immediate help to any woman and her family, including food, clothes, baby supplies and help with rent and utilities.

Postpartum Support International has two active support groups in Pierce County.

Public Health Improvement Partnership is convened by the Washington State Department of Health to prevent or reduce the impact of adverse childhood experiences, such as abuse and neglect.

Maternal and Child Health

Continued

ASSETS & RESOURCES

Results Washington is Governor Jay Inslee's statewide framework which calls for reducing birth outcome disparities.

Women, Infants and Children (WIC) Provides support for pregnant women, nursing moms and children under five to improve access to healthy foods, receive health education and screening services, increase breast feeding and access other health and social services.

Injury and Violence Prevention

Injuries and violence adversely affect everyone, regardless of background. Injuries and violence are leading causes of death and disability at all levels of our society, but are preventable. Those who survive these traumatic experiences may face life-long mental and physical problems.

In this section, information is included for intentional and unintentional injuries that have occurred in the community. Suicide and homicide rates in the Mary Bridge service area are not different than state or county averages – this is likely due to sample size limitations (i.e. The sample size, or number of youth homicides and suicides in this community, is too small to measure significance). Qualitative data could be collected to learn more about specific community needs regarding youth homicide and suicide.

There were no differences by gender or individual races within the service area, however the number of Multiracial youth experiencing abuse or domestic violence was higher than Pierce County and state rates.

Females were more likely than males to be hospitalized due to intentional injuries, while males were more likely to be hospitalized due to unintentional injuries. Infants and youth ages 15-17 years were the highest risk age groups for both intentional and unintentional injuries.

Accidental deaths (typically due to poisonings, motor vehicle crashes and falls) occur at a similar rate in the Mary Bridge service area compared to the state. Males, infants, youth ages 15-17 years and Black youth had the highest risk of accidental death in the service area.

Injury and Violence Prevention

Continued

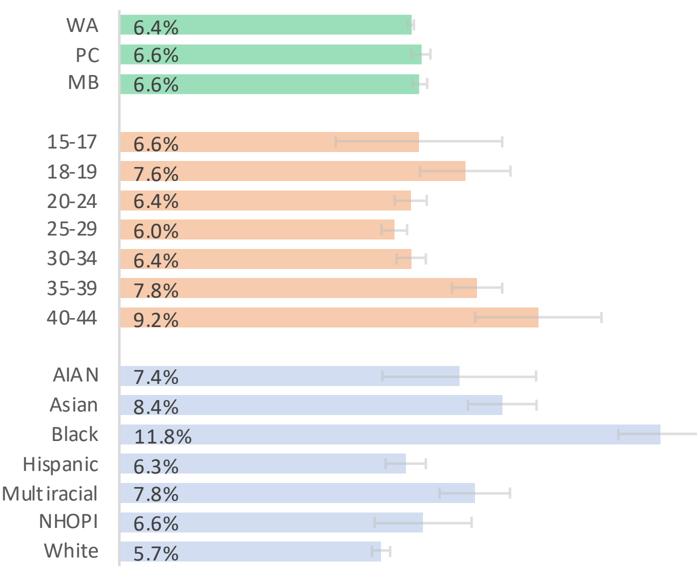
ABUSE & DOMESTIC VIOLENCE

The percent of youth who were exposed to abuse or domestic violence is estimated using the Healthy Youth Survey.

The percent of youth reporting exposure to abuse or domestic violence was not different from Pierce County or the state. There were no differences by gender. Black youth had higher rates of observed violence compared to all other race/ethnicity groups.

Observed Physical Violence (%)

Mary Bridge Children's Hospital Service Area, 2011-2015



Source: Healthy Youth Survey (10th graders)

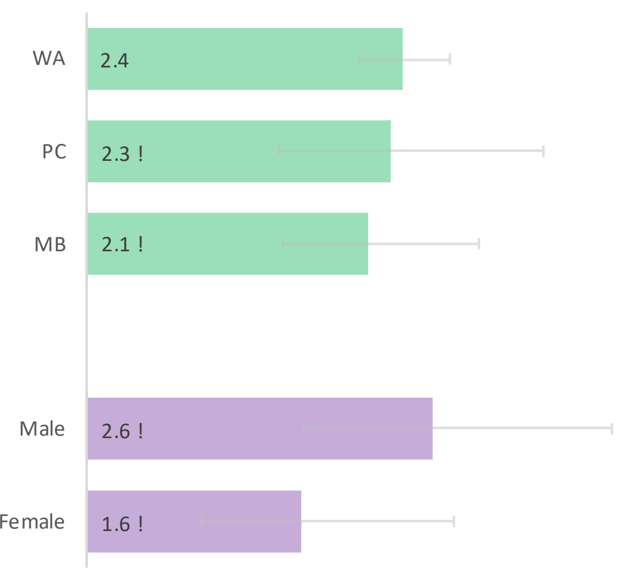
SUICIDE

Suicide is one of the leading causes of death. The rate of suicide is the number of deaths due to intentional self-harm per 100,000 youth and young adults.

Suicide rates among youth were not different than the state or Pierce County. There was no difference by gender.

Suicides

Mary Bridge Children's Hospital Service Area, 2012-2016



(!) relative standard error greater than 30%
Age & race information excluded due to sample size limitations
Source: Washington State Department of Health, Center for Health Statistics (CHS), Death Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

Injury and Violence Prevention

Continued

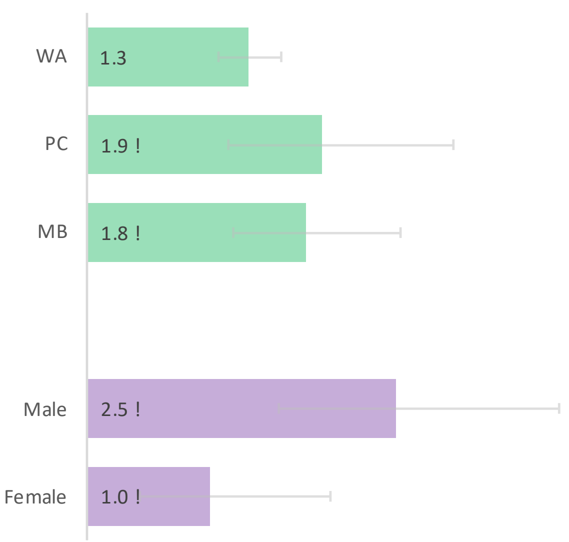
HOMICIDE

The rate of homicide is the number of deaths due to intentional harm by another person per 100,000 youth and young adults.

Homicide in the Mary Bridge Children's Hospital community was not different than the state or Pierce County. There was no difference by gender.

Homicides

Mary Bridge Children's Hospital Service Area, 2012-2016



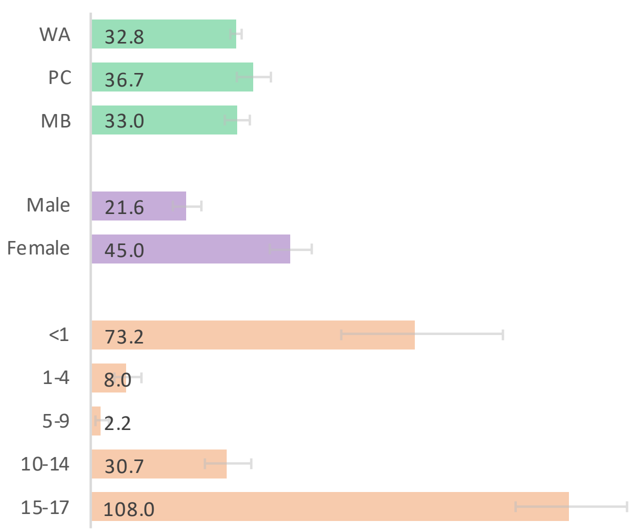
(!) relative standard error greater than 30%
Age & race information excluded due to sample size limitations
Source: Washington State Department of Health, Center for Health Statistics (CHS), Death Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

HOSPITALIZATIONS

Intentional injuries are self-inflicted, assault or other.[11] Hospitalization rates due to intentional injuries are generated using the same three categories. The rate of hospitalizations due to intentional injury for the Mary Bridge Children's Hospital community was not different from the state. Females were more likely than males to be hospitalized due to intentional injuries. Infants and youth ages 15-17 were the highest risk age groups.

Hospitalizations (Intentional Injury)

Mary Bridge Children's Hospital Service Area, 2011-2015



Source: WA Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS) 1987-2015. Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT), August 2016.

[11]Other includes intentions that are not clearly under self-inflicted, assault, unintentional or undetermined.

Injury and Violence Prevention

Continued

UNINTENTIONAL INJURIES

Unintentional injuries are one of the leading causes of hospitalization and death nationwide. Typically, unintentional injuries are due to poisonings, motor vehicle crashes and falls.

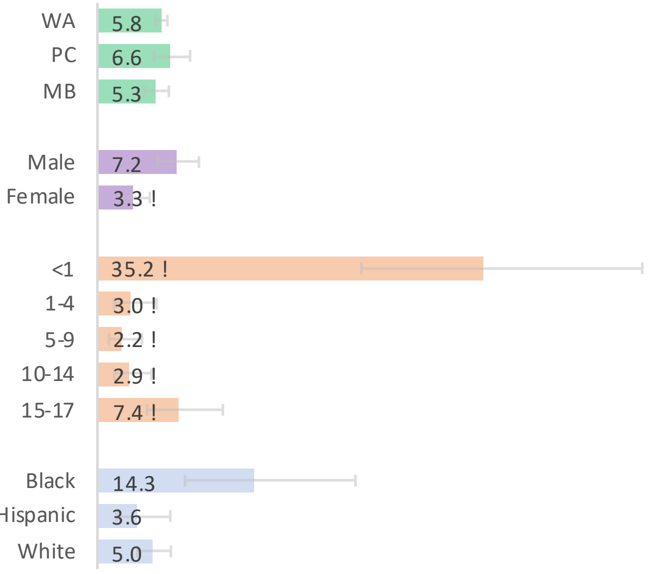
UNINTENTIONAL INJURY DEATHS

The rate of unintentional injury deaths is the number of unintentional deaths per 100,000 youth and young adults, which is measured using death certificate data.

Accidental deaths occur at a similar rate in the Mary Bridge service area compared to the state. Males, infants, youth ages 15-17 years and Black youth had the highest risk of accidental death in the service area.

Unintentional Injury Deaths Youth

Mary Bridge Children's Hospital Service Area, 2012-2016



(!) relative standard error greater than 30%

Source: Washington State Department of Health, Center for Health Statistics (CHS), Death Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT), June 2017.

Injury and Violence Prevention

Continued

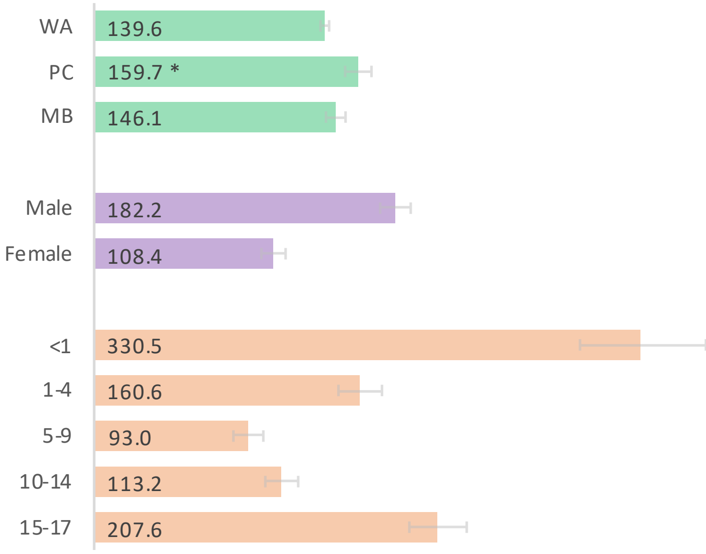
UNINTENTIONAL INJURY HOSPITALIZATIONS

Hospitalizations caused by unintentional injuries are reported as a rate per 100,000 youth and young adults from hospital discharge data.

Unintentional injury hospitalizations occur at about the same rate in the Mary Bridge service area as the state. Males were more likely to be hospitalized due to unintentional injuries. The highest risk age groups were infants and youth ages 15-17 years.

Unintentional Injury Hospitalizations

Mary Bridge Children's Hospital Service Area, 2011-2015



(*) value different from WA state
Source: WA Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS) 1987-2015. Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT), August 2016.

Injury and Violence Prevention

Continued

ASSETS & RESOURCES

Child Safety

Mary Bridge Center for Childhood Safety works to prevent unintentional childhood injury through health education, community partnerships and best practice prevention strategies. Examples include infant sleep guidelines to bicycle helmet use to fall prevention and car seat inspections and life jacket loans, free of charge.

Drugs & Alcohol

The Target Zero Task Force which focuses on reducing traffic crashes and traffic-related injuries to zero by the year 2030.

Fall Prevention

THINKFIRST is a national injury prevention foundation, including concussions and falls.

Neighborhood & Community Safety

City of Tacoma gang violence prevention initiatives provide youth and their families with a network of community resources to help prevent youth from being affiliated with gangs and to provide families and youth with assistance and resources to prevent and suppress gang violence in their communities.

Crime Prevention Through Environmental Design (CPTED) is a violence prevention approach through the lens of more livable neighborhoods.

Safe Streets Neighborhood Mobilization Programs support safety and violence prevention across the county.

Behavioral Health

MENTAL HEALTH

Mental health is essential to our youth's well-being and ability to live a full and productive life. Children and adolescents with untreated mental health disorders are at an elevated risk for co-occurring disorders, including substance abuse and dependency. Continuing to support a health care system committed to addressing these concerns can help improve the lives of those who experience mental health issues and strengthen our community.

36% of youth self-reported they have been depressed (i.e. feeling so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities) in the past 12 months. This was the same as Pierce County and slightly higher than Washington state rate (34%), with females and Hispanic youth being more likely to report being depressed.

Reports of bullying in this area were similar to the county and state rates. Females were more likely than males to report being bullied, and White and American Indian or Alaska Native youth were more likely than Asian, Black, Hispanic and Native Hawaiian and Pacific Islander youth to report being bullied in the past year. Females were also more likely than males to report suicidal ideation.

Youth binge drinking, marijuana and opioid use in this area were not different than state and Pierce County rates. American Indian or Alaska Native youth had the highest risk of binge drinking in the area; while females reported higher lifetime marijuana usage than males.

Behavioral Health

Continued

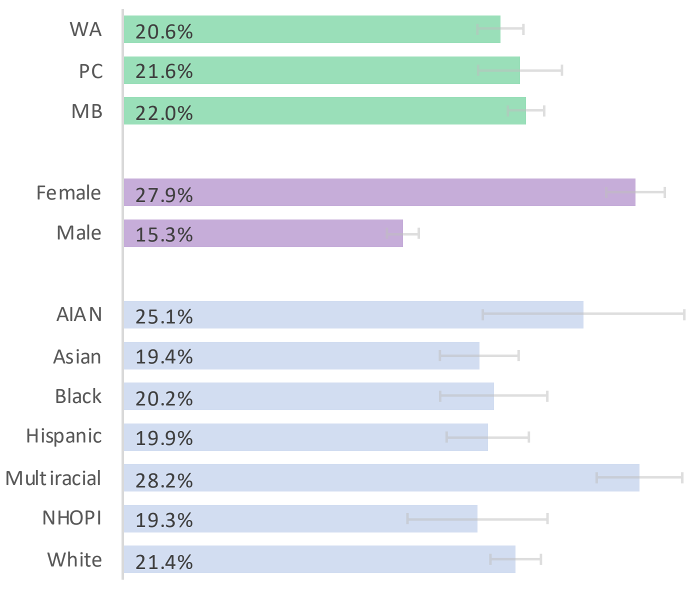
SUICIDE IDEATION AMONG YOUTH

The percentage of youth reporting suicidal thoughts in the past 12 months is important as it precedes potential suicide attempts.

In the Mary Bridge service area, youth report suicidal ideation at similar rates to Pierce County and the state. Females were more likely than males to report suicidal ideation.

Suicidal Ideation in Past Year (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

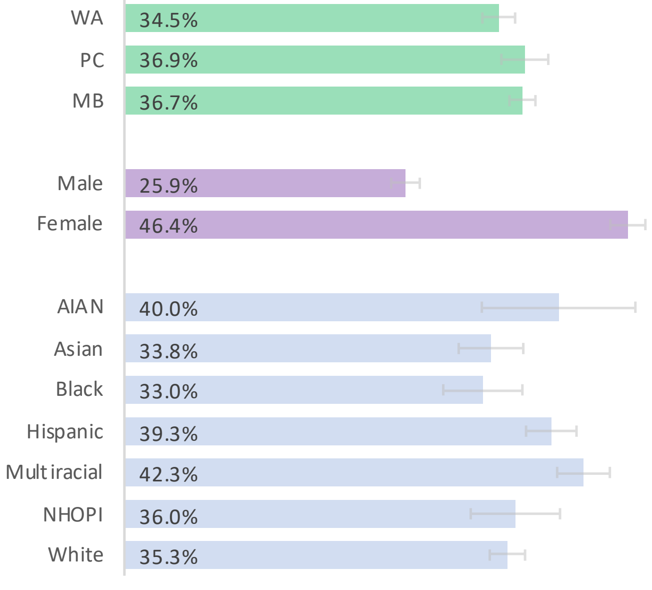
DEPRESSION – YOUTH

Youth are considered to have been depressed when they reported feeling so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities in the past 12 months.

Self-reported depression among youth in the Mary Bridge Children's Hospital community was similar to Pierce County and the state. Females were more likely than males to report depression and Hispanic youth were more likely than White youth to report depression.

Self-Reported Depression – Youth (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Behavioral Health

Continued

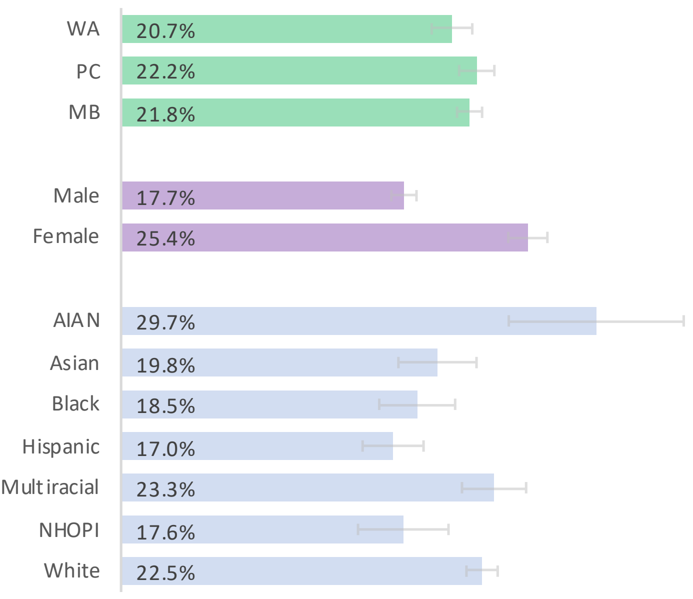
YOUTH BULLYING

The percentage of youth reporting being bullied in the past 12 months is measured using the Healthy Youth Survey.

Bullying among youth in the Mary Bridge service area was similar to Pierce County and the state. Females were more likely than males to report being bullied in the past year. White and American Indian or Alaska Native youth were more likely than Asian, Black, Hispanic and Native Hawaiian and Pacific Islander youth to report being bullied in the past year.

Bullied Youth in Past Year (%)

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Behavioral Health

Continued

SUBSTANCE ABUSE AND DEPENDENCY

The inappropriate use of mind-altering substances, legal and illegal, presents major challenges to a community. Substances of public health concern include, but are not limited to, alcohol, marijuana and opioids. Alcohol and marijuana use among youth, or driving while under the influence of either, are public health concerns. Ensuring an adequate system to assist individuals dealing with substance abuse and dependency issues is key.

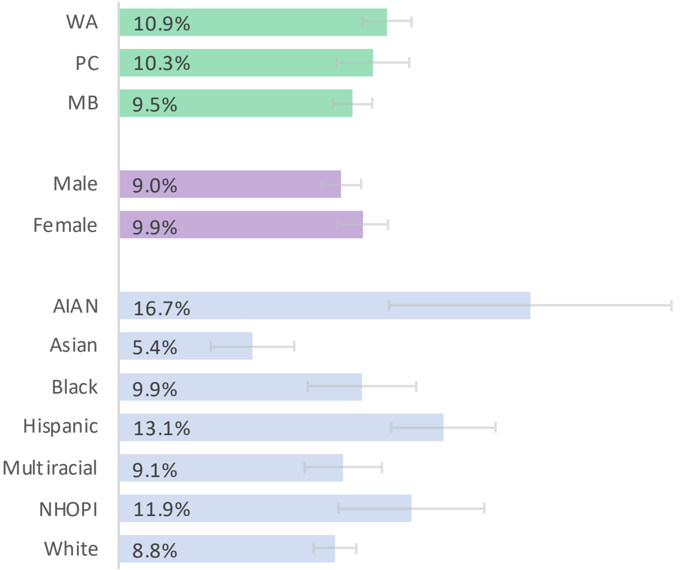
BINGE DRINKING – YOUTH

Binge drinking among youth is self-reported through the Healthy Youth Survey. Youth who reported consuming five or more drinks in a row in the past two weeks were considered to have engaged in binge drinking.

The rate of binge drinking among youth in the Mary Bridge Children's Hospital service area was not different than Pierce County or the state. American Indian or Alaska Native youth had the highest risk of binge drinking in the Mary Bridge service area.

Binge Drinking Among Youth

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

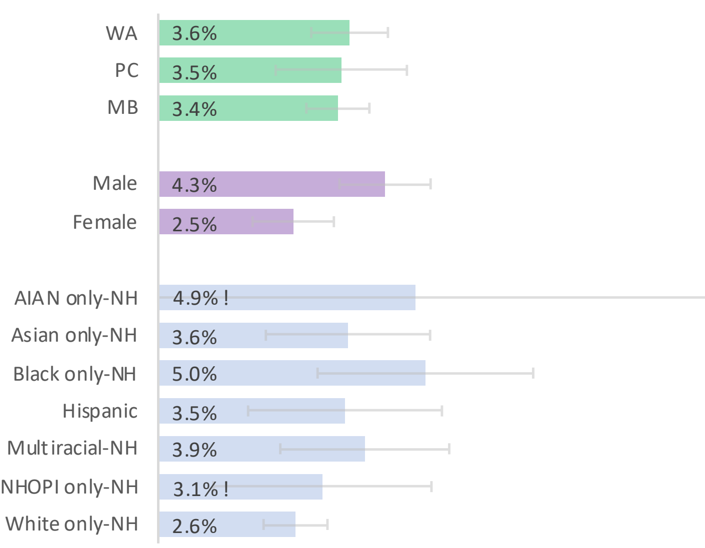
OPIATE USE - YOUTH

Opioid use among youth was approximated using lifetime heroin use data from the Healthy Youth Survey.

In the Mary Bridge service area, the rate of lifetime heroin use was not different from Pierce County or the state. Male youth were more likely than female youth in this service are to report lifetime heroin use.

Lifetime Heroin Use - Youth

Mary Bridge Children's Hospital Service Area, 2016



(!) relative standard error greater than 30%
Source: Healthy Youth Survey (10th graders)

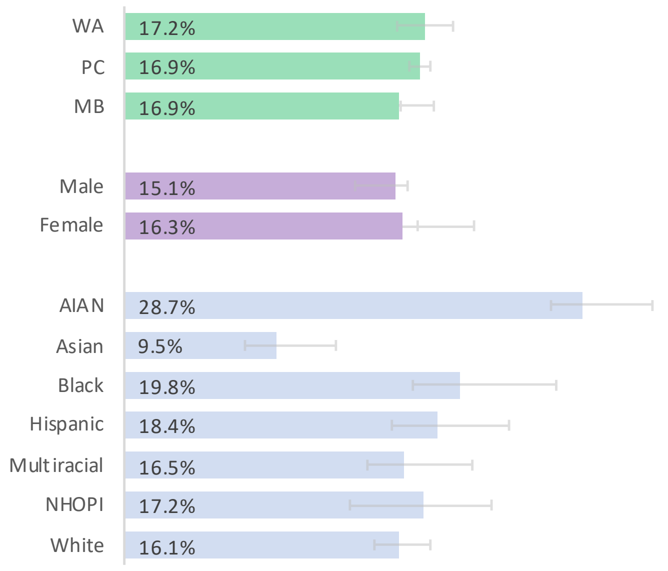
MARIJUANA USE - YOUTH

In Washington state marijuana use is legal for people 21 years and older. Marijuana use puts youth at greater risk for addiction and failing in school. Most teens who enter drug treatment programs report marijuana is the main drug they use.

The percent of youth who reported using marijuana was about the same as the county average. Asian youth in this community reported less marijuana use compared to other race and ethnicity groups. American Indian/Alaska Native youth had higher use rates compared to White youth.

Lifetime Marijuana Use - Youth

Mary Bridge Children's Hospital Service Area, 2016



Source: Healthy Youth Survey (10th graders)

Behavioral Health

Continued

ASSETS & RESOURCES

Catholic Community Services consists of 12 family centers across Western Washington providing an array of services, including counseling, case management, information and referral, chemical dependency services, mental health services and family support services to children, adults and families in need.

Children's Crisis Outreach Response System (CCORS) provides mobile crisis outreach and crisis stabilization services for children and youth up to age 18.

Comprehensive Life Resources provides behavioral health services, including outpatient and community support services to adults, children and families, services to homeless individuals, housing services, foster care and residential/inpatient services for children and adults.

The Crisis Solutions Center offers a therapeutic option when police and medics are called to intervene in a behavioral health care crisis. The program minimizes inappropriate use of jails and hospitals and provides rapid stabilization, treatment and referrals for up to 46 individuals.

Forefront, a research organization based at the University of Washington, is training health professionals to develop and sharpen their skills in the assessment, management and treatment of suicide risk.

Gig Harbor Key Peninsula Suicide Prevention Coalition is a collaboration of social service and other community partners who help educate the community about the risks of and how to prevent suicide.

Greater Lakes Mental Healthcare provides a full range of youth and adult mental health services.

WA House Bill 2315 and other bills passed over the past several years require school staff, behavioral healthcare providers and other healthcare providers to participate in suicide prevention training as part of their licensure.

Living Works has several suicide prevention programs and trainings in Pierce County.

Mental Health First Aid is an 8-hour course that gives people the skills to help someone who is developing a mental health problem or experiencing a mental health crisis.

Behavioral Health

Continued

Metropolitan Development Corporation has a wide range of housing, health and mental health programs.

MultiCare Behavioral Health is the largest behavioral health organization in Pierce County. They provide comprehensive expert treatment for children, adults and older adults who are struggling with a wide range of mental health conditions, as well as provide treatment, assistance and support for those working to overcome chemical dependence or substance abuse addictions.

NAMI Pierce County serves individuals, families and communities in Pierce County struggling with mental health.

Olalla Recovery Centers treats all aspects of drug and alcohol addictions, including the needs of special populations through skilled inpatient and outpatient care and services.

Pierce County Alliance provides human services, specializing in substance abuse and mental health services for individuals, families and the community.

Tacoma Area Coalition for Individuals with Disabilities (TACID) works with individuals to assess needs, including behavioral health needs. TACID supports and connects individuals with community resources, including behavioral health services.

Tacoma Pierce County Health Department Family Support Centers offer many community-based services. They are a hub to help families find the resources to achieve their goals. Not all support centers have the same services. They are each designed to meet the needs of the community around it.

211 Pierce County has a dedicated mental health navigator.

Supplement

QUANTITATIVE DATA SOURCES

The data sources included in the quantitative analysis range from those providing aggregate results for the populations of interest to those with raw data available for analysis where estimates were generated by TPCHD.

American Community Survey (ACS)

This mailed survey is an annual supplement to the 10-year Census. The ACS location of residence is based on census tracts, which are converted to zip code tabulation area (ZCTA) for analysis.

Agency for Healthcare Research and Quality (AHRQ)

Prevention Quality Indicators (PQIs) are a set of measures generated using hospital discharge data (CHARS) based on guidance from the AHRQ.

Behavioral Risk Factor Surveillance System (BRFSS)

This is the largest, continuously conducted telephone health survey in the world. The survey collects information on a vast array of health conditions, health-related behaviors and risk and protective factor about individual adults. In 2011, a new data weighting approach was implemented making data before 2011 unreliable for comparison to 2011+ data.

Comprehensive Hospitalization Abstract Reporting System (CHARS)

Hospital discharge data including records on inpatient and observation patient hospital stays.

Community Health Assessment Tool (CHAT)

This data source is a web application that allows authorized users to generate estimates for different geographies depending on the data source. Data from an array of data sources is used to generate estimates by zip code, county and state in this tool.

Washington State Department of Social and Human Services (DSHS)

Foster care placement services, foster care support services and Child Protective Services aggregate estimates at the county-level and school district-level were available using the online reporting system available through DSHS.

Supplement

Continued

Enhanced HIV/AIDS Reporting System (eHARS)

This disease reporting system was developed by the CDC and is managed by the Washington State Department of Health. It collects and stores HIV/AIDS case surveillance data. Reported case counts from these data are generated for each hospital service area upon request.

Health Resources and Services Administration (HRSA)

Health Professional Shortage Areas (HPSA) information was obtained through the HRSA Data Warehouse and Map Tool available online, including shapefiles of polygon and point data for HPSAs in mental, dental and primary care.

Healthy Youth Survey (HYS)

This school-based survey is administered in even number years statewide to grades 6, 8, 10 and 12. School districts overlapping the hospital service area, defined by zip code, were included in the analysis. 10th grader data is used to approximate each indicator for all 8th-12th grade youth.

Office of Superintendent of Public Instruction (OSPI)

The Washington State Office of Superintendent of Public Instruction provides data on graduation and free or reduced-price meal data through the Comprehensive Education Data and Research System (CEDARS), an online system that captures information regarding student graduation, transfers and drop-outs. The adjusted cohort method follows a single cohort of students for four years based on when they first entered 9th grade. The cohort is adjusted by adding in students who transfer into the school and subtracting students who transfer out of the school.

Point-in-Time Count (PIT)

The Homeless Housing and Assistance Act (ESSHB 2163-2005) requires each county to conduct an annual point-in-time count of sheltered and unsheltered homeless persons (RCW 43.185C.030) in accordance with the requirement of the U.S. Department of Housing and Urban Development (HUD). Data was made available for this assessment by Pierce County; however, data for zip codes outside Pierce County were not available. Estimates were generated using data with a geographic identifier (city or zip code) within the hospital service area.

Supplement

Continued

SMILE Survey

During the 2014-2015 and 2015-2016 school years, the Washington State Department of Health's Oral Health Program conducted this assessment of the oral health status and treatment needs of children throughout the state. Data collected through this assessment allows for reliable estimates at the county level. Dental screenings were completed by licensed dental hygienists and one dentist, following the standardized protocol set by the Association of State and Territorial Dental Directors (ASTDD) for conducting Basic Screening Surveys.

Birth Certificate Data

The birth certificate system contains records on all births occurring in the state and nearly all births to residents of the state. Information is gathered about the mother, father, pregnancy and child. The information is collected at hospitals and birth centers through forms completed by parents or medical staff, a review of medical charts or a combination of both. Midwives and family members who deliver the baby complete the birth certificate and collect the information from a parent or from their records. Data are compiled by the Washington State Department of Health, Center for Health Statistics.

Death Certificate Data

Funeral directors collect information about the deceased person from an informant who is usually a family member or close personal friend of the deceased. A certifying physician, medical examiner or coroner generally provides cause of death information. Cause of death data is derived from underlying causes of death. For example, if a person dies of a complication or metastasis of breast cancer, breast cancer would be the underlying cause of death. Data are compiled by the Washington State Department of Health, Center for Health Statistics.

Washington State Cancer Registry (WSCR)

The Washington State Cancer Registry (WSCR) monitors the incidence of cancer in the state to better understand, control and reduce the occurrence of cancer. In 1995, WSCR received funding through the Centers for Disease Control and Prevention's National Program of Central Cancer Registries. This program is designed to standardize data collection and provide information for cancer prevention and control programs. Estimates based on this data were obtained through the Washington State Department of Health's Community Health Assessment Tool (CHAT).

Supplement

Continued

Washington State Immunization Information System (WAIIS)

The Washington State Immunization Information System (WAIIS) is a lifetime registry that keeps track of immunization records for people of all ages. Estimates for each hospital service area were acquired from WAIIS. Immunization reports included data on 19-35 month olds, 13-17 year olds and 15-17 year olds.

Washington Tracking Network (WTN)

The Washington Tracking Network is a collection of environmental public health data. Estimates available through this resource are collected from an array of data sources and serve as a single location to see various measures affecting environmental public health.

Quantitative Methods

Estimates are generated for Washington, Pierce County and the hospital service area. In most cases we use SAS 9.4 software to analyze data. In some cases, estimates are provided from an external source. Estimates for sub-populations are also generated and maps are displayed when possible and appropriate. The following definitions help understand the contents of this report:

Rates: A rate is a standardized proportion (or ratio) expressed as the number of events (e.g. live births per year) that have occurred with respect to a standard population, within a defined time period (usually one year). Rates help compare disease risk between groups while controlling for differences in population size. The size of the standard population used can vary depending on whether the events are common or rare. For example, since HIV is a rare condition in Washington, HIV incidence rates are expressed as new cases per 100,000. **Crude rates** are rates calculated for a total population, while **age-specific rates** are calculated for specific age groups.

Age-Adjustment: All age-adjusted mortality and disease rates in this report are adjusted to the 2000 U.S. population. The risk of death and disease is affected primarily by age. As a population ages, its collective risk of death and disease increases. As a result, a population with a higher proportion of older residents will have higher crude death and disease rates. To control for differences in the age compositions of the communities being compared, death and certain specific disease rates are age-adjusted. This aids in making comparisons across populations.

Averages: Multiple-year average estimates were used in order to increase sample sizes and to minimize widely fluctuating frequencies from year to year.

Confidence Intervals (CI): Hospital service area comparisons to Washington state and comparisons among subpopulations were calculated using 95% confidence intervals. Confidence intervals (error bars on the graphs) indicate the margin of error for the value estimated by describing an upper and lower limit of an estimate. Using confidence intervals is an approach to determine if differences among groups are statistically significant. If the confidence interval of two different estimates do not overlap, we most often can conclude that the difference is statistically significant and not due to chance.

Standard Error (SE): Standard errors are used to determine significance between groups in the analysis. Unless noted, these are based on 95% confidence intervals, or an alpha of 0.05. Relative standard error (RSE) is used to determine what statistics are reported. If the RSE is greater than 30% and/or the sample size is too limited to have confidence in these estimates, then they are excluded. If the RSE is greater than 30%, but the estimates may still be reliable, then they are presented but with a "!" to draw attention to this concern.

Stratification: Where possible (i.e., the population size or counts were adequate to determine significance and protect anonymity), we analyzed the indicators by race/ethnicity or gender. We used the following terms to describe race/ethnicity:

- NH: Non-Hispanic
- AIAN: Non-Hispanic American Indian/Alaska Native
- Asian: Non-Hispanic Asian
- Black: Non-Hispanic Black
- Hispanic: Hispanic as a race
- Multiracial: More than one race
- NHOPI: Non-Hispanic
- Native Hawaiian and Pacific Islander
- White: Non-Hispanic White

For some indicators, these stratification levels may not have a sample size adequate to draw reliable conclusions about that population and are therefore excluded from this report. Groups are typically not combined due to concerns about over-generalizations made based on those results.

Selection of Priority Health Needs

Key findings were identified as priority health needs using four criteria. A public health epidemiologist reviewed data from this CHNA and applied the following criteria:

1. When compared to Washington state, the hospital service area numbers are statistically worse (1 point).
2. Existing estimates present a trend in the negative direction (1 point).
3. The measure is related to listed themes from community engagement activities (1 point).
4. There is an appearance of inequity by gender or by race (2 points).

All health indicators and themes are scored and ranked using the above criteria. Based on the results of the ranking, at least three and no more than six key findings are identified per CHNA report.