Bridging the Maternal and Child Health Gaps in Snohomish County

A Plan for 2020-2025

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Background

Sources of Data

The Snohomish Health District (SHD) pulled data from various primary, secondary and tertiary sources to complete this report. These sources include a completed 2018 community health assessment (CHA) that used county-level data from surveys or databases maintained by SHD, Washington State Department of Health (WA DOH) and federal partners or federal sponsored partners such as the Centers for Disease Control and Prevention (CDC)[1]. Maternal health data that was analyzed and presented by SHD in 2017[2] and 2019[3] was also used. The data presented was from the WA DOH, Center for Health Statistics Birth Certificate Data, 1990–2016, Community Health Assessment Tool (CHAT)[4], as well as the Centers for Disease Control and Prevention (CDC) National Vital Statistics System 2016 (NVSS)[5]. Other sources of data came from the census tract level heat map data from WA DOH's Washington Tracking Network[6], the United States Census Bureau[7], and WA DOH 2017 Infant Mortality Reduction Report[8]. One focus group discussion with 6 participants was held after presentation of the results of the MCH assessment data results[9]. Limitations of the data presented and analyzed are unavailability of data on some MCH indicators of interest, a level self-selection of survey and focus group participants thus limiting representativeness of the data, and inability to disaggregate some of the data due to low numbers.

General Demographics

Snohomish County is the 13th largest county in the State of Washington at 2,090 square miles, 68% of this being forest land, 18% rural, 9% urban/city and 5% agricultural[10]. The county's population is approximately 10.7% of the state's with a growth rate of 8.7%, which is faster than that of the state[1]. Even though Snohomish County is racially and ethnically less diverse than the state, diversity has been increasing with the percentage of Caucasians dropping from 83.4% in the year 2000 to 70.8% in 2017[1].

In 2017, the total population was 801,633 with an even distribution of males and females and a median age of 38.1 years[7], and a smaller percentage of residents who are age 65 years and older when compared to the state[1]. The 2017 average life expectancy at birth for women in Snohomish County was 82.5%, which is longer than the men's 78.1 years[1]. The average of 80.3 years is comparable to the state but longer than the U.S. 78.6 years[1]. The overall mortality rate for the county of 684.3 per 100,000 in 2017 was comparable to the state but lower than the U.S. rate of 728.8, with American Indian/Alaskan Natives (AI/ANs) having the highest rate of all residents in the county[1].

The county's 2016 unemployment rate was 4.4% with the lowest rate among Asians and the highest rate among those who identify as two or more racial backgrounds[1] The median household income in 2016 was $73,528, much higher than the state's $62,848 and the U.S. $55,322[1]. In 2017, men working full time had a median annual income of $65,199 compared to $48,540 for the female population[7]. Employment through private companies was the highest at 71.1% for civilians age 16 and older in 2017[7]. Other sources of employment were private not for profit, self-employment, local government, state government workers, federal government workers, and unpaid family workers[7]. In 2016, single women with children were the most likely to be poor with 30% living under the Federal Poverty Level[1].

11.7% of the population have a disability, majority of whom are between 18 to 64 years old at 53.5%, and some who were living with more than one disability. Of the 11.7% living with a disability, 48% had ambulatory difficulties, 41.2% had cognitive difficulties, 34.7% had independent living difficulties, 27.9% had hearing difficulties, 17.7% had self-care difficulties, and 16.6% had vision difficulties.[7]

In 2017, 31.9% of Snohomish County residents who are over 25 years of age had attained a Bachelor Degree or higher[7]. On-time high school graduation for 2017 was 79.5% which is comparable to the state's 79.3%, and lower than the 2016 U.S. rate of 84.1% and Healthy People 2020 goal of 87%[7].

Status of Maternal Child Health

Maternal and child health can be affected by many factors including: environmental conditions of places where people work, live, learn and play; socioeconomic factors such as access to health care and early intervention, education, finances and economic opportunities, social support, access to resources for daily living; maternal behaviors such as breastfeeding; and the physical and mental health of the caregivers[11].In the United States, there are racial and ethnic disparities in morbidity and mortality of mothers and children with the Black population having the highest rates[11–14]. Research that includes a systematic review has shown that these disparities in health exist partly due to socioeconomic factors such as access to insurance, income, education and quality of care[11,15–21].

The development of children after they are born is affected by the health status and health behaviors of their mothers while they are pregnant as well as the early years of the child, including having a safe environment that is free from adverse childhood experiences[11]. This is especially important considering the knowledge that adverse childhood experiences affect the physical and mental health of children into adulthood[22–24] and is intergenerational[25–28].

Emerging issues in maternal and child health include recognizing the need to address persistent disparities through a “life course” lens of health promotion and disease prevention, and employing a multi-pronged evidence-based intervention perinatal health intervention strategies as well as paying attention to emerging public health concerns[11]. This perspective includes taking a close look at other non-traditional disparities in maternal and child health such as higher rates of infertility among African American women and access to quality male and female fertility services[11].

Infant Mortality as an Indicator of Overall Health

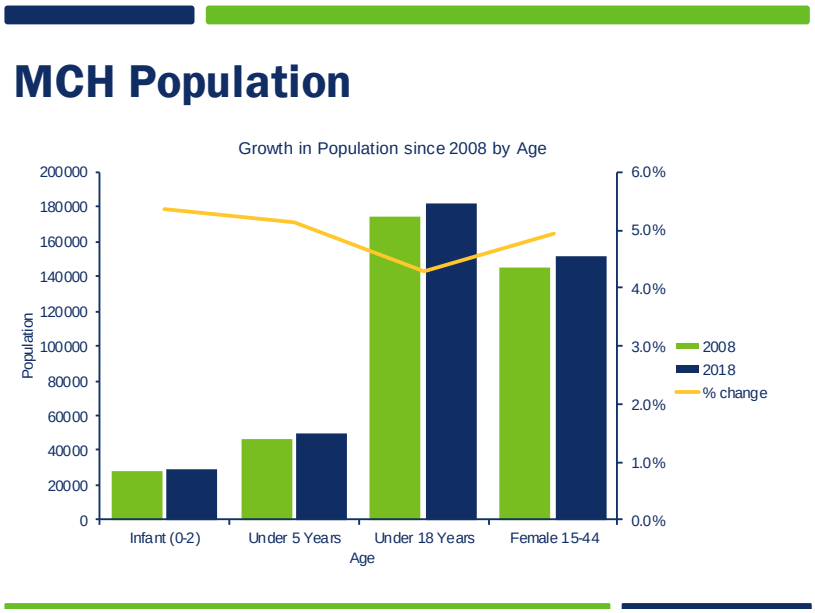
Infant mortality is generally considered to be a good indicator of the overall health of a population[29]. Good perinatal care that includes preconception care, prenatal care, interconception care, early identification and treatment of health conditions in the mother-child dyad not only reduces the risk of maternal and infant mortality[11,30], but also helps prevent disability and provide children with the opportunity of reaching their full potential[11,12,30–32].

The WA DOH Infant Mortality (IM) Reduction Report identified the following as factors that put an infant at higher risk of mortality: mother smoked while pregnant, mother experienced poverty, mother had a low level of educational attainment, mother was younger than 20 or older than 40, mother was obese prior to pregnancy, mother had diabetes[8]. Additionally, there’s evidence that maternal cannabis smoking while pregnant negatively impacts attention, memory, problem-solving skills, and behavior problems in their children[33]. Protective factors for IM reported by WA DOH: taking folic acid, multivitamins or prenatal vitamins; risk appropriate level of care; infant sleep position; breastfeeding[8].

Status of Snohomish County Maternal Child Health

Children up to 19 years of age and women of child-bearing age (20-49 years old) make up 44.5% of the county’s population[6]. Between 2008 and 2018, the lowest population growth occurred among 0-18 year old children[3]. However, when that age group is disaggregated, the 0-2 year olds had the highest growth among in the entire MCH population[3]. (Figure 1)

Figure 1. Graph of Snohomish County MCH Population Characteristics – Number and Growth Comparison between 2008 and 2018



Birth Rate

Snohomish County's 2016 birth rate was at par with the state rate at 13 in comparison to the national rate of 12[2] (Figure 2). When disaggregated by racial/ethnic groups, the 4 highest birth rates in Snohomish County were Pacific Islanders (PIs) at 21, Blacks at 20, and Hispanics and Asians both having a rate of 17[2](Figure 3).

Figure 2. Graph of Snohomish County Live Birth Rate Trend – 2007-2016 Comparison with State[i]

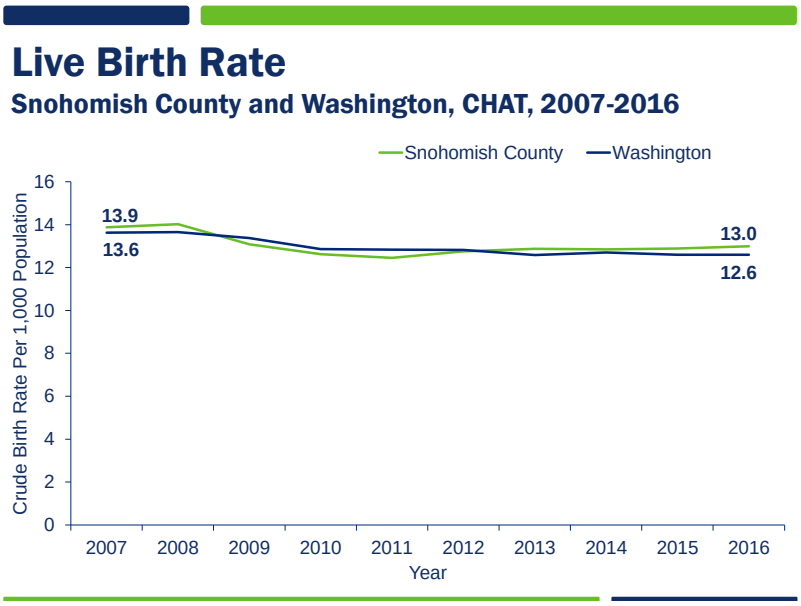
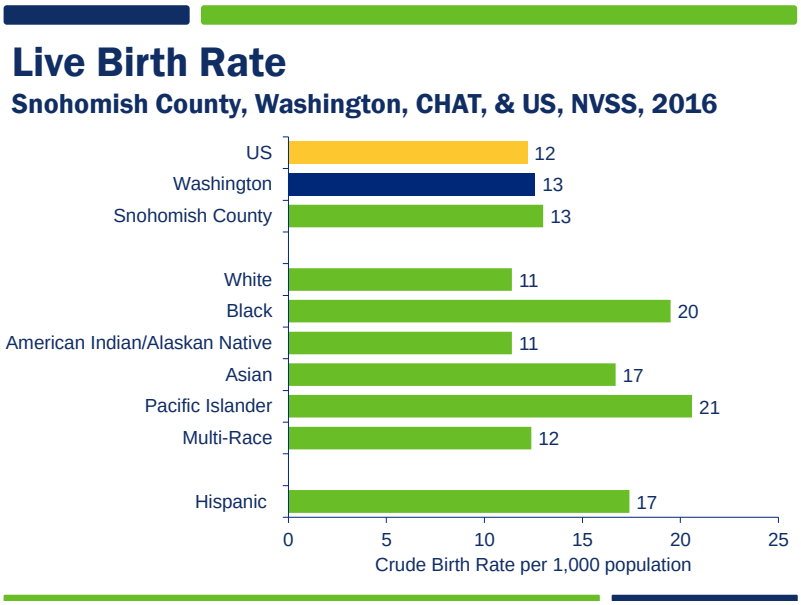


Figure 3. Graph of Snohomish County 2016 Live Birth Rate – Comparison with State/US and Disaggregated by Race/Ethnicity[1]



Protective and Risk Indicators of Infant Mortality

As aforementioned, infant mortality is generally considered an indicator of the overall health of a community[29]. Therefore, taking a closer look at protective and risk indicators of infant mortality in Snohomish County will not only serve to gauge the status of the county's maternal and child health, but also the overall health of the county's residents.

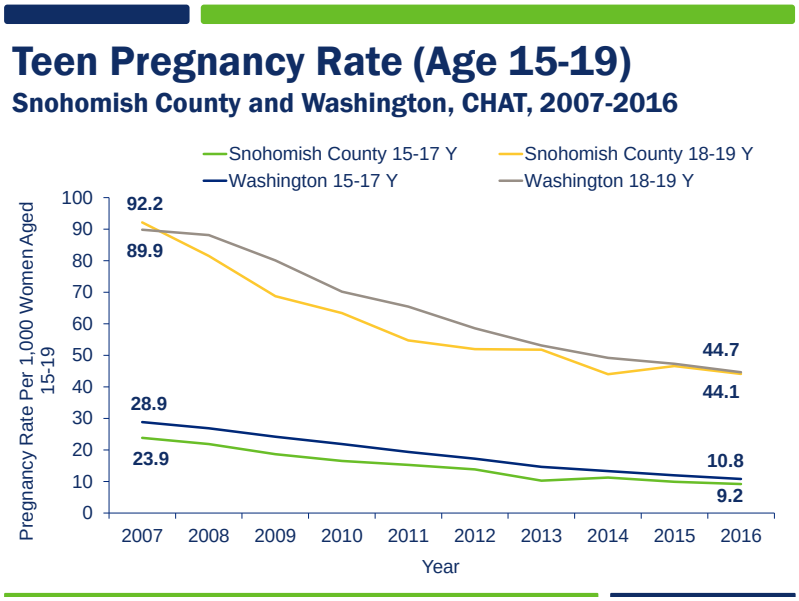
SHD's CHA found that Snohomish County met the Healthy People 2020 infant mortality rate of 6 or lower by 2015[1]. In that year, the county's rate was 4.1, lower than the state's rate of 4.8 and U.S. rate of 5.9[1]. However, even though the overall county picture is commendable, the leading cause of hospitalization in 2017 was complications of pregnancy and childbirth at 14%[1] and inequities arise when data on factors that increase or decrease the risk infant mortality are disaggregated by race and ethnicity. The racial and ethnic inequities reported in the WA DOH infant mortality report of Black, AI/AN, Native Hawaiian and other PI infants being twice as likely to die before the first birthday when compared to White and Asian infants[8]. This mirrors the Snohomish County's poorer perinatal outcomes experienced by Blacks, AI/ANs, Asian, Native Hawaiian or other PI, and those who self-identify as belonging to two or more races. Considering that the county is not only populated by a higher percentage of Asians, but is also less racially and ethnically diverse than the state,[1] an inference can be made that the county's low infant mortality rate is masked by the relative lack of diversity and low infant mortality rate among Asians.

Teen Pregnancy

The teen pregnancy rate in Snohomish County has decreased steadily from 23.9 in 2007 to 9.2 in 2016 among 15-17 year olds and 92.2 in 2007 to 44.1 in 2016 among 18-19 year olds[2]. The county's 15-17 year old rate has been consistently lower than the state's level which decreased from 28.9 in 2007 and 10.8 in 2016[2]. For 18-19 year olds, the county's rate was higher than the state's rate of 89.9 in 2007 but decreased at a faster rate to lower than the state's 2016 rate of 44.7[2].(Figure 4.)

[1] Birth weights less than 227 grams of more than 8165 were not included so as to meet National Center for Health Statistics (NCHS) standards[2]

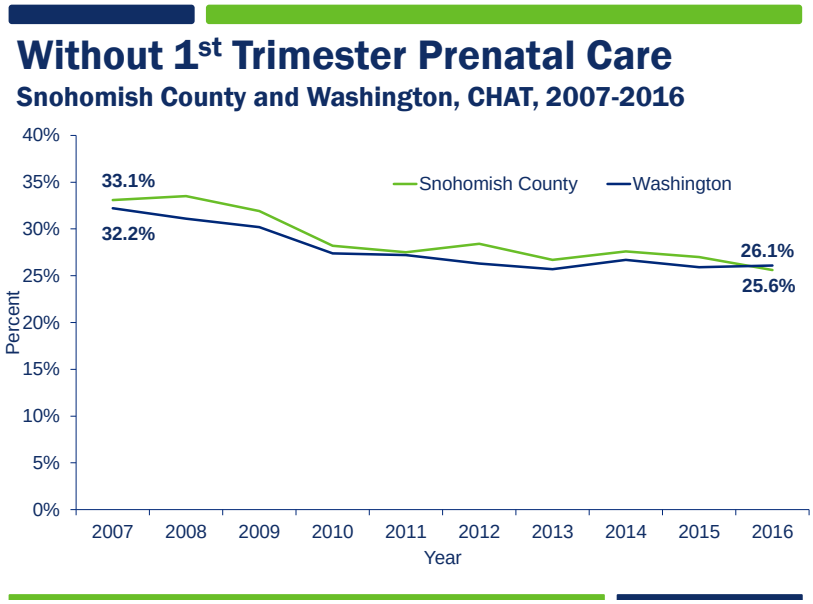
Figure 4. Graph of Snohomish Teen County Rate Trend – 2007-2016 Comparison with State



Prenatal Care

Early prenatal care is essential in providing the best possible perinatal health outcomes for both mother and baby. The percentage of women accessing early prenatal care has improved steadily from 2007 to 2016 in both the county and state. The percentage of women who do not access 1st trimester prenatal care services has decreased slowly from 33.1% to 25.6% in the county and 32.2% to 26.1% in the state. Despite these improvements however, comparison to the county's overall rate of 23% in 2016[2] reveals that early prenatal care is still a challenge for the county. (Figure 5.)

Figure 5. Graph of Snohomish County Without 1st Trimester Prenatal Care Trend – 2007-2016 Comparison with State



When the county's data is disaggregated by age, the age ranges of highest concern are 15-19 year olds at 49%, followed by 40+ at 28%, and 20-24 year olds at 24%[2] (Figure 6.). When disaggregated by racial/ethnic groups, the county's groups that are of highest concern are PIs at 59%, American Indians (AI) and Alaskan Natives (AN) at 54%, and Blacks at 34%[2] (Figure 7.).

Figure 6. Graph of Snohomish County 2016 Without 1st Trimester Prenatal Care – Comparison with State/US and Disaggregated by Age

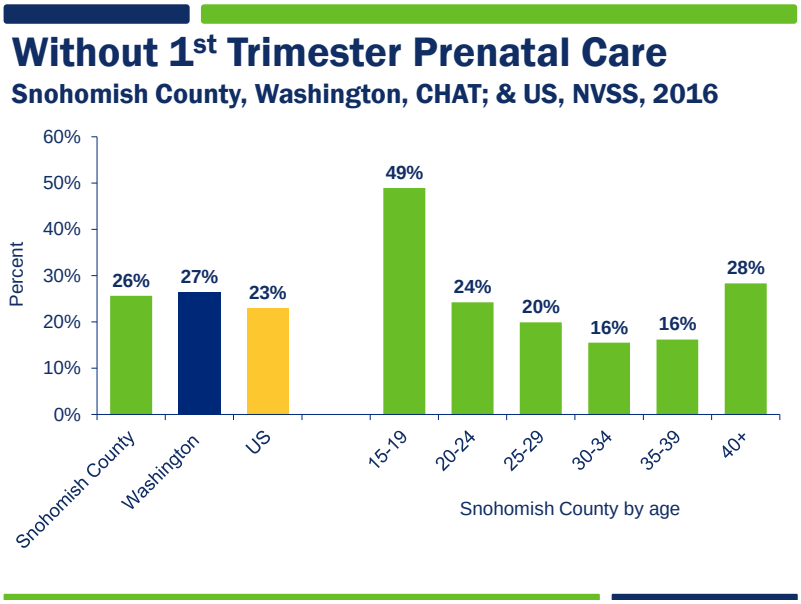
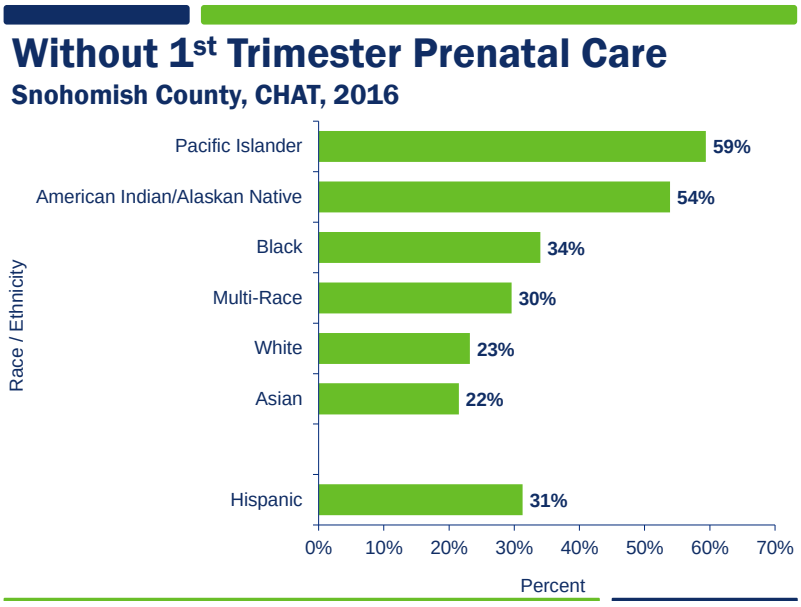
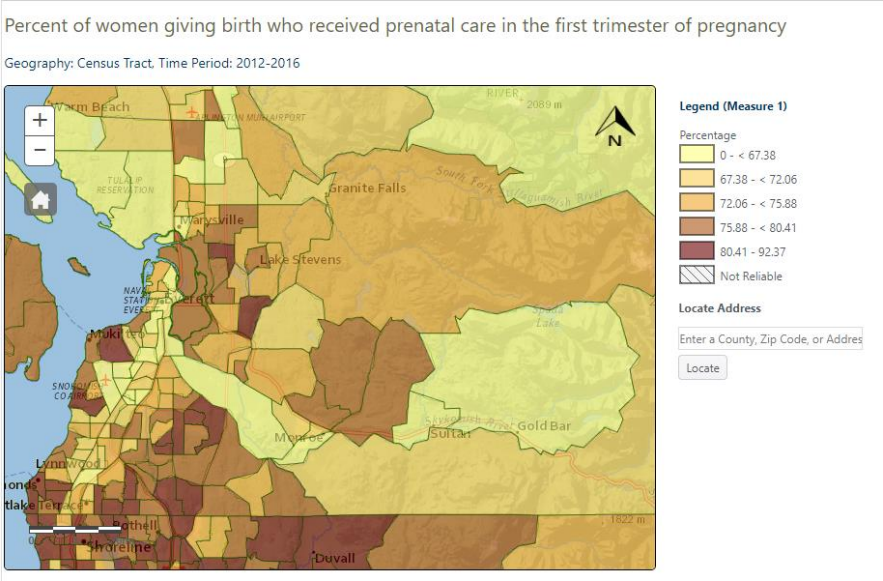


Figure 7. Graph of Snohomish Snohomish County 2016 Without 1st Trimester Prenatal Care – Disaggregated by Race/Ethnicity



Cities with lowest percentage of women accessing prenatal care in first trimester were Everett, Monroe, Goldbar, Lynnwood and Marysville (Figure 8.).

Figure 8. Heat Map of Snohomish County Women Accessing First Trimester Prenatal Care



The state continues to administer the First Steps Program through three providers in the county[34] that is geared towards improving access of low-income pregnant women and infants to medical and social services including prenatal care services[35]. Asians were the only ones who met the Healthy People 2020 goal at 21.5%[1].

Low Birth Weight

Low birth weight is a major contributor to infant morbidity and mortality[2]. The percentage of babies who were born in Snohomish County at less than 2500 grams (5lbs 8 oz.) decreased slightly from 6.5% in 2007 to 6% in 2016[2]. The State's rate was 6.3 in 2007 and remained relatively steady with a final rate of 6.4 in 2016. Both the county and the state are performing better than the overall country's rate of 8%[2] (Figure 9.). When the county's data is disaggregated by age, the highest percentages are among 40+ at 9%, 15-19% at 8%, and 35-39 at 7%[2] (Figure 10.).

Figure 9. Graph of Snohomish County Low Birth Weight Trend 2007-2016 Comparison with State

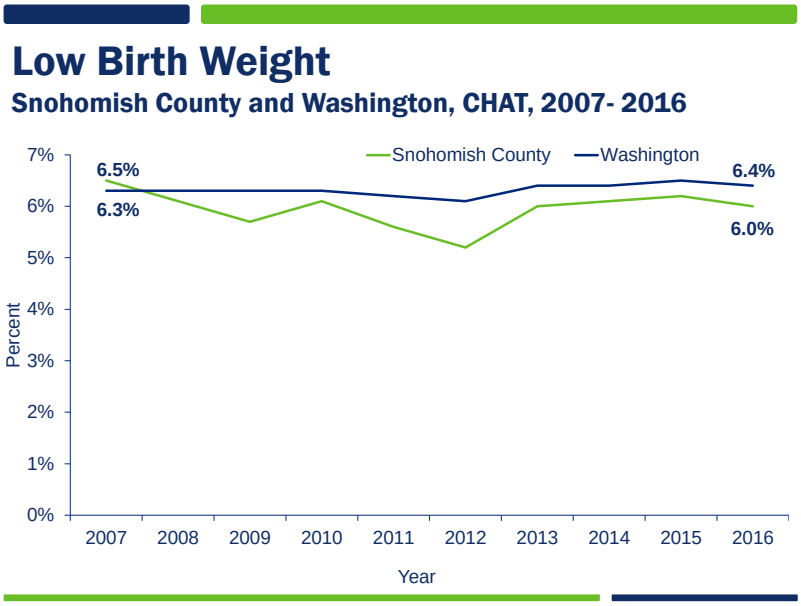
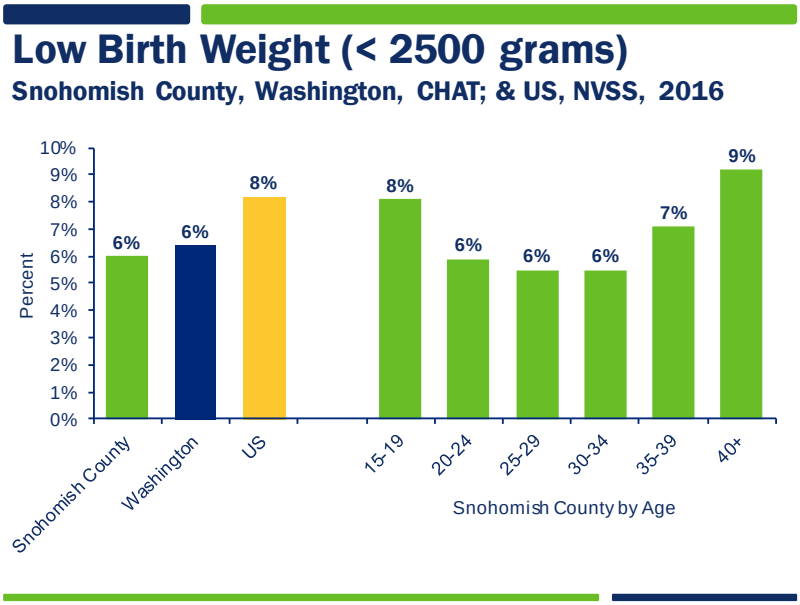
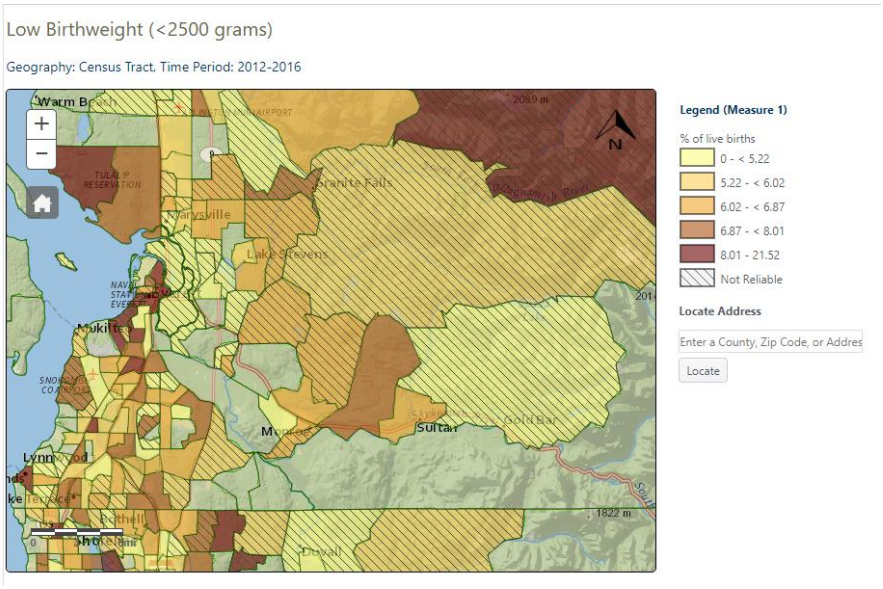


Figure 10. Graph of Snohomish County 2016 Low Birth Weight Comparison with State/US Disaggregated by Age



Cities with highest number of infants born with low birth weight between 2012 and 2016 were Darrington, Everett and Edmonds (Figure 11.).

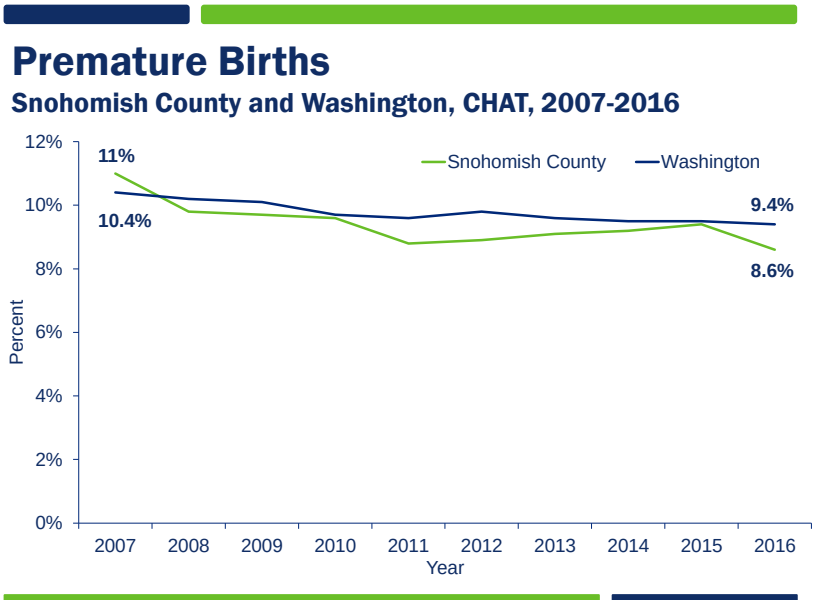
Figure 11. Heat Map of Snohomish County Percent of Low Birth Weight



Premature Births

Percentage of babies born prematurely (less than 37 completed weeks of gestation) in Snohomish County has decreased faster than the overall state percentage from 2007 to 2016 and is performing better than the state as per 2016 rates[2]. The county's rate decreased from 11% to 8.6% compared to the state's rate which decreased from 10.4% to 9.4% with the 2016 rates being lower than the overall country rate of 10%[2]. (Figure 12.)

Figure 12. Graph of Snohomish County Premature Births Trend – 2007-2016 Comparison with State



When the county's data is disaggregated by age, the highest rate of premature births is 16.1% for the 40+ age group which is double the county's overall rate, and 10% for both the 35-39 year old and 15-19 year old age groups[2] (Figure 13.). Disaggregation by racial/ethnic groups shows AI/AN having the highest rate at 16%, followed by Blacks at 13%, and Multi-Race cat 11%[2] (Figure 14.).

Figure 13. Graph of Snohomish County 2016 Premature Births Comparison with State/US Disaggregated by Age

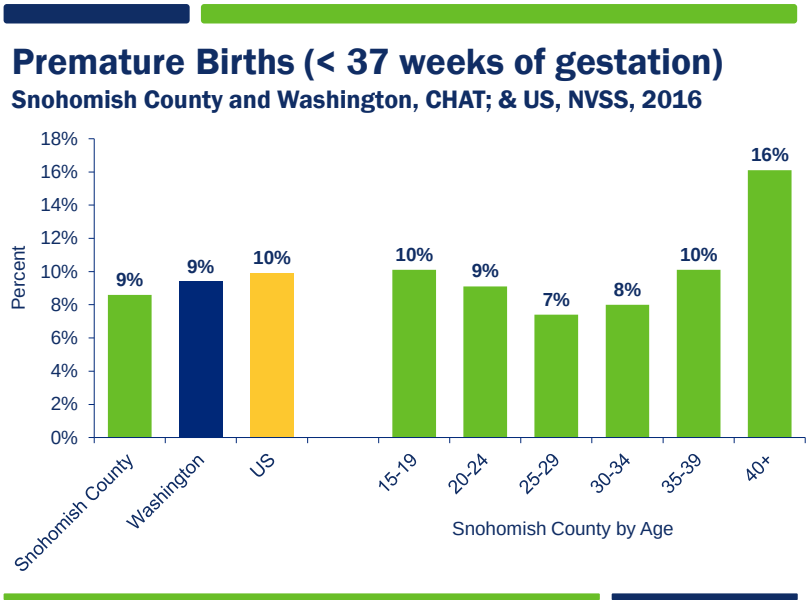
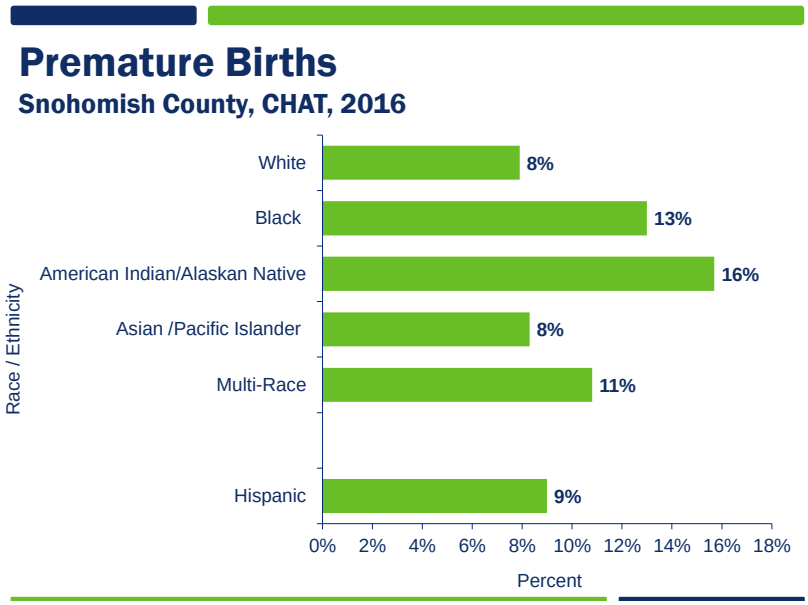
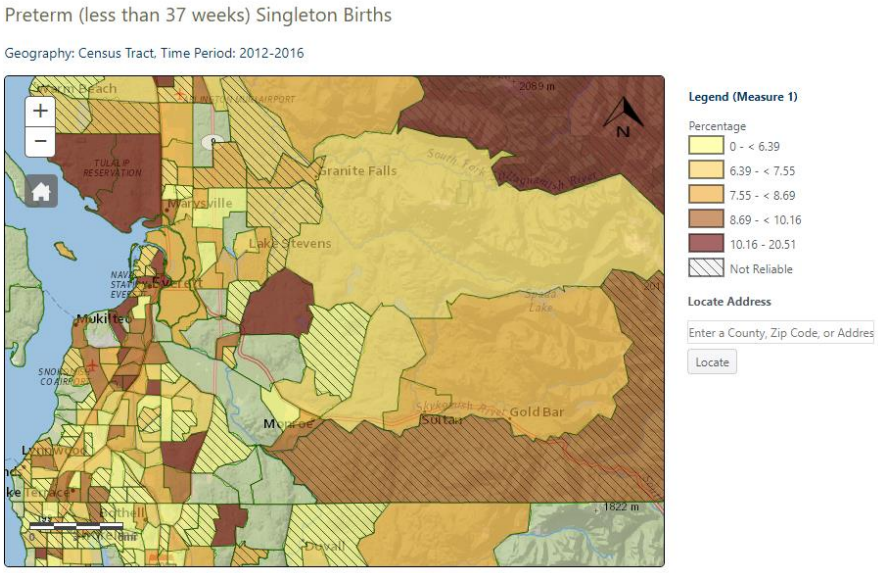


Figure 14. Graph of Snohomish County 2016 Premature Births Disaggregated by Race/Ethnicity



The cities with the highest numbers of infants born prematurely are Darrington, Three Lakes, Everett, Turner Corner and Clearview (Figure 15.).

Figure 15. Heat Map of Snohomish County Preterm Births



Gestational Diabetes

Untreated gestational diabetes puts both the baby and mother at risk for health complications: malformations, preterm birth, high birth weights which complicates vaginal delivery, breathing difficulties and harmfully low blood sugars for the baby; high blood pressure, frequent urinary tract infections, preeclampsia, seizures and even death for the mother[1].

Even though the rate of gestational diabetes has been increasing over the years from 2007 to 2016 in both the county and the state, the county's rate has been consistently higher than the state. In 2007, the county's rate was 6% compared to the state's rate of 5%, and both steadily increased to 2016 rates of 10% and 9% for the

county and state respectively[2] (Figure 16.). The country's overall rate is at 6% as of 2016 (Figure 17.). Disaggregating the county's data by age shows the highest rates being among 40+ age group at 19%, followed by 35-39 year olds at 16%, and 30-34 year olds at 11% (Figure 17.)[2].

Figure 16. Graph of Snohomish County Gestational Diabetes Trend – 2007-2016 Comparison with State

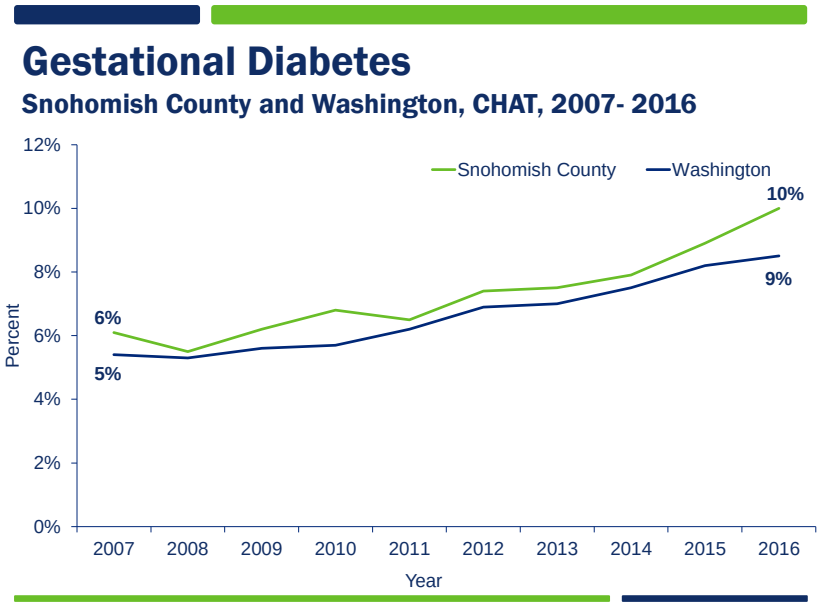
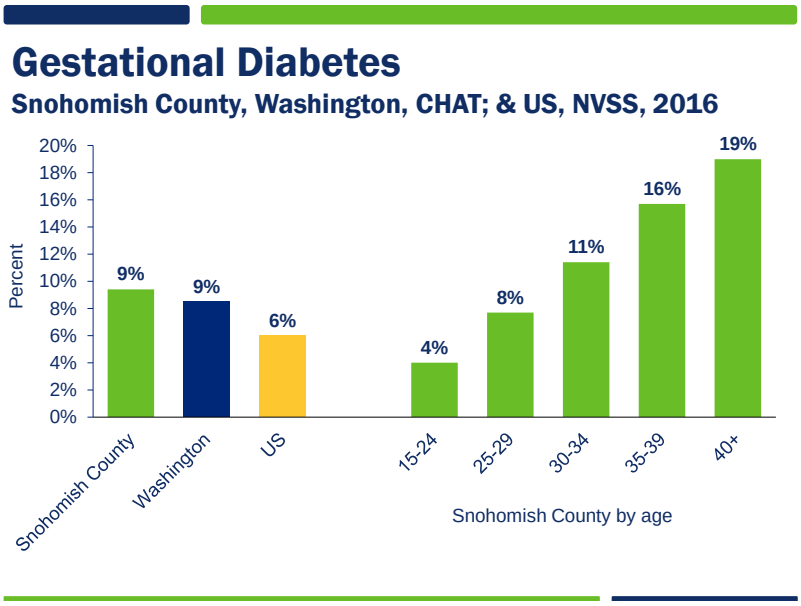
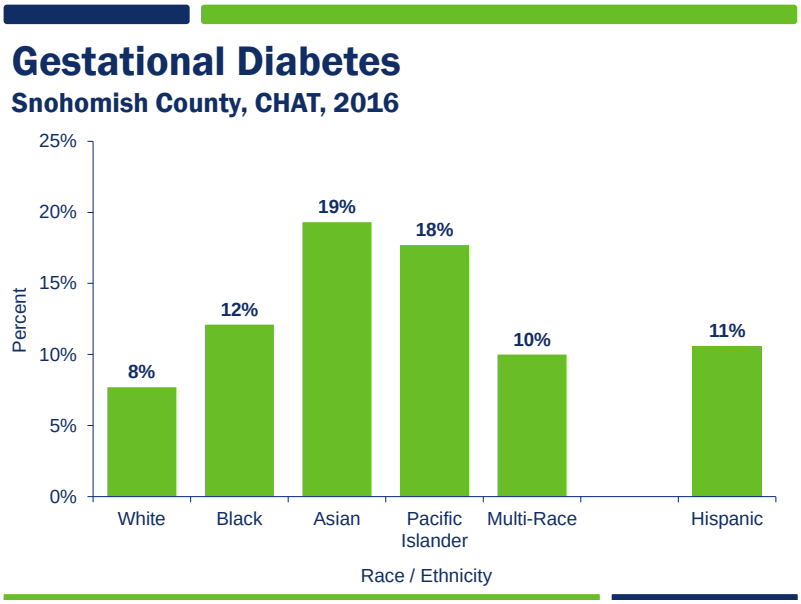


Figure 17. Graph of Snohomish County 2016 Gestational Diabetes Comparison with State/US Disaggregated by Age



Disaggregation by age shows the highest rates being among Asians at 19%, followed by PI at 18%, and Blacks at 12% (Figure 18.)[2].

Figure 18. Graph of Snohomish County 2016 Gestational Diabetes Disaggregated by Race/Ethnicity



Smoking during Pregnancy

Estimates of smoking attributable costs of complicated births range from 1.4 to 2 billion dollars annually, nationwide[2]. According to the 2014 report of the surgeon on smoking, apart from the myriad of health conditions among all populations which have smoking as a cause, there are many that are directly linked to maternal and child health. Maternal smoking during pregnancy and secondhand exposure of infants and children (by parents or otherwise), causes premature rupture of membranes, placenta previa, placental abruption, preterm delivery, ectopic pregnancy, fetal growth restriction and low birth weight, reduced fertility, orofacial clefts, Sudden Infant Death Syndrome (SIDS), and, poor lung function and lower respiratory illnesses in childhood[36]. A causal relationship between maternal exposure to secondhand smoke during pregnancy and a small reduction in birth weight, as well as a suggestive link to preterm delivery was also found[36]. Additionally, smoking is a cause of diabetes with a positive dose-response relationship, a condition that increases the risk of poor perinatal outcomes[36]. For women in general, smoking is a cause of ovarian cancer, cervical cancer[36]. Active smoking in children and teens can cause impaired lung growth, early onset of lung function decline and asthma-related symptoms, and cardiovascular diseases in adulthood[36].

Snohomish County's rate of smoking during pregnancy decreased from 11.3% in 2007 to 6.1% in 2015 before increasing sharply to 8.6% in 2016[2] (Figure 19.). Through these years, the county's rate was consistently lower than the state's rate which decreased from 12.3% in 2007 to 9.1% in 2016[2](Figure 19.). Both the county's and state's 2016 rates were higher than the country's overall rate of 7% (Figure 20.)[2]. Disaggregation of the county's 2016 data by age shows markedly higher rates in the 20-24 year olds at 17% and 15-19 year olds at 16% (Figure 20.)[2]. The 3rd highest rate is among the 25-29 year olds at 10% (Figure 20.)[2].

Figure 19. Graph of Snohomish County Smoking During Pregnancy Trend – 2007-2016 Comparison with State

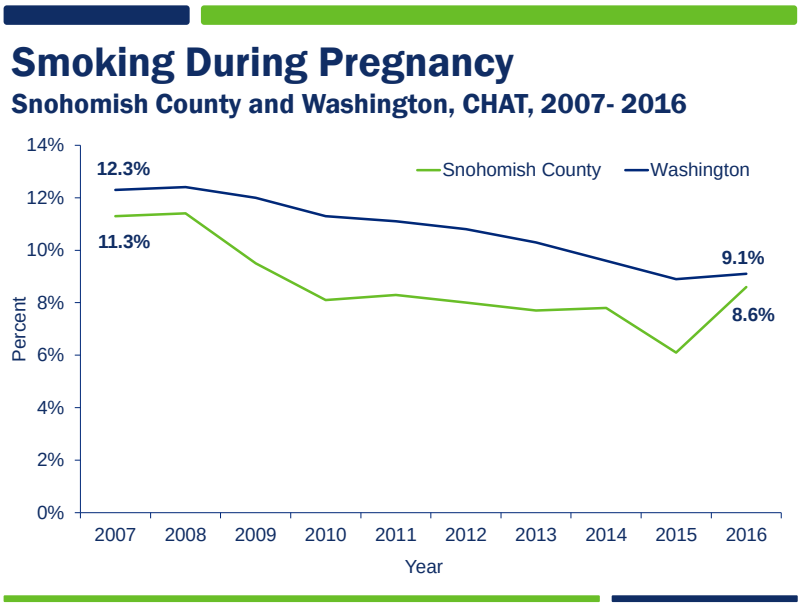
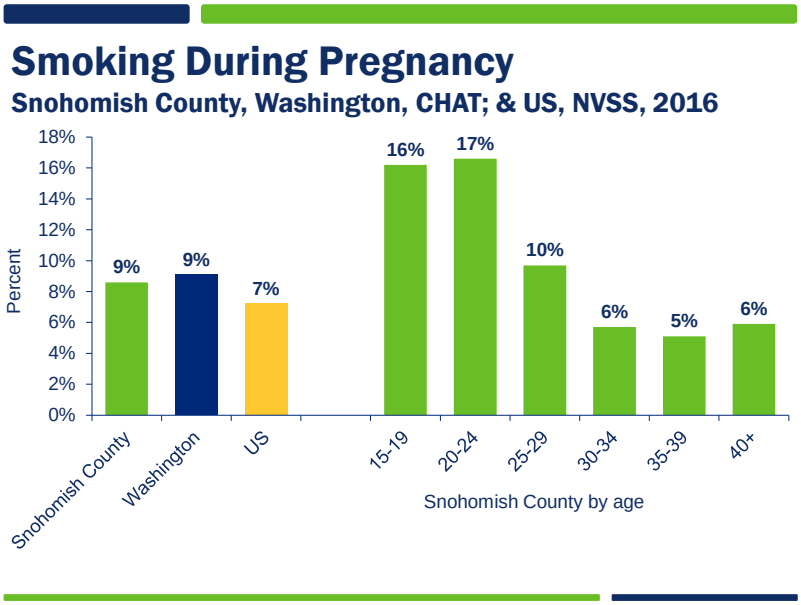
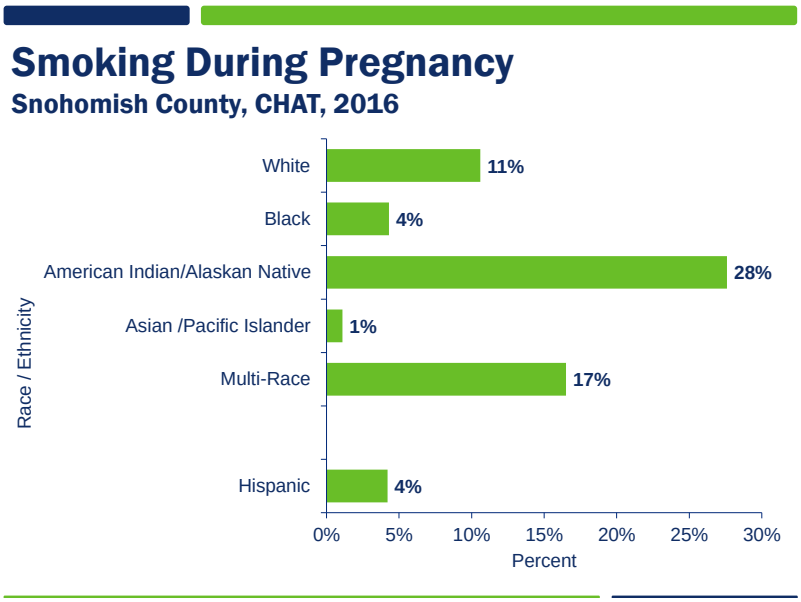


Figure 20. Graph of Snohomish County 2016 Smoking During Pregnancy Comparison with State/US Disaggregated by Age



Disaggregation by racial/ethnic groups gives a rate of 28% in AI/AN, followed by Multi-Race at 17%, with the third highest being Whites at 11% (Figure 21.)[2].

Figure 21. Graph of Snohomish County 2016 Smoking During Pregnancy Disaggregated by Race/Ethnicity

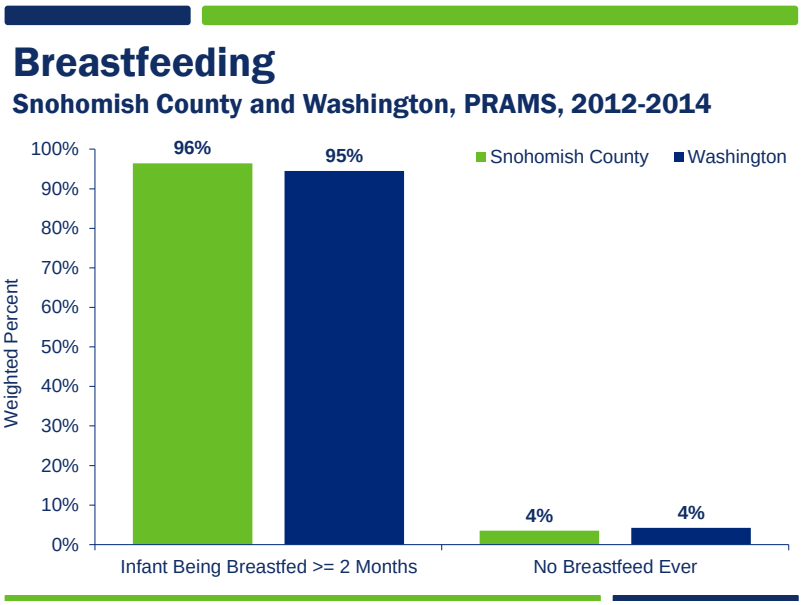


Interestingly, the Washington State Infant Mortality Reduction Report found that smoking cigarettes in the three months before pregnancy increased the risk of infant mortality among Blacks, Whites and Hispanics but did not appear to increase the risk among AI/AN, Native Hawaiians and other PIs[8].

Breastfeeding

A survey conducted in 2016 showed that most Snohomish County mothers breastfed their infants during the first two months of the infants life at 96.4%[1]. The same survey conducted in the earlier years of 2012 to 2014 among women with infants 2-6 months after delivery shows that both the county and the state are performed well in terms of breastfeeding rates at 96% and 95% respectively (Figure 22.). The survey did not ask regarding exclusive breastfeeding. Small sample size did not allow for disaggregation.

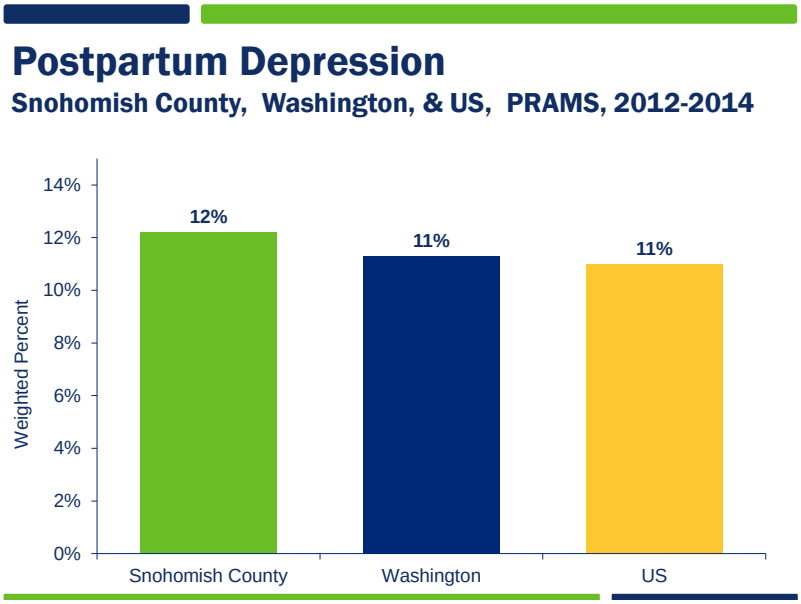
Figure 22. Graph of Snohomish County 2012-2014 Breastfeeding Rates Comparison to State



Depression

The same women surveyed on breastfeeding were also asked if they were experiencing postpartum depression. Both the county and the state's rates of 12% and 11% respectively, were comparable to the nation's rate of 11%. The data does not speak to other perinatal mood and anxiety disorders that includes depression during pregnancy. Small sample size did not allow for disaggregation.

Figure 23. Graph of Snohomish County 2012-2014 Postpartum Depression Rates Comparison to State/US



Priority Populations and Areas

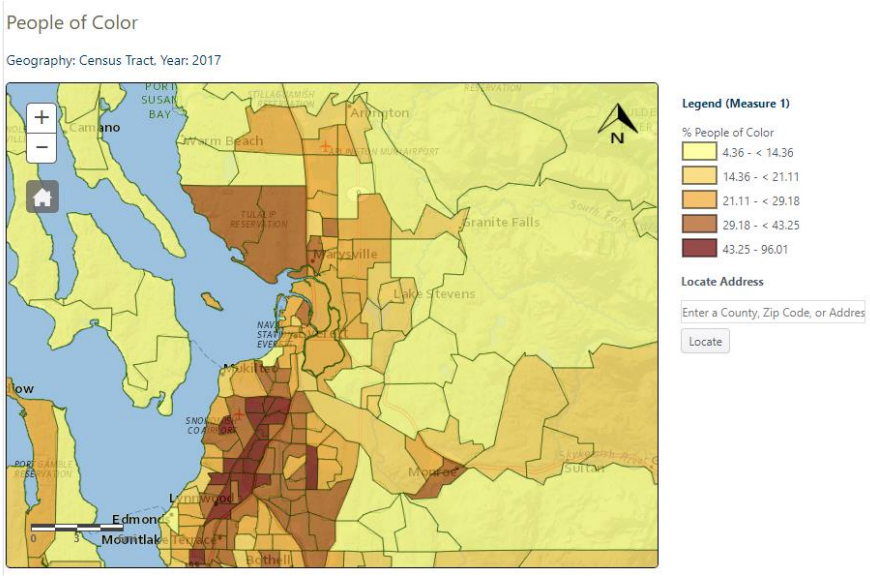
In order to target populations with interventions that follow these recommendations in light of limited resources available, we have identified priority populations and areas with disparities in health status for purposes of achieving the greatest impact: areas with racial/ethnic minorities including non-native English speakers, areas of lower access to health care, and areas with poorer economic determinants of health.

Racial/Ethnic Minorities

In terms of racial/ethnic minorities, the preliminary health status of the MCH populations in Snohomish County is in alignment with findings by the WA DOH infant mortality report that reported Black, AI/AN, Native Hawaiian and other PI infants were twice as likely to die before the first birthday when compared to White and Asian infants[8]. Based on the preliminary health status of the county's MCH populations, the racial/ethnic minorities identified as having MCH disparities are Blacks, AI/ANs, Asian, Native Hawaiian or other PI, and those who self-identify as belonging to two or more races.

2017 Data from Washington Tracking Network was used to identify cities with the highest concentration of people of color reside in the county at the census tract level. Racial/ethnic groups included are all groups except White Non-Hispanic and includes SHD MCH's priority populations of Blacks, AI/ANs, Asian, Native Hawaiian or other PI, and two or more races. People of color make up 29% of the county's population compared to the state's 30.8%[6]. Lynnwood, Marysville, Everett, Monroe and Mukilteo were the cities with the highest percentage of people of color at 29.2% or higher[6]. The Interstate 5 and Highway 99 corridor between Lynnwood and Everett has the highest concentration in the entire county with concentrations of 43.3% to 96.0% (Figure 24.)[6].

Figure 24. Heat Map of Snohomish County People of Color[6]

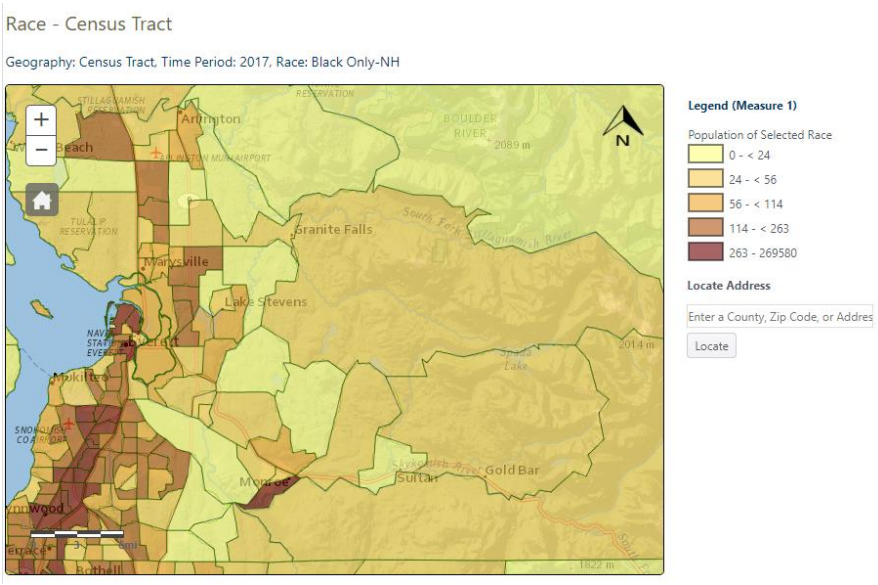


There was no data for people who identify as “two or more races” after disaggregation into specific racial/ethnic groups. Data on Blacks, AI/AN, and PIs was available and is presented in the figures below.

Black People of Snohomish County

Blacks make up 0.04% of the state’s population at a total of 269,580 people and 0.03% of the county’s population at 21,557 people[6]. Blacks highest concentrations ranging between 263 and 269,580 people are found along the Interstate 5 and Highway 99 corridor[6]. Outside of this corridor, the cities with the highest populations are Marysville, Everett, Lynnwood and Monroe[6]. Arlington, Lake Stevens, Mukilteo and Mountlake Terrace also have a relatively high concentration in the range of 56 to 262 people (Figure 25.)[6].

Figure 25. Heat map of Snohomish County Black People[6]

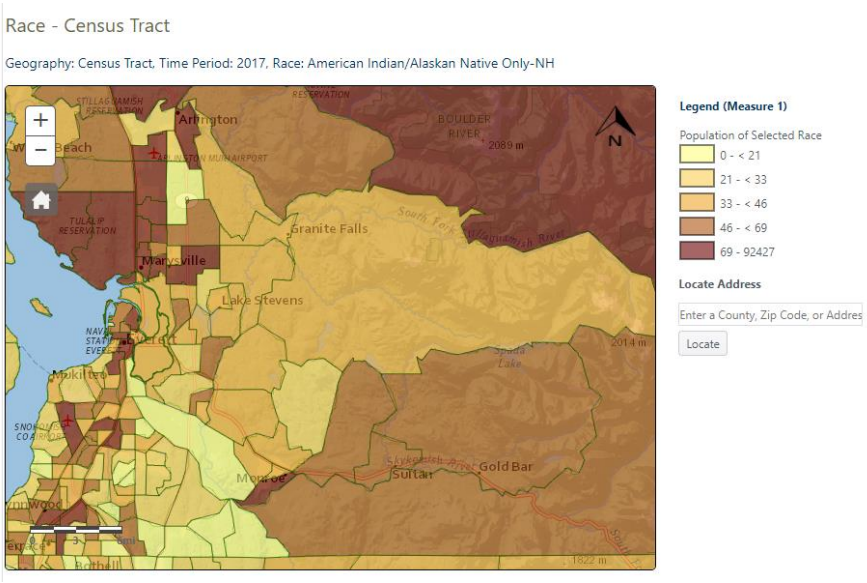


American Indian and Alaskan Native People of Snohomish County

AI/ANs make up 0.01% of the state’s population at a total of 92,427people and 0.01% of the county’s population at 9,029 people[6]. Outside of the Tulalip and Stillaguamish reservations, AI/ANs highest

concentrations ranging between 69 and 92,427 people are on the eastern side of the county with highest concentrations in Darrington[6]. There are limited pockets of high concentrations in the same count range in Marysville, Arlington, Everett, Monroe and Lynnwood (Figure 26.)[6].

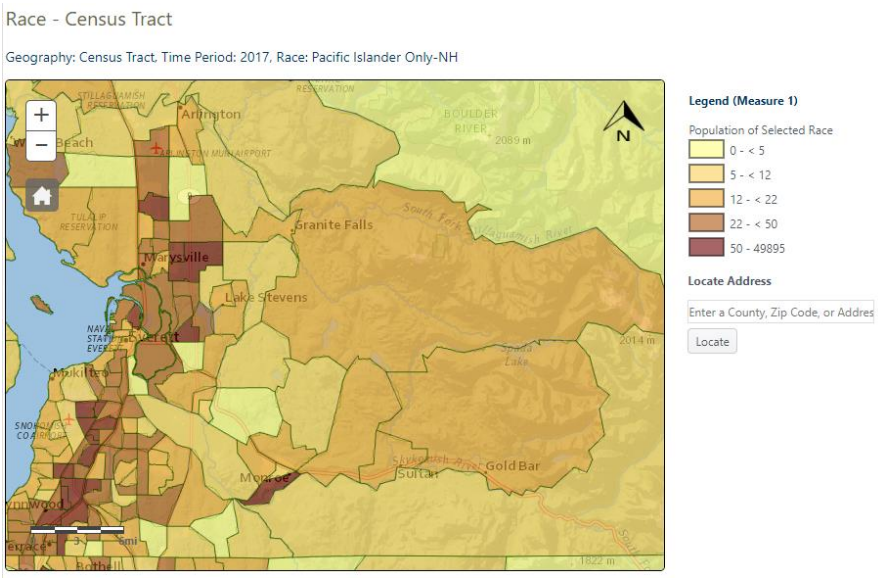
Figure 26. Heat map of Snohomish County AI/AN People[6]



Pacific Islander People of Snohomish County

PIs make up 0.01% of the state's population at 49,895 people and 0.005% of the county's population at 4009 people[6]. PIs highest concentrations ranging between 50 and 49,895 people are found along the Interstate 5 and Highway 99 corridor and City of Monroe (Figure 27.)[6].

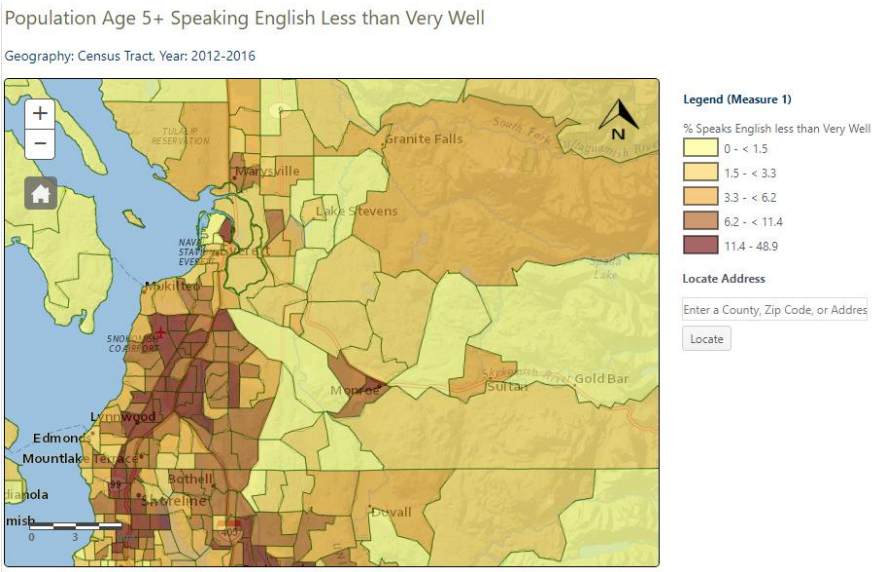
Figure 27. Heat map of Snohomish County PI People[6]



Non-Native English Speakers

Cities with the highest number of residents age 5 and older who speak English less than very well are Marysville, Everett, Monroe, Mountlake Terrace and Lynnwood.

Figure 28. Heat Map of Snohomish County Age 5+ speaking English Less Than Very Well[6]



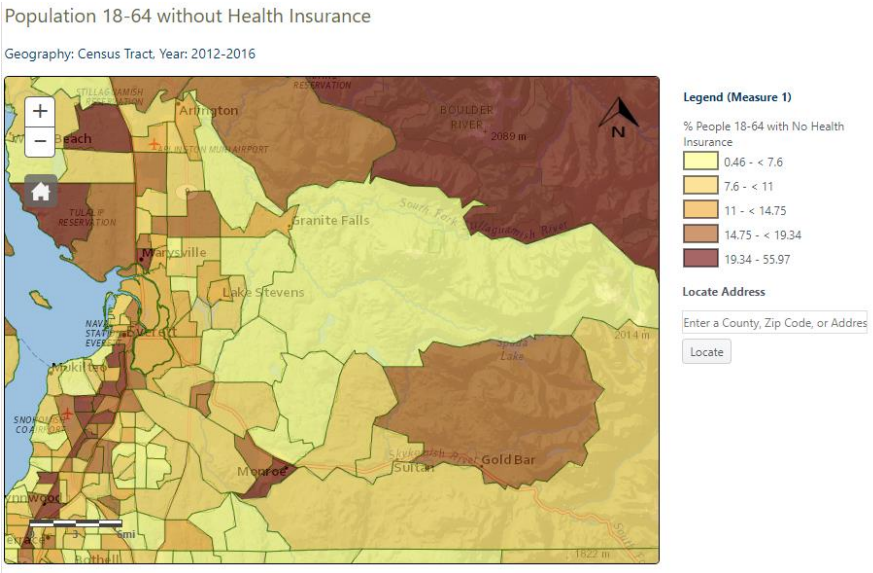
Access to Health Care

Access to health care priority populations relevant to MCH identified through Washington Tracking Network that can be narrowed down to the census tract level for targeted programming purposes are population without Health Insurance and health professional shortage areas.

Health Insurance

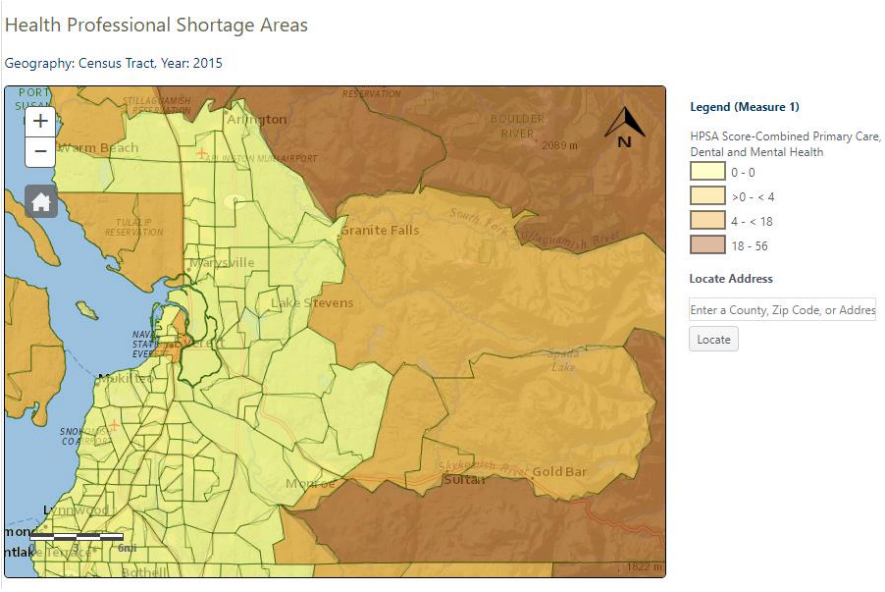
Cities with the highest percentage of adults (18 to 65 years old) without health insurance are Darrington, Marysville, Everett, Monroe, Lynnwood, Mountlake Terrace and West Arlington.

Figure 29. Heat Map of Snohomish County Age 18-65 without Health Insurance[6]



Cities with the lowest coverage of primary care, dental care and mental health professionals are Gold Bar, Monroe, Granite Falls, Darrington, Arlington, Sultan and Everett.

Figure 30. Heat Map of Snohomish County Health Professional Shortage (Primary Care, Dental & Mental Health). [6]



Economic Determinants of Health

Economic determinants of health relevant to MCH identified through Washington Tracking Network that can be narrowed down to the census tract level for targeted programming purposes are children living in poverty, individuals living below the poverty level, people with low median incomes and people with no high school diploma. Cities with the highest number of children living in poverty are Everett, Lynnwood and Monroe (Figure 31.), whereas Cities with the highest number of residents living below the poverty level are Darrington, Monroe, Everett, Marysville and Lynnwood (Figure 32.).

Figure 31. Heat Map of Snohomish County Children Living in Poverty[6]

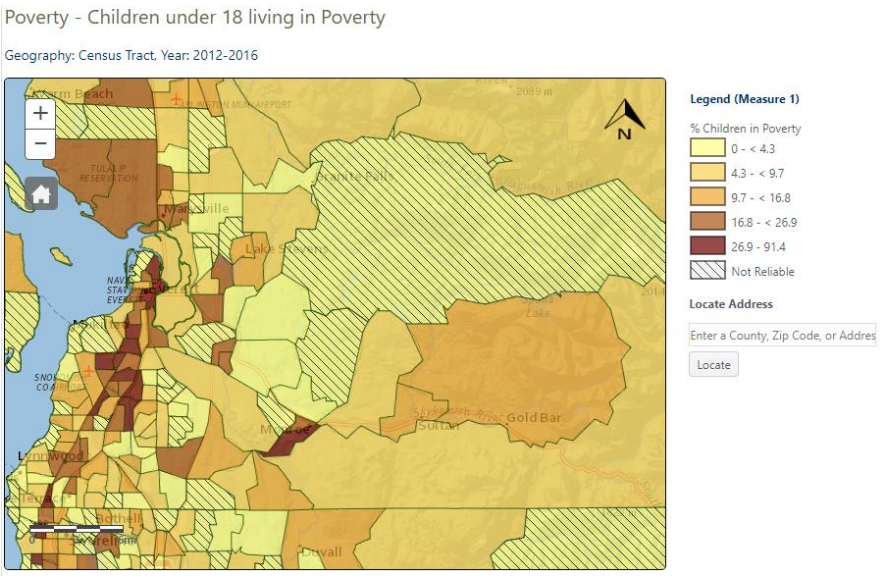
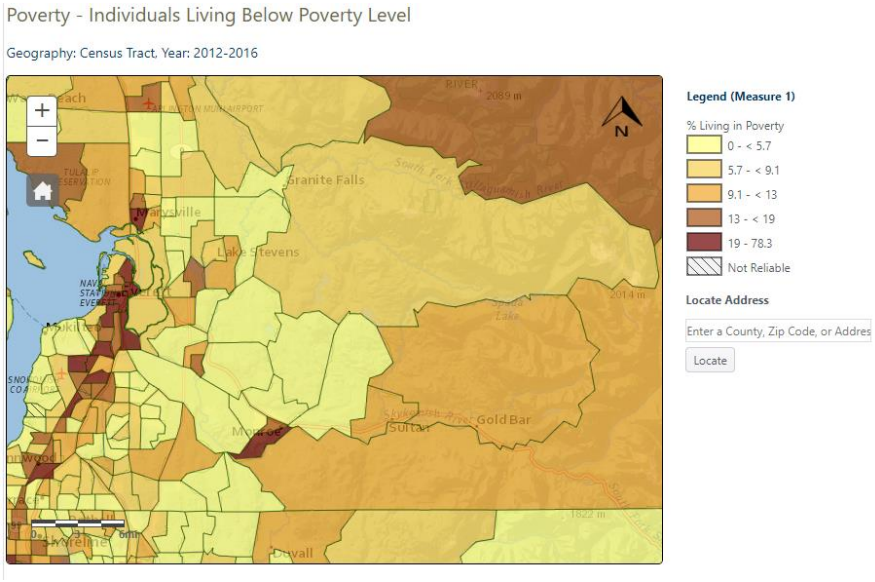


Figure 32. Heat Map of Snohomish County Individuals Living Below Poverty Level[6]



Cities with the highest number of residents with lowest median incomes are Everett, Marysville, Monroe and Lynnwood (Figure 33.) whereas cities with the highest number of residents that do not have a high school diploma are Gold Bar, Monroe, Lynnwood, Everett and Marysville (Figure 34.).

Figure 33. Heat Map of Snohomish County Lowest Median Incomes[6]

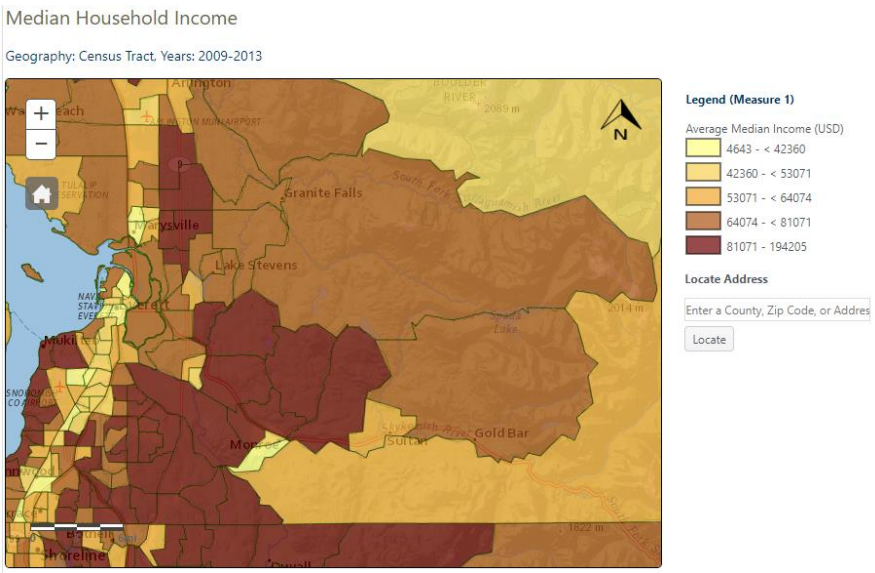
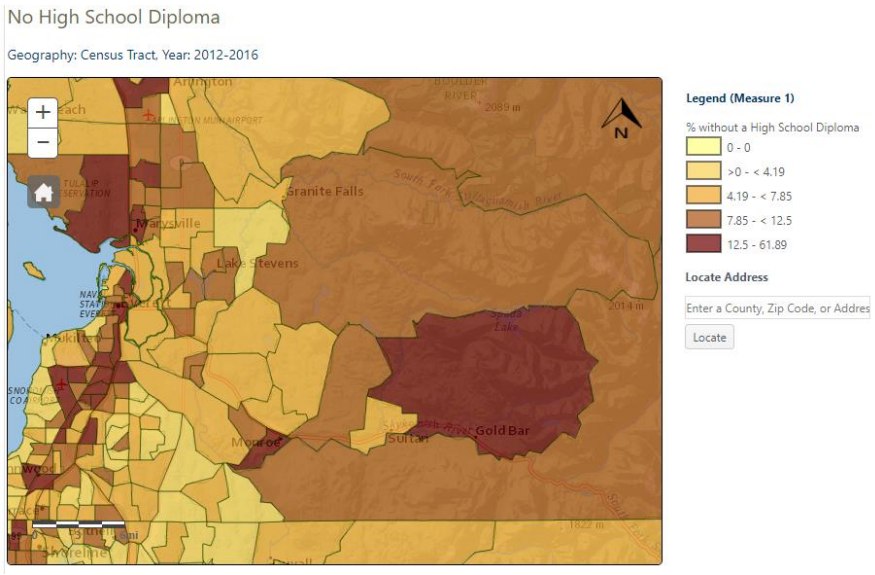


Figure 34. Heat Map of Snohomish County Residents without High School Diploma[6]



Community Partner Voices on Maternal and Child Health

As the chief health strategist of the county, SHD's Maternal and Child Health Programs has a goal of creating multi-sector, place-based partnerships that support community efforts through authentic community collaboration in serving the residents. We have done this through the NEAR Collaborative for Action (NEAR) and CityMatCH Collective Impact Learning Collaborative (NEAR/CM) larger collaborative.

The NEAR Collaborative for Action (NEAR) convened by SHD is a collaboration that seeks to increase awareness on childhood adversity and the relationship to adverse adult health outcomes through upstream measures that intersect with need for access to the health care system to address the mind-body-spirit-

emotion-environment sequelae of ACES. NEAR is an acronym representing the scientific disciplines of Neuroscience, Epigenetics, the Adverse Childhood Experiences study, and Resilience.

NEAR works in concert with the CityMatCH Collective Impact Learning Collaborative (CityMatCH), a national organization comprising of health departments' MCH programs and urban community leaders, with a mission to strengthen efforts to improve the health of urban women, families, and communities and to promote equity.

NEAR and CityMatCH has brought together the following collaborating partners: core members include SHD, Everett Public Schools Early Learning (EPS), and Child Strive (fiscal agent), and Duet Dynamics (backbone support); collaborative members include UW Community of Public Health Practice, Everett Housing Authority (EHA), PCAP (Parent Child Assistance Program), Program for Early Parent Support (PEPS), Pregnancy Resource Center, Community Health Workers Coalition for Migrants and Refugees, Catholic Community Services, YWCA, Coordinated Care, United Health Community Plan, Washington State Employees Credit Union (WSECU), Compass Health, Sea Mar and Beneficial State Bank.

Through the NEAR/CM platform, SHD sent an invitation to attend presentation of the MCH quantitative data to community organizations that were members of the Maternal and Child Health Care Coalition of Snohomish County. After the presentation, six people participated in a focus group discussion (FGD). In terms of race/ethnicity, there were four Caucasians, one Hispanic and one mixed ethnicity/race. In terms of age there were four under 50 years old and two of 50 years old. All participants were female with some working with Snohomish County residents who receive Medicaid, others work with families with newborns while others directly serve the under 18 years of age population.[9]

Most participants felt that the results were not surprising. However, some participants mentioned the marked disparities among PIs. The recurring themes on gaps and needs for MCH in the county include: access to care and resources, with the most common topics of interest being farm workers, refugees, transportation, rural regions and linguistic access; affordable housing with the most common topics of interest in-migration from King County due to prices which may be contributing to the steady increase of cultural and linguistic diversity, and inadequate translation services; and disparities and equity with the most common drivers of interest being fear of police or human trafficking in undocumented individuals, fear of increasing racism, economic inequity farmworkers wage stagnation, language barriers, and lack of respect of teen parental choices by those older than them.[9]

Groups that the FGD Suggestions for improving access, equity and empowerment include sexually active teens, teen parents, women of color, refugees, farmworkers and mothers or potential mothers addicted to opioids. Suggestions for bridging the gaps in these groups included prioritizing vulnerable populations, providing better education for all residents on equity and disparities considering that trainings on racism and equity have been done for years without much improvement, education for minors on their rights to privacy for reproductive health care including contraceptives, and, better civic engagement for purposes of empowering women and immigrants to improve their health.[9]

Community members expressed interest in seeing more data in neonatal abstinence syndrome, other drug and alcohol use in pregnancy.[9]

Recommendations

Snohomish Health District recommends following the recommendations by WA DOH arising from review of data, evidence-based and evidence-informed practices as well as literature review to reduce infant mortality as a strategy for improving the maternal and child health of Snohomish County. The recommendations from the report are as follows:

1. Address social determinants of health, such as poverty and low educational attainment, in order to reduce infant mortality in racial/ethnic groups with disparities.
2. Improve support for vulnerable infants and families in our communities.
3. Reduce the rate of low birth weight and preterm births in Washington.

4. Reduce the rate of SUID, which includes SIDS and sleep-related infant deaths, in Washington.
5. Provide comprehensive, coordinated health care to all women during the preconception, pregnancy, and post-partum periods.
6. Improve the rate of pregnancies that are planned and well-spaced, including reducing the rate of teen pregnancies.
7. Increase cross-agency access to and linkage of datasets for surveillance, assessment, planning, and quality improvement.[8]

Community partners can use this report as a guide for providing targeted programming and interventions as well as creating common agendas through partnerships geared towards improving maternal and child health which will in turn positively impact the overall health of the county.

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