



ISLAND COUNTY CHRONIC DISEASE REPORT 2022

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Introduction

The chronic disease profile report is a summary of health statistics related to chronic disease for the local populations in Island County. Island County's department of Public Health uses data available through the Washington State Department of Health, the Health Care Authority, and the Center for Disease Control (CDC). The measures of health describe the prevalence of chronic disease health indicators within specific populations and compares Island County to Washington state for the incidence and risk factors of chronic disease. A chronic disease (hereafter abbreviated CD) is defined as a condition that lasts one year or more and requires ongoing medical attention or limits activities of daily living, or both (source: CDC). A chronic disease is one that persists over a long period of time or recurs.¹

There are four overarching categories that can cause chronic diseases: pathogens (germs), behavior, environment, and genetics. For example, behaviors such as sedentary lifestyle and eating unhealthy foods can cause negative health outcomes, such as heart disease. Genetics also play a role in an individual's health; some birth defects can result in chronic diseases, for example some people have certain genes that make them more likely to develop type 1 diabetes.² Some asthma and cancers can occur because of harmful environmental conditions. Cancer, heart disease, and diabetes are the leading causes of death and disability in the United States.

Island County

Island County (IC) encompasses Whidbey and Camano islands, located roughly 50 miles north of Seattle in the Puget Sound. Both islands are connected by separate bridges to the mainland, however residents must drive about 30 miles (through Skagit County) to get from one to another by land. The ferry on the south end of Whidbey Island also connects to yet another county, Snohomish, where people can then drive north to access the bridge to Camano Island. Whidbey is the larger and more populous of the two islands, with a total land coverage of 437 square km, 60 km (37 miles) long, and 20 km (10 miles) wide. Island County is mostly rural. The US Census Bureau defines "rural" as any population, housing, or territory

¹ WA state DOH website

² From the CDC website: [What Is Type 1 Diabetes? | CDC](#)

not in an urban area. Urban is classified into two categories, either Urbanized Areas of 50,000 or more people or Urban Clusters, areas with a population between 2,500 and 50,000. There is only one town in Island County (Oak Harbor) that qualifies as an Urban Cluster. A Navy Air Station (NAS) on the north end of Whidbey has a strong influence on migration to and from the island as many residents in Oak Harbor are employed by the NAS. The average age of residents in IC is older than the state, with 25% of residents being 65 years or older, compared to 15% in Washington. There are less people under 18 years old residing in IC (18%) compared to the state (22%) (Figure 1).

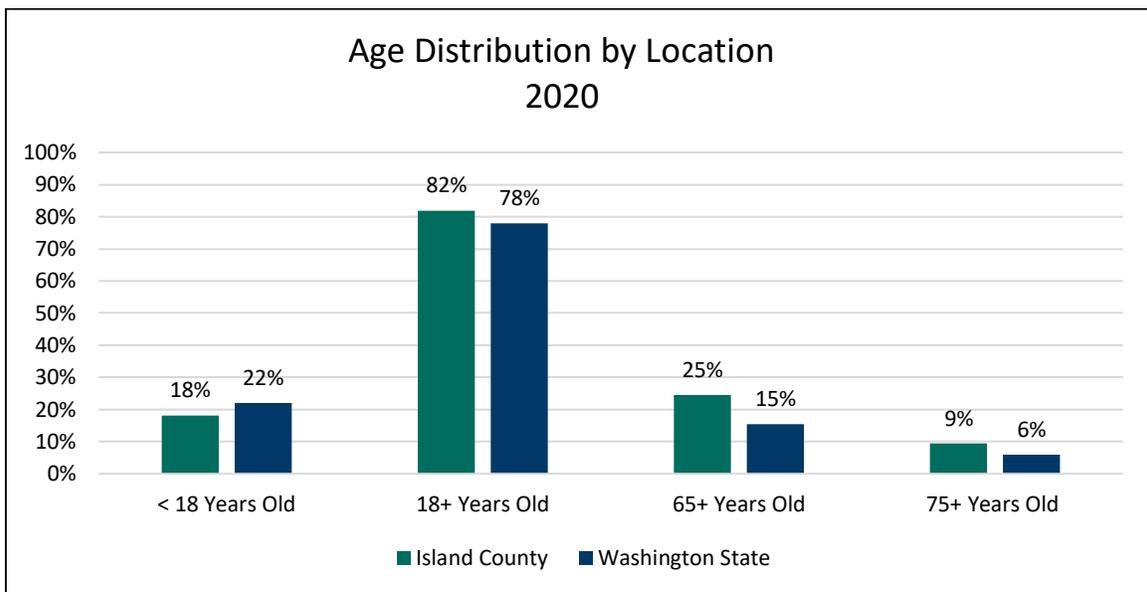


Figure 1 Age Distribution for Island County and Washington State, 2020

Quality of life, living with a chronic disease

Compared to a healthy individual, individuals living with a chronic condition report poorer quality of life compared to healthy individuals. This can be further diminished when living with more than one chronic disease. For example, individuals living with diabetes mellitus “live with an incurable disease that requires not only drug therapy and blood glucose control, but also a healthy lifestyle...”³ Rural communities often experience higher rates of chronic disease

³ (Pera PI. Living with diabetes: quality of care and quality of life. Patient Prefer Adherence. 2011; 5:65-72. Published 2011 Jan 20).

and related mortality rates. Furthermore, non-metropolitan or rural residents report higher rates of multiple chronic conditions.⁴

Healthy People 2030

Healthy People 2030 is the fifth iteration of the Healthy People initiative, which sets 10-year national objectives to improve health and well-being nationwide. The vision of Healthy People 2030 is a society in which all people can achieve their full potential for health and well-being across the lifespan.⁵ The Healthy People goal may be referred to as simply the 2030 target or goal in the following paragraphs.

Included data

Indicators prioritized for this report reflect the most up to data and valid data available. Data is suppressed for the indicators when non-zero counts were less than ten, unless they are in a category labeled “unknown.” The report includes a short narrative for the chronic conditions with a disease rate statistically different from the state’s rate.

Examining this data is the first step of implementing an evidence-based intervention. It provides the community context needed so that community health interventions are designed, planned, and carried out in ways that are acceptable and maximize the benefit to the community.

Discussion of Risk Factors

High blood pressure is a risk factor that, if addressed locally, has the potential to decrease the prevalence of associated chronic diseases. In 2019, nearly 33% of the population in IC has high blood pressure compared to 28% in WA (Figure 2). High blood pressure contributes to heart disease, heart attack and stroke.

⁴ Team. “Rural Health Information Hub.” *Chronic Disease in Rural America Overview*, <https://www.ruralhealthinfo.org/topics/chronic-disease#urban-comparison>.

⁵ National Association of County and City Health Officials (NACCHO) Newsletter July 5, 2022

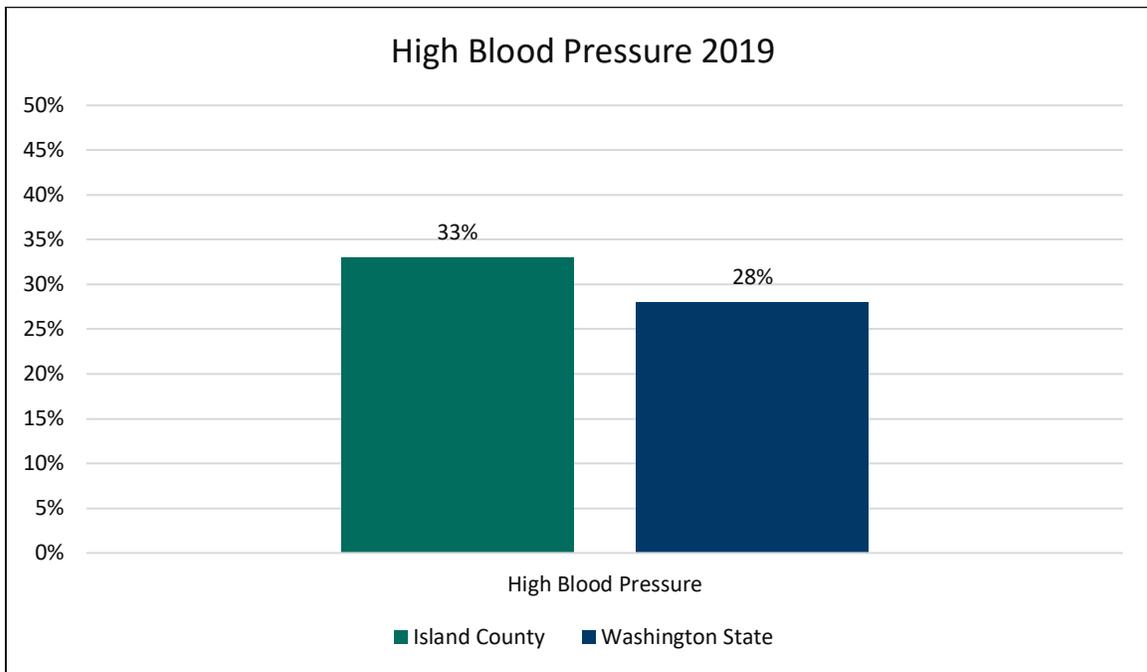


Figure 2 High Blood for Island County and Washington State, 2019

Prenatal and Birth Health Risk Factors

In 2020, hypertension during pregnancy in IC was 12.5% compared to 9.5% for Washington state (Figure 3). Many factors contribute to high blood pressure during pregnancy, including: living overweight or obese, not getting enough physical activity, smoking, drinking alcohol, first-time pregnancy, a family history of pregnancy-related hypertension, carrying more than one child, age (over 35), assistive reproductive technology (such as IVF), and having diabetes or certain autoimmune diseases.⁶

Smoking can lead to complications at birth, such as: low birth weight and preterm birth, restricted head growth, placental problems, increased risk of still birth, and increased risk of miscarriage.⁷ Children of mothers who smoked during pregnancy may have poorer lung function, persistent wheezing, asthma, and visual difficulties, such as strabismus, refractive

⁶ [High Blood Pressure During Pregnancy | cdc.gov](https://www.cdc.gov/pregnancy/conditions/hypertension/)

⁷ [Smoking, Pregnancy, and Babies | Overviews of Diseases/Conditions | Tips From Former Smokers | CDC](https://www.cdc.gov/pregnancy/conditions/smoking/)

errors, and retinopathy.⁸ Long term, these children may have more need for specialized care resulting in increased health care costs.

Although the rate of adolescent mothers in IC is comparable to WA state (about 6 per 100,000 for the county and 8.7 per 100,000 statewide), the US Healthy People 2030 goal is 3.1 per 100,000 (Figure 3). Evidence based practices to address this gap include access to programming that provides reliable contraception and comprehensive sexual health education.

Treatment for specialized care could be an economic stressor to the family and the local community, which is why preventative programs are a better choice when they are effective. A healthy student population also means that educators can focus more on teaching at or above grade level, instead school faculty may be spending extra time ensuring children with poor health receive special attention, health care and quality nutrition.

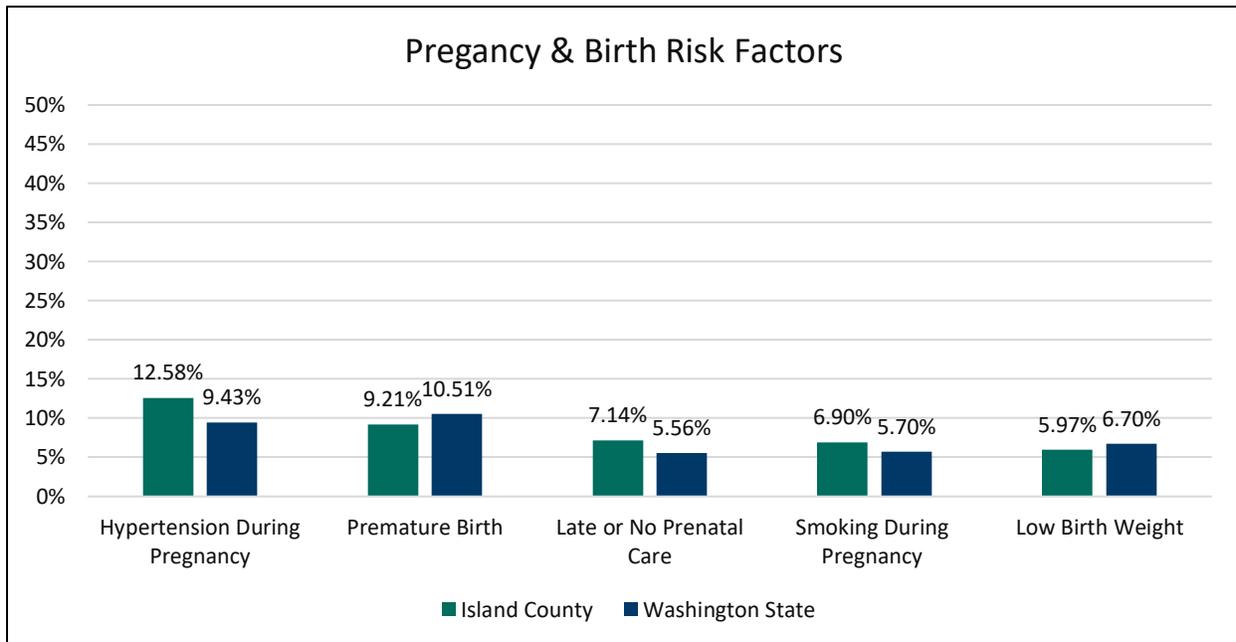


Figure 3 Pregnancy and Birth Risk Factors for Island County and Washington State

⁸ Team. "What Are the Risks of Smoking during Pregnancy?" *National Institutes of Health*, U.S. Department of Health and Human Services, 12 Apr. 2021, <https://nida.nih.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/what-are-risks-smoking-during-pregnancy>.

Chronic Disease Risk and Protective Factors

Aerobic exercise

Adults who meet aerobic recommendations in IC is about 55%, compared to 58% in WA. Though this percentage is not significantly lower than the HP 2030 goal (59%) (Figure 4), it could increase with access to safe running trails or exercise facilities like gyms and pools. Getting the recommended 150 minutes per week has many benefits for health, including; improves cardiovascular health, lowers blood pressure, helps regulate blood sugar, reduces asthma symptoms, reduces chronic pain, aids sleep, regulates weight, strengthens immune system, improves brain power, boosts mood, and reduces risk of falls⁹

Smoking

About 13% of IC adults are current smokers, this is the same as WA. However, the Healthy People 2030 target is 6% (Figure 4), something which may be attainable with extensive anti-smoking interventions. Smoking is a risk factor for many chronic diseases and cancers including; Chronic Obstructive Pulmonary Disease (COPD), heart disease and the negative effects of smoking during pregnancy (previously mentioned).

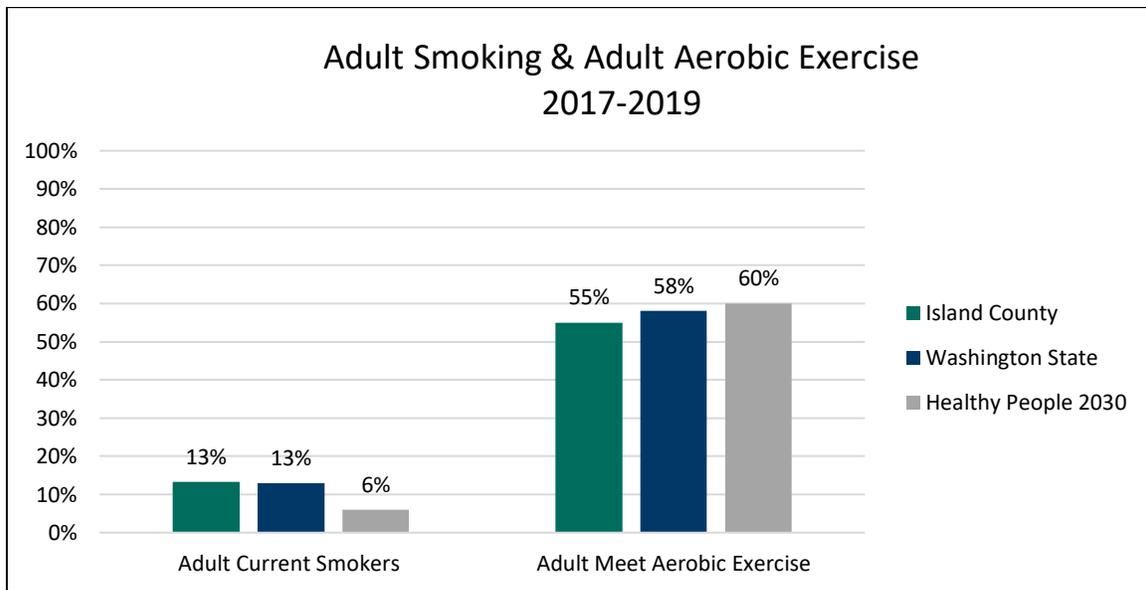


Figure 4 Adult Smoking & Adult Aerobic Exercise for Island County and Washington State

⁹ <https://www.healthline.com/health/fitness-exercise/benefits-of-aerobic-exercise#benefits> accessed 7/11/22

Chronic Disease Incidence and Mortality

Age-adjusted rates are commonly used in when comparing mortality rates, since age is such an important factor in mortality (the relative frequency of deaths in a population), especially with chronic diseases.¹⁰ Age-adjusted rates are included in subsequent sections when discussing the incidence of chronic disease and disease-related mortality in IC.

Coronary Heart Disease

Between 2017 and 2019, the age-adjusted rate for hospitalizations due to coronary heart disease in Island County was 65 per 100,000 residents. There was a higher rate of hospitalization in IC when compared to WA, (55 per 100,000 residents), but this difference was not statistically significant. The death rate was also higher in IC (82 per 100,000) compared to WA (78 per 100,000) (Figure 5). The Healthy People 2030 target is 71 per 100,000. This emphasizes that very serious cases of coronary disease are more prevalent in our community, and this is not due to an older population. Coronary heart disease is due to the buildup of fat in the arteries. Risk factors include behavioral factors such as a lack of exercise and smoking or non-behavioral factors such as having family member with a CHD or having high cholesterol.

The ‘high cholesterol awareness’ for our county was about 36%, meaning that 36% of adults (18+) screened from 2012 to 2017 had high cholesterol. Individuals in Island County with high cholesterol are slightly more likely to adhere to their prescribed cholesterol medication, when compared to individuals across WA State.

¹⁰ From <https://www.health.pa.gov/topics/HealthStatistics/Statistical-Resources/UnderstandingHealthStats/Pages/Age-Adjusted-Rates.aspx> 7/12/22

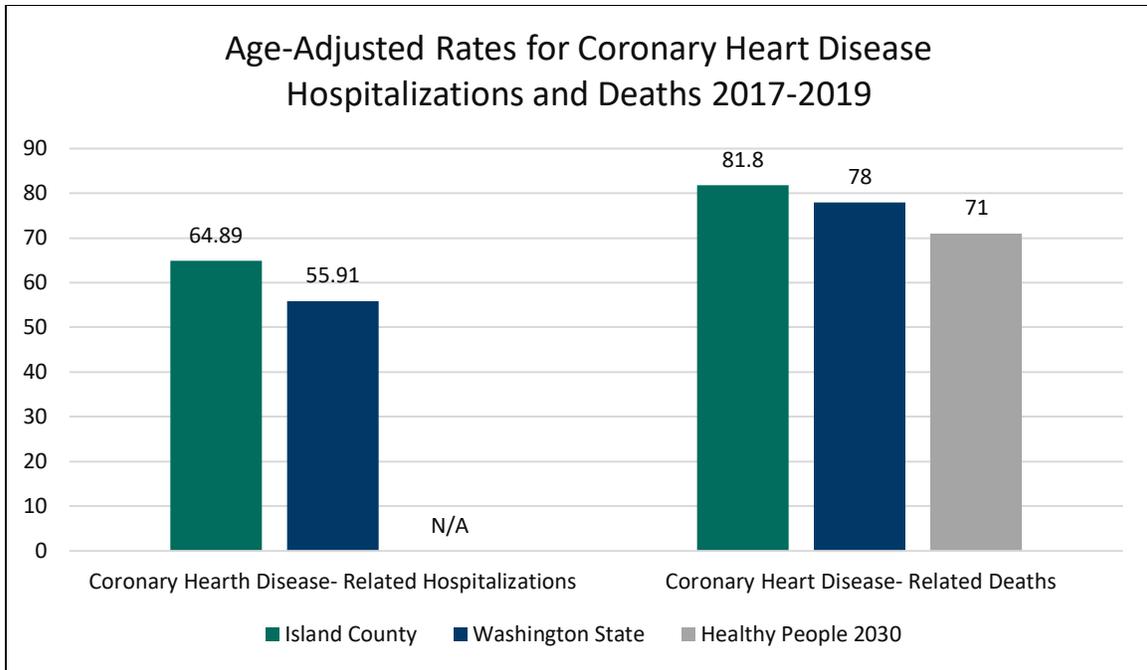


Figure 5 Age-Adjusted Rates Per 100,000 for Coronary Heart Disease Hospitalizations and Deaths, 2017-2019

Physicians

In 2017, the CDC reported a ratio of one cardiovascular physician per 42,200 residents (1:42,200) in Island County, compared to a metropolitan county, like King County, with a ratio of one cardiovascular physician for every 13,500 residents.¹¹ The lack of physicians is concerning in part because “rural residents are more likely to die from health issues like cardiovascular disease, unintentional injury, and chronic lung disease than city-dwellers.”¹² Possible public health interventions include: the Sodium Reduction in Communities Program (SRCP) and the Cardiac Rehabilitation Change Package (the CRCP is designed to improve cardiovascular health following a cardiac-related event or procedure), both programs are CDC sponsored and evidence based.

¹¹ Center of Disease Control and Prevention (2017). Interactive Atlas of Heart Disease and Stroke. <https://nccd.cdc.gov/dhdspatlas/reports.aspx?geographyType=county&state=WA&themeld=6&filterIds=1.5.3.6.7&filterOptions=1.1.1.1.1#report>

¹² Association of American Medical Associates. <https://www.aamc.org/news-insights/attracting-next-generation-physicians-rural-medicine#:~:text=Of%20the%20more%20than%207%2C200,of%20physicians%20is%20deeply%20worrisome>

Heart attack

From 2017-2019, the hospitalization rate for heart attacks in IC was 138 per 100,000, compared to 129 per 100,000 in Washington. From 2018-2020, the death rate for heart attacks in IC was 47.17 per 100,000 compared to 42 per 100,000 in Washington.

Breast cancer

Breast cancer is not a significant issue in IC. Both the incidence and death rates for breast cancer are lower in IC when compared to WA. From 2017-2019, the incidence rate for breast cancer in IC was 156 per 100,000 and the death rate was 14.8 per 100,000. Washington state reported an incidence rate of 164.10 per 100,000 and a death rate of 19.30 per 100,000 during the same time period. Also noteworthy is the high utilization of preventative care measures in IC. In 2020, 79% of IC women ages 50 to 74 reported that they had received a mammogram in the past two years compared to 75% in WA.

Cervical cancer

Measures for cervical cancer incidence and mortality in IC are suppressed, however, when observing rates in the North region of Washington state (including Whatcom, Skagit, Snohomish, San Juan, and Island Counties), the incidence and death rates are comparable to state-level rates. From 2015-2020, the North region reported 7.4 per 100,000 new cases and 1.7 per 100,000 deaths. Statewide, these rates were 6.8 and 1.7, respectively. In 2020, 70% of IC women 18 years of age and older reported that they have had at least one Pap test ever, compared to 73% in WA (Figure 6). The 2030 goal is 84% as it is an easy preventative measure to detect cervical cancer or precancerous cells. ICPH could start an informational campaign and communicate with primary care doctors to make sure that this test is being offered to all adult women, especially if their records show that they have never received a pap smear.

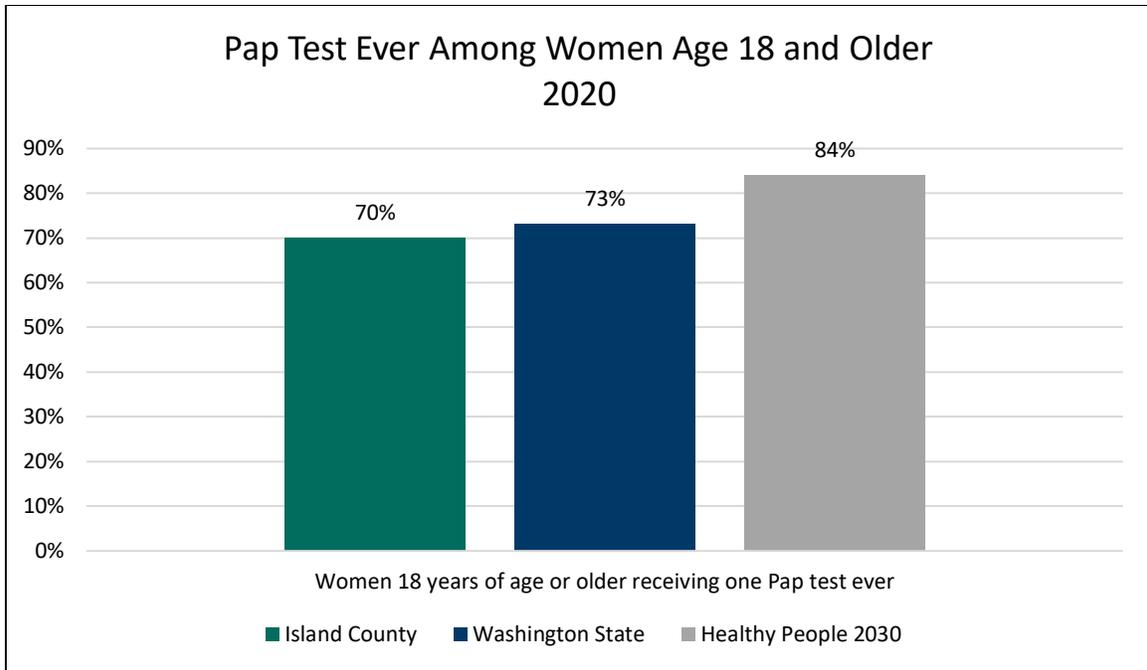


Figure 6 Women 18 Years or Older Reported Receiving a Pap Test Ever in Island County and Washington State, 2020

Colorectal cancer

The death rate for colorectal cancer in IC is 17 per 100,000. In WA, the death rate is about 12. Although this is not a statistically significant difference, something as simple as a colonoscopy could mean the difference between early detection and morbidity or mortality due to colorectal cancer. Therefore, IC could work on methods to improve colorectal screening and preventative measures. The CDC has an informative website with the different screening tests available,¹³ though the final decision of how to test should be made after talking to your doctor.

The CDC recommends that adults 45-75 should be screened for colorectal cancer.¹⁰ In 2021, adults 50 years of age and older who received an appropriate and timely screening for colorectal cancer in IC was 61%, which is the same as WA, however the 2030 target is over 74%. Age-adjusted incidence rate of colorectal cancer in IC is approximately 44 (per 100,000), whereas the state has a rate of 34. We imagine that making it easier for individuals

¹² [Colorectal Cancer Screening Tests | CDC](https://www.cdc.gov/cancer/colorectal/basic_info/screening/tests.htm)
(https://www.cdc.gov/cancer/colorectal/basic_info/screening/tests.htm)

to schedule and get to their screening appointments would reduce the incidence rate in the long term.

Lung cancer

Age-adjusted death rate for lung cancer in IC is 25.3. In WA, the death rate is closer to 32. The 2030 goal is 25.1 per 100,000, indicating that IC is well on track to reaching that goal.

Melanoma

Incidence of melanoma is higher in IC than in the state overall, despite perhaps having a lower risk because of low altitudes (at or around sea level).¹⁴ Age-adjusted incidence rate in IC was almost 80 per 100,000 from 2017-2019, whereas Washington had a rate of 53. Melanoma only accounts for about 1% of all skin cancer cases (though nationally that is still about 9,000 deaths from melanoma a year). Rates of skin cancer have been increasing in the USA for the last several decades.¹⁵ Melanoma is about 20 times more common in white people than in black people.¹⁶ Island County's population is 83% White, compared to 67% (Figure 7) in WA, so some of the higher occurrence in Island County could be explained by demographic specificities. However, we recommend more education on common protective measures (hat, sunscreen or UPF clothing, avoiding the sun in the middle of the day) as well as a campaign on what skin cancer can look like so that individuals can more easily identify possible cancerous marks on themselves or their kin.

¹³ Aceituno-Maderaa, P., et al. "Melanoma, Altitude, and UV-B Radiation." *Actas Dermo-Sifiliográficas* (English Edition), Elsevier Doyma, 11 July 2011, <https://reader.elsevier.com/reader/sd/pii/S1578219011707855?token=D0536DA1FFB83808886517FA31CA22EBC2AF4C733A534C8380D28EBE7191C739E2E80EA5A1A02D3B2415BB98895BF443>.

¹⁴ [Melanoma of the Skin Statistics | CDC](#) and [Everyone Can Play a Role to Reduce Skin Cancer \(cdc.gov\)](#)

¹⁵ Villines, Zawn. "Skin Cancer by Race and Ethnicity: Images and Statistics." *Medical News Today*, MediLexicon International, 2021, <https://www.medicalnewstoday.com/articles/skin-cancer-by-race#incidence-rates>.

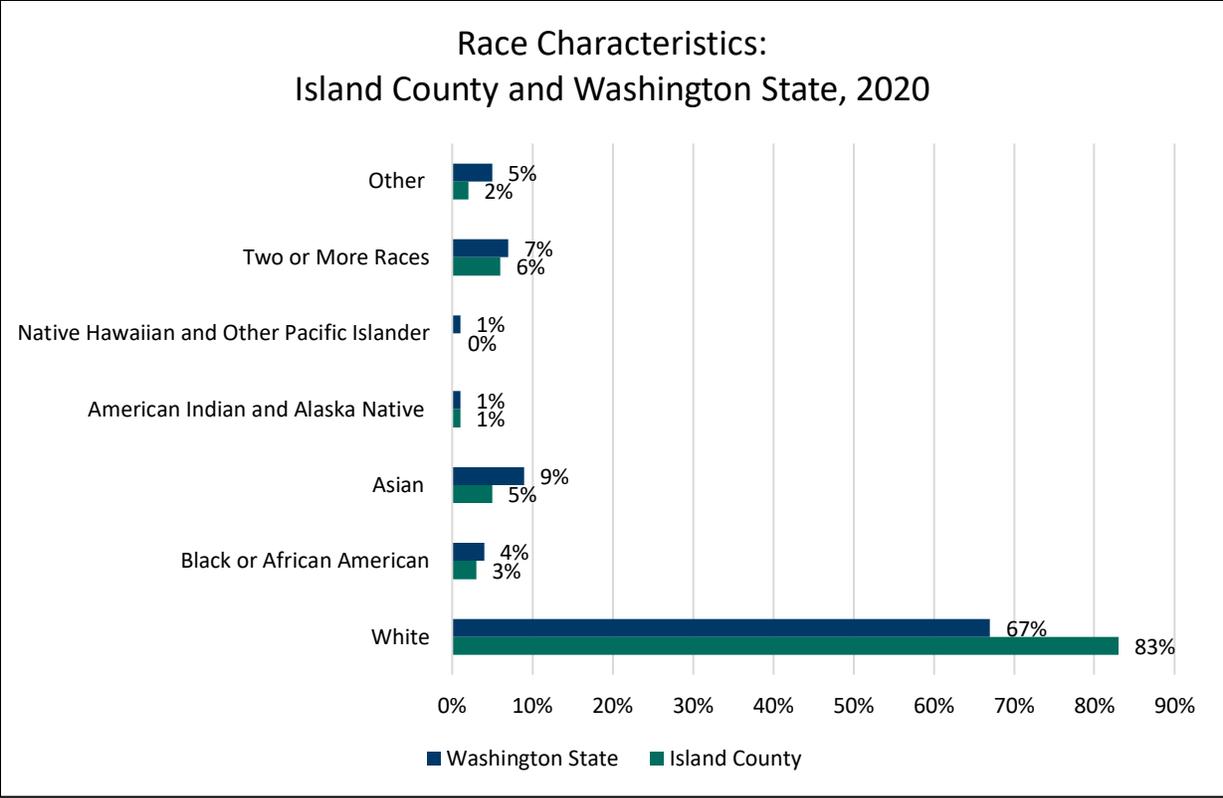


Figure 7 Race Characteristics of Island County and Washington State, 2020

Prostate cancer

Rates of death due to prostate cancer in IC was 18.6 per 100,000 from 2017-2019. This is similar to WA state (19.3 per 100,000), however the 2030 target is a rate of less than 17. Prostate cancer is the second leading cause of death for men in the US.¹⁶ The 2030 target is not much lower than the current rate, however, if more men who are at risk or diagnosed follow their doctor’s advice (perhaps cutting down on their fat intake, eating fruits and vegetables and making time to exercise)¹⁸ the death rate from this cancer could diminish. Prostate cancer screening is not recommended for every man and should only be done for men 55-69 years old after evaluating their individual risk.

Diabetes

In 2019, there was a statistically significant difference between diabetes-related hospitalizations in IC (837 per 100,000) compared to WA (1039 per 100,000). However, the

¹⁶ [Key Statistics for Prostate Cancer | Prostate Cancer Facts](#)
¹⁷ [How to Prevent Prostate Cancer: Health Tips and More \(healthline.com\)](#)

Healthy People goal for 2030 is 264 hospitalizations per 100,000. This goal could be attained by teaching older adults how to manage their diabetes, as older adults are more likely than people in other age groups to be hospitalized for diabetes-related complications.¹⁹ The death rate from diabetes in IC is 62 per 100,000, lower than WA's rate of 75 per 100,000 (Figure 8).

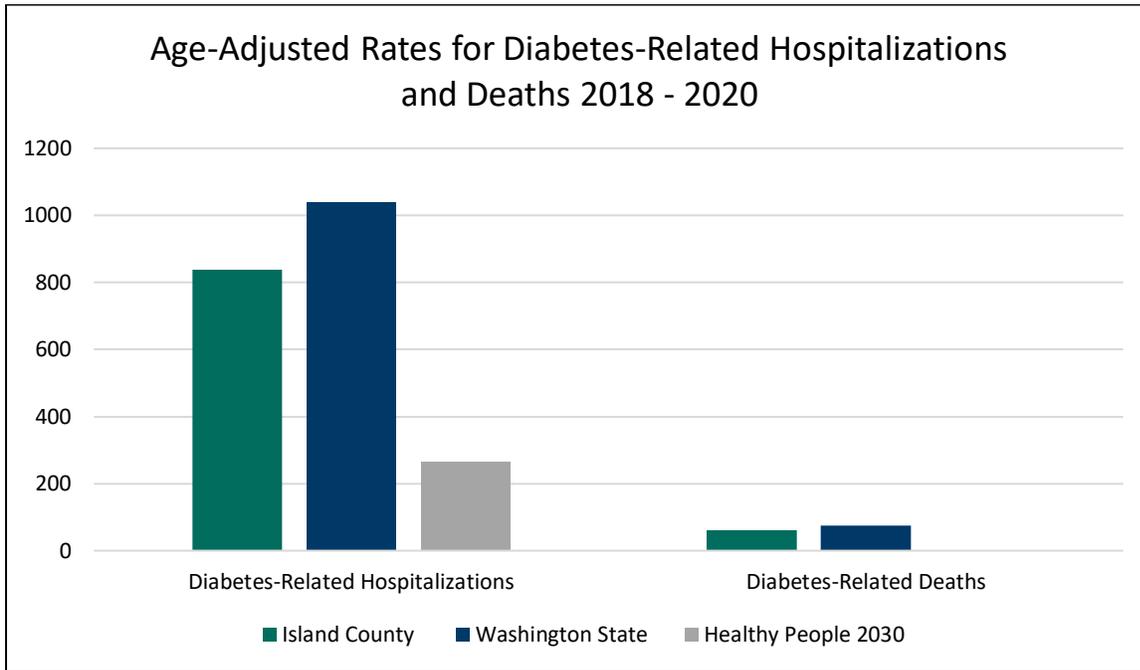


Figure 8 Age-Adjusted Rates Per 100,000 for Diabetes- Related Hospitalizations and Deaths, 2018-2020

¹⁸ [Reduce the rate of hospital admissions for diabetes among older adults – OA-05 - Healthy People 2030 | health.gov](https://www.health.gov/ourpriorities/2030-goals/05-reduce-the-rate-of-hospital-admissions-for-diabetes-among-older-adults)

References:

[Chronic Disease in Rural America Overview - Rural Health Information Hub](#)

[Fit & Strong! - Instructors - Training & Certification \(fitandstrong.org\)](#) (arthritis) **

[Rural Project Summary: Albert Lea Blue Zones Project - Rural Health Information Hub](#) (walkability/
city planning)

[The Social Determinants of Chronic Disease - PMC \(nih.gov\)](#)