



Public Health
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Lincoln County

Lincoln County Assessment of Access to Healthcare

Date: July 31, 2024

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Executive Summary

Introduction

This report serves to evaluate the availability and accessibility of healthcare services within Lincoln County, Oregon. The focus is on primary care, behavioral health, and dental services. The primary goal of this report is to identify the barriers community members face when seeking healthcare services and to uncover the underlying causes.

Methodology

Data for this report was primarily obtained from secondary sources. Demographic and social determinant of health measures were primarily gathered from the United States Census Bureau American Community Survey. Healthcare access information was sourced from Community Health Needs Assessments published by Samaritan Health Services in 2022 and the 2022-2026 Linn, Benton, and Lincoln Counties Regional Health Assessment (RHA). Additional healthcare access data was obtained from partner organizations and from reports by the Oregon Health Authority. Qualitative insights into residents' experiences accessing care were gathered through key informant interviews and focus groups conducted by Lincoln County Public Health in 2022 as part of the RHA process and conversations conducted with healthcare organizations in 2024 as part of this assessment.

Key Challenges for Healthcare Access

Lincoln County, Oregon faces significant healthcare access challenges, reflecting disparities in health insurance coverage, provider and facility availability, and linguistic appropriateness.

Insurance Disparities:

In 2022, 8.9% of Lincoln County residents lacked health insurance, surpassing state and national averages. Certain sub-populations of Lincoln County face disproportionately high uninsured rates including those ages 19-64, those employed, and non-citizens.

Provider Shortages:

The county grapples with a shortage of healthcare providers, especially physicians and psychologists, which have patient-provider ratios exceeding 70% and 286% the state average, respectively.

Limited Hours of Operation:

Few healthcare outlets in Lincoln County operate outside of usual business hours and many behavioral health and dental providers offer appointments fewer than five days a week and eight hours a day. These factors constrain access to care and lead to unnecessary use of the emergency department.

Linguistic Appropriateness:

Limited availability of bilingual staff at healthcare facilities in Lincoln County hinders non-English speakers' access to care. While availability of interpretation services has improved over time, reliance on virtual interpretation services and strict certification requirements at the state level hinder effective communication among non-English speakers.

Health Outcomes Performance

Lincoln County ranks 27th out of 35 counties in Oregon for the health of its residents (University of Wisconsin Population Health Institute, 2023). The county performs worse than the state average on most health outcomes and health behavior indicators including premature death rates, days of poor physical and mental health, teen birth rates, and preventive health screenings.

Emerging Issues in Healthcare Access

Closure of Adventist Health:

As one of the major healthcare providers in Lincoln City, the closure of Adventist Health in April 2024 further restricts the availability of healthcare services for Lincoln County residents.

Healthier Oregon Program Rollout:

The Healthier Oregon Program, which expands Medicaid coverage to undocumented community members, may strain Lincoln County's healthcare system due to the existing shortage of primary care and mental health providers. Despite broader coverage, the program fails to address the provider deficit, resulting in increased demand without adequate supply augmentation.

End of Continuous Enrollment:

The cessation of continuous enrollment mandated by the Family First Coronavirus Response Act poses challenges for Medicaid recipients in Lincoln County. With the resumption of redetermination processes, enrollees may face barriers to continued Medicaid enrollment such as communication issues and gaps in coverage, impacting consistent access to healthcare services

Areas of Opportunity

Lincoln County would benefit from additional assessment in various areas. Additional assessment is especially warranted in the following topic areas:

- Youth mental health services
- Cultural appropriateness
- Specialty health services
- Recovery services

Acknowledgments

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Arcoiris Cultural

Lincoln Community Health Center

Lincoln County Behavioral Health

Samaritan Health Services

Lincoln County Veterans Services

Introduction

Purpose of Assessment

This report was developed to assess the availability and accessibility of healthcare within Lincoln County, Oregon, with focus on primary care, behavioral health, and diagnostic and preventative dental care. This report aims to explore the barriers Lincoln County residents face when accessing healthcare services and seeks to identify their root causes. This report was created in compliance with the Public Health Accreditation Board's Standards & Measures for Reaccreditation, Version 2022, for Measure 7.1.1 Required Documentation 1 (Public Health Accreditation Board, 2022).

Definition of Access to Healthcare

Several definitions of healthcare access have been proposed in the primary literature and established by professional organizations. The Institute of Medicine (IOM) defines access to healthcare as "the timely use of personal health services to achieve the best possible health outcomes" (Institute of Medicine, 1993). Furthermore, the IOM specifies three distinct steps to accessing healthcare:

- Gaining entry into the healthcare system (principally through insurance coverage)
- Accessing a healthcare delivery location (geographic availability)
- Finding a healthcare provider whom the patient trusts and can communicate with (personal relationship)

A key component of this definition is its dependence on both the utilization of health services and the resulting health outcomes as criteria for determining whether access has been achieved. While this conceptual definition provides valuable insight, it lacks clarity on practical assessment methods for healthcare access. A more useful definition from the literature, as articulated by Daniels (1982) and Whitehead (1992), emphasizes access to services, providers, or institutions in a manner that allows consumers or communities to utilize appropriate services proportionate to their needs. This definition better captures the essential components of healthcare access, including the availability of necessary services and healthcare outlets, as well as the volume of these services to meet the specific needs of the population or community under assessment. In this report, a combination of these definitions will be employed to comprehensively evaluate healthcare access within Lincoln County.

Frameworks for Assessing Healthcare Access

Two frameworks will guide the analysis of healthcare access within this report: Levesque's Conceptual Framework of Access to Health (Lévesque et al., 2013) and the Millman Model of Access (Millman, 1993). Levesque's framework offers a comprehensive examination of healthcare access through the evaluation of five

dimensions of accessibility to generate access in addition to five dimensions of accessibility of services. The dimensions of accessibility to generate access encompasses the ability to perceive, the ability to seek, the ability to reach, the ability to pay, and the ability to engage (Lévesque et al., 2013). Comparatively, the dimensions of accessibility of services focus on the approachability, acceptability, availability and accommodation, affordability, and appropriateness of healthcare services (Lévesque et al., 2013). The components of each of these dimensions can be seen in **Figure 1**.

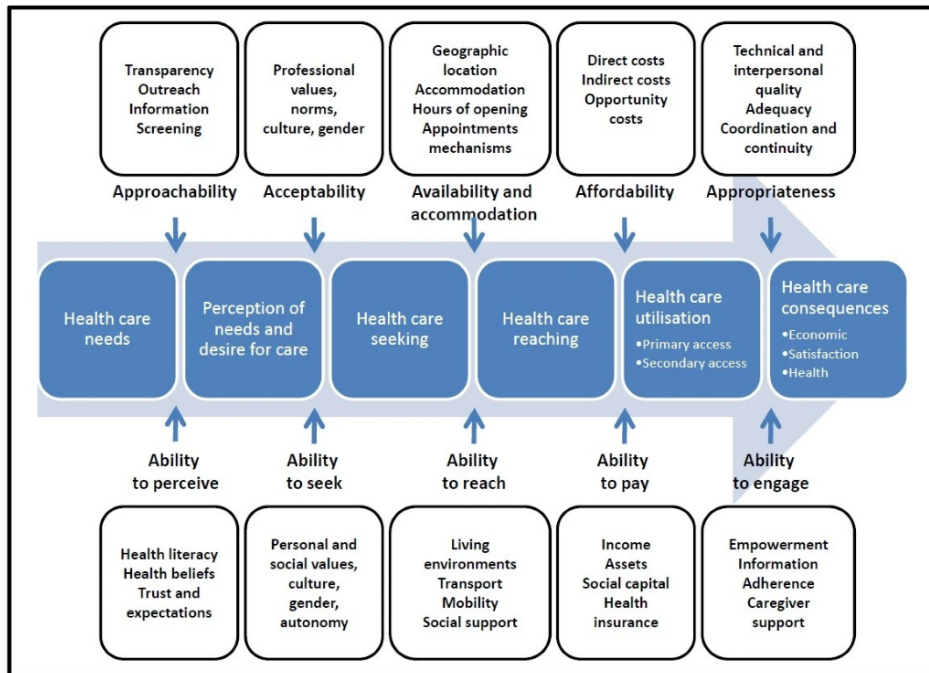


Figure 1 - Levesque's Conceptual Framework of Access to Health

Source: Lévesque et al. (2013)

While Levesque's framework provides a robust conceptual foundation, it provides limited operational value due to its conceptual nature. Therefore, the Millman Model of Access serves as a more practical approach, focusing on identifying barriers to care, including structural, financial, and personal barriers. The model also incorporates utilization indicators, mediators, and outcome measures to assess access, primarily relying on quantitative data, which facilitates the implementation and reporting of findings. The constituent elements of the barriers, use of services, mediators, and outcomes associated with this model are identified in **Figure 2**.

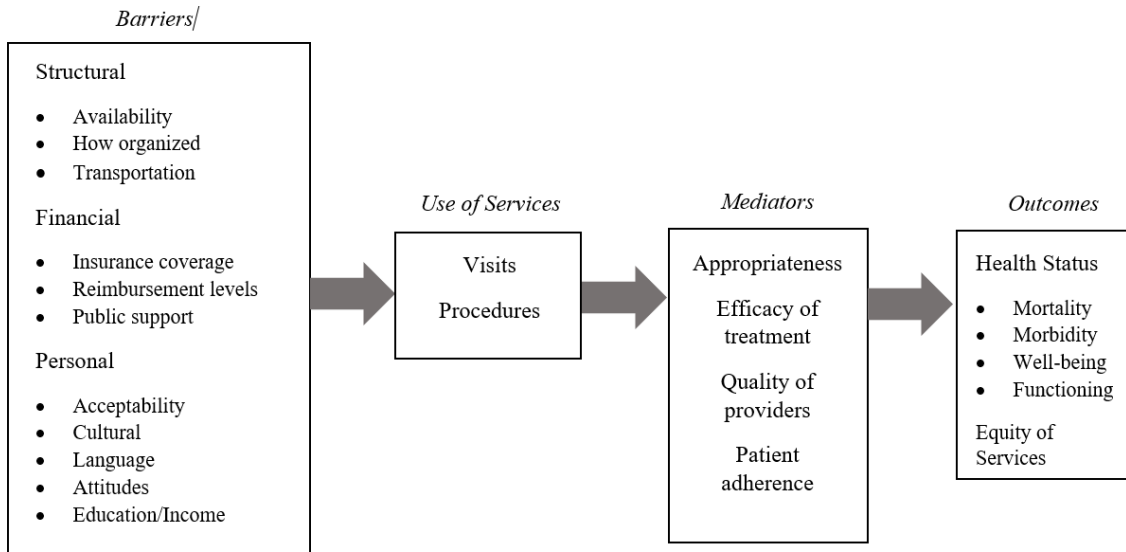


Figure 2 – Millman Model of Access

Source: Millman (1993)

By utilizing Levesque’s Conceptual Framework of Access to Health primarily for analyzing the supply side of healthcare provision and the Millman Model of Access for a more practical assessment of barriers and outcomes, this report aims to evaluate healthcare access within Lincoln County, combining theoretical insights with quantitative and qualitative data analysis for actionable insights and policy recommendations.

Methodology

The data contained within this report was collected principally from secondary sources. Demographic data and many social determinants of health measures were collected primarily from the United States Census Bureau American Community Survey (ACS). Information relating directly to healthcare access was gathered from Community Health Needs Assessments published by Samaritan Health Services in 2022, the 2022-2026 Regional Health Assessment (RHA) spanning Linn, Benton, and Lincoln counties, and various other reports compiled by the Oregon Health Authority and other entities.

Primary data came from key informant interviews with community partners and a focus group with Spanish-speaking community members conducted in May and June 2022 as part of the RHA process. Additional primary data was gathered through conversations with community partners in winter and spring 2024. Data on wait times was obtained primarily by calling facilities directly to inquire about their current appointment availability.

Limitations

While this report identifies many issues that influence access to healthcare, it isn't exhaustive of every relevant factor. This report should not be considered a formal study or research document. In addition, the conclusions, hypotheses, and interpretations made within the report were based on the best available evidence at the time the report was authored in winter and spring 2024.

The demographic data presented in this report primarily comes from the American Community Survey (ACS), which furnishes updated estimates on a multitude of demographic indicators. However, the ACS encounters limitations in rural counties like Lincoln County due to small sample sizes. This results in less accurate estimates, especially in sparsely populated regions with limited representation (Greiman & University of Montana Rural Institute, 2017). Individuals who speak languages other than English are also less likely to respond to the Census as well as other public health surveys (Espinoza, 2020; Link et al., 2006), therefore the proportion of residents who speak Spanish and other languages were likely underreported. Additionally, ACS data cannot fully capture community members who reside in temporary housing not meeting the US Census Bureau's definition of a Housing Unit (US Census Bureau, n.d.).

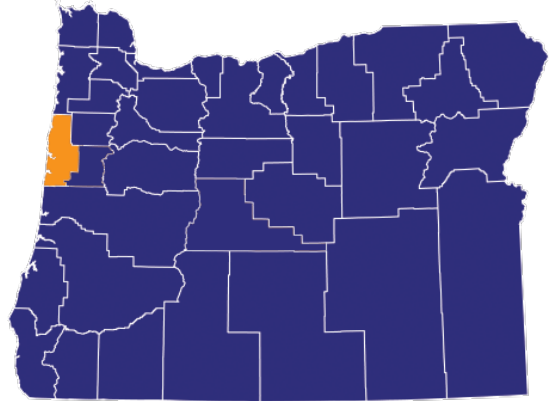
Data for several of the health outcomes and healthcare utilization indicators was gathered from PLACES, which is a partnership between the CDC and Robert Wood Johnson Foundation to make data available for smaller regions, like Lincoln County. PLACES uses small area estimation methods, a statistical model that estimates health indicators using demographic data and CDC's Behavioral Risk Factor Surveillance System data. Small area estimation, while useful for providing insights into health outcomes at a local level, has its limitations. These limitations stem from factors such as reliance on statistical models, data quality issues, and sensitivity to underlying assumptions. Additionally, the precision of estimates may be compromised in areas with small sample sizes or high variability.

Data on wait times, which as described above, was obtained by calling the healthcare facilities directly and inquiring about service wait times has various limitations. First, because the callers identified themselves as employees of Lincoln County Public Health (LCPH), it's possible that social desirability bias impacted the accuracy of responses, causing facilities to misrepresent their wait times as shorter than they were. Additionally, random sampling was not employed when identifying the facilities to be called and therefore selection bias may be present. Finally, many facilities responded that wait times varied quite significantly. This data provides a point count of wait times and shouldn't be generalized.

County Profile

Lincoln County, Oregon is located along the central Oregon coast. The county seat, Newport, serves as the administrative center, while Lincoln City stands as the second largest population center. Both Newport and Lincoln City boast approximately 10,000 residents each. Other towns include Toledo, Siletz, Waldport, Depoe Bay, and Yachats. With a total population of around 50,000 people, Lincoln County is rural, with its most remote regions meeting the criteria for frontier classification (Lincoln County, 2023).

For thousands of years, the land comprising Lincoln County and surrounding areas was home to a variety of Native American tribes (Robbins, 2014). In the 1840s, European settlers began to move west and displace the tribes. In 1855, the United States established a 1.3-million-acre reservation in what is now Lincoln County (Lincoln County Historical Society, n.d.). Lincoln County remains the home of the Confederated Tribes of Siletz Indians.



Lincoln County benefits from its proximity to the Pacific Ocean in many ways. As a coastal community with expansive public beaches, tourism is a major driver of economic activity, particularly during the summer months. The dominant industries within the county are accommodation and food services, retail, and healthcare and social assistance (University of Oregon, Institute for Policy Research and Engagement, 2021). Additionally, Newport is home to the largest commercial fishing fleet in Oregon (Disse, 2022).

There are approximately 20 grocery stores operating in Lincoln County. There are 59 Supplemental Nutrition Assistance Program (SNAP)-authorized outlets and 12 Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)-authorized stores located in the county. Newport and Lincoln City have the highest density of grocery stores, accounting for approximately two thirds of the grocery stores in the county. The county's less populous towns have zero to two grocery stores operating in each. Lincoln County hosts 11 food pantries and three meal sites; however, these organizations have limited operating hours, typically opening only one day per week for a few hours (Food Share of Lincoln County, 2023).

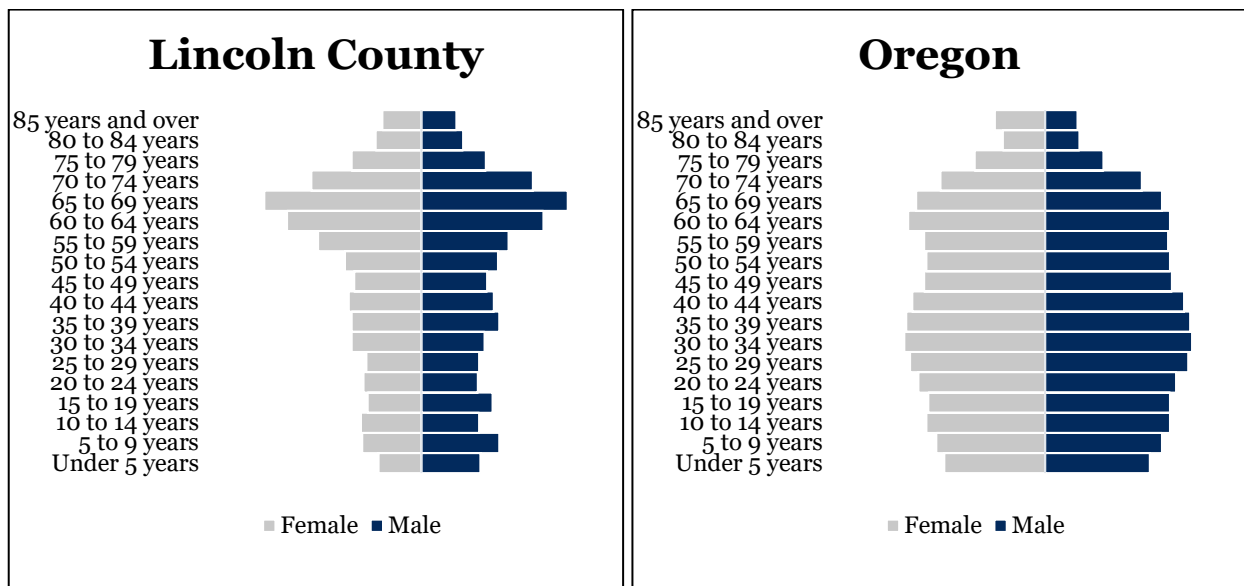
Lincoln County School District (LCSD) operates 12 public schools across the county: six elementary schools, two middle schools, and four high schools (LCSD, 2024). LCSD also operates a fully online program serving students in grades 6 through 12 and offering a GED option. Additionally, four private schools and three charter schools are available. Lincoln County is home to Oregon Coast Community College, a public institution offering a variety of certificate, two-year, and four-year degree programs.

County Demographics

The demographics of a population impact the demand and supply of healthcare services. To provide context to the unique barriers to healthcare access that exist within Lincoln County, various demographic indicators will be presented in comparison to the state of Oregon and the United States.

Age Distribution

Lincoln County exhibits an older demographic profile compared to both Oregon and the United States. While Oregon and the United States display a relatively uniform population distribution across age groups up to 64 years, with gradual declines thereafter, Lincoln County diverges notably. Lincoln County demonstrates a similar distribution up to age 54 but experiences substantial increases in population percentages up to age 69, followed by gradual declines in older age groups. This age distribution is particularly noteworthy as older residents utilize more healthcare resources compared to younger residents.



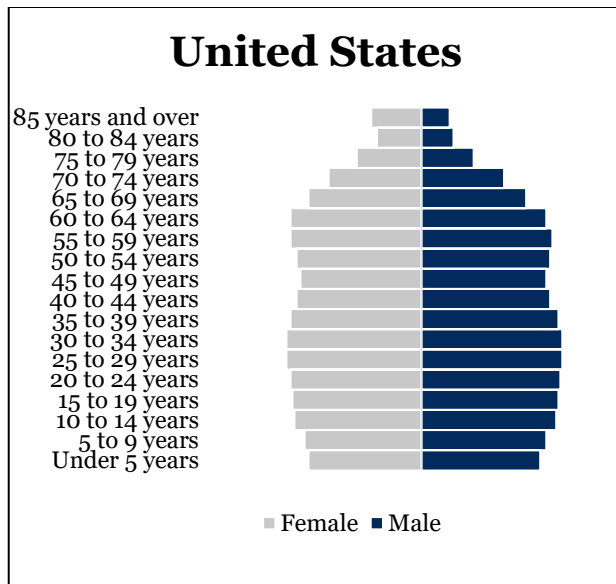


Figure 3 – Population Pyramids for Lincoln County, Oregon, and United States Populations

Data Source: United States Census Bureau, American Community Survey, Table S0101

Time Period: 2022 - 5 Year Estimates

Sex

Lincoln County has a higher proportion of female residents than both state and national averages, which has implications for the quantity of healthcare consumed. This effect is particularly notable due to healthcare needs related to pregnancy. Additionally, research shows that female patients utilize substantially more healthcare services than male patients, including primary care, specialty care, preventive health services, diagnostic services, and emergency services, even among non-pregnant adults (Bertakis et al., 2000; Vaidya et al., 2012).

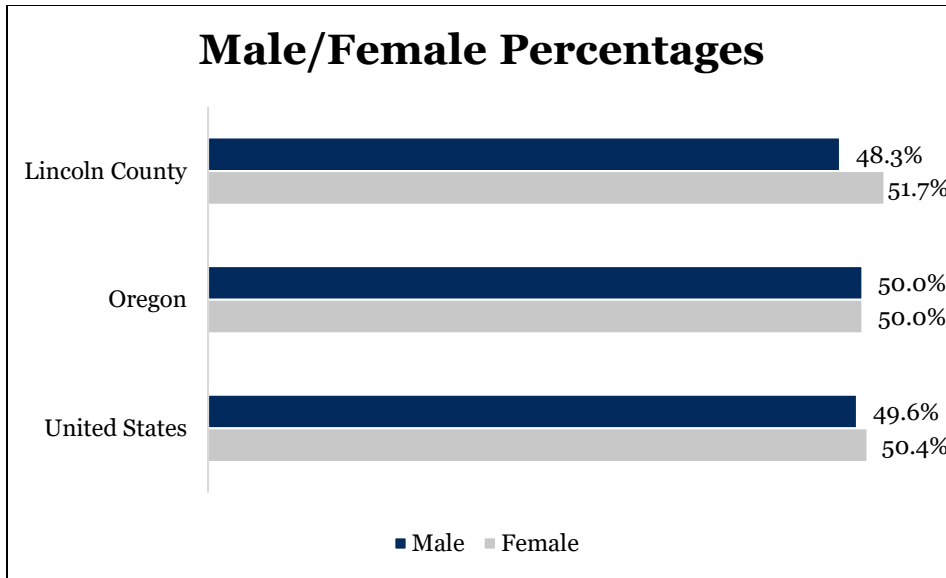


Figure 4 – Male/Female Population Distribution for Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S0101
 Time Period: 2022 - 5 Year Estimates

Race and Ethnicity

Lincoln County residents are predominantly white and non-Hispanic compared to Oregon and the United States. However, approximately a quarter of students enrolled in Lincoln County School District K-12 schools do identify as Hispanic/Latino. Notably, Lincoln County also exhibits a significantly higher proportion of individuals identifying as American Indian and Alaska Native relative to both Oregon and the national average. Studies consistently show disparities in healthcare access and utilization based on race and ethnicity (Manuel, 2017). Racial and ethnic minority groups, including Hispanic, Black, and Asian individuals, are less likely to have a regular healthcare provider, have fewer physician visits, and have restricted use of outpatient mental health services relative to white individuals (Manuel, 2017). Factors such as socioeconomic status and insurance coverage contribute to these disparities (Manuel, 2017).

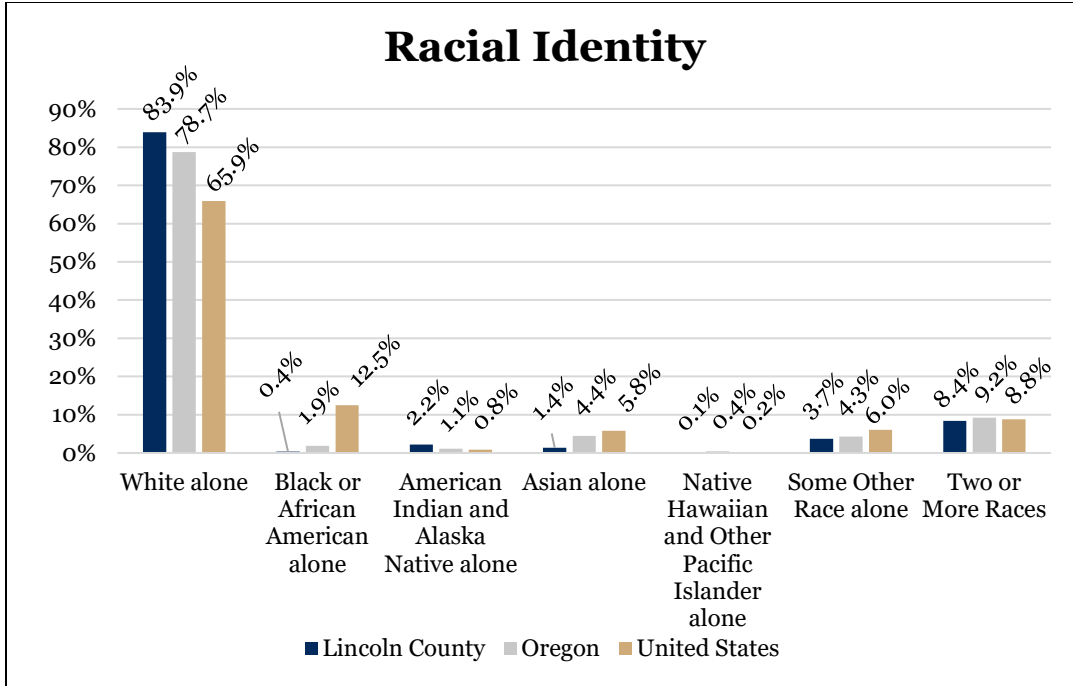


Figure 5 – Racial Identity of Residents in Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table B02001
 Time Period: 2022 - 5 Year Estimates

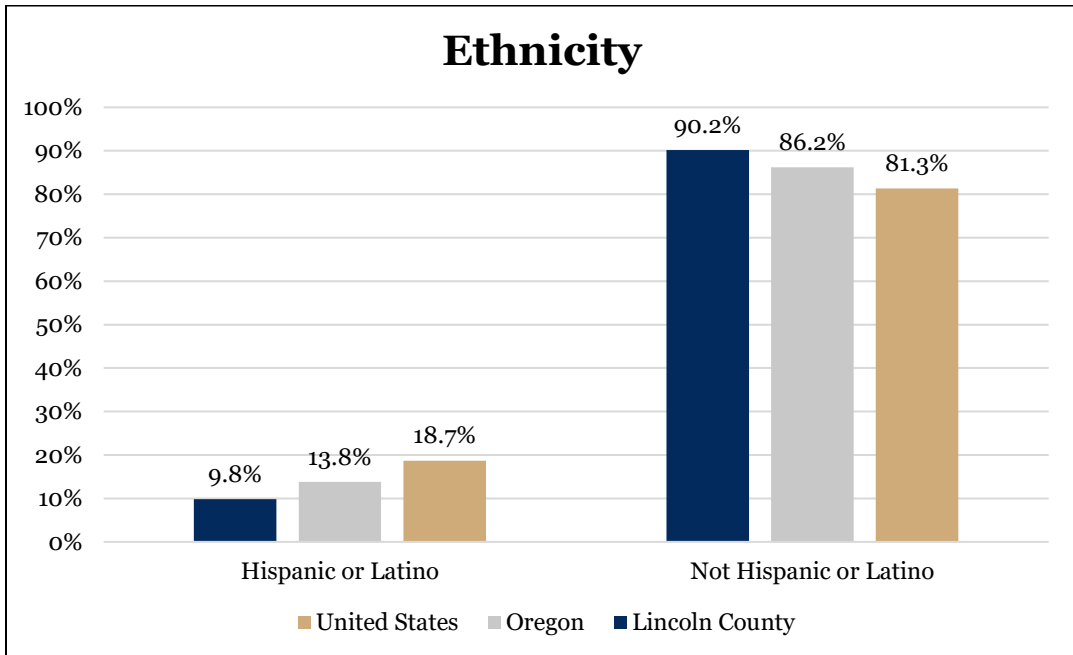


Figure 6 – Ethnicity of Residents in Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table B03002
 Time Period: 2022 - 5 Year Estimates

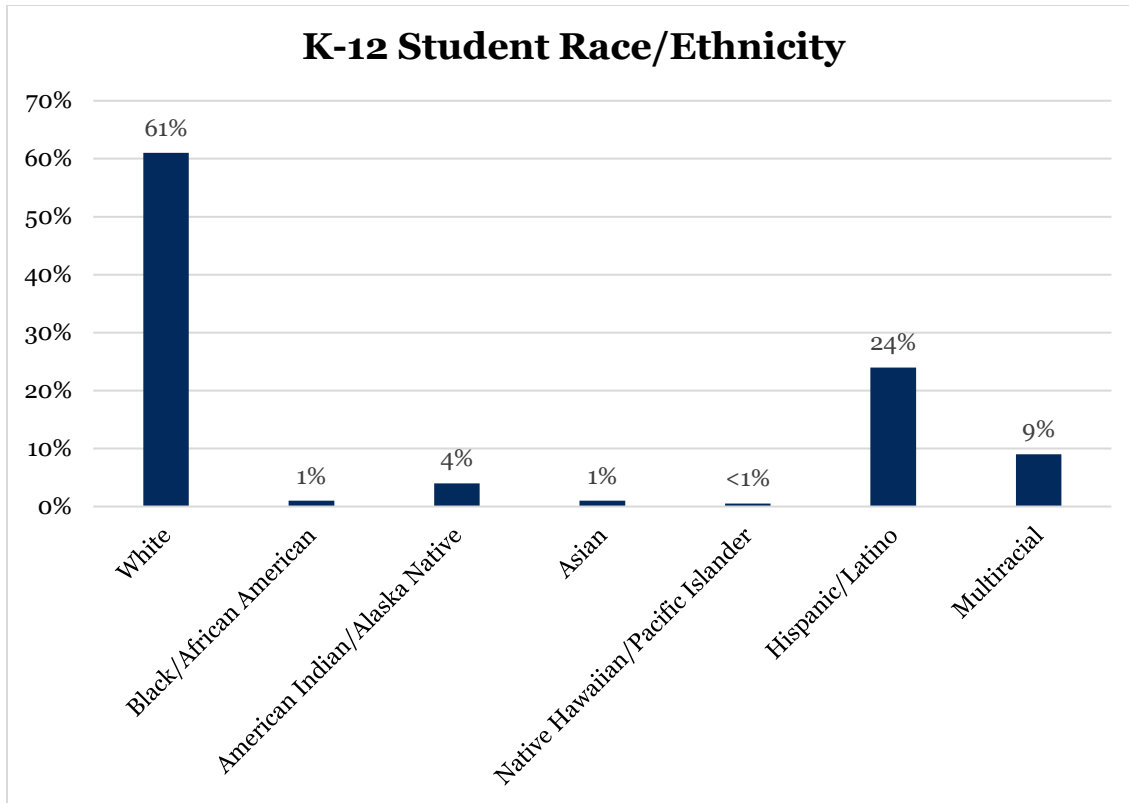


Figure 7 – Race/Ethnicity of Lincoln County School District K-12 Students
 Data Source: Oregon Department of Education, Oregon At-A-Glance District Profile
 Time Period 2022/2023 school year

Language

The majority of Lincoln County residents speak English at home, with the second largest group speaking Spanish. Limited English proficiency has been shown to delay access to healthcare services and hinder the development of therapeutic relationships between patients and healthcare providers (Pandey et al., 2021). This barrier also obstructs effective communication, resulting in suboptimal care and dissatisfaction among patients (Pandey et al., 2021). Moreover, language barriers can impede treatment adherence, limit the utilization of preventive and screening services, and exacerbate delays in accessing timely care, ultimately leading to poor chronic disease management and adverse health outcomes (Pandey et al., 2021). Healthcare organizations could lessen these poor outcomes by offering high quality language services.

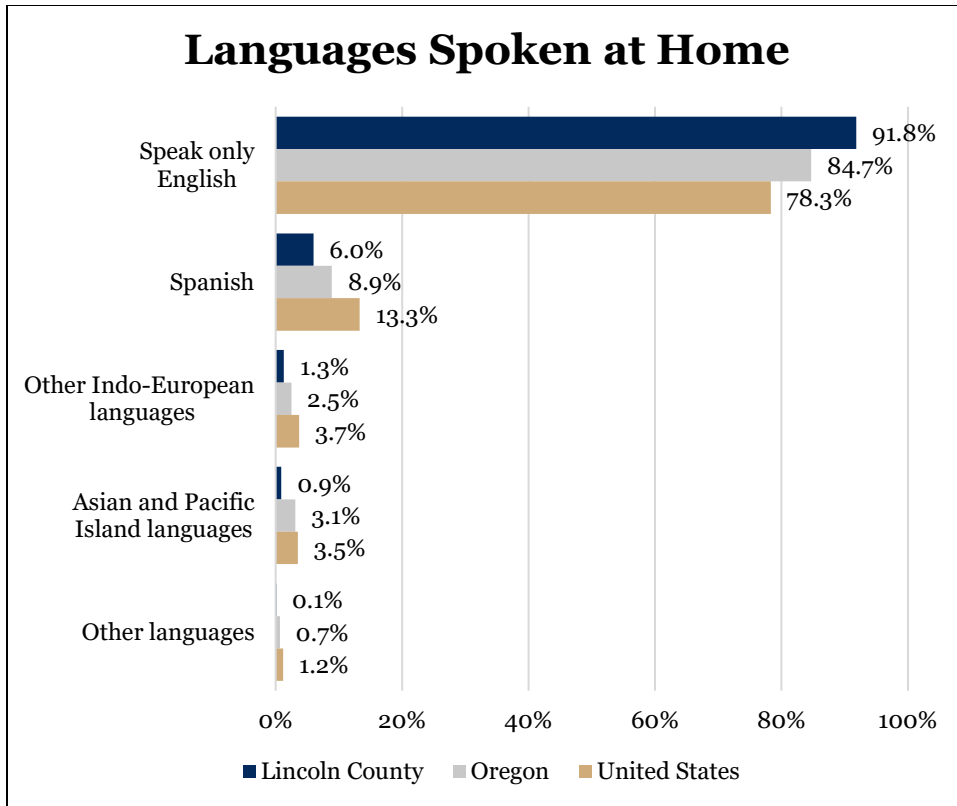


Figure 8 – Languages Spoken at Home for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S1601
 Time Period: 2022 - 5 Year Estimates

Veteran Status

Lincoln County is home to a veteran population that is nearly double the national average and over 50% higher than Oregon's average. Veterans experience higher rates of morbidity for numerous conditions including obesity, heart disease, stroke, skin cancer, COPD, kidney disease and diabetes (Betancourt et al., 2021; Betancourt et al., 2023). Furthermore, due to the exposure to potentially traumatic events associated with military service, returned service members experience an increased prevalence of mental health diagnoses. Specifically, veterans experience a higher rate of posttraumatic stress disorder (PTSD), depression, and anxiety relative to the general population (Vogt, 2011). The higher rate of morbidities in the veteran population is indicative of a heightened demand for healthcare services to address potentially complex medical needs.

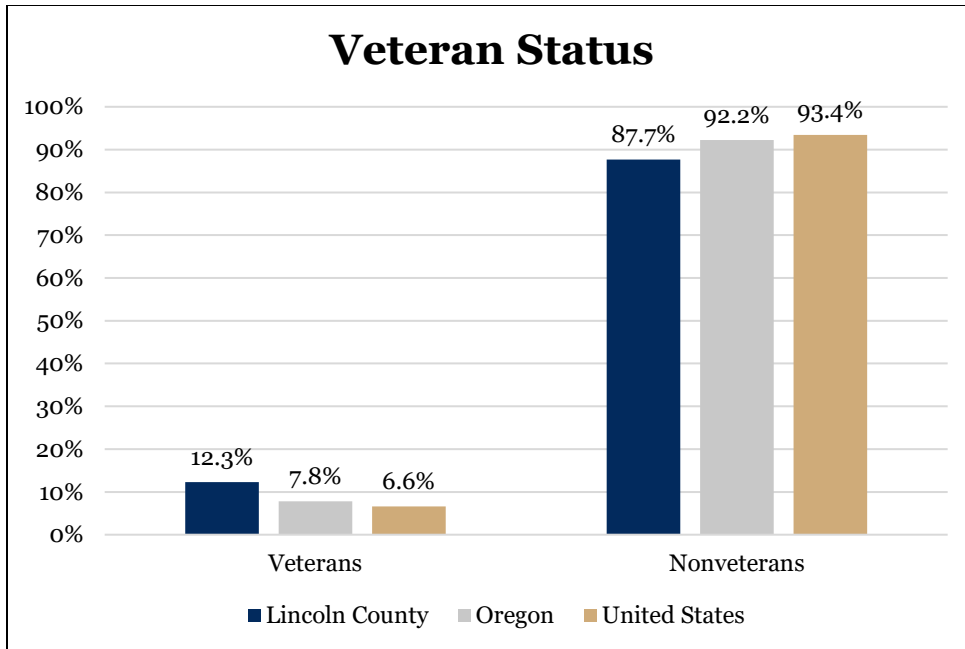


Figure 9 – Veteran Status of Residents in Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S2101
 Time Period: 2022 - 5 Year Estimates

Disability Status

The prevalence of disability in Lincoln County surpasses both state and national averages across all age groups 18 and older. Lincoln County exhibits markedly higher disability rates among those ages 35-64 years, where the disability rate surpasses Oregon's by over 8% and the national average by more than 10%. Furthermore, Lincoln County residents face higher rates of disability across all disability types compared to state and national averages, with the prevalence of ambulatory difficulties particularly pronounced. While the county's relatively older population contributes to these figures, high disability rates among those under the age 65 suggest additional factors at play.

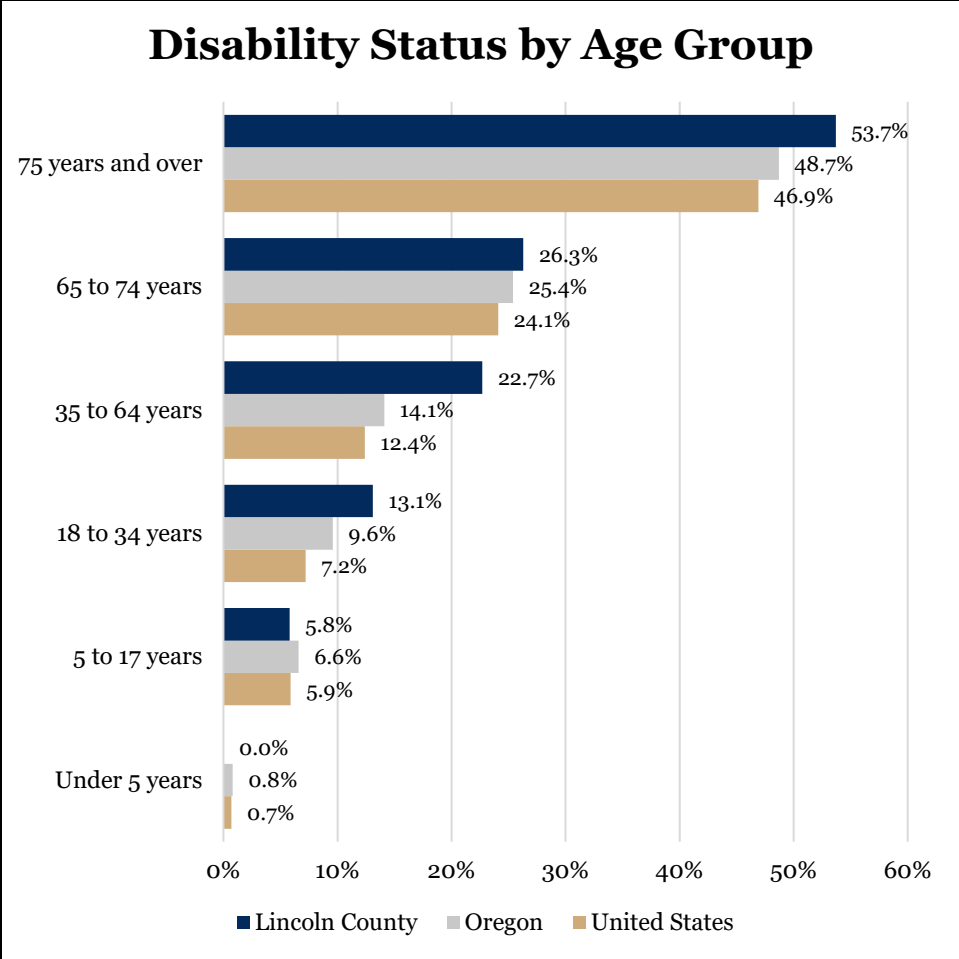


Figure 10 – Disability Status by Age Group for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S1810

Time Period: 2022 - 5 Year Estimates

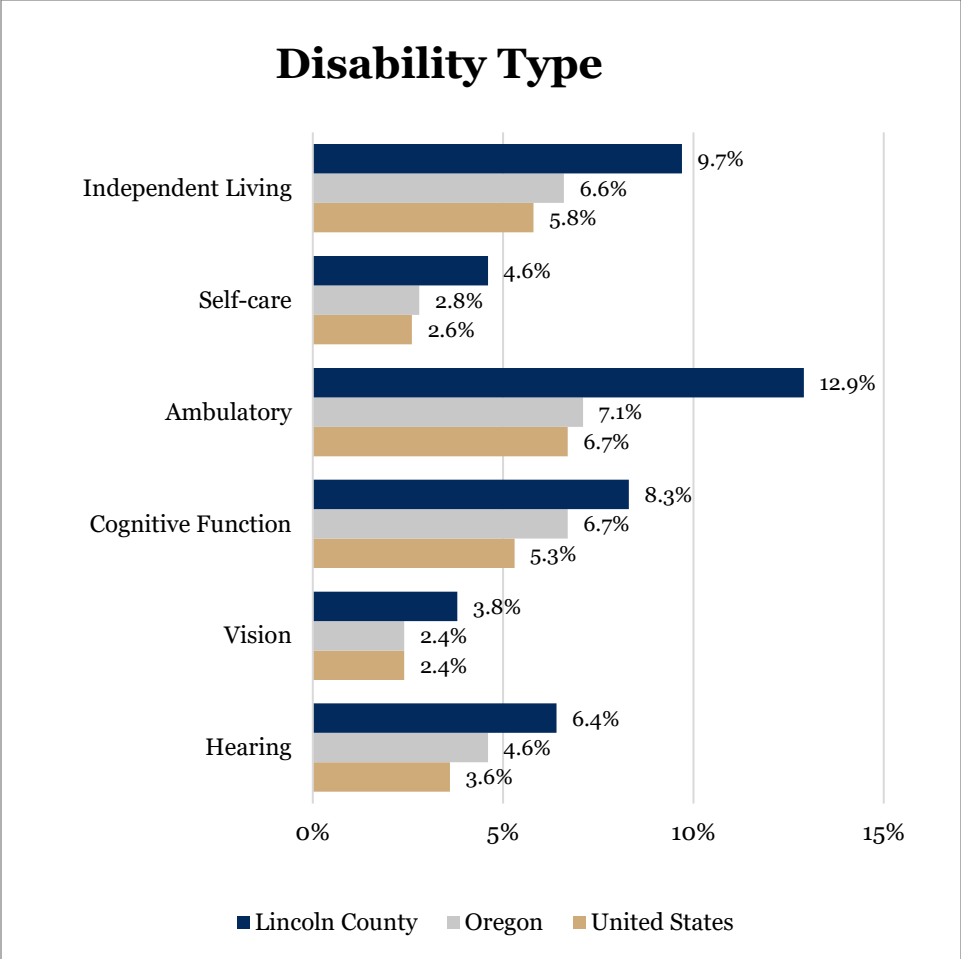


Figure 11 – Percentage of Population with a Disability by Disability Type for Residents of Lincoln County, Oregon, and the United States
 Data Source: United States Census Bureau, American Community Survey, Table S1810
 Time Period: 2022 - 5 Year Estimates

Social Determinants of Health

Social determinants of health (SDOH) are the conditions in which people are born, live, learn, work, play, and age that affect a wide range of health and quality of life outcomes (US Department of Health & Human Services, Office of Disease Prevention and Health Promotion, n.d.). SDOH include factors such as socio-economic status, educational attainment, neighborhood and physical environment, and employment. SDOH affect the demand for healthcare services and may impose barriers to accessing care.

Computer and Internet Access

Computer and internet access within Lincoln County closely mirrors state and national averages, with 95.0% of households possessing at least one type of computing device, and 89.7% having internet subscriptions. This is notable considering the emergence of telehealth services that are becoming increasingly commonplace.

| Households with Computer and Internet Access | | | |
|--|-----------------------|---------------|----------------------|
| | Lincoln County | Oregon | United States |
| Total Households (n) | 22,483 | 1,680,800 | 125,736,353 |
| Has one or more types of computing devices | 95.0% | 95.7% | 94.0% |
| Desktop or laptop | 81.1% | 84.1% | 79.3% |
| Smartphone | 84.7% | 89.5% | 88.2% |
| Smartphone with no other type of computing device | 7.1% | 6.7% | 9.1% |
| Tablet or other portable wireless computer | 62.5% | 65.6% | 63.4% |
| Other computer | 2.9% | 2.3% | 2.6% |
| No computer | 5.0% | 4.3% | 6.0% |
| With an Internet subscription | 89.7% | 90.8% | 88.5% |
| Without an Internet subscription | 10.3% | 9.2% | 11.5% |

Table 1 – Internet Access and Computer Access by Device Type for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S2801
Time Period: 2022 - 5 Year Estimates

Employment Status

Lincoln County faces an unemployment rate marginally higher than state and national averages. Notably, with the county’s dominant economic sectors including tourism and service industry jobs, significant seasonal fluctuations exist in the unemployment rate.

The values presented in **Table 2**, while captured in December 2023 (a period characterized by historically elevated unemployment rates due to reduced tourism activity during winter months) are seasonally adjusted, meaning this seasonal variability should be accounted for.

| Employment Status | Lincoln County | Oregon | United States |
|--------------------------|-----------------------|---------------|----------------------|
| Employed | 95.9% | 96.3% | 96.3% |
| Unemployed | 4.1% | 3.7% | 3.7% |

Table 2 – Unemployment Rate of Residents in Lincoln County, Oregon, and the United States

Source: Oregon Employment Department Qualityinfo.org; United States Department of Labor, Bureau of Labor Statistics, USDL-24-0006

Time Period: December 2023

Income and Poverty

Lincoln County’s poverty rates reveal a complex socioeconomic landscape characterized by both wealth disparities and elevated levels of poverty across income thresholds. Despite higher income brackets (400% and 500% FPL) indicating relative affluence, the county experiences high poverty rates compared to Oregon and the United States. This suggests that while segments of the population may be relatively well-off, a significant portion of the community faces severe economic challenges. Moreover, the elevated poverty levels are especially pronounced for minors within the county, with over a quarter of children under 5 years of age living below the Federal Poverty Level (FPL). Additionally, minors of all age groups experience poverty rates far exceeding state and national averages, underscoring the urgent need for targeted interventions to address childhood poverty and promote economic equity within the community.

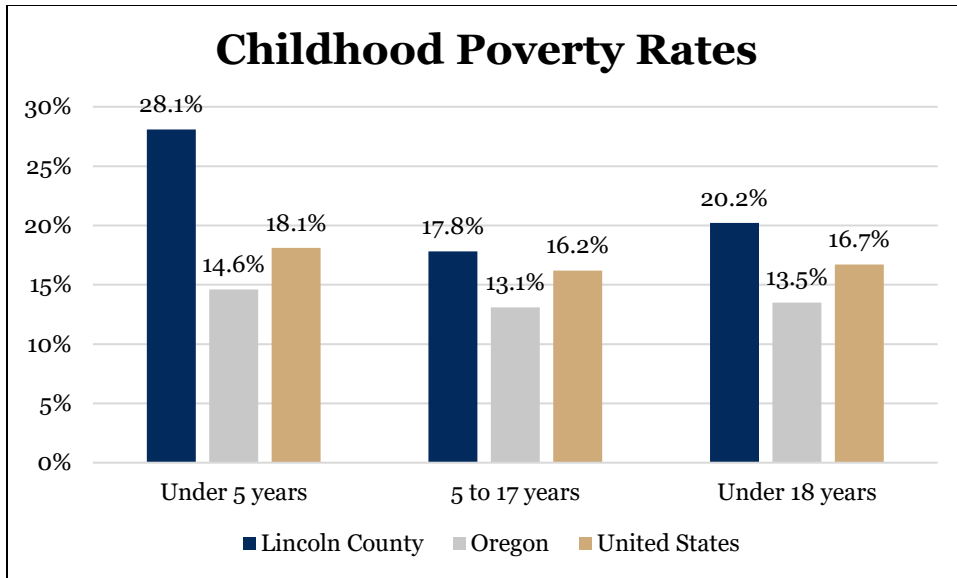


Figure 12 – Percentage of Minors Living Below the Federal Poverty Level by Age for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S1701

Time Period: 2022 - 5 Year Estimates

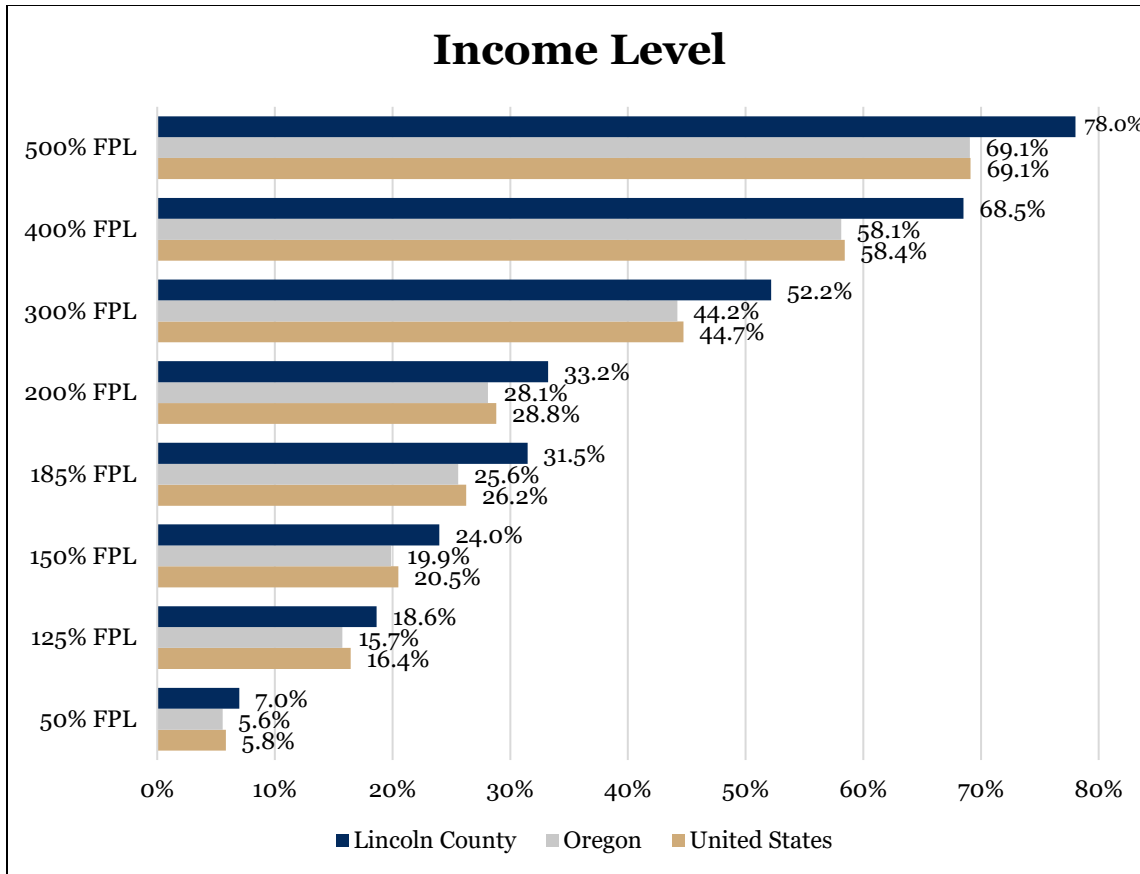


Figure 13 – Income Level by Federal Poverty Level Ratio for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S1701

Time Period: 2022 - 5 Year Estimates

2024 Federal Poverty Level (FPL):

<https://www.medicaidplanningassistance.org/federal-poverty-guidelines/>

*Note: The percentages exceed 100% because each successive income threshold includes individuals earning less than that level, contributing to cumulative figures.

Educational Attainment

Lincoln County presents an intriguing educational landscape, with lower percentages of residents failing to complete high school compared to state and national averages. The county shows roughly equivalent numbers of individuals with the highest educational attainment of a high school diploma or less compared to Oregon. However, Lincoln County exhibits lower rates of bachelor’s and graduate/professional degrees compared to both the state of Oregon and the United States.

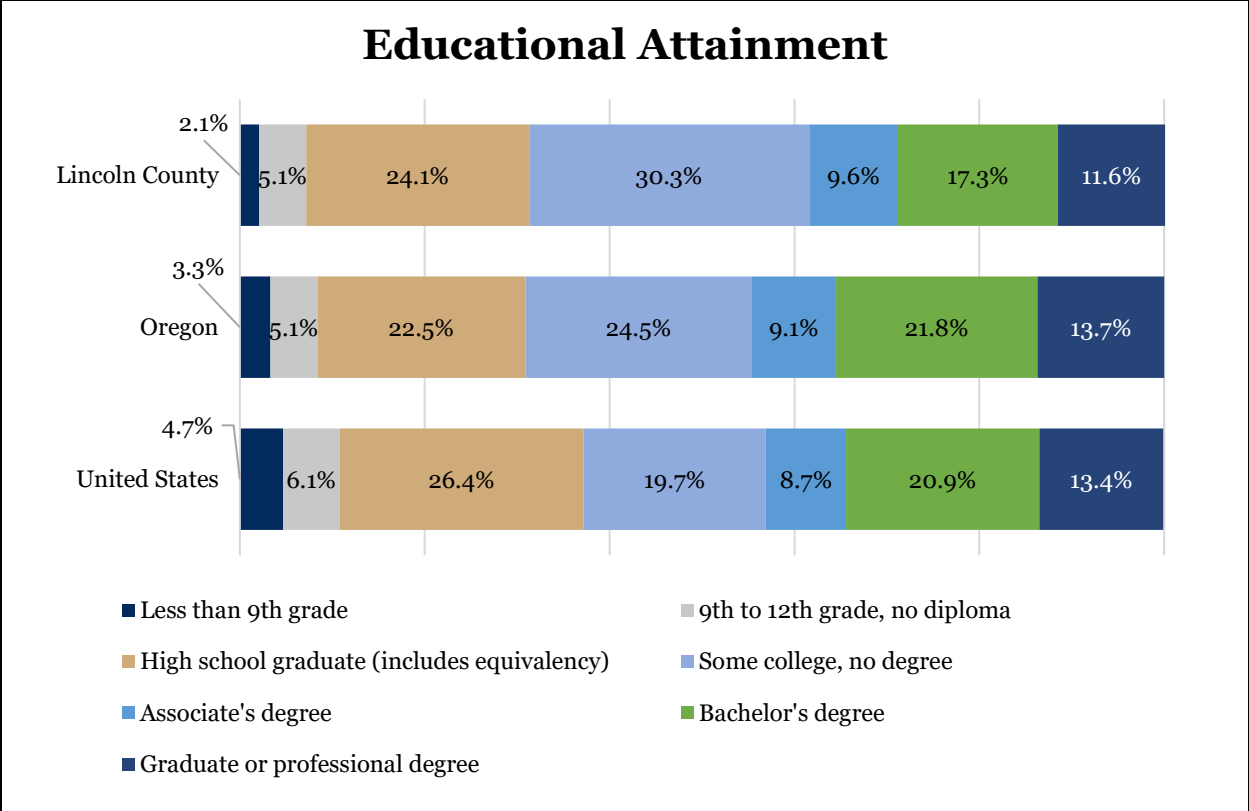


Figure 14 – Highest Educational Attainment for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S1501
 Time Period: 2022 - 5 Year Estimates

Housing

During community conversations conducted by LCPH in spring 2023, Lincoln County community members frequently cited lack of affordable housing as a major concern. Approximately 33% of Lincoln County households experience housing burden, which is defined as paying 30% or more of household income on rent or mortgage and utilities. Data presented in **Figure 18** is especially striking, revealing the homelessness rate among Lincoln County K-12 students as nearly five times higher than the state average.

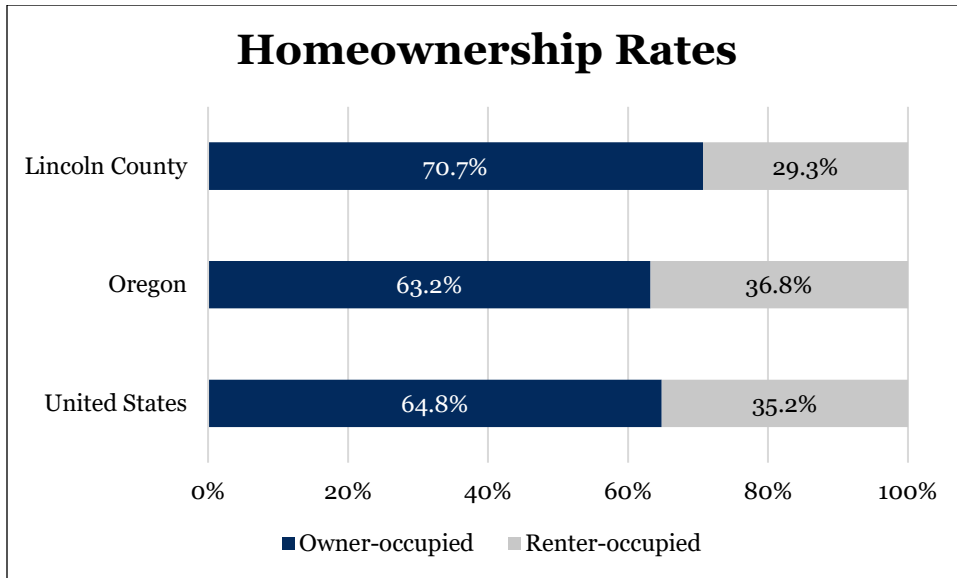


Figure 15 – Homeownership Rates for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table DP04
 Time Period: 2022 - 5 Year Estimates

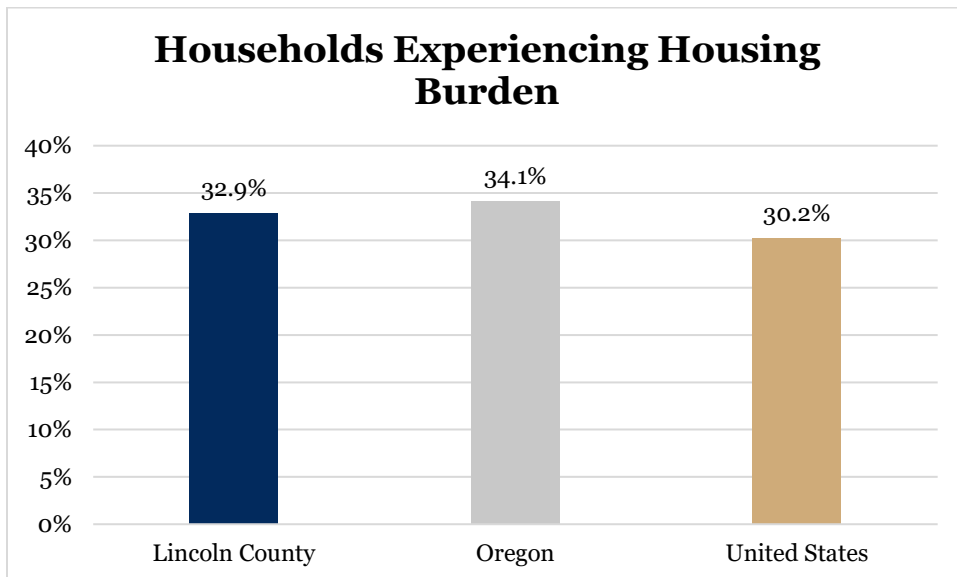


Figure 16 – Percent of Households Experiencing Housing Burden in Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S2503
 Time Period: 2022 – 5 Year Estimates

Definition: Housing burden defined as paying 30% or more of household income on rent/mortgage and utilities.

Transportation

With two intracity, three intercity, and one regional bus route, Lincoln County has a relatively robust public transportation infrastructure by rural standards. Despite this, during community conversations conducted in spring 2023, lack of public transportation was a common concern cited. Additionally, Latinx and Indigenous communities in Lincoln County report being unaware of public transportation or not knowing how to access or use the service (Mendez, 2020).

Lincoln City and Newport are the only communities with dedicated intracity bus routes with busses running approximately once every hour between 7am and 5:30pm. The South County route runs four loops daily between Newport and Yachats, operating from 7am to 6:20pm. The North County route connects Lincoln City/Rose Lodge to Newport with five daily trips from 5:25am to 8:45pm. The East County route runs six trips daily between Newport and Siletz from 6:45am to 8:22pm. The Coast to Valley Express links Albany/Corvallis and Newport, with four daily trips each way from 6:15am to 6:47pm, facilitating access to medical facilities, job training, shopping, recreation, and education. All bus routes within the county operate seven days per week, except on select Federal Holidays. Fares for intracity routes are \$1.00 per trip. The North County, South County, East County, and Coast to Valley Express routes each use a zone system to calculate trip fares, with riders paying \$1 per zone, with a maximum one-way fare of \$4, \$3, \$2, and \$6, respectively. Discounted fares are available for riders who prepurchase their fares.

Lincoln County also operates two Dial-A-Ride (DAR) services in Lincoln City and Newport which operate from 8am to 3:30pm on weekdays, offering curb-to-curb transportation. The DAR services can be utilized by anyone, and service is provided on a first-call, first-serve basis. Fares for DAR are \$1.00 per ride, with additional stops costing an additional \$1.00. Fare coupons can be utilized for DAR services as well. County residents predominantly utilize DAR to access medical appointments, grocery shopping, and community and senior centers.

In addition to county-provided public transportation options, Oregon Health Plan (OHP) recipients can access free transportation to medical appointments. This service is provided by Cascades West Ride Line and contracted to local transportation providers for patients traveling to and from covered non-emergency medical services. It's advised that rides be scheduled at least two to three days in advance to assure availability.

Health Insurance Coverage

Health insurance coverage is a pivotal factor in patients' ability to access healthcare services. It is well documented that expanding health insurance coverage improves healthcare access and increases the utilization of healthcare services by mitigating barriers to care (Gaffney et al., 2019). The Affordable Care Act (ACA), which passed in 2010, was instrumental in expanding health insurance access, especially for low-income and other marginalized populations (Kominski et al., 2017). The ACA increased insurance coverage through measures such as Medicaid expansion, extending coverage to dependent children up to age 26, ensuring coverage for individuals with pre-existing conditions, and establishing health insurance marketplaces with tax credits for middle-income Americans (U.S. Department of Health and Human Services, 2022). As a Medicaid expansion state, Oregon has witnessed a significant reduction in its uninsured population following the passage of the ACA, a trend mirrored in Lincoln County.

As of 2022, 8.9% of Lincoln County residents lacked health insurance, surpassing state and national averages of 6.5% and 8.7%, respectively. Reflecting state and national trends, individuals over 65, who are eligible for Medicare, exhibit the lowest uninsured rate at 0.5%, while those under 19 experience a similarly low uninsured rate of 2.9%, largely attributed to the expansion of the Children's Health Insurance Program under the ACA (Alker & Chester, 2016). Conversely, the 19-64 age group in Lincoln County faces the highest uninsured rate, exceeding the uninsured rates for this population in Oregon and the US.

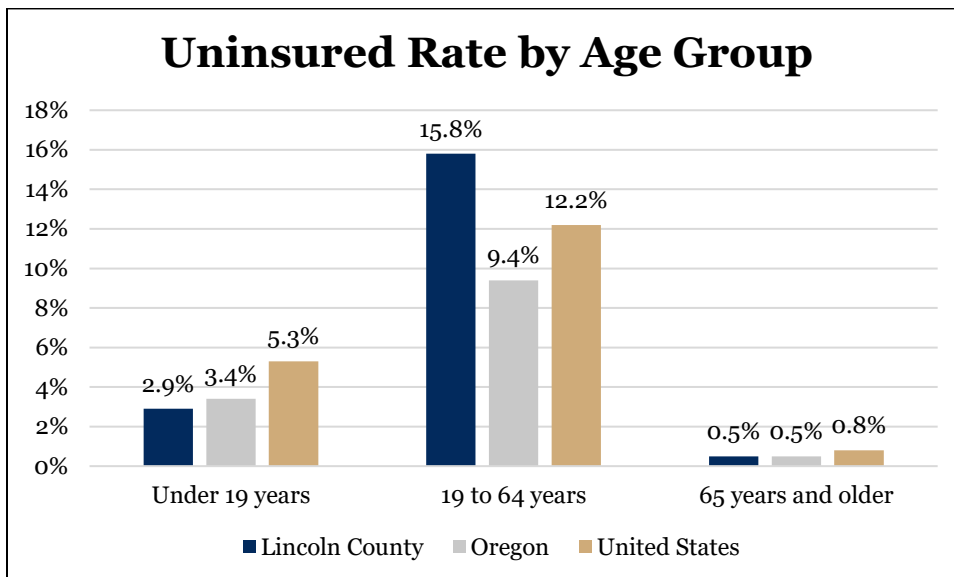


Figure 19 – Percentage of the Population Without Insurance Coverage by Age Group for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S2701

Time Period: 2022 - 5 Year Estimates

Several noteworthy trends emerge regarding the demographic groups in Lincoln County with the lowest rates of insurance coverage. As shown in **Figure 20**, almost 43% of Lincoln County residents who are non-citizens lack insurance coverage. High uninsured rates among non-citizens is a trend mirrored in Oregon and the US, however, the uninsured rate among this population is over 50% higher in Lincoln County than Oregon on average. As non-citizens are also less likely to speak English, this confluence of factors severely influences this population’s access to care within the county.

In 2021, the Oregon Legislature passed House Bill 3352 which created the Healthier Oregon Program (Oregon Health Authority, 2023). This program took effect in July 2023 and expands full Medicaid coverage to all persons living in Oregon, regardless of citizenship status, provided they meet the income and other eligibility criteria to enroll in OHP (Oregon Health Authority, 2023). As knowledge of this program increases across the state it is anticipated that the uninsured rate for non-citizens will begin to decline.

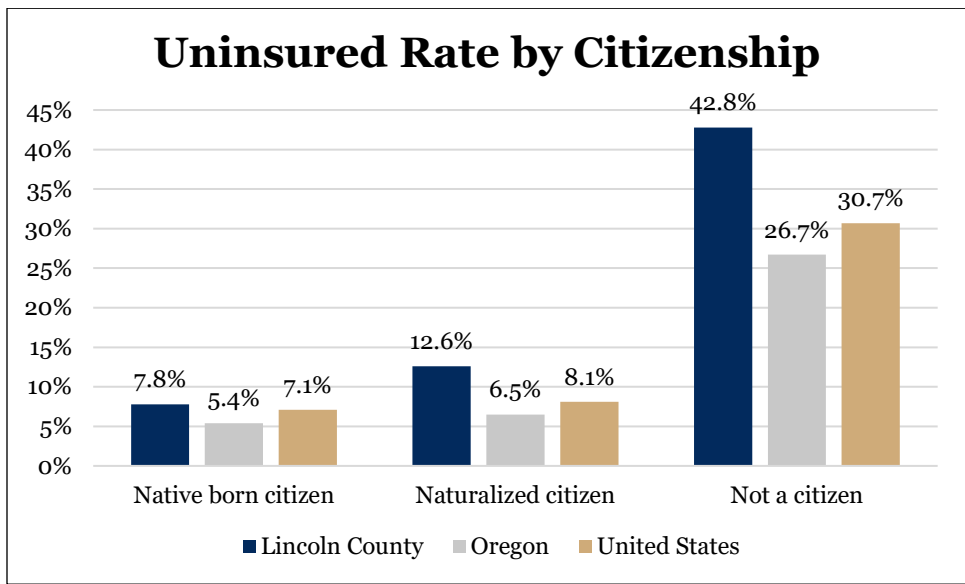


Figure 20 – Percentage of the Population Without Insurance Coverage by Citizenship Status for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S2701
 Time Period: 2022 - 5 Year Estimates

Another noteworthy pattern in the uninsured population in Lincoln County is the percentage of employed persons lacking insurance coverage. As shown in **Figure 21**, over 18% of county residents who are employed lack health insurance coverage. This percentage is higher than both unemployed residents in the county and county residents who are not in the labor force. The high uninsured rate among employed residents may be explained in part by the major industries operating within the county. Self-employed

workers, including those employed within the commercial fishing industry, may opt not to purchase insurance coverage through the Marketplace. In addition, the size, seasonality, and part-time nature of some of the county’s tourist and service industry jobs allow employers to opt out of providing health insurance to its employees. The ACA requires employers with at least 50 employees to offer health insurance coverage to employees regularly scheduled to work at least 30 hours per week (Congressional Research Service, 2016). Smaller employers can choose to provide insurance coverage but there is no requirement for them to do so (Su et al., 2019).

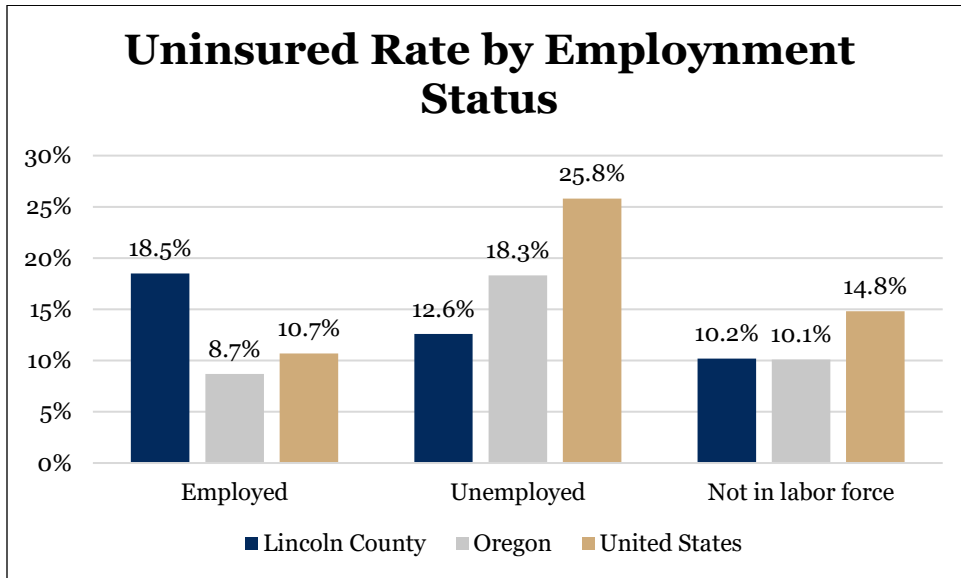


Figure 21 – Percentage of the Population Without Insurance Coverage by Employment Status for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S2701
 Time Period: 2022 - 5 Year Estimates

Another notable pattern is the percentage of residents without health insurance relative to FPL thresholds. Residents of Lincoln County making less than 138% the FPL experience a higher uninsured rate than Oregon on average. The ACA expanded Medicaid income eligibility requirements up to 138% of the FPL. This indicates that there are many Lincoln County residents who are eligible for Medicaid that aren’t enrolled. Lincoln County residents at the opposite end of the income spectrum also experience uninsured rates above that of Oregon’s average. Those making 400% of the FPL or more have an uninsured rate twice that of Oregon.

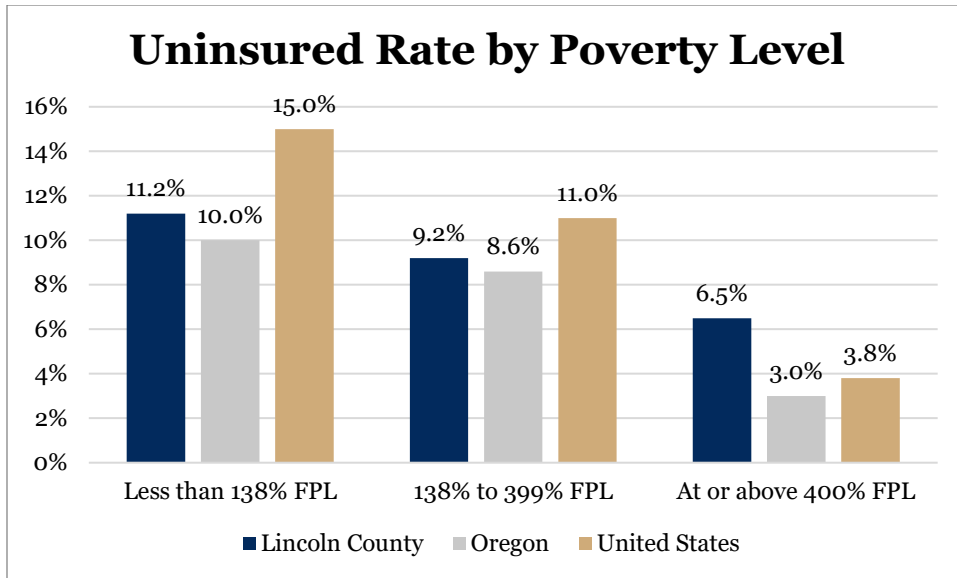


Figure 22 – Percentage of the Population Without Insurance Coverage by Federal Poverty Level Threshold for Residents of Lincoln County, Oregon, and the United States

Data Source: United States Census Bureau, American Community Survey, Table S2701
 Time Period: 2022 - 5 Year Estimates

Capacity of the County Health System

Healthcare Outlets

Primary Care

Lincoln County has broad geographic distribution of primary care providers, with at least one primary care outlet in Lincoln County's five largest population centers. The cities of Newport and Lincoln City have the highest density of primary care providers. More rural areas of Lincoln County including Yachats, Otis, Tidewater, Logsdan, Nashville, and Eddyville noticeably lack access to primary care outlets within their communities.

Density of Primary Care Outlets

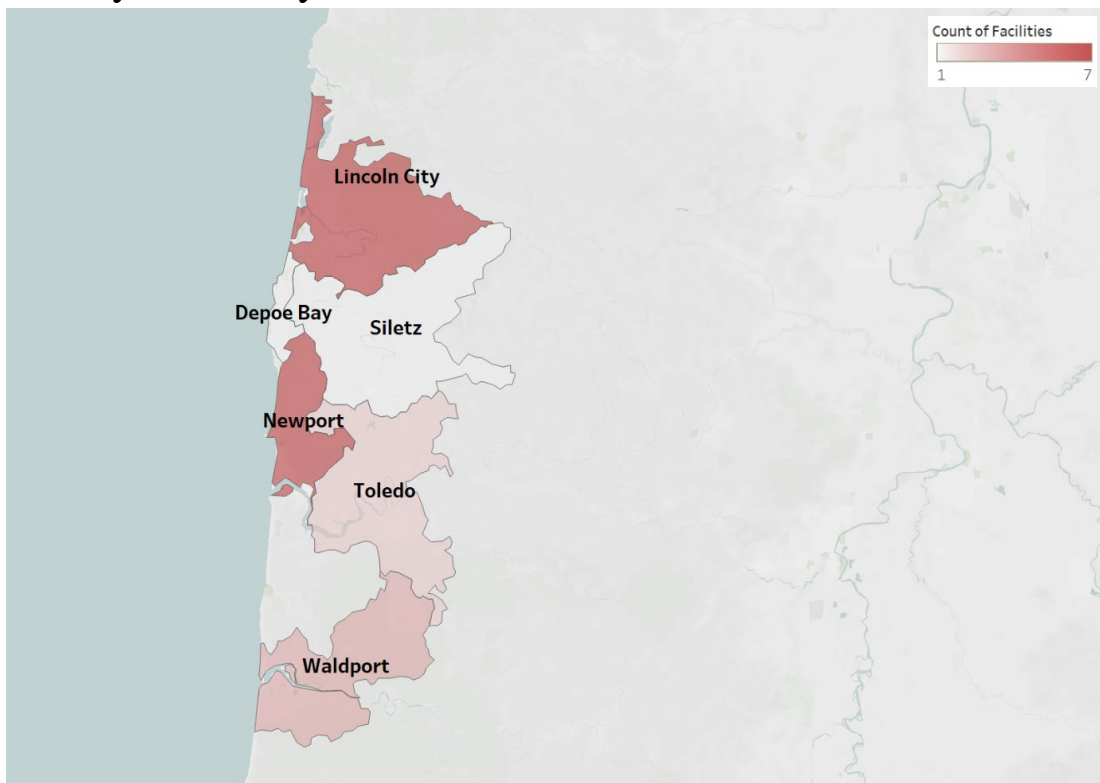


Figure 23 – Density of Primary Care Outlets in Lincoln County by Geographic Location

Data Source: Lincoln County Public Health, contact for additional information

Time Period: Spring 2024

The largest providers of primary care services in Lincoln County include Samaritan Health Services, the Lincoln Community Health Center, and the Siletz Community Health Clinic.

Samaritan Health Services operates 41 distinct practices in Lincoln County, with locations in Lincoln City, Newport, Depoe Bay, Toledo, and Waldport. Of these 41

practices, eight offer primary care services. These locations include the Samaritan Coastal Clinic in Lincoln City, Samaritan Depoe Bay Clinic, Samaritan Health Center in Newport, Samaritan Lincoln City Medical Center, Samaritan North Lincoln Hospital in Lincoln City, Samaritan Toledo clinic, Samaritan Waldport Clinic, and Samaritan Pacific Communities Hospital in Newport.

The Lincoln Community Health Center is operated by the county and includes three Federally Qualified Health Centers (FQHCs), two Veterans Administration (VA) clinics, and four School-Based Health Centers (SBHCs). Each of these facilities offers primary care services. The Lincoln Community Health Center has outlets in four Lincoln County towns: FQHCs in Newport, Lincoln City, and Waldport; VA clinics in Newport and Lincoln City; SBHCs at the high schools in Lincoln City, Newport, Toledo, and Waldport.

The Confederated Tribes of Siletz Indians (CTSI) operate the Siletz Community Health Clinic located in Siletz, Oregon. The Siletz Community Health Clinic provides various services including primary care. The clinic provides services to all community members but prioritizes access to specific groups. CTSI members are given priority, followed by members of other Federally Recognized Tribes, and lastly non-Native community members.

While not one of the largest providers of primary care in Lincoln County, Integrity Coastal Health & Wellness provides essential services specifically to trans, non-binary, and genderfluid community members.

Behavioral Health

Behavioral health is a designation of care that encompasses various professions and numerous services. To better represent the geographic availability of services, substance use and recovery services are displayed separately, although they normally fall under the umbrella of behavioral health. **Figure 24** displays behavioral health facilities in Lincoln County. These facilities provide a range of services including individual therapy, group therapy, skills training, medication management, peer support, and/or crisis services. **Figure 24** does not include facilities who strictly serve individuals with substance use disorder, as these facilities are displayed in **Figure 25**. Facilities specializing in substance use and recovery services also provide a range of services, including therapy, skills training, peer support, medication-assisted therapy, and detox services. Most behavioral health outlets in Lincoln County are located in the cities of Newport and Lincoln City. Similar to primary care, numerous rural areas of Lincoln County lack access to behavioral health services.

Density of Behavioral Health Outlets

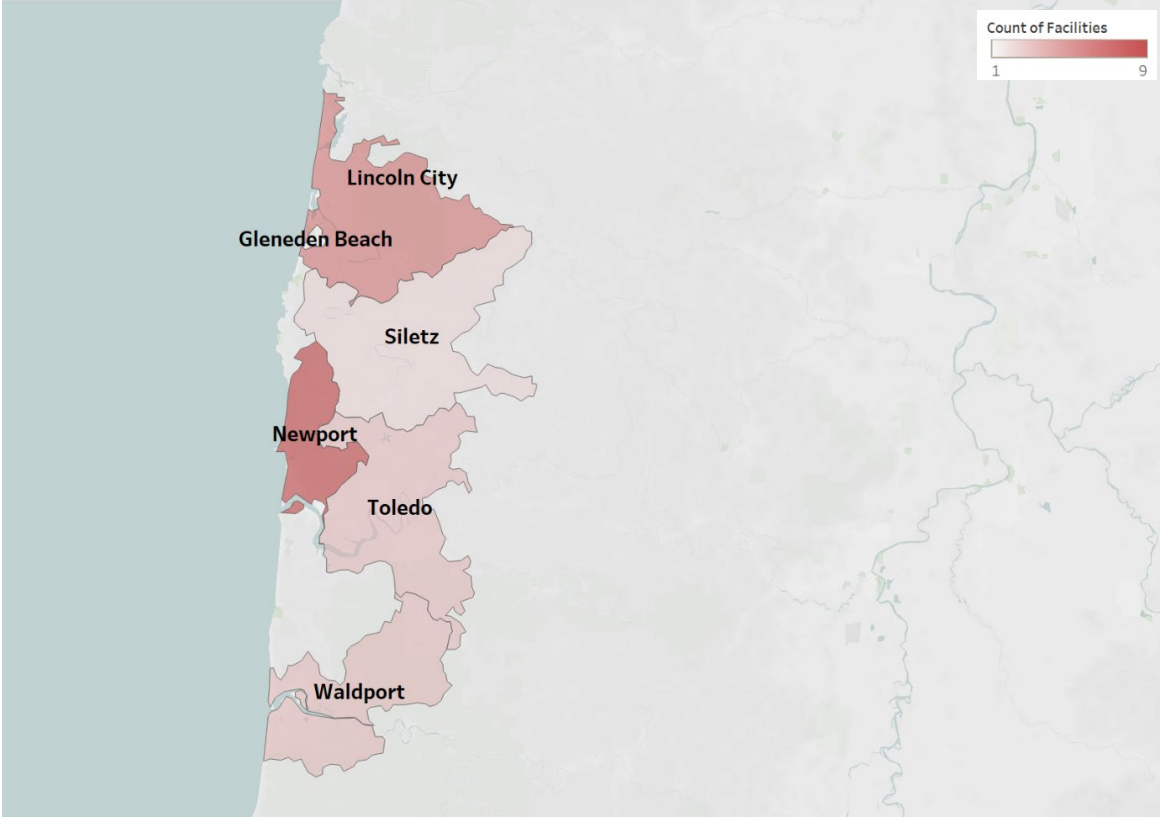


Figure 24 – Density of Behavioral Health Outlets in Lincoln County by Geographic Location

Data Source: Lincoln County Public Health, contact for additional information

Time Period: Spring 2024

Density of Substance Use & Recovery Services



Figure 25- Density of Substance Use & Recovery Service Outlets in Lincoln County by Geographic Location

Data Source: Lincoln County Public Health, contact for additional information

Time Period: Spring 2024

Lincoln County Behavioral Health (LCBH) is operated by Lincoln County and serves as the primary provider of behavioral health services in the county. LCBH offers behavioral health services through its offices in Lincoln City, Newport, and Waldport, as well as through its community outreach team. Although LCBH's services are available to all community members, priority is given to certain populations, including individuals under the care of the Department of Health and Human Services, patients subject to 72-hour holds, and individuals navigating different stages of the justice system.

Samaritan Health Services, the Lincoln Community Health Center, and the Siletz Community Health Clinic all provide behavioral health services in addition to their primary care services. Samaritan Health Services offers psychiatry and/or psychology services at all eight of the locations where primary care services are offered. Samaritan is currently building a 16-bed treatment and recovery facility in Newport, which is expected to open in summer 2024. This outlet will provide residential treatment and

intensive outpatient programs for adults with substance use disorder and will be the only facility of its kind in Lincoln County.

The Lincoln Community Health Center provides behavioral health services at its FQHCs and SBHCs. These facilities provide outpatient services for treatment of acute mental health needs. The Lincoln Community Health Center also operates a program called Bridges to Recovery that provides office-based addiction treatment services in Lincoln City, Newport, and Waldport. The Siletz Community Health Clinic provides various behavioral health services including substance use treatment and adult and youth therapy, primarily to tribal members.

Additional organizations identified as offering behavioral health services in Lincoln County include Whalesong Counseling, Changing Tides Psychiatry, Ocean Mist Counseling and Wellness, Building Blocks Mental Health, Solution Focused Therapy, Olalla Center, Oregon Holistic Counseling, and Pacific Counseling Services. All but two of these organizations are located in either Newport or Lincoln City. Organizations who offer critical services in the areas of substance use recovery in Lincoln County include ReConnections Counseling, Phoenix Wellness Center, Discovery Counseling, CHANCE Recovery, Power House Detox, and Equinox Clinics. Olalla Center operates the only youth day treatment center in the county and Power House Detox is the only residential drug treatment center in the county.

Dental Care

There are approximately 23 dental offices located in Lincoln County, including independent practitioners which aren't indicated in figure 24. The majority of these dental offices are located in the cities of Newport or Lincoln City. Of the 23 dental providers identified, just four accept OHP (Medicaid) insurance. These providers include Willamette Dental and Gentle Dental in Lincoln City, Advantage Dental in Newport, and the Siletz Community Health Clinic in Siletz. As with its other services, the Siletz Community Health Clinic's Dental Clinic prioritizes certain populations. In spring 2024, the Dental Clinic was only accepting dental patients who were tribal members.

Density of Dental Care Outlets



Figure 26 – Density of Dental Care Outlets in Lincoln County by Geographic Location

Data Source: Lincoln County Public Health, contact for additional information

Time Period: Spring 2024

Number of Providers

Lincoln County does not have sufficient providers to meet the healthcare needs of the community. While the county is home to numerous healthcare outlets, providers often split their time across various facilities including facilities located outside of the county.

Table 3 details the number of licensed providers by provider type, the full-time equivalency (FTE) of these providers, and the ratio of the number of providers to the number of patients in Lincoln County and Oregon as a whole. Patient-to-provider ratios that are listed in red indicate that Lincoln County's ratio for this provider type exceeds the Oregon average by over 50%, indicating a substantial shortage of these providers within the county. In contrast, values listed in green indicate provider types where Lincoln County's ratio is below the state average by 50% or more. The two most notable provider-type shortages are physicians and psychologists with the patient-provider ratio exceeding 70% and 286% of the state average, respectively, for these providers.

Furthermore, as shown in **Figure 27**, Lincoln County has fewer primary care

professionals, behavioral health professionals, and dental health professionals per 10,000 population relative to the state average (Oregon Health Authority & Office of Health Analytics, 2023).

| Provider Type | Lincoln County | | | Oregon | | |
|---|-----------------------------|-------------------------|---------------------------|-----------------------------|-------------------------|---------------------------|
| | Number Estimated Practicing | Direct Patient Care FTE | Patient to Provider Ratio | Number Estimated Practicing | Direct Patient Care FTE | Patient to Provider Ratio |
| Medical Providers | | | | | | |
| Physicians | 119 | 82.6 | 610 | 14956 | 11,861.9 | 358 |
| Physician Assistants | 30 | 21.0 | 2,399 | 2312 | 1,984.2 | 2,139 |
| Mental Health Providers | | | | | | |
| Psychologists | 18 | 10.8 | 11,938 | 1928 | 1,018.0 | 4,169 |
| Counselors & Therapists | 54 | 32.3 | 1,560 | 4669 | 2,460.4 | 1,725 |
| Nursing Professionals | | | | | | |
| Nurse Practitioners | 40 | 34.6 | 1,456 | 4611 | 3,409.8 | 1,245 |
| Registered Nurses | 463 | 251.7 | 200 | 49501 | 28,111.8 | 151 |
| Certified Nursing Assistants | 104 | 80.1 | 629 | 15507 | 12,082.7 | 351 |
| Clinical Nurse Specialists | 2 | 1.0 | 50,387 | 113 | 31.1 | 136,238 |
| Certified Registered Nurse Anesthetists | 8 | 7.1 | 7,097 | 468 | 427.2 | 9,930 |
| Licensed Practical Nurses | 28 | 16.6 | 3,035 | 4755 | 3,032.0 | 1,400 |
| Social Workers | | | | | | |
| Licensed Clinical Social Workers | 34 | 18.9 | 2,666 | 4418 | 2,327.4 | 1,823 |
| Clinical Social Work Associates | 6 | 1.7 | 29,639 | 1137 | 726.8 | 5,839 |
| Dental Professionals | | | | | | |
| Dentists | 30 | 20.7 | 2,434 | 2978 | 2,421.6 | 1,753 |
| Dental Hygienists | 32 | 20.3 | 2,482 | 3162 | 2,087.3 | 2,033 |

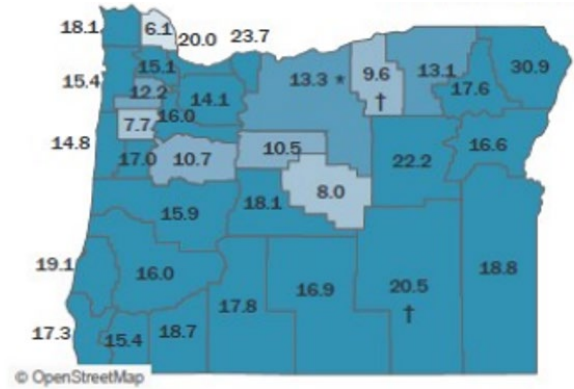
Table 3 – Healthcare Provider Numbers and Ratios in Lincoln County and Oregon by Provider Type

Source: Oregon Health Authority Workbook: Oregon’s Licensed Health Care Workforce
Time Period: 2022

Primary care professionals include physicians and physician assistants who specialize in family practice, general practice, geriatric medicine, pediatrics, adolescent medicine, internal medicine, or obstetrics and gynecology; nurse practitioners who specialize in family practice, geriatrics, pediatrics, internal medicine, or Obstetrics/Gynecology/women’s health; and naturopathic physicians who specialize in family medicine, pediatrics, geriatrics or obstetrics.

Statewide ratio: 16.2 providers per 10,000 population

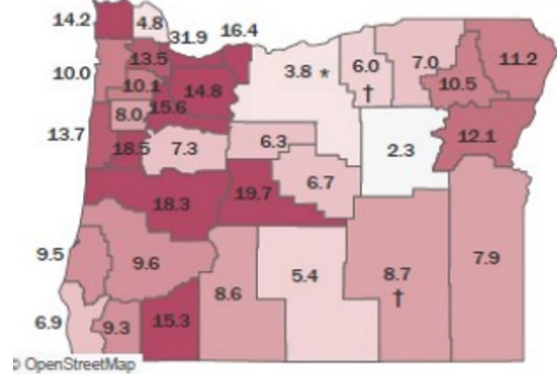
Lincoln County ratio: 14.8 providers per 10,000 population



Behavioral health professionals include all psychologists, counselors and therapists, licensed clinical social workers, and clinical social work associates; physicians and physician assistants who specialize in psychiatry (addiction, neurology, child, adolescent, geriatric, or forensic) or psychoanalysis; nurse practitioners who specialize in psychiatry/mental health; and naturopathic physicians who specialize in mental health.

Statewide ratio: 17.1 providers per 10,000 population

Lincoln County ratio: 13.7 providers per 10,000 population



Oral health professionals include dentists who specialize in oral health, pediatric dentistry or public health; and expanded practice dental hygienists who specialize in oral health, pediatric dentistry or public health and who report holding an expanded practice permit.

Statewide ratio: 5.8 providers per 10,000 population

Lincoln County ratio: 4.7 providers per 10,000 population

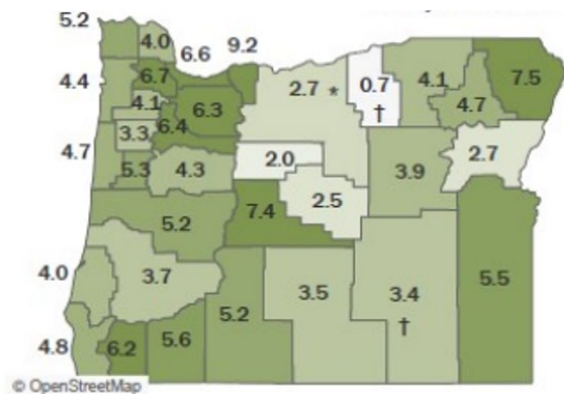


Figure 27 – Ratio of Healthcare Providers to 10,000 Population for Oregon Counties

Source: Oregon Health Authority & Office of Health Analytics, 2023

Time Period: 2022

The above data corroborates qualitative accounts of provider availability in Lincoln County. During a mental health symposium, which brought together 103 representatives of various sectors in 2023, shortages in Lincoln County’s behavioral health workforce was identified as a top factor impacting mental health. During key informant interviews conducted by LCPH as part of the 2021 RHA, nearly every respondent identified the leading healthcare-related challenge in Lincoln County as a shortage of providers. These informants noted issues with both recruiting and retaining providers.

To help aid the recruitment of medical professionals in rural areas across the state, in 2017 the Oregon Legislature approved House Bill 3261, establishing the Healthcare Provider Incentives Program (Oregon Health Authority, n.d.). The program provides loan repayment and loan forgiveness to primary care providers, pharmacists, and dentists who commit to working in a Health Professional Shortage Area (HPSA), which Lincoln County is designated as (Oregon Health Authority, n.d.). While this program is very impactful in provider recruitment, it does little to address provider retention. The program guidelines specify that participants are obligated to practice in a rural area for every year of funding they receive, however, after fulfilling this service requirement they are free to practice elsewhere. As a result, many providers leave the rural community after four years to establish a larger and more profitable practice in an urban community.

Provider Availability

Hours of Operation

Limited provider office hours and availability can be significant barriers to accessing care. Very few of the primary care, behavioral health, and dental providers identified as operating in Lincoln County offer services outside of usual business hours of 8am to 5pm, Monday through Friday. The exceptions include various Samaritan clinic locations, which remain open until 6pm. The Newport FQHC also remains open until 6pm two days a week and opens an hour early at 7am two days a week. LCBH has employees on call 24/7 to respond to mental health needs that rise to the level of a crisis, filling a critical void for those who need immediate attention. Of the 23 dental offices identified in Lincoln County, one provides hours of operation outside of usual hours and offers weekend appointments.

A number of healthcare facilities operating in Lincoln County offer appointments fewer than five days per week and/or offer appointments for less than eight hours per day. The Waldport FQHC is one such facility, operating three days a week. The SBHCs in Lincoln County are only open during the school year, and, even then, for limited hours. Additionally, it’s not uncommon for private dental offices and mental health facilities to operate on a limited schedule.

While not optimal sources of primary care or behavioral health services, there are two urgent care facilities and two emergency departments operating in Lincoln County. These facilities increase access to care outside of usual hours of operation. Continuity of primary care, which includes care received outside usual business hours, is associated with improved patient outcomes and lower ED use for non-urgent problems. Health problems developing outside of usual business hours are a leading cause of ED visits, with nearly 65% of all ED visits occurring between 5pm and 8am or on weekends. Many acute complaints regularly seen in the ED, including stomach and abdominal pain, fever, cough, and headache are commonly managed by PCPs (O'Malley, Samuel, Bond, & Carrier, 2012).

Table 4 identifies the most commonly cited chief complaints among Lincoln County residents presenting at an emergency department in years 2019-2023. Many of the most common reasons for ED visits among Lincoln County residents likely could be managed outside of the ED including abdominal pain, fever, dental pain, and headache. Unnecessary use of the ED is not only a result of limited business hours among healthcare providers, but visits for nonurgent conditions may reflect problems with community access to, and availability of, primary and preventive care, lack of a regular healthcare provider, or limited health insurance coverage (Agency for Healthcare Research and Quality, 2021).

| Chief Complaint | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| 1 | Abdominal pain | Abdominal pain | Abdominal pain | Abdominal pain | Abdominal pain |
| 2 | Chest pain | Chest pain | Chest pain | Chest pain | Chest pain |
| 3 | Shortness of breath | Shortness of breath | Shortness of breath | Shortness of breath | Shortness of breath |
| 4 | Fall | Fall | Fall | Fall | Fall |
| 5 | Back pain | Back pain | Back pain | Back pain | Back pain |
| 6 | Weakness | Vomiting | Vomiting | Cough | Vomiting |
| 7 | Vomiting | Altered mental status | Flank pain | Fever | Weakness |
| 8 | Cough | Weakness | Altered mental status | Vomiting | Wound check |
| 9 | Fever | Flank pain | Weakness | Weakness | Fever |
| 10 | Altered mental status | Fever | Dental pain | Altered mental status | Headache |

Table 4 – Chief Complaint Among Lincoln County Residents Presenting at an Emergency Department (ordered most commonly cited to least commonly cited)

Source: Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE)

Time Period: 2019-2023

Definitions: A chief complaint is a concise statement of the symptoms that caused a patient to seek medical care.

Wait Times

A common concern raised during key informant interviews conducted by LCPH in 2022 was extensive wait times for healthcare services in Lincoln County. This assessment revealed significant variability in wait times by healthcare organization and service type in spring 2024. As discussed in the limitations section of this report, wait time data provides point count data and shouldn't be generalized.

Primary Care

In winter 2024, Samaritan employed 34 providers who practiced primarily in Lincoln County. An additional 28 Samaritan providers were credentialed to practice in Lincoln County but very rarely provided services here. Of the 34 providers who primarily practiced in Lincoln County, 26 were accepting new OHP patients and nine were accepting patients with other types of health insurance. Of the providers accepting OHP,

19 specialized in adult-centered care and seven in pediatric care. Of the providers accepting other insurance types, seven specialized in pediatric care and two specialized in adult-centered care. At the time of this report, adult patients experienced longer wait times than pediatric patients when accessing primary care services through Samaritan. Wait times for patients on OHP were the same as for those with other forms of health insurance.

Figure 28 displays the lag time for establishing care with a primary care provider at a Samaritan facility in Newport or Lincoln City for the six-month period spanning September 2023 to February 2024. Lag time is defined as the median number of days between the date an appointment was scheduled and the date the appointment took place. A shorter scheduling lag reflects better access, as we assume that when someone calls for a new patient appointment, their preference is to schedule it as soon as possible. It's important to note that the data in Figure 26 encompasses the wait times for new pediatric and adult patients.

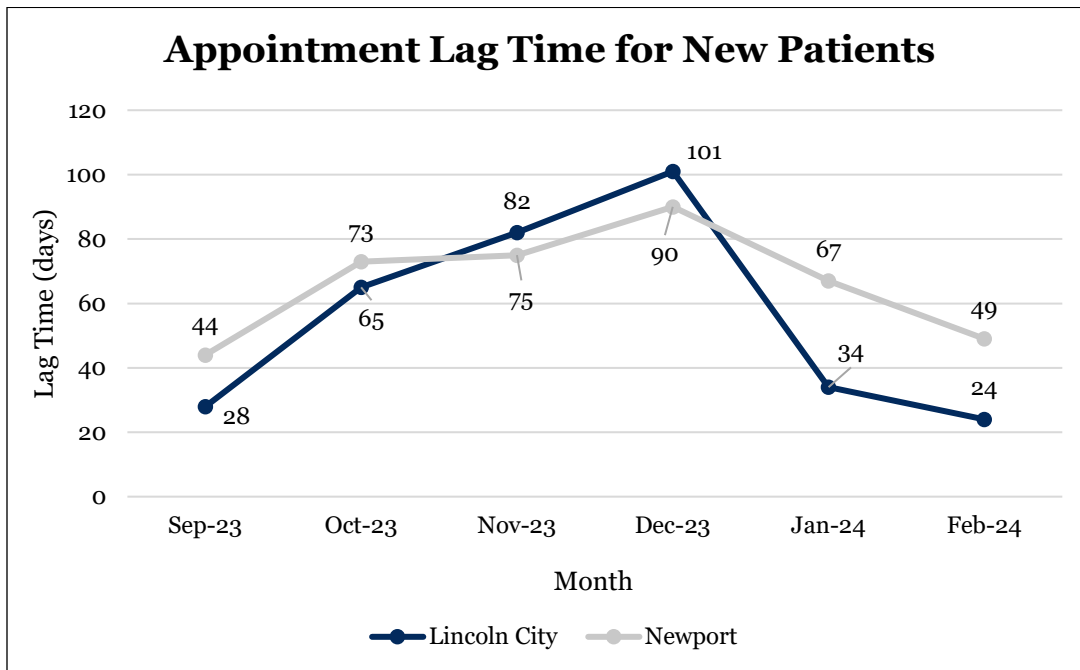


Figure 28 – Appointment Lag Time to Establish Care with Samaritan Primary Care Provider in Lincoln City and Newport

Source: Samaritan Health Services SMG Access PC new patient dashboard

Time Period: September 2023 – February 2024

In spring 2024, the Lincoln Community Health Center employed six primary care providers. Five of these six providers were accepting new patients, resulting in an average wait time of one to three weeks to establish care. Two of these six providers are locum positions, working on short term contracts to help address medical staffing shortages. Locums present some concerns related to the quality of services for reasons including lack of familiarity with local teams, processes, guidelines, and practices. Also,

due to their short tenure, locums can adversely impact continuity of care (Walshe & Ferguson, 2019). It's believed that Lincoln County residents may be unaware that FQHCs provide services to all, regardless of income. FQHCs may be viewed as safety net clinics, and literature has shown that FQHCs possess the potential to mitigate health disparities and enhance health outcomes, especially for underserved populations (Wright et al., 2015). However, the FQHCs operating under the Lincoln Community Health Center provide primary and behavioral health services to all residents of Lincoln County regardless of income.

Wait times for primary care services provided by the Siletz Community Health Clinic were not available at the time of this report.

Behavioral Health

Based on the information gathered, wait times for behavioral health services in Lincoln County reflect national trends. However, unlike other areas of the United States, Lincoln County residents on Medicaid (OHP) face similar wait times for behavioral health services as those with private insurance. This is likely thanks to Oregon's Coordinated Care Organization structure, which integrates physical and mental health.

In spring 2024, Samaritan employed two psychiatrists who primarily practice in Lincoln County, neither of which specialize in child or adolescent psychiatry. There were no Samaritan psychologists who primarily practiced in Lincoln County during this time. Similar to its primary care providers, Samaritan has additional providers credentialed to practice in Lincoln County, but these providers rarely serve the area. Both Samaritan psychiatrists in Lincoln County were accepting new patients at the time of this report.

Lincoln County's FQHCs employed one psychiatric nurse practitioner in spring 2024. Patients seeking acute mental health services from the FQHCs belonging to the Lincoln Community Health Center could establish care within one to two weeks. At the time of this report, neither VA clinic operating in Lincoln County provides behavioral health services. The SBHCs in Lincoln County are staffed with behavioral health providers from the FQHC and LCBH.

As of spring 2024, the Siletz Community Health Clinic is actively recruiting for a behavioral health provider. In the meantime, the clinic is placing patients on a waitlist and making referrals to care.

LCBH's wait times vary depending on the level of care needed. Those in need of crisis services can receive crisis support from LCBH within two hours. Those seeking urgent care can receive support from LCBH within approximately 72 hours. Wait times for those seeking routine care from LCBH face extended wait times of 6-8 weeks at the time of this report.

LCPH contacted a sample of nine behavioral health providers to determine average wait times. Of those contacted, four provided information. Among those, average wait times were below the national average, ranging from 1-2 weeks.

Dental Care

A sample of Lincoln County's dental providers were contacted in spring 2024 to determine an approximate wait time for preventative and diagnostic dental care. More intensive dental services were outside the scope of this report. However, anecdotal qualitative information from community members reveals that those living in Lincoln County often travel outside the county for major restorative care such as dentures, bridges, and crowns.

For those with private dental insurance, wait times ranged quite significantly from two weeks to two months depending on the provider. As mentioned above, three of the 23 dental offices operating in Lincoln County accept OHP insurance. Among these facilities, wait times were much longer, averaging 2-4 months.

There are no VA dental clinics in Lincoln County, impairing access to dental care for veterans who receive dental benefits through the VA. Of note, veterans have multiple avenues for dental coverage and just 15% of veterans enrolled in VA healthcare are eligible for dental benefits through the VA (Disabled American Veterans, 2022). Veterans below 400% the FPL are eligible for dental coverage under OHP through the Oregon Veteran Dental Program.

Access to Language Services

Lincoln County faces significant barriers to providing linguistically appropriate healthcare services. There's a lack of bilingual employees at healthcare facilities in Lincoln County and gaps in the availability of interpretation services among these facilities. An assessment conducted with Lincoln County Spanish and Mam-speaking community members in 2020 revealed a lack of bilingual employees among both medical providers and support staff of healthcare organizations. It was also indicated among the community members assessed that they were more likely to be offered interpretation services during their medical appointment than when speaking with front desk staff (Mendez, 2020). This leads non-English speaking community members to rely on community organizations to schedule healthcare appointments even when healthcare organizations advertise the availability of interpretation services.

The 2020 assessment referenced above (Mendez, 2020) noted that community members have seen improvements in the availability of interpretation services in Lincoln County over time. However, many healthcare organizations utilize virtual interpretation services, and it was indicated that in-person interpretation is preferred.

This may be in part due to technical issues experienced with video interpreters (Mendez, 2020).

Strict Oregon Health Authority (OHA) certification requirements, essential for ensuring interpretation quality, pose challenges to obtaining qualified interpreters by limiting their availability. Interpreters from other states may not meet OHA standards, potentially impacting interpretation quality and availability. Moreover, interpretation services for the Indigenous language Mam are severely limited. There is currently only one OHA-certified Mam interpreter state-wide, and they reside outside of Lincoln County.

Health Outcomes

In alignment with the Millman Model of Access (Millman, 1993), when examining the impact of healthcare access in Lincoln County, two primary indicators were analyzed: use of services and outcomes. The outcomes indicator is based on metrics such as mortality, morbidity, well-being, and functioning. These indicators provide valuable insights into the effectiveness of healthcare delivery and its impact on community well-being.

County Rankings

Lincoln County ranks 27th out of 35 counties in Oregon for the health of its residents and falls in the lowest quartile for measures of both health outcomes and health factors (University of Wisconsin Population Health Institute, 2023). Lincoln County performed worse than the Oregon average on every indicator except the percentage of babies born with low birthweight and incidence of sexually transmitted infections (STIs).

| Health Outcome | Lincoln County | Oregon | United States |
|---|----------------|--------|---------------|
| Premature Death | 8,700 | 6,100 | 7,300 |
| Poor or Fair Health | 14% | 13% | 12% |
| Poor Physical Health Days (in last 30 days) | 3.3 | 2.9 | 3 |
| Poor Mental Health Days (in last 30 days) | 5 | 4.6 | 4.4 |
| Low Birthweight | 7% | 7% | 8% |

Table 5 – Health Outcome Measures for Lincoln County, Oregon, and the United States

Source: University of Wisconsin Population Institute, 2023

Time Period: 2014-2020

Definitions: Premature death is defined as years of potential life lost before age 75 per 100,000 population

Healthcare Utilization

Table 6 highlights the manifestation of the barriers to care explored earlier in this report. Barrers including lack of health insurance, inadequate provider supply, and limited healthcare facility hours of operation have implications for the utilization of healthcare services, particularly preventive health services.

| Healthcare Utilization Measure | Lincoln County | Oregon |
|--|-----------------------|---------------|
| Percent of adults who received cholesterol screening within the past five years | 84.3%* | 86.6% |
| Percent of women ages 50-74 who received a mammogram in the past two years | 69.8%* | 78.9% |
| Percent of adults who visited a doctor for a routine check-up within the past year | 69.6%* | 71.8% |
| Percent of adults who visited a dentist in the past year | 62.2%* | 67.7% |

Table 6 – Healthcare Utilization Measures for Lincoln County and Oregon

Source: Behavioral Risk Factor Surveillance System PLACES

Time Period: 2020

**Note: Calculated via small area estimation methods using all national 2020 BRFS survey responses statistically adjusted for county-level demographics.*

Figure 29 and Figure 30 detail trends in emergency department (ED) and urgent care visits over the last five years using syndromic surveillance data collected from ESSENCE. ED visits in Lincoln County declined during 2020, mirroring national trends. Barrett et al. (2022) found that across 29 states, ED visits declined by 25.7% between April and December 2020, relative to these months in 2019. In comparison, urgent care visits in Lincoln County increased beginning in 2019, with a steep increase from 2020 to 2021. These trends in ED and urgent care visits from 2019 to 2023 were largely influenced by the COVID-19 pandemic.

As shown in **Figure 29**, from 2019 to 2023, residents of Lincoln County had annual ED visits ranging from 22,676 in 2020 to 28,432 in 2023. **Figure 30** expresses this same data as a rate per 100 persons. Residents of Lincoln County had ED visits ranging from 46 visits per 100 persons (2020) to 58 visits per 100 persons (2019). This rate is well above the national average for urban areas of 42.8 visits per 100 persons, but below the national average for rural areas of 64.5 per 100 persons, although it should be noted that this data is from January 2005 to December 2016 (Greenwood-Ericksen & Kocher, 2019). ED use patterns are reflective of the communities they serve. Rural areas that frequently have poorer healthcare access often experience higher ED visit rates due to this resource filling the role of a safety net provider (Greenwood-Ericksen & Kocher, 2019). Lincoln County’s ED visit rates indicate above-average healthcare access relative to other rural areas however, this data point should not be used in isolation.

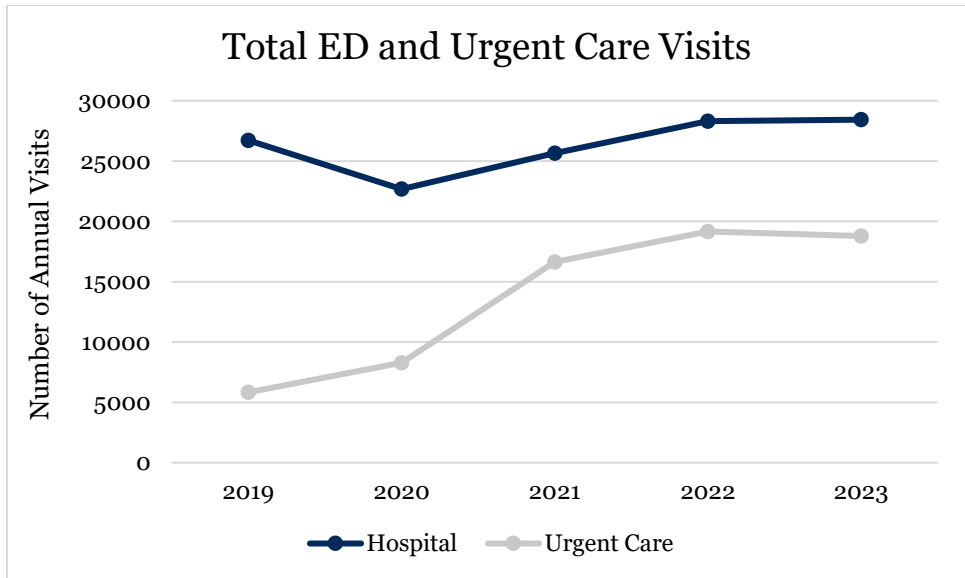


Figure 29 – Number of Annual Visits to Lincoln County Emergency Departments and Urgent Care Facilities

Source: Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE)

Time Period: 2019-2023

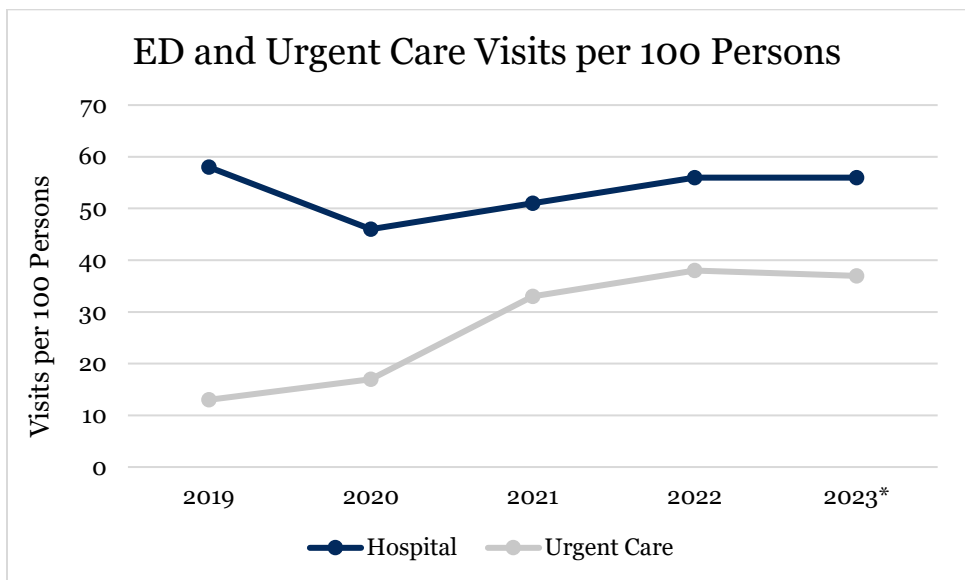


Figure 30 – Annual Visits to Lincoln County Emergency Departments and Urgent Care Facilities per 100 Persons

Source: Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE)

Time Period: 2019-2023

*American Community Survey 2023 population estimates were not available at the time of data analysis, therefore 2022 population estimates were used to calculate 2023 rates.

Health Behaviors

Assessing healthcare access in alignment with the Millman Model of Access (Millman, 1993) involves examining a range of health behavior indicators that reflect the availability, affordability, and utilization of healthcare services within communities. The relevant indicators are shown in **Table 7** and were selected as they affect health outcomes as defined in the Millman Model of Access (Millman, 1993). High rates of harmful health behaviors may signal challenges accessing health education resources often provided in a primary care setting or challenges accessing behavioral health services. It is important to recognize that many social determinants of health also impact these behaviors. Information in **Table 7** signals that Lincoln County may face access challenges manifesting in rates that exceed that of the state in nearly all health behaviors identified.

| Health Behaviors | Lincoln County | Oregon | United States |
|---|----------------|--------|---------------|
| Adult Smoking | 17%* | 14% | 16% |
| Adult Obesity | 32% | 28% | 32% |
| Physical Inactivity | 19% | 18% | 22% |
| Excessive Drinking | 21% | 20% | 19% |
| Sexually Transmitted Infections (per 100,000 population) | 200.2 | 376.0 | 481.3 |
| Teen Births (per 1,000 females ages 15-19) | 24 | 15 | 19 |

Table 7 – Health Behaviors Measures for Lincoln County, Oregon, and the United States

Source: University of Wisconsin Population Institute, 2023

Time Period: 2014-2020

*The Oregon Health Authority records Lincoln County adult smoking rates consistently above the source cited in table 7. To maintain consistency in the time period of table 7, University of Wisconsin Population Institute data has been used despite this discrepancy.

The current Centers for Disease Control and Prevention recommendations are for children to be fully vaccinated by age two against Diphtheria, Tetanus, Pertussis, Polio, Measles, Mumps, Rubella, Hib, Hepatitis B, Varicella, and Pneumococcal conjugate. This combination of vaccines is known as the 4:3:1:3:3:1:4 series. While some parents may choose not to vaccinate their children, vaccination status serves as a reliable indicator of healthcare access (Hofstetter & Schaffer, 2021). In the United States, vaccinations are predominantly administered at primary care offices (Hofstetter & Schaffer, 2021). However, not all children have access to a primary care provider. Even among those who do, families often encounter hurdles in obtaining care, such as limited office hours, challenges with scheduling appointments, and difficulties with

transportation, issues that are particularly salient in Lincoln County. The persistently lower childhood vaccination rates among residents of Lincoln County compared to the state average underscore the pressing need for targeted interventions to address identified barriers and improve healthcare access within the community.

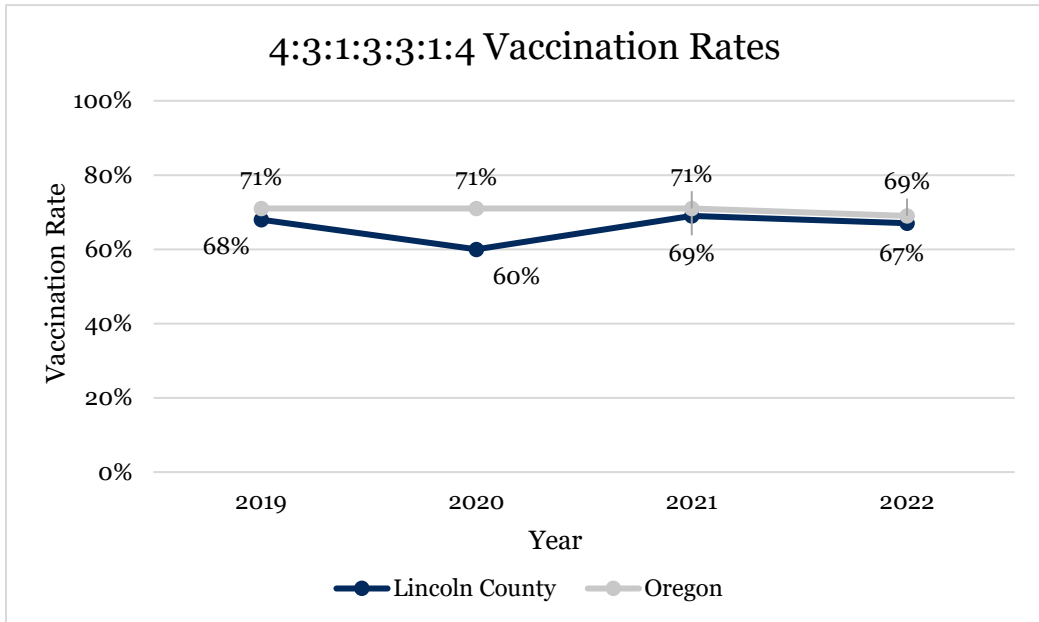


Figure 31 – Percent of two-year-old children up to date with the 4:3:1:3:3:1:4 vaccine series

Source: Oregon Immunization Program, Early Childhood Immunization Data
Time Period: 2019-2022

Emerging Issues and Areas of Opportunity

Emerging Issues in Access to Healthcare

The dominant emerging issue surrounding access to healthcare within Lincoln County is the insufficient number of primary care and mental health providers to meet community members' needs. Lincoln County already has a shortage of providers as shown in **Table 3**. In April 2024, the Adventist Health Clinic closed. As one of the major healthcare providers in this area, this closure will further restrict the availability of services in Lincoln County. Adventist Health played a vital role in the county's healthcare infrastructure as one of three urgent care clinics available. With access to primary care services being so limited across the county, urgent care clinics provide a crucial safety net to ensure community members can meet their healthcare needs.

Additionally, the shortage of providers is expected to be exacerbated by the rollout of the Healthier Oregon Program which will expand OHP coverage to all Oregon residents, regardless of immigration status, so long as they meet the other Medicaid eligibility criteria. There are approximately 1,500 non-citizens currently residing within Lincoln County and it is well documented that individuals with health insurance coverage are far more likely to utilize healthcare services (Farrell & Gottlieb, 2020; U.S. Census Bureau, 2023). Notably, the Healthier Oregon Program does nothing to increase the number of healthcare providers practicing within the state. Therefore, the expected result is a substantial increase in demand for healthcare services across the county with no corresponding mechanism to increase supply, leading to longer wait times for patients.

In the short run, this increased demand for healthcare services resulting from the Healthier Oregon Program will be balanced by a separate but related emerging threat to healthcare access in the county, Medicaid redetermination. Medicaid redetermination in Oregon refers to the periodic assessment conducted by OHA to confirm the continued eligibility of individuals enrolled in OHP. If individuals are determined to no longer meet the eligibility criteria during this process, they may lose their Medicaid coverage. Oregon Medicaid plans are required to complete the redetermination process every 12 months for adult recipients, and every 24 months for most minor recipients.

Redetermination was paused at a national level by the Family First Coronavirus Response Act in response to the COVID-19 Public Health Emergency, a provision known as continuous enrollment (Diana et al., 2023). Continuous enrollment came to an end in March 2023, requiring every Medicaid enrollee in Oregon to undergo redetermination between April 2023 and January 2024 (Diana et al., 2023; Health Share of Oregon, 2023). A nationwide study done by the Kaiser Family Foundation found varying levels of awareness among enrollees regarding the resumption of redetermination, with some facing barriers in the renewal process, including difficulty understanding notices, long processing times, and challenges accessing call centers (Diana et al., 2023).

Furthermore, disenrolled participants reported loss of coverage for various reasons and

encountered out-of-pocket costs for necessary medical care during gaps in coverage (Diana et al., 2023). The reinstatement of Medicaid redetermination processes presents an emerging issue affecting access to care in Lincoln County. As enrollees navigate the renewal process, barriers such as communication challenges and gaps in coverage pose significant obstacles to maintaining consistent access to healthcare services. This challenge is not unique to Lincoln County but given the county's large proportion of Medicaid recipients, this will inevitably impact the health of many county residents.

Areas of Opportunity

This assessment sought to gain an understanding of the healthcare access challenges facing Lincoln County. While numerous sources of information were consulted as part of this assessment, there are various topics of interest that weren't broached due to the limited scope of the report. Additional opportunities for further assessment include:

- **Youth mental health services-** Lincoln County would benefit from more in-depth assessment of the availability of youth mental health services. While some information on youth services was included within this report, more detail is warranted, especially considering the documented worsening of youth mental health as a result of pandemic-era social isolation (Bell et al., 2023; Brannen et al., 2023).
- **Cultural appropriateness-** Cultural appropriateness and linguistic appropriateness are often considered congruently. While linguistic appropriateness was touched on within this assessment, the topic of cultural appropriateness wasn't broached. Considering the rich cultural diversity of Lincoln County, assessment of cultural appropriateness would be of benefit.
- **Specialty health services-** Specialty healthcare services were beyond the scope of this assessment. However, preliminary information gathered during this assessment suggests that Lincoln County residents commonly travel outside of the county for certain specialty services. This preliminary finding should be explored further.
- **Substance use and recovery services-** While substance use and recovery services were assessed under the umbrella of behavioral health services, Lincoln County would benefit from a more in-depth investigation of these services considering the prevalence of substance use in the county.

Conclusion

Lincoln County's healthcare landscape is multifaceted, influenced by a variety of demographic and social factors. The county's unique demographics underscore the heightened demand for healthcare services. With a higher proportion of older adults, female residents, veterans, and individuals with disabilities, there is an increased need for healthcare resources and services. Additionally, the county's racial and ethnic diversity, along with a substantial population speaking languages other than English, underscores the necessity for culturally competent and linguistically appropriate care.

Furthermore, social determinants of health exacerbate healthcare challenges in Lincoln County. Relatively high unemployment rates, significant wealth disparity, housing instability, and extreme childhood poverty rates all negatively impact health, making the community vulnerable to disease and disability and in turn increasing the demand for healthcare services. Community members often highlight the restricted availability of public transportation as a major obstacle to accessing healthcare. This issue is particularly salient considering the finding that the majority of healthcare facilities are concentrated in the cities of Newport and Lincoln City.

Health insurance coverage is a crucial consideration in the evaluation of access to healthcare. Ability to pay is a major factor influencing healthcare utilization as evidenced by its inclusion within both Levesque's Conceptual Framework of Access to Health (Lévesque et al., 2013) and the Millman Model of Access (Millman, 1993). Lincoln County grapples with a significantly higher uninsured rate compared to the Oregon average. Specifically, Lincoln County's uninsured rate stands at 8.9%, notably surpassing Oregon's rate of 6.5%. Certain populations within Lincoln County face even steeper uninsured rates: 15.8% of 19–64-year-olds are uninsured, 42.8% of non-citizens are uninsured, and 18.5% of employed persons are uninsured. Consequently, these populations encounter a disproportionate barrier in accessing healthcare.

Additional factors that influence access to care in Lincoln County are shortages of healthcare providers, limited facility hours of operation, and extended wait times for appointments. Chief among these barriers to accessing care is the shortage of healthcare providers. Lincoln County faces shortages in numerous provider types, the most extreme being physicians and psychologists, with the patient-provider ratio exceeding 70% and 286% of the state average, respectively, for these providers. There are also few providers of healthcare services in Lincoln County who offer hours of operation outside of usual business hours, which greatly constrains access and leads to unnecessary use of the ED. Extended wait times for OHP members seeking dental services and lack of behavioral health services for those seeking care through the VA are also of paramount concern. A positive finding to emerge from this report was that those on OHP seeking primary care or behavioral health services didn't seem to experience longer wait times than those with private health insurance.

Lincoln County faces substantial obstacles in providing linguistically appropriate healthcare to those who don't speak English fluently. While the large healthcare facilities operating within the county have interpretation and translation resources at their disposal, reliance on virtual interpretation services and strict certification requirements at the state level hinder effective communication among non-English speakers. This is especially true for communities who speak less common languages, such as the Indigenous language Mam. Consequently, non-English-speaking patients encounter challenges scheduling appointments and rely on community-based organizations to assist, exacerbating disparities in healthcare access within the county.

These healthcare access challenges contribute to Lincoln County's poor health ranking, placing 27th out of 35 counties in Oregon and falling within the lowest quartile for both health outcomes and health factors. The county performs worse than Oregon in numerous indicators, including adult smoking, obesity, and physical activity.

Furthermore, the county's notably low rates of healthcare utilization, evidenced by lower percentages of adults receiving cholesterol screenings or routine check-ups compared to the state average, underscore the barriers residents face in accessing healthcare services. The high patient-to-provider ratio exacerbates these challenges, leading to delays in care and potentially worsening health outcomes. Additionally, consistently lower childhood vaccination rates in Lincoln County compared to the state average suggest limited access to preventive care services among youth.

The above findings suggest that Lincoln County would benefit from concerted efforts to improve access to primary care, behavioral health, and dental care within the county. The findings within this report reveal various avenues for improving access to care within Lincoln County including increasing health insurance coverage, most notably among non-citizens who are now eligible for OHP, addressing the shortage of primary care and mental health providers, expanding healthcare facility's hours of operation, and improving access to linguistically and culturally appropriate healthcare services.

References

- Agency for Healthcare Research and Quality. (2021). *Most Frequent Reasons for Emergency Department Visits*. Agency for Healthcare Research and Quality.
- Alker, J., & Chester, A. (2016). Children's health coverage rate now at historic high of 95 percent. In *Georgetown University Health Policy Institute Center for Children and Families*. Retrieved February 15, 2024, from <https://www.health4allkids.org/wp-content/uploads/2018/01/Kids-ACS-update-11-02-1.pdf>
- American Academy of Family Physicians. (2022, October 3). Appointment wait times increase across specialties, but not in family medicine. *Quick Tips*. Retrieved March 3, 2024, from <https://www.aafp.org/pubs/fpm/blogs/inpractice/entry/wait-times.html>
- Barrett, M., Owens, P., & Roemer, M. (2022). Changes in Emergency Department Visits in the Initial Period of the COVID-19 Pandemic (April–December 2020), 29 States. In *Agency for Healthcare Research and Quality (STATISTICAL BRIEF #298)*. Retrieved March 1, 2024, from <https://hcup-us.ahrq.gov/reports/statbriefs/sb298-COVID-19-ED-visits.jsp>
- Bell, I., Nicholas, J., Broomhall, A., Bailey, E., Bendall, S., Boland, A., Robinson, J., Adams, S., McGorry, P., & Thompson, A. (2023). The impact of COVID-19 on youth mental health: A mixed methods survey. *Psychiatry Research*, *321*, 115082. <https://doi.org/10.1016/j.psychres.2023.115082>
- Bertakis, K. D., Azari, R., Helms, L., Callahan, E. J., & Robbins, J. A. (2000). Gender differences in the utilization of health care services. *PubMed*, *49*(2), 147–152. <https://pubmed.ncbi.nlm.nih.gov/10718692>
- Betancourt, J., Dolezel, D., Shanmugam, R., Pacheco, G. J., Granados, P. S., & Fulton, L. V. (2023). The Health Status of the US Veterans: A Longitudinal Analysis of Surveillance Data Prior to and during the COVID-19 Pandemic. *Healthcare*, *11*(14), 2049. <https://doi.org/10.3390/healthcare11142049>
- Betancourt, J., Granados, P. S., Pacheco, G. J., Reagan, J., Shanmugam, R., Topinka, J. B., Beauvais, B., Ramamonjiarivelo, Z., & Fulton, L. V. (2021). Exploring Health Outcomes for U.S. Veterans Compared to Non-Veterans from 2003 to 2019. *Healthcare*, *9*(5), 604. <https://doi.org/10.3390/healthcare9050604>
- Brannen, D. E., Wynn, S., Shuster, J. L., & Howell, M. (2023). Pandemic isolation and mental health among children. *Disaster Medicine and Public Health Preparedness*, *17*. <https://doi.org/10.1017/dmp.2023.7>
- Congressional Research Service. (2016). The Affordable Care Act's (ACA) employer shared responsibility determination and the potential employer penalty. In *Congressional Research Service* (No. R43981). Retrieved February 16, 2024, from <https://crsreports.congress.gov/product/pdf/R/R43981>

- Daniels, N. (1982). Equity of access to health care: Some conceptual and ethical issues. *The Milbank Memorial Fund Quarterly*, 60(1), 51.
<https://doi.org/10.2307/3349700>
- Diana, A., Tolbert, J., Rudowitz, R., & Corallo, B. (2023, November 8). *Navigating the unwinding of Medicaid Continuous enrollment: A look at enrollee Experiences* | KFF. KFF. <https://www.kff.org/medicaid/report/navigating-the-unwinding-of-medicaid-continuous-enrollment-a-look-at-enrollee-experiences/#:~:text=During%20the%20COVID%2D19%20pandemic,informed%2C%20worried%20about%20losing%20coverage.>
- Disabled American Veterans. (2022, July 12). *More Access to Veterans Dental Clinics*. Retrieved from DAV: <https://www.dav.org/learn-more/news/2022/expanding-va-dental-care/#:~:text=Just%2015%25%20of%20the%20more,that%20would%20significantly%20increase%20access.>
- Disse, D. (2022, March 4). *Newport*. Oregon Encyclopedia. Retrieved February 5, 2024, from <https://www.oregonencyclopedia.org/articles/newport/>
- Espinoza, A. (2020, April 14). Low census response rates for Non-English Speakers. *VPM*. Retrieved February 12, 2024, from <https://www.vpm.org/news/2020-04-13/low-census-response-rates-for-non-english-speakers>
- Farrell, C. M., & Gottlieb, A. (2020). The effect of health insurance on health care utilization in the Justice-Involved Population: United States, 2014–2016. *American Journal of Public Health*, 110(S1), S78–S84.
<https://doi.org/10.2105/ajph.2019.305399>
- Food Share of Lincoln County. (2023, December 26). *Lincoln County Pantry & Meal Sites*. Retrieved February 19, 2024, from https://foodsharelc.org/wp-content/uploads/2023/12/Pantry-_-Meal-Sites-Eng.pdf
- Gaffney, A., Woolhandler, S., & Himmelstein, D. U. (2019). The effect of large-scale health coverage expansions in wealthy nations on Society-Wide healthcare utilization. *Journal of General Internal Medicine*, 35(8), 2406–2417.
<https://doi.org/10.1007/s11606-019-05529-y>
- Greenwood-Ericksen, M. B., & Kocher, K. E. (2019). Trends in emergency department use by rural and urban populations in the United States. *JAMA Network Open*, 2(4), e191919. <https://doi.org/10.1001/jamanetworkopen.2019.1919>
- Greiman, L. & University of Montana Rural Institute. (2017). Data Limitations in the American Community Survey: The Impact on Rural Disability Research. In *ScholarWorks at University of Montana* (No. 10–2017). University of Montana Rural Institute. Retrieved February 12, 2024, from <https://scholarworks.umt.edu/cgi/viewcontent.cgi?article=1045&context=ruralindependentlivingcommunityparticipation#:~:text=Analysis%20of%20rural%20data%20is,always%20be%20some%20sampling%20error.>

- Health Share of Oregon. (2023). *Oregon Medicaid waiver and redetermination FAQ*. Retrieved February 28, 2024, from <https://www.healthshareoregon.org/providers/redetermination>
- Hofstetter, A. M., & Schaffer, S. J. (2021). Childhood and adolescent vaccination in alternative settings. *Academic Pediatrics, 21*(4), S50–S56. <https://doi.org/10.1016/j.acap.2021.02.001>
- Institute of Medicine (US) Committee on Monitoring Access to Personal Health Care Services. (1993). *Access to Health Care in America* (M. Millman, Ed.). NCBI. <https://www.ncbi.nlm.nih.gov/books/NBK235890/>
- Kominski, G. F., Nonzee, N. J., & Sorensen, A. (2017). The Affordable Care Act's impacts on access to insurance and health care for Low-Income populations. *Annual Review of Public Health, 38*(1), 489–505. <https://doi.org/10.1146/annurev-publhealth-031816-044555>
- Lévesque, J., Harris, M., & Russell, G. (2013). Patient-centered access to health care: conceptualizing access at the interface of health systems and populations. *International Journal for Equity in Health, 12*(1), 18. <https://doi.org/10.1186/1475-9276-12-18>
- Lincoln County Historical Society. (n.d.). Lincoln County: A Brief History. Retrieved from Lincoln County History: <https://oregoncoasthistory.org/museums-exhibits/burrows-house/lincoln-county-history/#:~:text=The%20history%20of%20the%20central,were%20resettled%20on%20this%20reservation.>
- Lincoln County School District. (2024). Retrieved February 5, 2024, from <https://lincoln.k12.or.us/>
- Link, M., Mokdad, A. H., Stackhouse, H. F., & Flowers, N. T. (2006). Race, ethnicity, and linguistic isolation as determinants of participation in public health surveillance surveys. *PubMed, 3*(1), A09. <https://pubmed.ncbi.nlm.nih.gov/16356362>
- Manuel, J. I. (2017). Racial/Ethnic and gender disparities in health care use and access. *Health Services Research, 53*(3), 1407–1429. <https://doi.org/10.1111/1475-6773.12705>
- Mendez, A. (2020). *Community Needs Assessment in Lincoln County: Building Resiliency and Stronger Communities*. Corvallis: Oregon State University.
- Millman, M. (1993). Access to health care in America. In *National Academies Press eBooks*. <https://doi.org/10.17226/2009>
- OAR 410-141-3860 – *Integration & Coordination of Care*. (n.d.). https://oregon.public.law/rules/oar_410-141-3860#google_vignette
- O'Malley, A. S., Samuel, D., Bond, A. M., & Carrier, E. (2012). After-Hours Care and its Coordination with Primary Care in the U.S. *Journal of General Internal Medicine, 14*06-1415.

- Oregon Health Authority. (n.d.). *Health care Provider Incentive Program*. Oregon Health Authority: Primary Care Office. Retrieved February 19, 2024, from [https://www.oregon.gov/oha/hpa/hp-pco/pages/hc-provider-incentive.aspx#:~:text=Primary%20Care%20Loan%20Forgiveness%20\(PCLF,or%20frontier%20area%20in%20Oregon.](https://www.oregon.gov/oha/hpa/hp-pco/pages/hc-provider-incentive.aspx#:~:text=Primary%20Care%20Loan%20Forgiveness%20(PCLF,or%20frontier%20area%20in%20Oregon.)
- Oregon Health Authority. (2023). *Healthier Oregon*. Oregon Health Plan. Retrieved February 16, 2024, from <https://www.oregon.gov/oha/hsd/ohp/pages/healthier-oregon.aspx>
- Oregon Health Authority & Office of Health Analytics. (2023). 2022 Oregon's Licensed Health Care Workforce Supply. In *Oregon Health Authority* (No. 2022). Oregon Health Authority. Retrieved February 19, 2024, from <https://www.oregon.gov/oha/HPA/HP-HCW/Meeting%20Documents/5.-Health-Occupations-Report.pdf>
- Pandey, M., Maina, R., Amoyaw, J., Li, Y., Kamrul, R., Michaels, C. R., & Maroof, R. (2021). Impacts of English language proficiency on healthcare access, use, and outcomes among immigrants: a qualitative study. *BMC Health Services Research*, 21(1). <https://doi.org/10.1186/s12913-021-06750-4>
- Public Health Accreditation Board. (2022). *Standards & Measures for Reaccreditation* (Version 2022). Retrieved January 30, 2024, from <https://phaboard.org/wp-content/uploads/Standard-Measures-Version-2022-Reaccreditation.pdf>
- Rhone, A. (2023, July 6). *Food Environment Atlas*. U.S. Department of Agriculture Economic Research Service. Retrieved February 5, 2024, from <https://www.ers.usda.gov/data-products/food-environment-atlas/go-to-the-atlas/>
- Robbins, W. G. (2014). *A changing landscape and the beginnings of white settlement*. Oregon History Project. Retrieved February 5, 2024, from https://www.oregonhistoryproject.org/narratives/this-land-oregon/resettlement-and-the-new-economy/a-changing-landscape-and-the-beginnings-of-white-settlement/#.YsR_anbMKUk
- Su, C., Asfaw, A., Tamers, S. L., & Luckhaupt, S. E. (2019). Health insurance coverage among U.S. workers: differences by work arrangements in 2010 and 2015. *American Journal of Preventive Medicine*, 56(5), 673–679. <https://doi.org/10.1016/j.amepre.2018.12.010>
- University of Oregon, Institute for Policy Research and Engagement. (2021). *Economic Resilience | Lincoln County* (Lincoln County). Retrieved February 5, 2024, from https://www.ocwcog.org/wp-content/uploads/2021/08/EcoRes_County-Profile_Lincoln_Final.pdf
- University of Wisconsin Population Health Institute. (2023). *Lincoln, Oregon*. County Health Rankings & Roadmaps. Retrieved February 27, 2024, from <https://www.countyhealthrankings.org/explore-health-rankings/oregon/lincoln?year=2023> US Census Bureau. (n.d.). *Housing Units*.

- Retrieved February 12, 2024, from
[https://www.census.gov/quickfacts/fact/note/US/HSG010222#:~:text=Definiton%3A,occupancy\)%20as%20separate%20living%20quarters](https://www.census.gov/quickfacts/fact/note/US/HSG010222#:~:text=Definiton%3A,occupancy)%20as%20separate%20living%20quarters).
- U.S. Census Bureau. (2023). *Nativity and Citizenship in the United States*. Retrieved February 28, 2024, from
https://data.census.gov/table/ACSDT5Y2022.B05001?q=citizenship&g=010XX00US_040XX00US41_050XX00US41041&tid=ACSDT1Y2022.B05001
- US Census Bureau. (2023, June 27). *Response rates*. Census.gov.
<https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/response-rates/U.S.> Department of Health and Human Services. (2022, March 16). *About the Affordable Care Act*. HHS.gov. Retrieved February 15, 2024, from <https://www.hhs.gov/healthcare/about-the-aca/index.html>
- US Department of Health & Human Services, Office of Disease Prevention and Health Promotion. (n.d.). *Social Determinants of Health*. Retrieved April 2024, from Healthy People 2030: <https://health.gov/healthypeople/priority-areas/social-determinants-health>
- Vaidya, V., Partha, G., & Karmakar, M. (2012). Gender differences in utilization of preventive care services in the United States. *Journal of Womens Health, 21*(2), 140–145. <https://doi.org/10.1089/jwh.2011.2876>
- Vogt, D. (2011). Mental Health-Related Beliefs as a Barrier to Service Use for Military Personnel and Veterans: A review. *Psychiatric Services, 62*(2), 135–142. https://doi.org/10.1176/ps.62.2.pss6202_0135
- Walshe, K., & Ferguson, J. (2019). The quality and safety of locum doctors: a narrative review. *Journal of the Royal Society of Medicine*.
- Whitehead, M. (1992). The concepts and principles of equity and health. *International Journal of Health Services, 22*(3), 429–445. <https://doi.org/10.2190/9861-lhq6-2vte-yrrn>
- Wright, B., Potter, A. J., & Trivedi, A. N. (2015). Federally qualified health center use among dual eligibles: rates of hospitalizations and emergency department visits. *Health Affairs, 34*(7), 1147–1155. <https://doi.org/10.1377/hlthaff.2014.0823>

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