MARION-POLK
COMMUNITY HEALTH ASSESSMENT
2019

Marion County
OREGON
Health & Human Services

WILLAMETTE VALLEY
community health

POLK COUNTY

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Contents

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Executive Summary

Marion-Polk Community Vision:

A diverse and inclusive community with a physical environment that facilitates optimal physical and social health, infrastructure that supports economic growth and stability, and an integrated health care system that promotes equitable access to whole person care.

–Adopted March 2018

Every five years, Marion and Polk Counties, in partnership with local health professionals and community organizations, come together to describe the health of the community by conducting a Community Health Assessment (CHA). The CHA gathers data from various reliable sources to identify local strengths and the most pressing health challenges using an evidence based framework. This information is then used to create a Community Health Improvement Plan (CHIP), which focuses efforts on key priority areas, turning data into action.

The last CHA was published in 2015 and has been updated annually to capture the most current and accurate picture of local health. Since that publication, Marion and Polk Counties have seen improvements in many areas including, but not limited to:

- Increased prenatal care access in the first trimester of pregnancy;
- Increased immunization rates among 2 year olds;
- Lower rates of tobacco smoking in adults and teens;
- Lower rates of adult binge drinking and teen alcohol use;
- Decrease in opioid-related deaths and hospitalizations;

The community has also experienced significant progress with regard to accessing health care services as more people now have health insurance and the creation of local coordinated care organizations (CCOs) has expanded access for individuals with Medicaid. These improvements are due in large part to the passage of the Affordable Care Act in 2010 and local initiatives aimed at improving access. Despite these gains in access to health care services, there are still not enough local providers to serve the population.

Over the last five years, Marion and Polk Counties have experienced an increase in chronic conditions such as diabetes, obesity, and depression. Chronic conditions represent the vast majority of deaths, hospitalizations, and health care related costs in the community. Additionally, there has also been a recent rise in the rate of suicides and teens reporting that they have seriously considered suicide. The community is also experiencing substantial year-over-year increases in sexually transmitted infections (gonorrhea, syphilis, HIV, Hepatitis B).

Much of what is responsible for the health and quality of life in the community lies within factors that are not commonly thought of as being related to health. These are known as the ‘social determinants of health’ (SDOH) and examples include education, transportation, housing affordability, economic stability, and access to healthy foods. This community, like many others, is being affected by the SDOH, and particularly suffers from lower educational achievement, higher rates of people living in poverty, food insecurity, and unaffordable housing. These determinants along with other factors are playing a significant role in influencing local health.

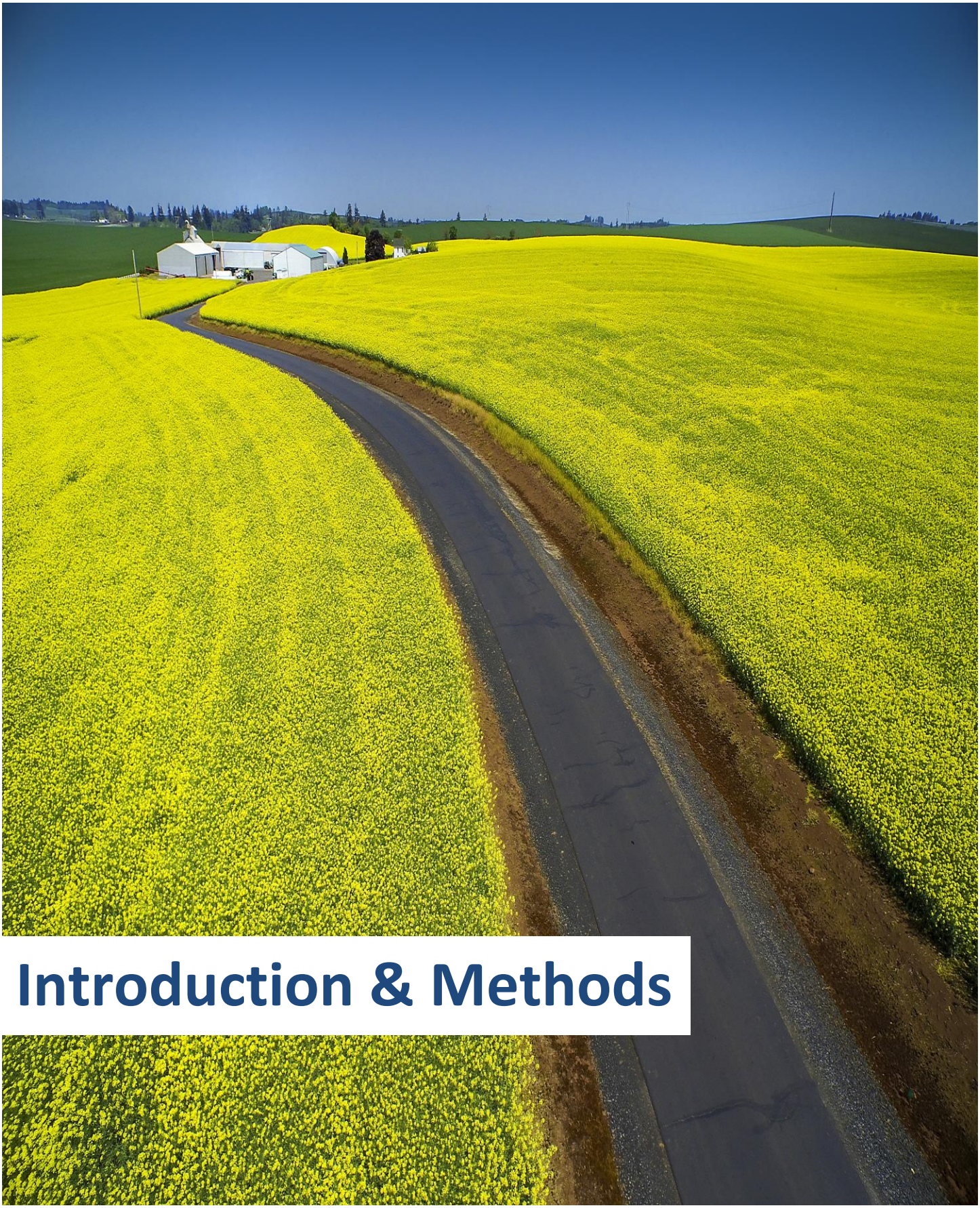
This community has an abundance of natural resources, local produce, and recreational areas that help to support health. Additionally, the population is growing and the economy is improving, providing opportunities for advancement and economic expansion. However, not everyone in the community is able to partake in these opportunities or equally share in the resources that are available. These differences, or health disparities, have direct implications for the health of the community and were found throughout the CHA process. This recurrent pattern supports the general theme that health is not equally shared by all in the community.

The CHA is the end result of the efforts and input of many community members who came together in 2018 to assess and ultimately improve local health. More than 600 people participated in community forums or took the online survey. This community voice was incorporated into the CHA along with health statistics and other assessment data to identify key priority areas to work on over the next five years in the new CHIP. Community members reviewed the findings from the CHA and selected the following three priority areas for the CHIP:

- Behavioral Health Support
- Housing
- Substance Use

In 2019, strategies will be developed to address these priority areas, resulting in plan for action that will be used to get the community closer to achieving its vision.

Mustard seed farm, Sublimity, Oregon



Introduction & Methods

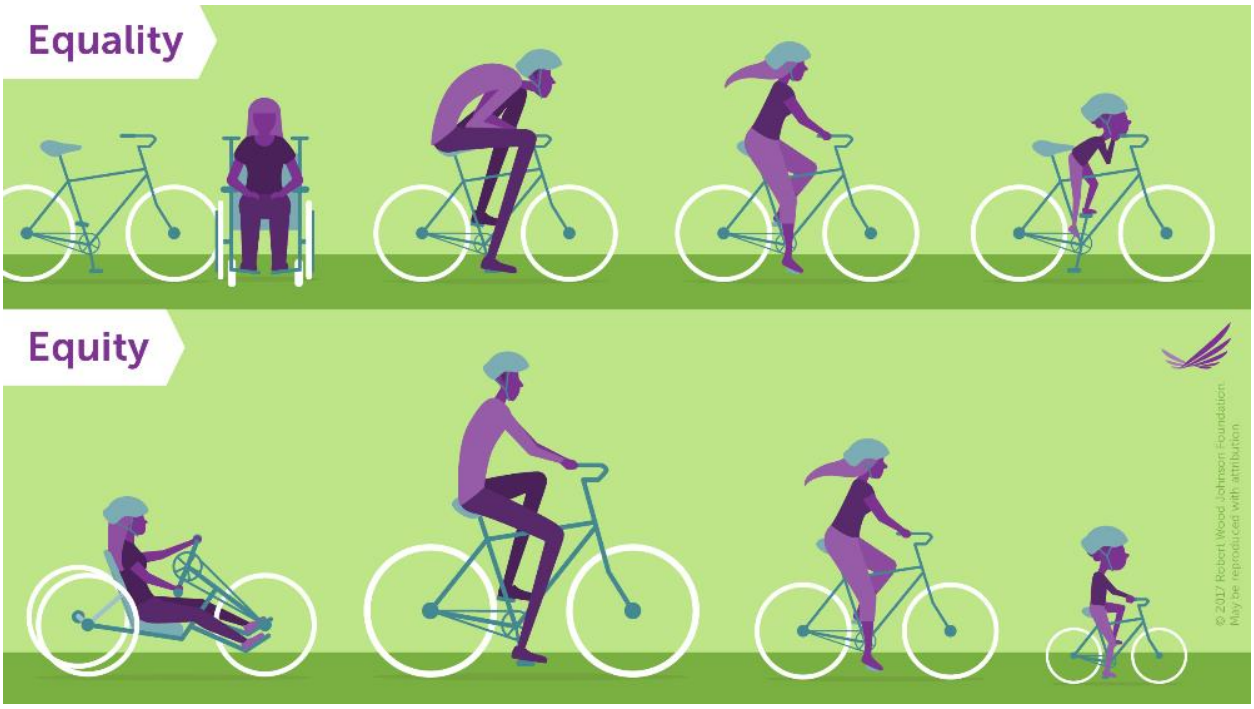
Introduction & Methods

In January 2018, Marion County Health & Human Services, Polk County Health Department, Willamette Valley Community Health (WVCH), local health professionals, and community partners began a new MAPP (Mobilizing for Action through Planning and Partnerships) cycle to assess and improve the health of the community. MAPP is a flexible, evidenced based framework, created by the National Association of County and City Health Officials (NACCHO). Each community that utilizes MAPP conducts a Community Health Assessment (CHA), which casts a wide net collecting data in various ways to understand local health and why health conditions occur. This information is then used to identify key priority areas (Strategic Issues) for improvement in the Community Health Improvement Plan (CHIP) over a five year time period. Although the CHA strives to be comprehensive, it should not be thought of as an exhaustive compendium of every local measure that exists; rather, this document utilizes select measures that best capture the health of the community.

MAPP builds off of previous work conducted by the community. The last CHA for Marion and Polk Counties was completed in 2015 and has been updated annually to give the most accurate picture of local health. The four priority areas selected in the last CHIP (2016-2018) were: access to prenatal care in the first trimester, obesity, depression, and tobacco use. Notable improvements were made in the last CHIP, especially around prenatal care access and tobacco use, however obesity and depression proved more challenging. A key takeaway from the last process was that three years was not enough time to make substantial gains in the CHIP priority areas. To make better use of resources, and to align more closely with the intent of MAPP, the community has shifted to a five year CHIP in the current and future iterations of this process. (Local non-profit hospitals operate on three year cycles to satisfy their requirements with alignment achieved through annual updates to the CHA.) The community has also chosen to focus on priority areas that are more upstream, or at the root of what causes health conditions, as opposed to the conditions themselves.

Health Equity and the Social Determinants of Health

According to the World Health Organization, health equity is defined as the absence of unfair, avoidable, or remediable differences in health among social groups. To achieve health equity, it's necessary to remove obstacles to health such as poverty, discrimination, and their resultant consequences. A state of health equity is said to exist when all people can reach their full potential regardless of social or economic status, race, ethnicity, religion, age, disability, gender identity, sexual orientation, or other socially determined circumstance. This requires changes in policies, laws, systems, environments, and practices that lead to unequal opportunities and resources necessary to be healthy. A "one size fits all" approach to solving these problems won't address the fundamental issues that lead to inequity; rather it requires focused efforts dedicated to bringing up groups who've been historically disadvantaged.



Many of the root causes of health inequity can be traced back to the social determinants of health (SDOH). The SDOH are the conditions in the environment where people are born, live, learn, work, play, worship, and age that affect their overall health and quality of life. Examples of SDOH include education, transportation, housing, access to healthcare and healthy foods, community safety, and economic opportunity. Those with less financial resources are less likely to be supported by the SDOH, which in turn leads to worse health outcomes, lower quality of life, and shorter lives.

The Local MAPP Process

As mentioned above, MAPP is a collaborative strategic planning tool for improving the health of a community. MAPP is composed of six phases, illustrated below; however MAPP is an ongoing effort with no true end point.

(Courtesy of the National Association of City and Community Health Officials (NACCHO))

The Six Phases of MAPP

1. **Organize for Success/Partnership Development**
2. **Visioning**
3. **Four MAPP Assessments**
4. **Identify Strategic Issues**
5. **Formulate Goals and Strategies to Address Issues**
6. **Action Cycle**

Organizing for Success & Visioning

Marion and Polk Counties began MAPP by building a diverse partnership from various health sectors, education, and social service areas to ensure adequate representation and input into the process. This included the formation of the Core Group and Steering Committee, which served two separate and distinct roles. Additionally, a subcommittee was created for each of the Four MAPP Assessments.

Core Group

The Core Group was made up of staff from Marion County Health & Human Services, Polk County Health Department, and the local CCO Willamette Valley Community Health (WVCH). This group was primarily concerned with the planning and managing of the MAPP process, which included creating agendas, gathering/reviewing data, and broadly coordinating efforts to complete the Community Health Assessment.

Steering Committee

The Steering Committee provided direction and guidance for the MAPP process. It was comprised of members from Marion County Health & Human Services, Polk County Health Department, WVCH, Community Advisory Council (CAC), hospitals, academia, transportation, community based organizations, and local authorities. This group was responsible for providing input to the assessments and creating the vision and values for the MAPP process. The following organizations were represented on the Steering Committee:

- Behavioral Care Network
- Chemeketa Community College
- Cherriots
- City of Woodburn
- Community Action Agency
- Community Advisory Council
- Early Learning Hub
- Kaiser Permanente
- Legacy Health Silverton
- Marion County Health & Human Services
- Northwest Senior & Disability Services
- Polk County Health Department
- Salem Health
- Santiam Hospital
- Western Oregon University
- Willamette Valley Community Health

Vision

A diverse and inclusive community with a physical environment that facilitates optimal physical and social health, infrastructure that supports economic growth and stability, and an integrated health care system that promotes equitable access to whole person care. –Adopted March 2018

Values

- Inclusive engagement and participation
- Use data in meaningful ways
- Common goals that are specific, measurable, achievable, relevant, and time-based (SMART)
- Shared commitment and accountability
- Clear communication, collaboration, and shared definitions
- Safe environment where diverse opinions on how to accomplish goals are respected

Four MAPP Assessments

A CHA is informed by four unique assessments under the MAPP framework. Each of these assessments sought to capture a different aspect of local health, which were then used together to identify priority areas (Strategic Issues) for improvement in the CHIP. It's important to note that even though each assessment had a different aim and occurred separately, they were all still connected and used to inform one another as the process evolved. The objective of each assessment was as follows:

- **Community Health Status Assessment –** Utilized local health statistics to determine what health conditions exist in the community. Serves as the primary source of quantitative data in the CHA.
- **Community Themes and Strengths Assessment –** Captured community voice to determine why health conditions exist, local assets available, and quality of life. Source of primary qualitative data.
- **Community Health Systems Assessment –** Evaluated how well the community health system is providing the Ten Essential Public Health Services. Identified systems strengths, weaknesses, and short or long term improvements.
- **Forces of Change Assessment –** Studied what might be occurring in the future that will be affecting local health. Source of primary qualitative data.

Community Health Status Assessment

A team of six subcommittee members with backgrounds and expertise in data analysis came together to assess overall local health. There were a total of six meetings between April and June 2018, which culminated in a health profile summarizing the key findings from the assessment. The subcommittee reviewed hundreds of health indicators that were evaluated against the following criteria for inclusion in the analysis:

- **Magnitude** – Proportion of the population being affected by the health condition or exposure
- **Seriousness** – Condition is associated with a high mortality rate or poor quality of life
- **Trend** – Measure is reported regularly at separate time intervals
- **Comparison** – Possible to compare local measure with state or national benchmarks
- **Quality** – Data comes from a reliable data source that is representative of the community

This led to a list of 33 indicators that became the focus of the assessment, which were then prioritized using the Hanlon Method. The Hanlon Method considers the magnitude and seriousness as described above, but also considers the effectiveness of interventions for addressing the health issue. The subcommittee ranked each of these three areas by consensus voting for each of the 33 indicators to generate the following alphabetical list of the 10 indicators that were most impacting local health:

1) Child immunizations (Two year olds)
2) Chronic Obstructive Pulmonary Disorder (COPD)
3) Diabetes
4) Educational Achievement
5) Food Environment
6) Heart Disease
7) Lung Cancer
8) Obesity
9) Stroke (Cerebrovascular Disease)
10) Tobacco Use

These 10 indicators became the focus of the health profile and were broken out further to evaluate which groups were being disproportionately affected by them. The full profile can be found here: https://www.co.marion.or.us/HLT/communityassessments/Pages/Assessments.aspx

Community Themes and Strengths Assessment

A team of six subcommittee members with diverse areas of expertise met five times between March and July 2018 to complete this assessment. They reviewed previous local engagement efforts, key questions, and planned to capture the community voice. To do this, an online community wide survey was administered in both Marion and Polk County along with four in-person community forums in Independence, Salem, Stayton, and Woodburn. These locations were chosen on the basis of geography and to provide the opportunity for various groups to participate in the process. In total, 118 people attended the four forums in May 2018; English and Spanish options were available. Demographic information was not collected at the forums to promote an environment where free and honest dialogue could take place. Discussions were documented and later compiled into community themes. Community voice was also captured via an online survey that was available in English and Spanish between May and June 2018. It was broadly promoted via email, flyers, community meetings, social media, and radio announcements. In total, 621 people responded to the survey, however the demographics of the sample differed from what was expected and thus are not considered to be

representative of the community as a whole. Demographic information collected from the survey is detailed below:

Demographics of Survey Respondents

- Majority indicated that they live in Marion County (68% Marion, 32% Polk)
- Majority were female (77% female, 23% male, 0.2% transgender)
- Majority were middle aged adults (1% under 18, 8% 18-25, 27% 26-39, 36% 40-54, 16% 55-64, 7% 65+)
- Majority had a college degree or higher (83% college graduates (including 2 year degrees or vocational training), 14% high school/GED, 3% less than high school)
- Majority identified as White (2% African American/Black, 5% American Indian/Alaska Native/Native American, 2% Asian, 1% Pacific Islander/Native Hawaiian, 90% White)
- Majority identified as non-Hispanic/Latina(o) (15% Hispanic/Latina(o), 85% non-Hispanic/Latina(o))

Survey and forum data were compiled and themed into a profile summarizing the key findings. The full profile can be found here: https://www.co.marion.or.us/HLT/communityassessments/Pages/Assessments.aspx

Community Health Systems Assessment

A team of five subcommittee members met several times between June and August of 2018 to complete this assessment. The assessment was completed using a standardized tool developed by NACCHO. As a starting point, Steering Committee members brainstormed examples of work happening in the community that supports the Ten Essential Public Health Services. Subcommittee members then reviewed needed sector coverage for the community health system and invited partners to attend one of two in-person sessions in August 2018. Each session evaluated five of the Essential Services by individually voting on the amount of activity taking place in the system. Votes were averaged to generate scores for each of the questions under the respective Essential Service to yield an overall score for each Service. Additionally, discussions were recorded and later compiled to identify themes. Key findings were summarized in a profile that can be found here: https://www.co.marion.or.us/HLT/communityassessments/Pages/Assessments.aspx

Forces of Change Assessment

A team of three subcommittee members met twice between June and July of 2018 to plan this assessment. An online survey was constructed using standard questions developed by NACCHO to engage local leaders in health, community organizations, and business leaders. This survey was distributed to several groups including the Steering Committee, Polk County Health Advisory Board, Early Learning Hub Board, Willamette Valley Community Health Transformation and Quality Committee, and the Willamette Valley Community Health Board. Results from the survey were summarized and reported back to these groups at meetings to discuss and provide additional information if necessary. Data was compiled and summarized for each of the influential forces identified in a profile that can be found here:
https://www.co.marion.or.us/HLT/communityassessments/Pages/Assessments.aspx

Strategic Issue Identification & Selection

Upon completion of the four assessments it was necessary to bring this information back together to inform the creation of strategic issues, which serve as the priority areas for the CHIP. Themes that overlap across the assessments can provide insight into what the community should focus on to improve health. Since strategic issues are broad, they have the ability to influence multiple health conditions and get at root causes responsible for the conditions that exist in the community. To brainstorm issues, the Steering Committee met in November 2018 to review a summary of the data collected from the four assessments. Steering members individually completed a list of key findings that they felt were important and impacting local health, which were then themed for each assessment. The Committee broke out into groups with facilitators to propose 3 or 4 issues for consideration as a CHIP priority. Similar issues were merged into broader topic areas to arrive at the following alphabetical list of eight issues:

1) Access to Health Care
2) Behavioral Health Support
3) Economic Stability
4) Education
5) Food environment/Food Insecurity
6) Housing
7) Substance Use
8) Transportation

As resources are limited, it was necessary to prioritize the identified issues. Given past experience and NACCHO recommendations, it was determined that the top three issues would move forward to become the CHIP priority areas. To get broader input for issue selection the Steering Committee, local leaders, Health Advisory Board members, and other community members were invited to attend a prioritization meeting in December 2018. A series of representative indicators for each proposed issue were reviewed for magnitude, comparison to the state and national benchmarks, and worsening or improving trends. Additionally, health disparities were provided to describe who is being disproportionately affected by these issues in the community. Attendees then voted on the issues that they believed would be best for the community to work on; arriving at the following three priority areas for the next CHIP:

- Behavioral Health Support
- Housing
- Substance Use



Next Steps

With the selection of the CHIP priority areas complete, the community will be developing strategies, goals, and objectives aimed at addressing them. There is no limit to the number of strategies that a community can adopt to address an issue, however given resource limitations it will be necessary to prioritize the strategies themselves. CHIP development will begin in early 2019 with a finalized plan published later in the year.

Data Limitations

Despite best efforts to give the most representative picture of health in the community there is no study without its limitations. This assessment relies heavily on data collected from self-reported surveys, which has the potential to introduce bias. Some groups are more likely to participate in surveys than others and even when oversampling occurs there are still some that will be missed. Thus, groups that represent a small proportion of the overall population typically don't produce reliable local estimates. Due to this, it was necessary to get state level data in some cases to obtain estimates that could be deemed reliable. This is consistent with epidemiological best practices, however it requires the assumption that what's happening in the state is happening locally as well. This is more of an issue in some cases than others and requires an additional level of thought in terms of local applicability. Fortunately, there have been recent improvements around the availability of granular local data, which is supported by the passing of legislature requiring its collection including Public Health Modernization. Another limitation is the time delays for getting local data, which might not accurately represent the current state. A key concern throughout this assessment was the comparability of county BRFSS data to CCO MBRFSS data. County and state data is age-adjusted; however the CCO data is not. Thus, age cannot be ruled out for what's responsible for the disparities observed in the Medicaid population. However, it could be inferred that given the age distribution in the Medicaid population, the majority of estimates from the MBRFSS would in actuality be underestimates if they were age-adjusted due to the noted increase in chronic disease as people age.

Efforts were made throughout this assessment to engage and limit barriers to participation for underrepresented groups in forums and surveys, such as producing community messages/surveys in both English and Spanish, however not every group was reached. People who experience health disparities might face time constraints or other barriers to participation. Therefore, the health concerns identified might not necessarily be the concerns of these communities. Additionally, to participate in the community survey required an internet connection, which is not available to everyone. While this report strived to use the most reliable, valid, and up to date data available; it is important to acknowledge these limitations and seek to address them in future studies.

Champoeg State Heritage Area, Saint Paul, Oregon

Supporting Assessments

Community Themes & Strengths Assessment

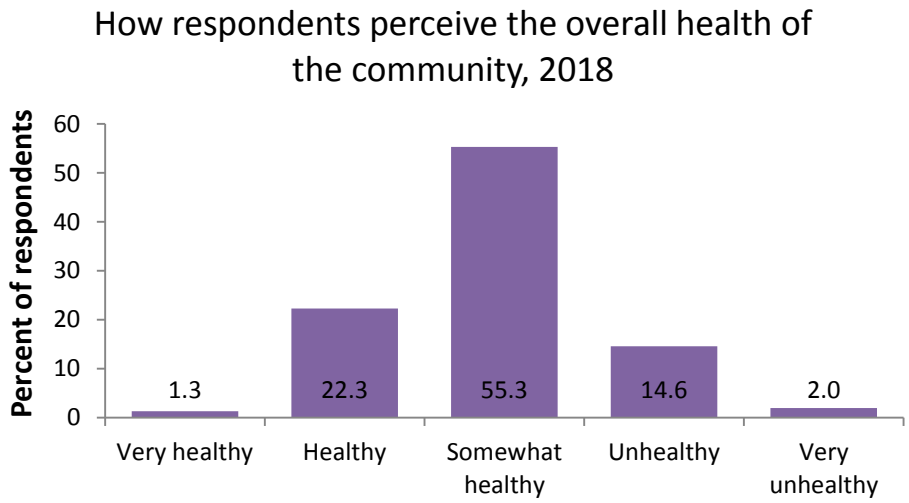
This assessment sought to determine what's important to the community with regard to health, quality of life, and assets that are available to improve health. To capture the voice of the community, four local forums were held in Independence, Salem, Stayton, and Woodburn in May 2018; in addition to a community wide online survey. The discussions were recorded and survey data was analyzed for themes to inform the selection of the CHIP priority areas. The full assessment can be found at the link below:
https://www.co.marion.or.us/HLT/communityassessments/Pages/Assessments.aspx

Key Findings for the Community

- Natural resources, such as parks and recreational areas, help support the health of the community
- Local produce is sold at farmer's markets; however these locations might not be available or convenient for everyone. Additionally, the abundance of fast food restaurants is contributing to poor eating habits.
- Physical activity helps keep community members healthy; however local infrastructure doesn't always support these activities (e.g. lack of sidewalks) and prevents people from being as active as they'd like.
- Community members need more access to a wide range of health services. High cost, lack of available appointments, and no paid leave time creates barriers to accessing health care.
- Lack of affordable housing is making it difficult for people to be healthy and community members believe that this issue is worse where they live than in other areas. They also believe that the lack of affordable housing is contributing to homelessness.
- Lack of public transportation options is making it difficult for community members to be healthy. Members also believe that public transportation options are worse where they live than in other areas.

How community members rated the overall health of the community…

- The majority of survey respondents described the overall health of the community as "healthy", however roughly 17% described it as "unhealthy".



The most important health issues facing the community are…

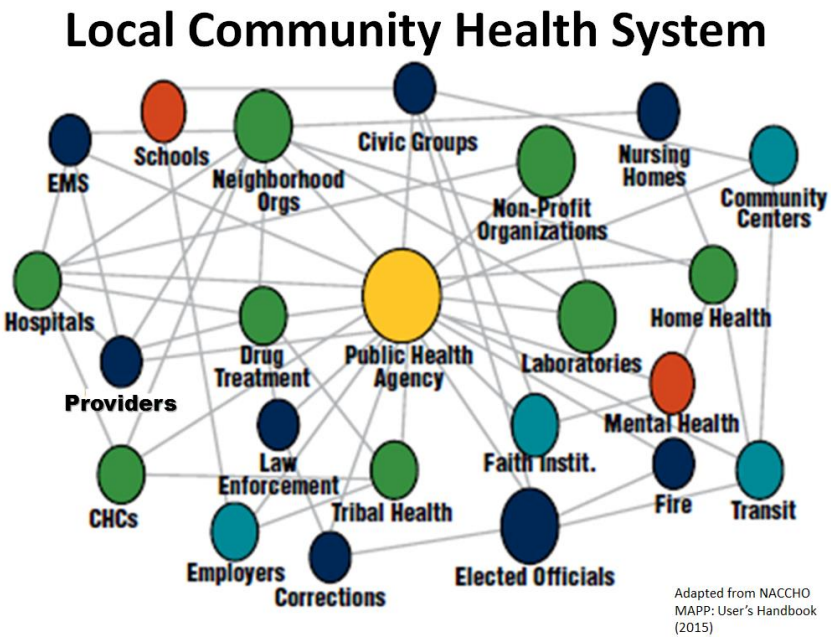
- Mental health problems
- Alcohol/drug abuse
- Housing needs (Unsafe housing/unaffordable housing)
- Homelessness
- Obesity

The health behaviors most affecting the community are…

- Drug abuse
- Poor eating habits
- Alcohol abuse
- Lack of exercise
- Dropping out of school

Community Health System Assessment

The local community health system is more than a health department; it is all entities (public and private) that work together to improve the health and well-being of the community. To assess how well this system is functioning, two meetings were convened in August 2018 with community health system partners and scored the amount of activity occurring for each of the Ten Essential Public Health Services. The full assessment can be found at the link below:
https://www.co.marion.or.us/HLT/communityassessments/Pages/Assessments.aspx



Key Findings for the Community Health System in Marion and Polk:

- There are gaps in all of the Ten Essential Services across the local community health system
- Overall, the community health system is operating at a "moderate" level of activity, with at least some activity occurring in each of the Ten Essential Services
- There was a sense that activities that support the Essential Services is occurring within organizations, however it is not necessarily known or communicated outside of these organizations who is doing what or who is responsible for providing the services. This might speak to a general disconnect within the system and a need to create more connectivity between system partners.
- **The top scoring Essential Services:**
    - Diagnose and Investigate
    - Monitor Health Status
    - Linking to Health Services

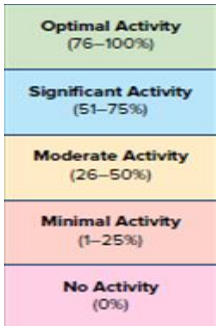
- **The lowest scoring Essential Services:**
    - Mobilize Partnerships
    - Evaluate Services
    - Research/Innovations
- **Key strengths identified:**
    - Data Collection/Analysis
    - Planning
    - Local Partnerships
    - Health Education
    - Ensuring Care
- **Key areas for improvement:**
    - Communication
    - Policy Development
    - Health Resources
    - Evaluation
    - Community Engagement
    - Collaboration
    - Workforce Development

The Ten Essential Public Health Services

1) **Monitor Health Status:** This service is concerned with using data, such as the Community Health Assessment (CHA), to continually assess and monitor the health of the community.
2) **Diagnose and Investigate:** This service focuses on identifying health problems/hazards in the community along with how quickly and effectively they are responded to.
3) **Inform, Educate, Empower:** This service considers how well the system does at providing information and educating the community around health issues along with empowering them to take charge of their health.
4) **Mobilize Community Partnerships:** This service is all about getting the community energized around a health problem or other issue and ultimately making a synergistic attempt to address it.
5) **Develop Policies and Plans:** This service is concerned with creating policies/plans to support and promote local health.
6) **Enforce Laws:** This service involves the enforcement of laws, ordinances, and regulations that protect health and ensure safety.
7) **Link to and Provide Care:** This service is about connecting patients to the care that they need and assuring continuity when care is not available.
8) **Assure a Competent Workforce:** This service focuses on having a competent public and personal healthcare workforce that is constantly being developed through ongoing education and trainings.
9) **Evaluate:** This service assesses how well the efforts to improve local health are going and if they are having the intended effects.
10) **Research and Innovation:** This service is the connection and contribution between the local health system and entities of higher learning, which includes using the best available evidence to innovate strategies for improving community health.

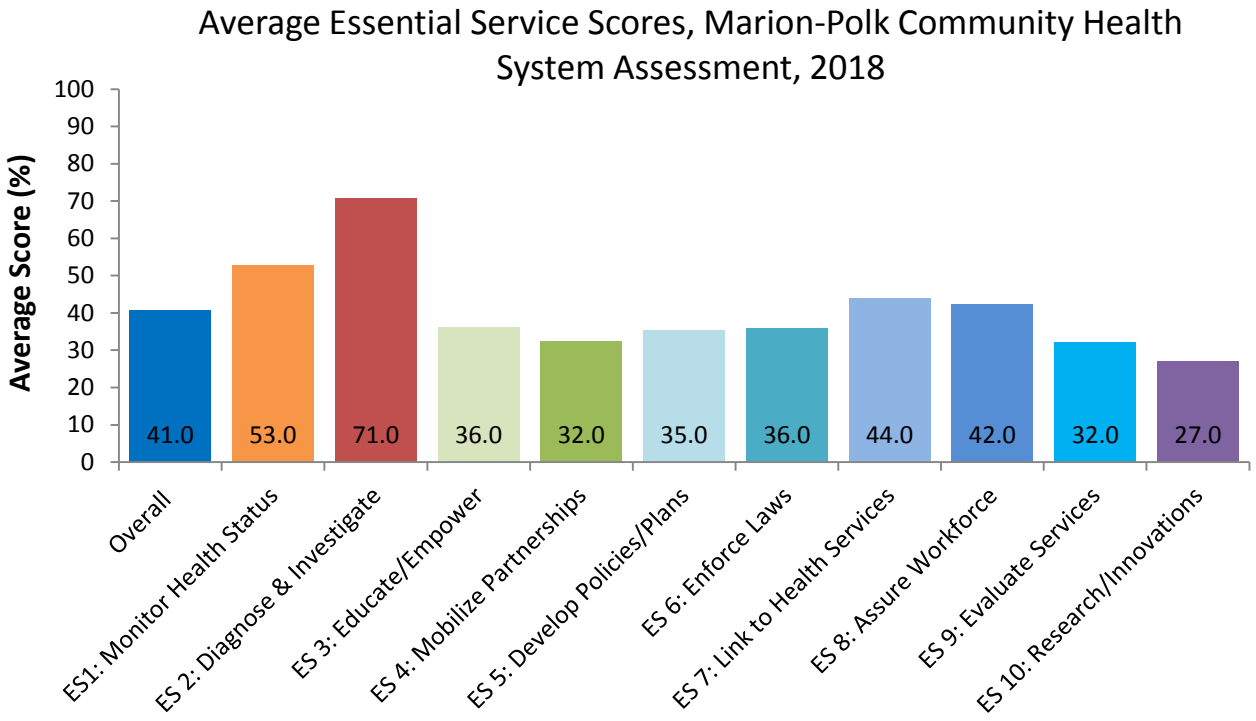
Scoring the Ten Essential Public Health Services

To score the Ten Essential Public Health Services listed above a standardized tool developed by NACCHO was used during discussion with community health system partners. This tool scores the amount of activity occurring around the Essential Services by averaging partner voting and is not an A-F scale; instead scoring falls between "No Activity (0%)" at the lowest end and "Optimal Activity (76-100%)" at the highest. Every community health system has some room for growth.



Results

Overall, the community health system is operating at a "moderate" level of activity (41%). All of the Essential Services had at least some activity occurring and some even had "significant" activity; however substantial gaps were identified as well. Strengths emerged around data collection/analysis, planning, partnerships, health education, and ensuring care. Areas for improvement clustered around communication, policy development, health resources, evaluation, engagement, collaboration, and workforce development. Strengths can be leveraged to make improvements in these areas to bolster the capacity and performance of the community health system.



Short Term Improvements

- Improving system communication in terms of what services others are providing, roles in the community, and assessment/evaluation of results
- Create and sustain partnerships within the system

Long Term Improvements

- Continuing to hire a diverse work force in the public and private sectors at all levels of leadership
- Increase the footprint of the community health system by engaging in shaping policy and providing representation on advisory councils

Forces of Change Assessment

Participants in this assessment identified the events, trends, and factors that affect health in the community or could affect health in the community in the future. This assessment helped to provide social, political and environmental context to consider in choosing strategic issues.

Events - **One-time occurrences, such as a natural disaster or the passage of legislation.**

Participants identified elections, changes in governmental leadership, and legislative mandates as significant events that have impacted and will continue to impact health in the community. Specific legislative events identified included the Affordable Care Act, Deferred Action for Childhood Arrivals (DACA), and Cover All Kids. Specific elections identified included the most recent presidential election and Oregon's gubernatorial election.

The formation of the coordinated care organization and the pending redesign of Oregon's Medicaid program were identified as significant events that will continue to present both challenges and opportunities. While there has been a lot of progress in increasing health care coverage and access for the region's low income population, challenges remain. Other events identified included the Salem area water crisis in the summer of 2018 due to an algae bloom and the potential for this kind of event to happen again in the future, local and national protests, wildfires and mass shootings.

Trends – **Patterns over time, such as migration or environmental changes.**

The primary trend that participants identified was increasing unmet housing need. Unmet housing need is perceived to be due both to a lack of inventory available to accommodate the region's population, as well as a lack of affordability in the housing that is available, both for renting and owning. Other trends identified included increasing need for mental health and substance abuse treatment and support, increasing rates of sexually transmitted infections, increasing cost of healthcare, and increasing tensions around immigration and immigration policy.

Factors – **Forces that are constant, such as community's location or proximity to resources.**

Participants identified the ongoing prevalence of trauma experienced in the community as a key factor that may present challenges and opportunities in improving community health. Participants acknowledged the relationship between childhood trauma and increased subsequent risk for substance abuse, another identified force in the community. Additionally, participants pointed to the chronic underfunding and unsatisfactory conditions of the educational system as a key factor to consider in improving the health of the community.

Demographics

Demographics

Demographics describe who lives in a particular community at any given time. Knowing this information helps to set the context for health indicators, as different groups of people have different life experiences that put them at greater or reduced risk of disease. For example, based on national statistics, the highest risk group for chlamydia infections are women between the ages of 20 and 24. Since this community has a younger population than Oregon as a whole, it's likely that the local chlamydia rates will also be higher than the state.

Key Findings for Marion & Polk County:

- A greater percentage of the community population is younger, under the age of 25, than Oregon.
- The community has a larger percentage of members that identified as Hispanic or Latina(o) than Oregon. About 26% identified as Hispanic/Latina(o) in Marion, compared to 13% in Polk and 12% in Oregon.
- The community has a higher percentage of members that speak a language other than English at home than Oregon. Roughly 1 in 4 households (25%) in Marion speak a language other than English, compared with 14% in Polk and 15% in Oregon. The most common languages spoken after English were Spanish, Asian or Pacific Islander languages, and Russian.
- About 15% of community members are living with a disability, which has been increasing over time. The most common types of disabilities in the community were difficulties walking, living alone, or cognitive. The proportion of community members living with a disability differed by race and ethnicity.
- One third (33%) of Marion County community members lived outside of the five largest cities in Marion County. About 16% of Polk County community members lived outside of its largest cities.
- This community is growing, aging, and becoming more diverse, a trend that is predicted to continue into the future. Population projections estimate that there will be 500,000 community members by 2035. Older adults will represent a greater proportion of the overall population in the future than they do currently.

Marion & Polk County Quick Facts

Marion and Polk County are located in the Willamette Valley and are the 5th and 13th most populous counties in Oregon respectively.[1] This community spans about 1,950 square miles, of which 1,200 are in Marion and 750 are in Polk. In Marion, the five largest cities are Keizer, Salem, Silverton, Stayton, and Woodburn, which are home to 66% of the County's total population. The remaining 34% live in one of the smaller 15 cities or on unincorporated land.[2] In Polk, the largest cities are Dallas, Falls City, Independence, Monmouth, West Salem, and Willamina, of which about 84% of Polk's population resides. Those who live outside of the major population areas in the community may experience greater difficulty accessing resources like health care services and healthy foods. Given the limited public transportation in these rural areas, access to a vehicle is likely required to live a healthy lifestyle.

Population

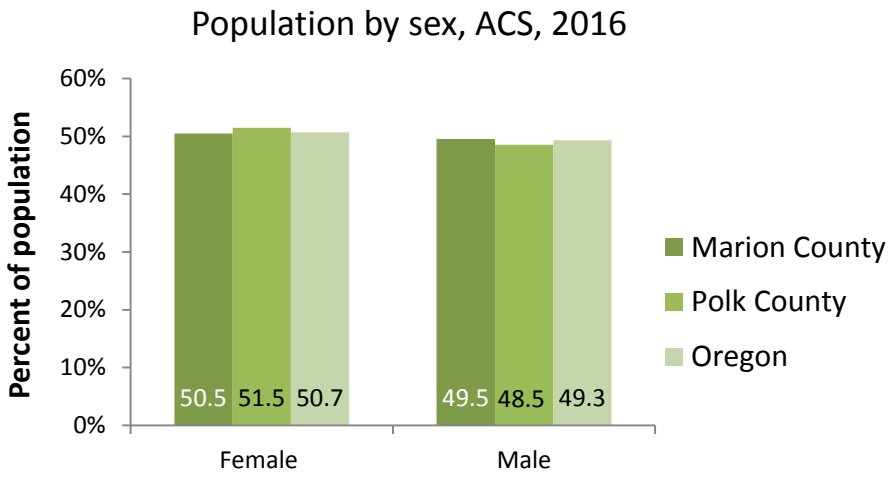
- As of 2017, there were about 424,982 people living in the community, which is about 10% of the total state population.[1] Of those, it is estimated that 341,286 people live in Marion and 83,696 live in Polk. Since 2010, the population has increased by 8% in Marion and 11% in Polk, which was similar to the increase in the state as a whole. There were also a larger number of people living per square mile in this community compared to the state and this was especially true for Marion.

Community population, ACS, 2017			
	Marion	**Polk**	**Oregon**
Total Population	341,286	83,696	4,142,776
Population change since 2010 (%)	8.0	10.8	8.0
Population density (persons per square mile)	286.2	113.0	42.1

Sex

It is important to identify the makeup of populations by sex as disease and other health factors often occur at different rates in males than females.

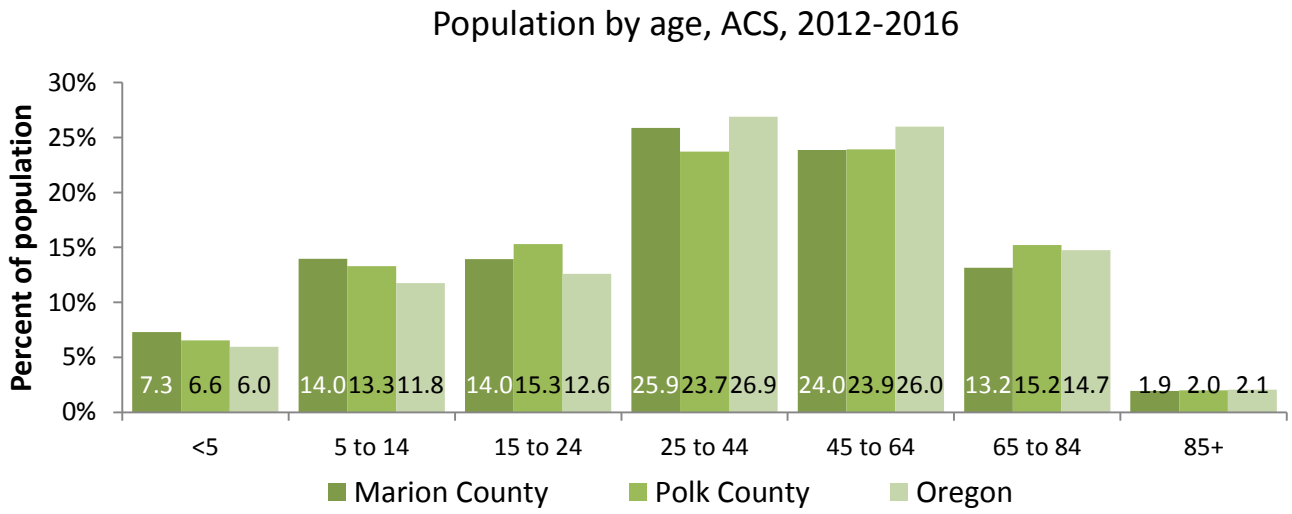
- Just over half of community members identified as female, which was similar to the state.[3]



Age

Age is one of the most important predictors of overall health, as people of different age groups experience different health problems. For example, young children and elderly adults over 65 years of age are more likely to die of the flu than individuals in other age groups.

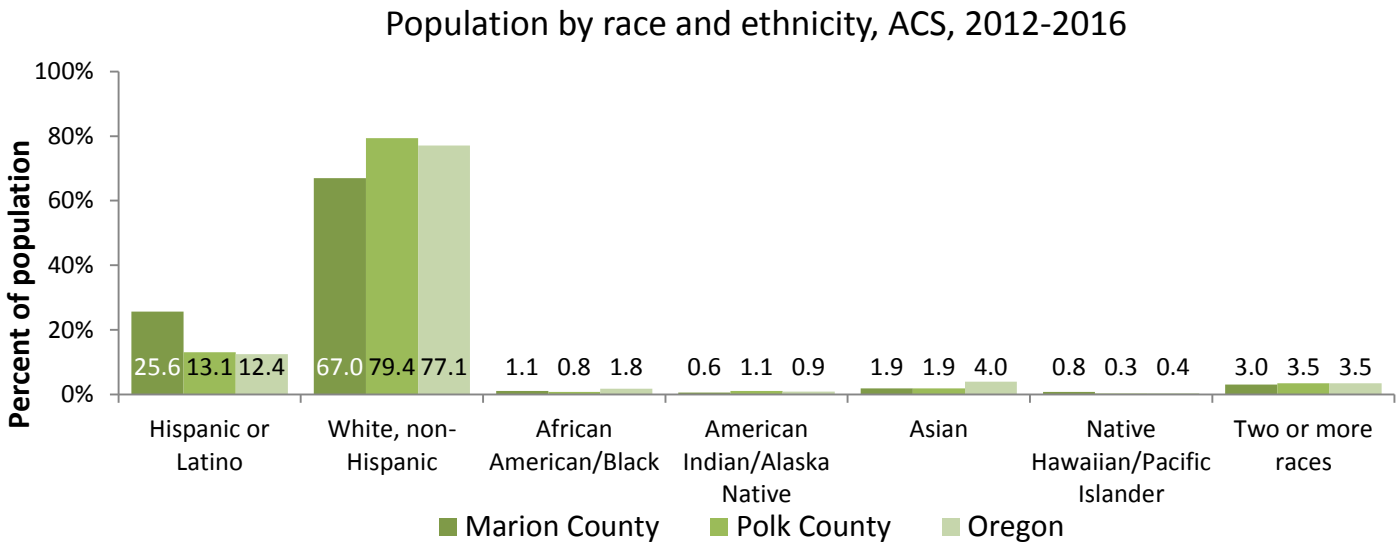
- The community had a larger proportion of members between the ages of 0-24 years old than Oregon.[4] There was also a smaller proportion of working age adults (25-64) in the community than the state. In 2016, the median age was lower in Marion (36.4 years) compared to Polk (37.7 years) and the state (39.2 years).[3]



Race and Ethnicity

People of various races and ethnicities often have different life experiences and exposures, which can put them at higher or lower risk of disease. Health inequities can appear along racial or ethnic lines, placing certain groups particularly at increased risk of worse health outcomes.

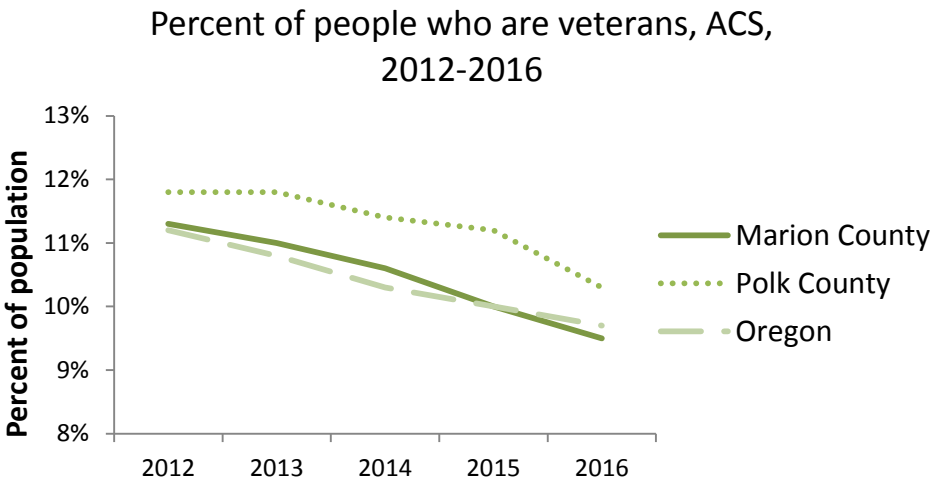
- About 26% of community members in Marion identified as Hispanic or Latina(o), which was higher than Polk (13%) and Oregon (12%).[4] Marion had a smaller proportion of members who identified as White, non-Hispanic/Latina(o) than Polk and the state. Marion also had a larger proportion of members who identified as Native Hawaiian or Pacific Islander than Polk and the state.



Veterans

During service, military personnel can experience higher rates of exposure to adverse environmental factors that can increase risk for chronic health conditions and/or disability.

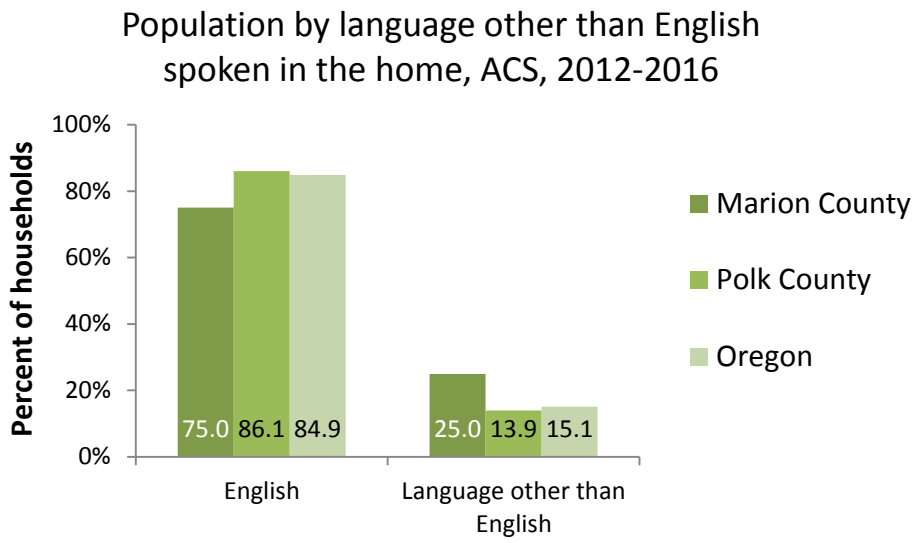
- About 10% of community members were veterans and Polk had a larger proportion of veterans than Marion and the state.[4] The proportion of veterans living in this community has been decreasing in recent years, most of which served in Vietnam or the Gulf War.



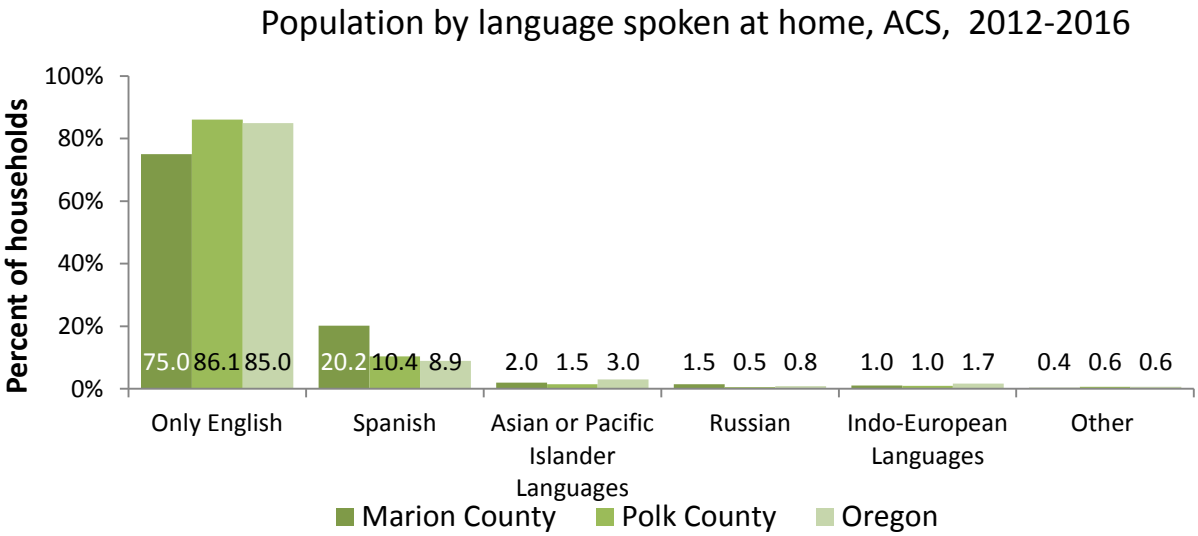
Language

As this community continues to become more diverse, so do the languages spoken. Difficulty speaking, reading, or understanding English, can present barriers to seeking, accessing, and receiving necessary health care and other services.

- About 1 out of 4 households (25%) in Marion spoke a language other than other than English at home than Polk (14%) and the state (15%).[4]



- Spanish, Asian or Pacific Islander languages, and Russian were the most common languages spoken after English in this community.[4] One in 5 households (20%) in Marion spoke Spanish, which was higher than Polk (10%) and the state (9%).



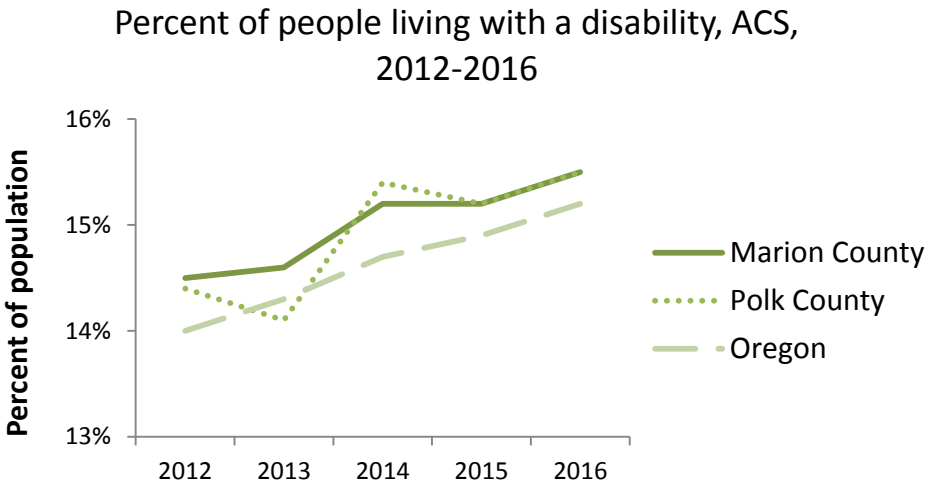
Detailed language spoken at home estimates, ACS, 2012-2016			
	Marion # (%)	**Polk # (%)**	**Oregon # (%)**
Language			
Only English	228,113 (75.0)	63,602 (86.1)	3,184,816 (84.9)
Spanish	61,296 (20.2)	7,652 (10.4)	334,636 (8.9)
Russian	4,489 (1.5)	376 (0.5)	31,647 (0.8)
Arabic	526 (0.2)	223 (0.3)	8,613 (0.2)
Chinese	990 (0.3)	489 (0.7)	28,975 (0.8)
French, Haitian, or Cajun	464 (0.2)	97 (0.1)	11,599 (0.3)
German	1,133 (0.4)	398 (0.5)	17,390 (0.5)
Korean	360 (0.1)	134 (0.2)	10,115 (0.3)
Other	559 (0.2)	222 (0.3)	14,903 (0.4)
Other Asian	2,965 (1.0)	320 (0.4)	39,493 (1.1)
Other Indo-European	1,467 (0.5)	216 (0.3)	34,321 (0.9)
Tagalog	734 (0.2)	112 (0.2)	9,626 (0.3)
Vietnamese	879 (0.3)	32 (0.0)	24,132 (0.6)

People Living with Disabilities

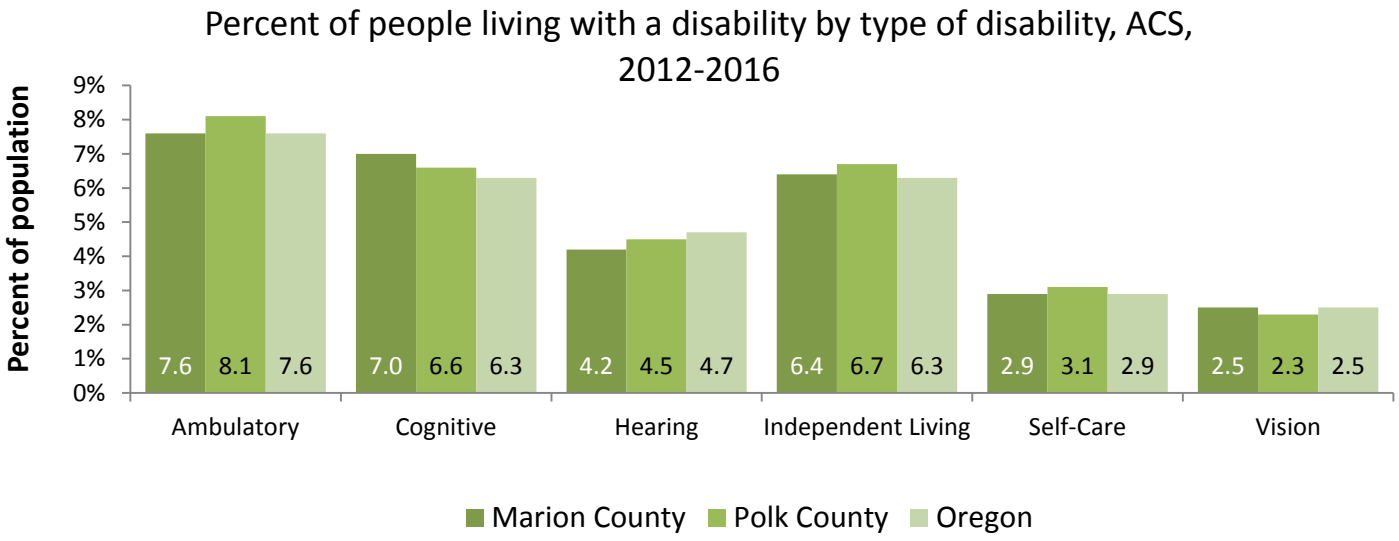
Disabilities can make it more difficult for a person to engage in certain activities and interact with the world around them. There are many types of disabilities and two people with the same disability may be affected in different ways. Adults living with disabilities are at greater risk of chronic disease such as diabetes and cancer; they are also more likely to be current tobacco smokers, and in some cases are less likely to receive preventive screenings to catch disease early.[5]

- Just over 15% of people in this community were living with a disability, which was greater than the state.[4] The proportion of people living with disabilities has been increasing in all regions in recent years.

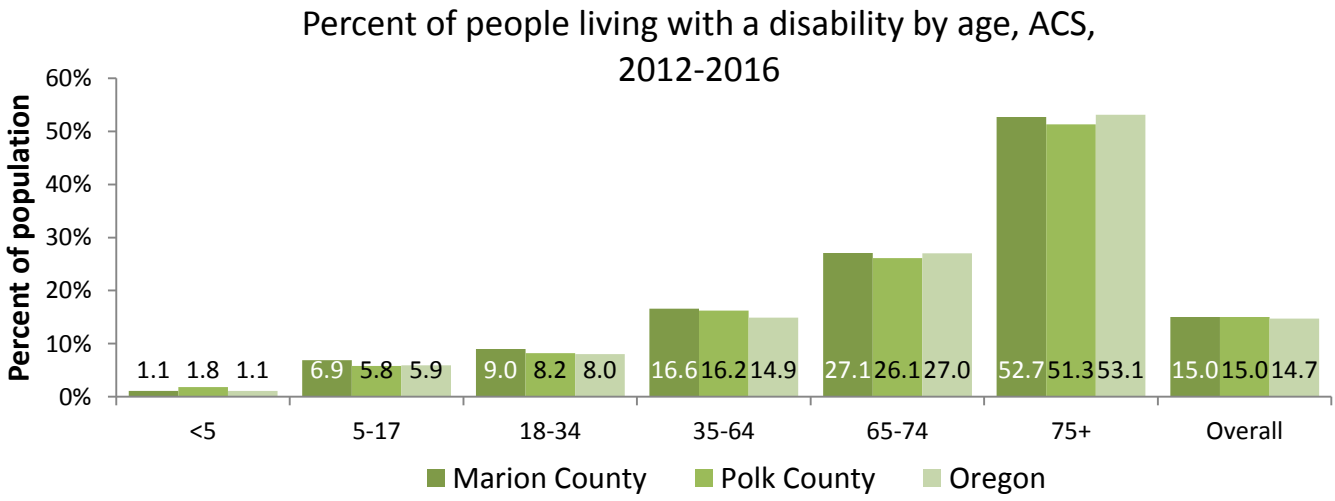
*Note: A person is considered to be disabled by the U.S. Census Bureau if they are limited in any activities because of physical, mental, or emotional problems**



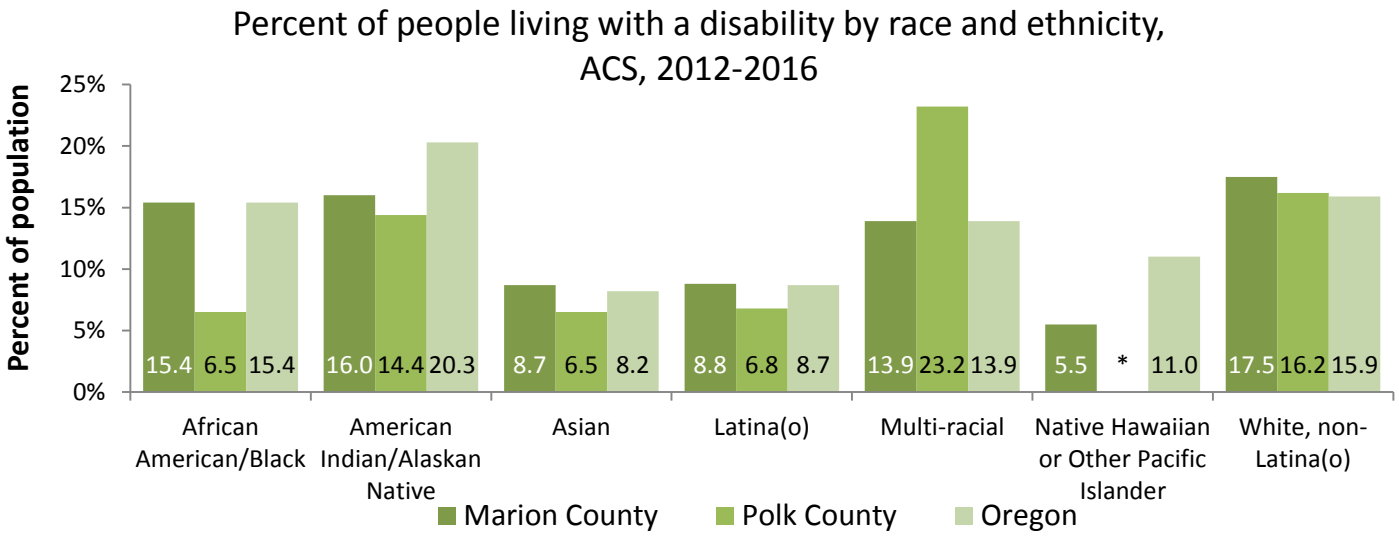
- The three most common types of disabilities in the community were difficulties walking (ambulatory), difficulties living alone, and cognitive.[4] Marion had a slightly greater proportion of people living with a cognitive disability than Polk and the state. Polk had a slightly higher proportion of people who have difficulties walking than Marion and the state.



- The proportion of people living with disabilities in the community increases with age.[4] Over half of community members over the age of 75 were living with a disability.



- Those who identified as American Indian/Alaska Native, African America/Black, White, non-Hispanic, or Multiracial, had a higher proportion of people living with disabilities than their peers.[4]



Note: Data for Native Hawaiian/Pacific Islanders in Polk was unreliable and not shown.

Population Projections

Forecasting future demographics provides insight into health resource need and allocation, along with upgrades and expansions of existing infrastructure.

- The population in this community will continue to grow over the next 50 years as there will be more births than deaths as medical and public health advances expand lifespans.[6] Additionally, more people have been migrating into this community as opposed to leaving, which is expected to continue during the forecast period. Between 2017 and 2035, growth will occur at a slightly higher pace and will begin to slow down, tapering off towards the end of the forecast. It is estimated that this community will exceed 500,000 members by 2035 and Polk will be growing at a faster rate than Marion.
- Shifts in age groups will be occurring over the next 50 year forecast period in this community, with a greater proportion of members falling into older age groups.[6] This change is important, as it highlights the need to expand and prepare for the growing health needs of an aging population.

Community population projections, US Census & PSU, 2000-2067								
	Historical			Forecast				
	2000	2010	AAGR (2000-2010)	2017	2035	2067	AAGR (2017-2035)	AAGR (2035-2067)
Total Population								
Marion	284,834	315,335	1.0%	337,773	405,352	513,142	1.0%	0.7%
Polk	62,380	75,403	1.9%	81,089	105,217	149,203	1.5%	1.1%
Marion-Age(years)								
Under 14	22.7%	22.0%		21.3%	20.2%	19.9%		
15-64	64.9%	65.1%		63.2%	59.8%	59.9%		
65+	12.4%	12.9%		15.5%	20.0%	20.2%		
Polk-Age(years)								
Under 14	20.8%	20.0%		19.9%	19.0%			
15-64	64.4%	65.2%		62.7%	61.9%			
65+	14.8%	14.8%		17.5%	19.1%			

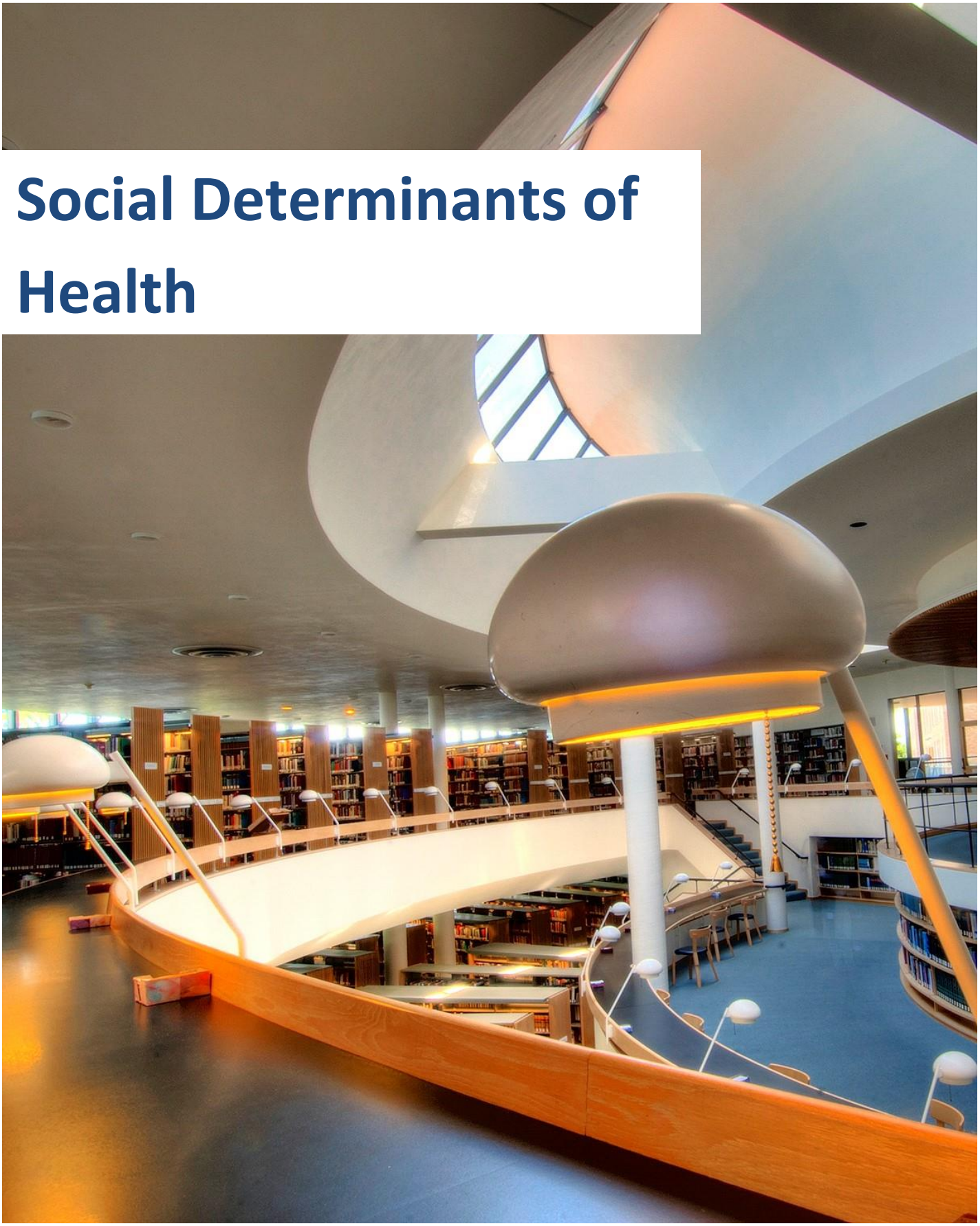
AAGR = Average Annual Growth Rate

- This community is also becoming more diverse with regard to race and ethnicity.[6] Minority populations are growing and comprise a greater proportion of the population, which is especially true for those who identified as Hispanic or Latina(o). There was a substantial increase in this population from 2000 to 2010, due in part to Hispanic and Latina women having higher fertility rates on average than White, non-Hispanic/Latina women. However, more recent data indicates that this trend may not continue.

Community population ethnicity and race, US Census, 2000 and 2010				
	Marion		Polk	
	2000	2010	2000	2010
Hispanic or Latina(o) (%)	17.1	24.3	8.8	12.1
Not Hispanic or Latina(o) (%)	82.9	75.7	91.2	87.9
White alone	76.5	68.7	85.6	80.5
African American/Black alone	0.8	0.9	0.4	0.5
American Indian/Alaska Native alone	1.2	1.0	1.7	1.8
Asian alone	1.7	1.8	1.1	1.9
Native Hawaiian/Pacific Islander alone	0.3	0.7	0.2	0.3
Some other Race alone	0.1	0.1	0.1	0.1
Multiracial	2.3	2.3	2.1	2.9

Aalto Library, Mount Angel Abbey

Social Determinants of Health



Social Determinants of Health

The social determinants of health are the circumstances in which people are born, grow up, live, work, age, and the systems put in place to deal with illness (World Health Organization). Examples of these social determinants include socioeconomic status, education, housing, access and availability of healthy food, and safety among others. The social determinants of health are shaped by the economy, social policy, and politics. Changing policies around the social determinants of health can promote health equity and improve the health of the community as a whole.

> **Health Equity:** Absence of unfair, avoidable, or remediable differences in health; which is achieved when all people are able to reach their full health potential.

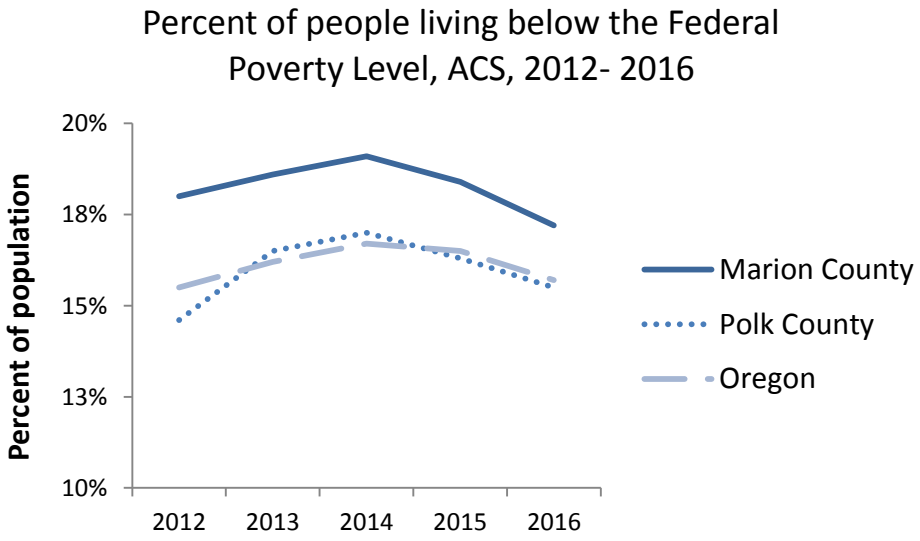
Key Findings for Marion & Polk County:

- Community members in Marion had lower household median incomes and a higher percentage living in poverty, especially children, than Polk and the state. Roughly 25% of children were living in poverty in Marion, compared to 17% in Polk and 20% in Oregon. In the community, a higher proportion of females were living in poverty than males, and members who identified as a race or ethnicity other than White, non-Hispanic/Latina(o) had higher poverty rates as well. Overall, poverty rates have been decreasing in this community and the state recently, likely due in part to improving economic conditions.
- Educational achievement has been improving in recent years as a higher percentage of community members have a high school diploma/GED. However, educational achievement in Marion was lower than Polk and the state, especially with regard to college graduates. In Marion, 22% of people had a Bachelor's degree or higher, compared to 30% in Polk and 31% in Oregon. Educational achievement differed by sex, race and ethnicity, geography, and disability status.
- About 1 out of 5 children were food insecure in this community. It was also difficult for some community members to obtain healthy foods due to affordability and low access to stores that sell them.
- Community members are experiencing low rental vacancy rates and a high cost to rent relative to income, which is making housing unaffordable for many. Relatedly, the rate of homelessness has also been increasing in this community. About 3%, or 1,965 students between the ages of K-12 were homeless or living in an unstable housing situation in this community, which differed by school district of enrollment.
- Violent crime has been gradually increasing in the community in recent years. The violent crime rate was higher in Marion than Polk and the state.

Socioeconomics

Socioeconomic status is a key predictor of overall health and well-being of community members. The amount of resources available to a person or a household is a critical gateway to accessing health services and engaging in healthy activities. For those who find themselves living below the Federal Poverty Level, there may not be enough resources available to sustain themselves and their families, which can create an increased need for public assistance for health insurance (Medicaid) or food benefits (SNAP, WIC, etc.).

- Community members in Marion had lower household incomes than Polk and the state.[4]
- Home ownership is often viewed as a measure of financial success and economic stability. A higher percentage of community members living in Polk own their home than Marion and the state.
- Poverty rates have been decreasing in this community and the state in recent years. Marion had a higher proportion of community members living below the federal poverty level than Polk and the state. One in four children (25%) was living in poverty in Marion, which was also greater than Polk (17%) and the state (20%). Relatedly, a higher proportion of children were living with a single parent in in Marion and these single parent households were about three times more likely to be headed by females than males.[4]
- As Marion had a greater proportion of community members living in poverty, it also had a greater reliance on public assistance. A higher proportion of households were receiving SNAP (food benefits) or cash assistance in Marion and this was especially true for households with children, as over half of households with children were receiving SNAP.[4] Community members also heavily relied on WIC services, as nearly 4 in 10 pregnant women in the community were enrolled in WIC in 2017.[7]



Socioeconomic status of the community, ACS, 2012-2016			
	Marion	**Polk**	**Oregon**
Economic Stability			
Median household income (USD)	$50,775	$54,010	$53,270
Home ownership* (% owning their home)	55.9	60.2	55.6
Poverty†			
Total poverty (% of population in poverty)	17.2	15.5	15.7
Child poverty (% of children under age 18 in poverty)	25.4	17.4	20.4
Children in single parent families (% of children under 18 living with single parent)	33.6	25.8	30.5
Male householder	24.1	27.7	26.7
Female householder	75.9	72.3	73.3
Employment			
Unemployment rate[a] (%)	4.0	4.0	3.8
Public Assistance			
SNAP or cash benefits (% of households receiving benefits in past 12 months)	23.4	19.4	19.5
Children receiving SNAP (% of households with children under age 18 receiving SNAP in past 12 months)	56.7	48.5	45.1
WIC enrollment‡			
Families served (#)	5,042**	1,073	N/A
Working families (%)	74.0**	69.0	N/A
Percent of all pregnant women served (%)	43.0**	36.0	35.0

* Percent of all housing units occupied by homeowners

** Values calculated for clients served by Marion County Health & Human Services and does not include clients served by Salud

† U.S. Census Bureau definition: household income compared to family size and composition

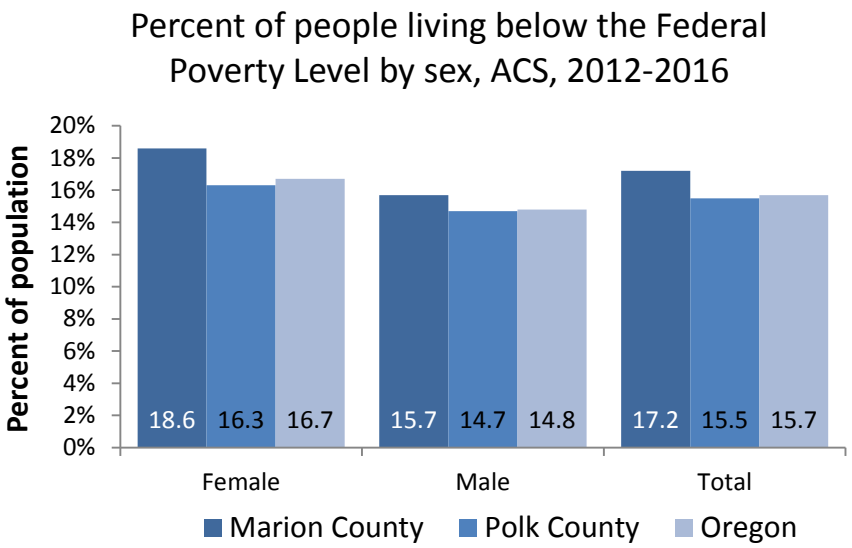
SNAP = Supplemental Nutrition Assistance program, previously Food Stamp Program

‡ Oregon Health Authority, Oregon WIC Program Annual Report, 2017

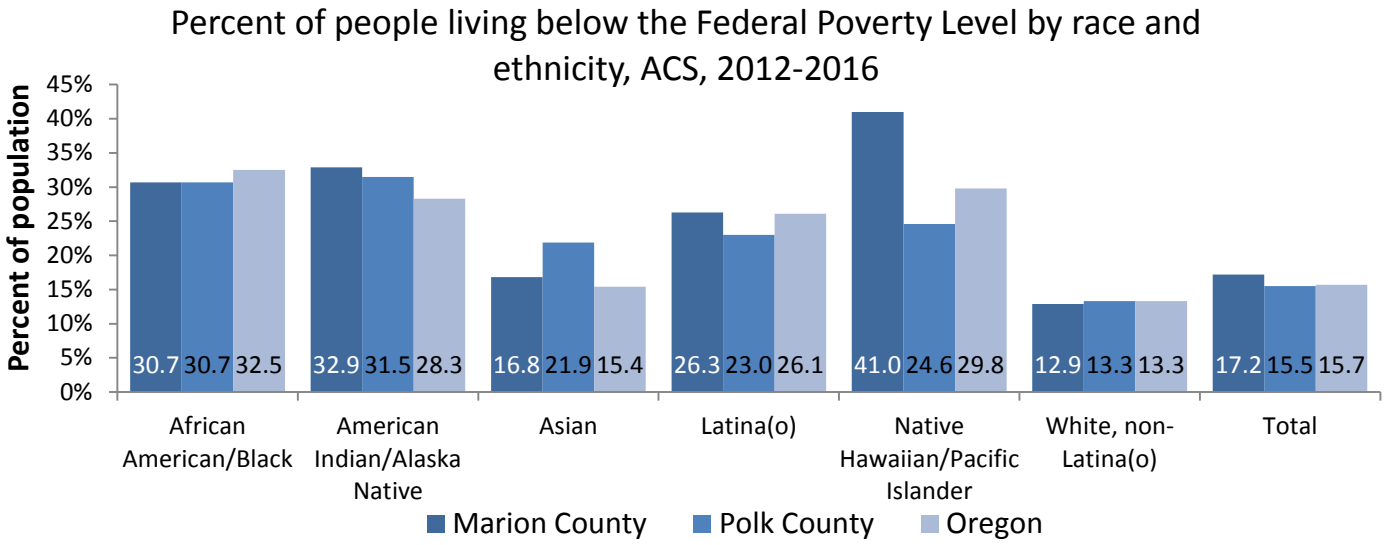
[a] United States Department of Labor, Bureau of Labor Statistics, April 2018

N/A = Data not available

- A higher proportion of females were in poverty than males in this community and the state.[4]



- All races and ethnicities had greater poverty rates than White, non-Latina(o)s. African American/Blacks, American Indian/Alaska Natives, and Native Hawaiian/Pacific Islanders had the highest proportion of community members living in poverty.[4]



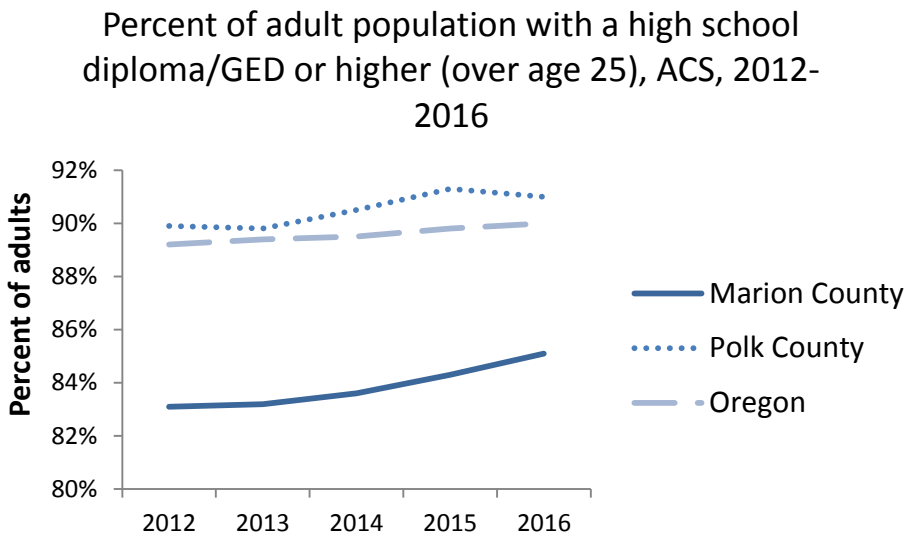
Education

Educational attainment can be indicative of income earning power and is associated with better health outcomes. Additional information on education can be found in the Infant, Child, and Adolescent Health section.

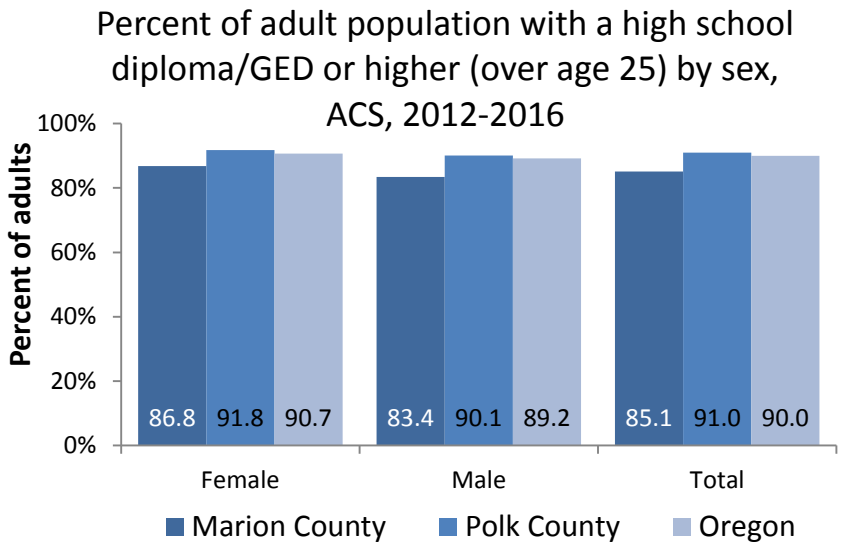
- The proportion of community members over age 25 who earned a high school diploma, GED, or a higher level degree has been increasing in recent years.[4] Marion had a lower percentage of members who earned a high school diploma, GED, or higher level degree than Polk and the state.
- Between 76-80% of young adults graduated from high school in four years in this community, which is not meeting the Healthy People 2020 goal of 87%.[8,9] Marion had a smaller percent of people with a Bachelor's degree or higher (22%) than Polk (30%) and the state (31%).[4]

Education status of the community, ACS, 2012-2016			
	Marion	**Polk**	**Oregon**
High school graduate/GED or higher (% over age 25)	85.1	91.0	90.0
Four year high school graduation rate* (%)	75.6	79.6	76.7
Bachelor's degree or higher (% over age 25)	22.4	30.0	31.4

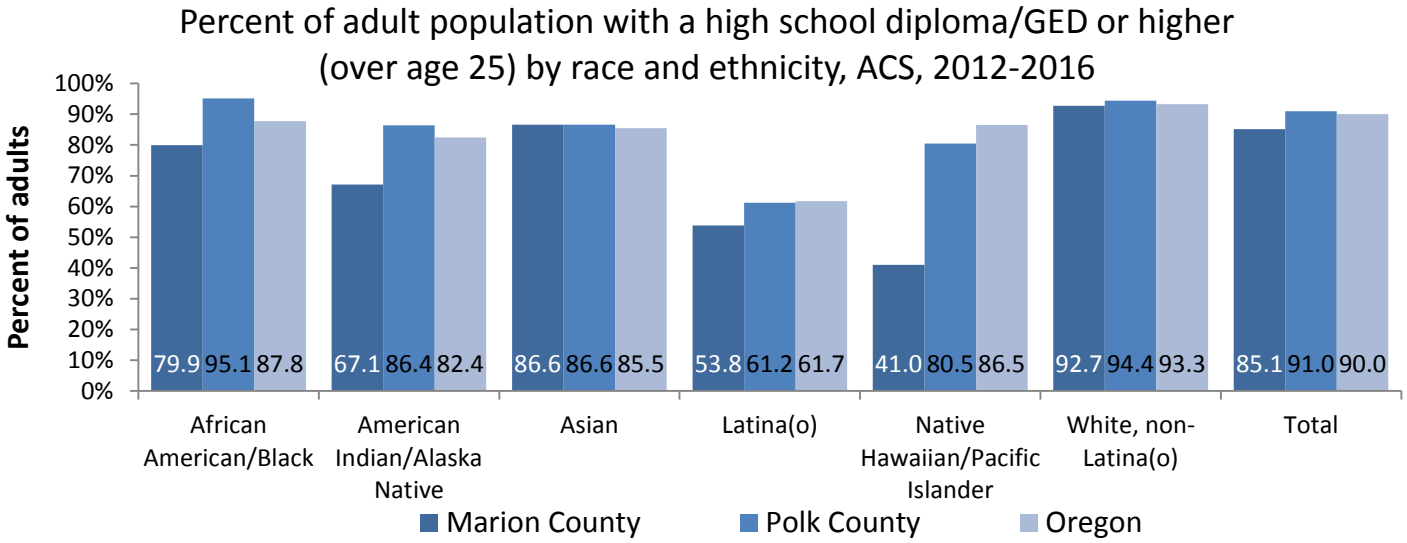
*Oregon Department of Education, Cohort Graduation Rate, 2016-2017



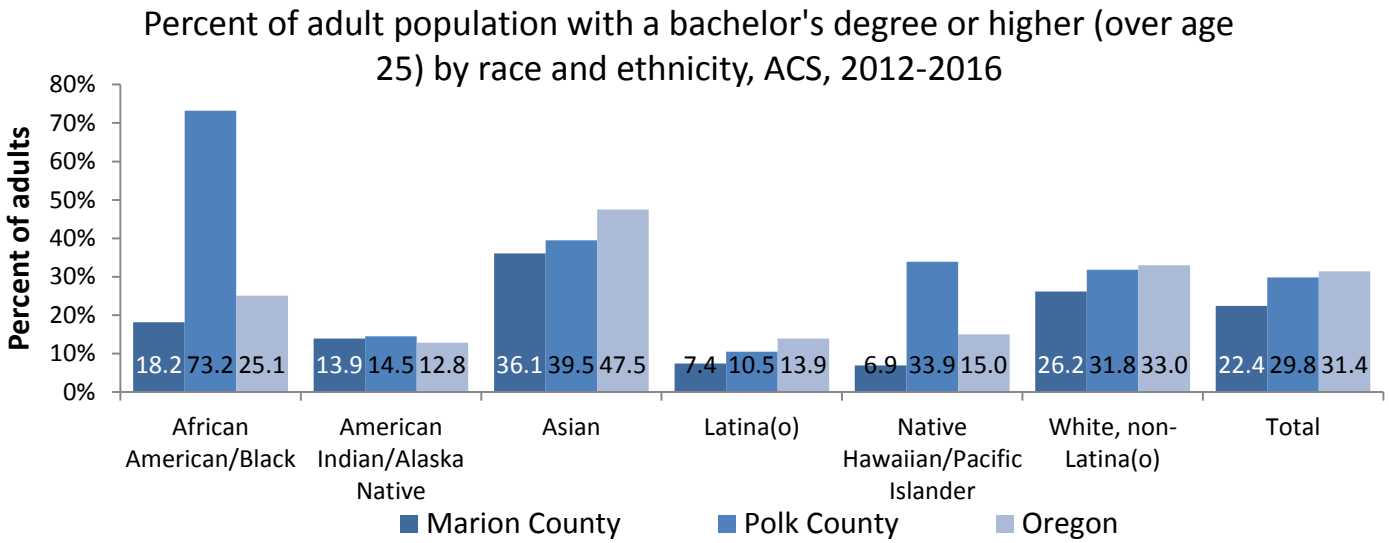
- A greater proportion of females had a high school diploma, GED, or higher than males in this community and the state.[4]



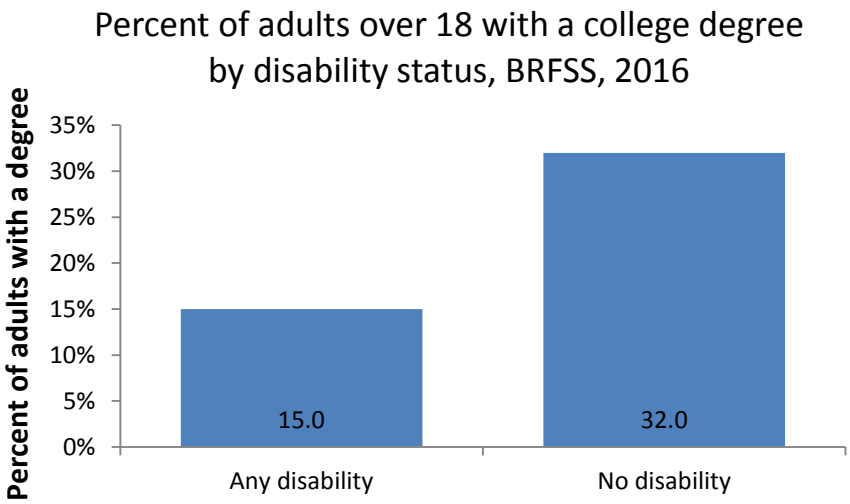
- Adult community members who identified as White, non-Latina(o) were more likely to have a high school diploma, GED, or higher level degree than their peers.[4]



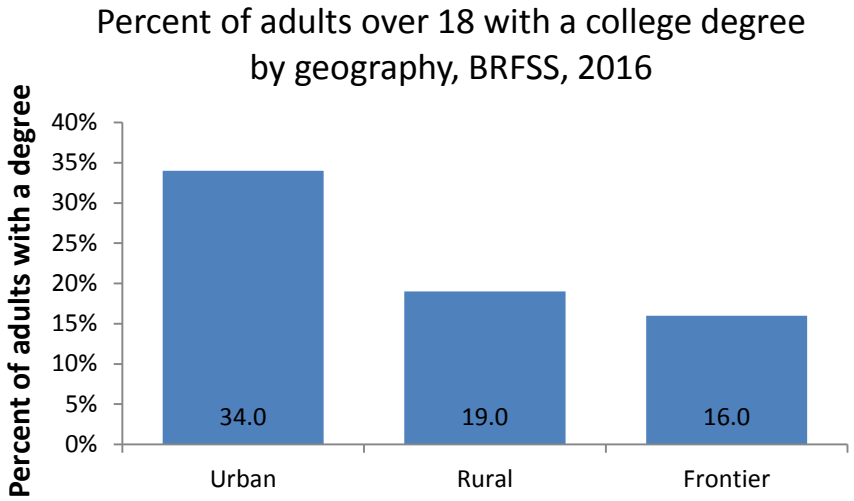
- In general, adults who identified as Asian were more likely than their peers to have a bachelor's degree or higher.[4]



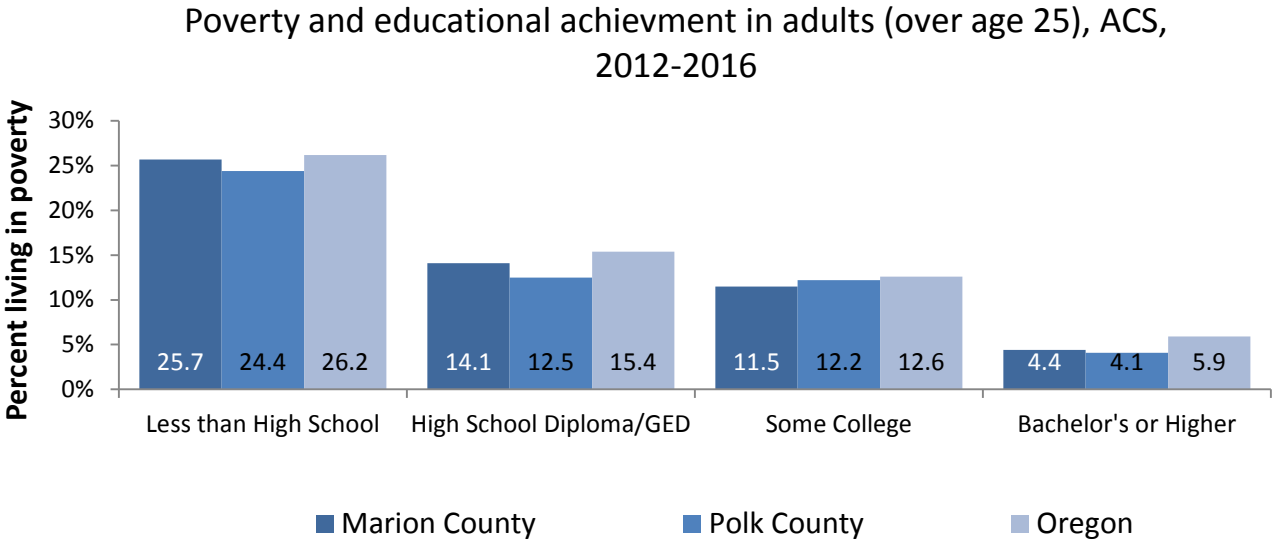
- In Oregon, adults living with a disability were less likely to have a college degree.[10]



- In Oregon, adults who live in an urban geographical location were more likely to have a college degree.[10]



- Poverty and educational achievement are very closely linked. Those with higher educational achievement in this community had the lowest poverty rates and this trend decreased with each level of education providing even greater protection from poverty.[4]

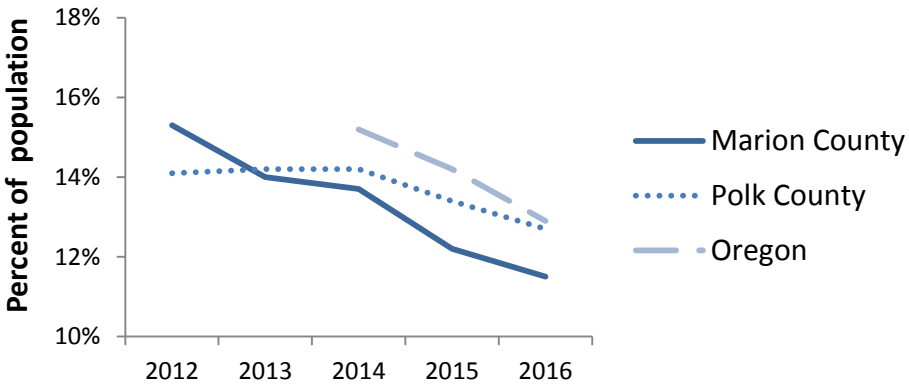


Food Insecurity

The U.S. Department of Agriculture (USDA) defines food insecurity as limited or uncertain availability of nutritionally adequate foods or uncertain ability to acquire these foods in socially acceptable ways. Unemployment and poverty are strongly linked to food insecurity. Food insecurity has been associated with chronic diseases including diabetes, heart disease, and depression, along with risk factors such as obesity, high blood pressure, and high cholesterol.

- Just over 1 in 10 community members were considered to be food insecure, which was slightly lower than the state.[11] Of those who are food insecure, most were eligible for some form of nutrition assistance in Marion, however in Polk, a lower percent would qualify and were thus more reliant on charitable sources (e.g. foodbanks) to obtain adequate nutrition. Overall, the proportion of the total population who are food insecure has been decreasing in recent years.
- One in 5 children in this community were food insecure and only 74% of food insecure children in Marion and 68% in Polk were eligible for some form of assistance, increasing demand on charitable sources for food.[11]
- In Marion, 41% of community members were living in a food desert compared to 18% in Polk.[12] To be considered a food desert, a census tract must be designated as both low-income and have low access to supermarkets or large grocery stores where healthy foods are available.

Percent of the population that experienced food insecurity in the last year, Feeding America, 2012-2016



Note: Data not available for Oregon in 2012 and 2013

Food insecurity in the community, Feeding America, 2016			
	Marion	**Polk**	**Oregon**
Total Food Insecurity* (% of total population who was food insecure in last 12 months)	11.5	12.7	12.9
Likely Eligible for Federal Nutrition Assistance† (% who are food insecure that likely qualify for food assistance)	90.0	76.0	70.4
Child Food Insecurity (% of children under age 18 who were food insecure in last 12 months)	21.2	20.0	20.0
Children Likely Eligible for Federal Nutrition Assistance (% of food insecure children who likely qualify for federal nutrition assistance†)	74.0	68.0	63.0
Food Deserts‡ (% of population living in a census tract designated as a food desert)	40.6	17.9	NA

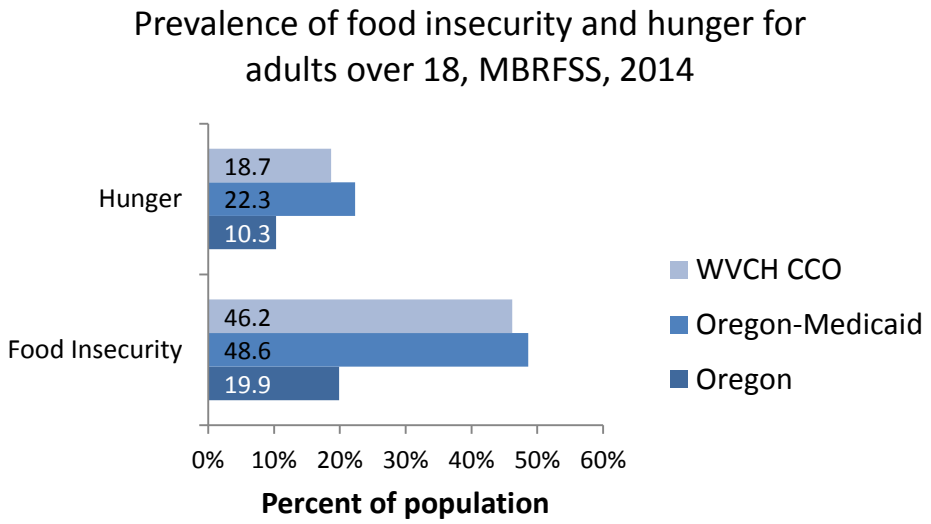
*Food insecurity rates are determined using data from the 2001-2016 Current Population Survey on individuals in food insecure households; data from the 2016 ACS on median household incomes, poverty rates, homeownership, and race and ethnic demographics; and the 2016 data from the Bureau of Labor Statistics on unemployment rates.

†Estimates reflect percent of food insecure individuals living in households below the 185% poverty threshold and eligibility for assistance can vary by state. Federal Nutrition Assistance programs include SNAP, WIC, free school meals, CSFP, TEFAP.

‡ USDA, Food Access Research Atlas, 2015. Census tract is defined as a food desert if it is both low income and has low access to supermarkets or large grocery stores

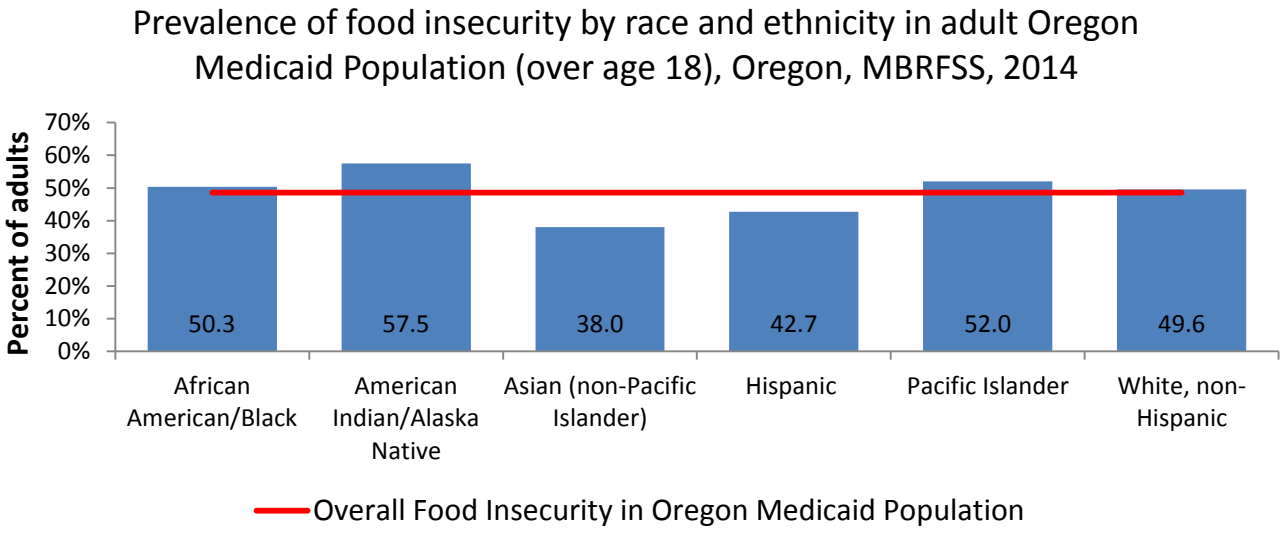
NA = Data not available

- Although not directly comparable, food insecurity and hunger appeared to be more prevalent in the Oregon Medicaid population compared to the general population in Oregon.[13] Local Medicaid (WVCH CCO) had slightly lower food insecurity and hunger prevalence than Oregon Medicaid as a whole.



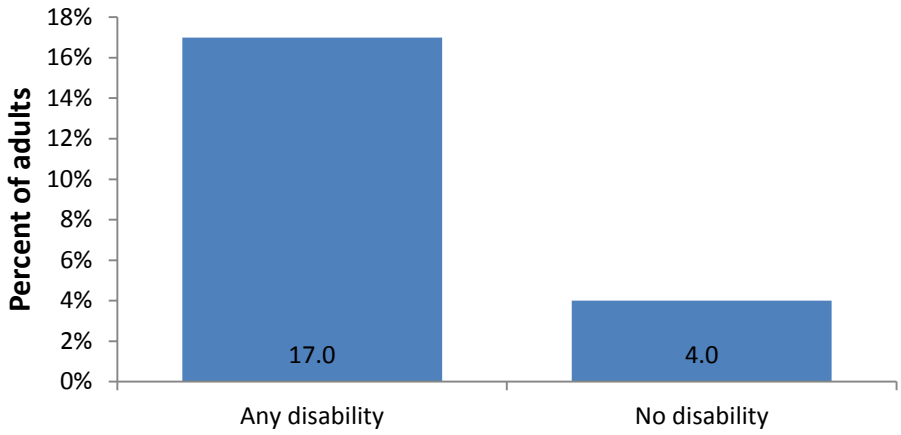
**Note: General population estimates may not be directly comparable to Medicaid estimates due to differences in survey methodologies and are provided as a reference point.*

- In the Oregon Medicaid population, there was a higher prevalence of food insecurity in people who identified as American Indian/ Alaskan Native, Pacific Islander, African American/Black, and White, non-Hispanic than Hispanic and Asian.[13]



- In Oregon, a higher percentage of adults living with a disability reported being food insecure than adults without a disability.[10]

Prevalence of food insecurity in adults over age 18 by disability status, Oregon, BRFSS, 2016



Housing & Homelessness

Having a safe, stable, and reliable home is essential to human health. When there aren't enough homes available to own or rent, housing prices increase, creating an unaffordable burden on the community. Inadequate and unsafe housing contributes to health problems such as chronic disease and injuries, and can have harmful effects on child development.

- The average number of people living in each home was slightly higher in the community compared to the state.[4]
- Over half of community members who rent, paid 30% or more of their gross household income on rent and this proportion is slightly greater in Polk than Marion and the state.[4]
- Less than 1 out of every 25 homes was available to rent at any given time in this community, which was similar to the state.[4]
- About 1 out of every 5 homes in this community had severe problems.[4]

*Note: Severe housing problems includes at least one of the following: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities**

- The 2018 homeless count estimated that 1,218 community members were homeless.[14] The rate of homelessness has been increasing both in the community and the state in recent years.[15,16]
    - About 59% of homeless community members identified as male.[15]
    - The majority of homeless community members identified as White (84%), followed by African American/Black (5%), Multiple Races (4%), Native Hawaiian/Pacific Islander (2%), American Indian/Alaska Native (4%), and Asian (1%).[14]
    - About 87% of homeless community members identified as non-Hispanic/non-Latina(o).[14]
    - About 29% of homeless community members reported that they were chronically homeless.[14]

- About 23% of adult homeless community members were living with at least one child.[14]
- Roughly 20% of homeless community members were under the age of 24.[14]
- About 26% of homeless community members reported chronic substance abuse.[14]
- About 24% of homeless community members reported suffering from a severe mental illness.[14]
- The four most common responses given as reason for homelessness were that the individuals were "Unemployed" (41%), "Could not afford rent" (23%), "Homeless by choice" (17%), and "Mental or Emotional Disorder" (16%).[16]
- The two main things respondents believe would improve their current situation were affordable housing and a job/income source.[16]

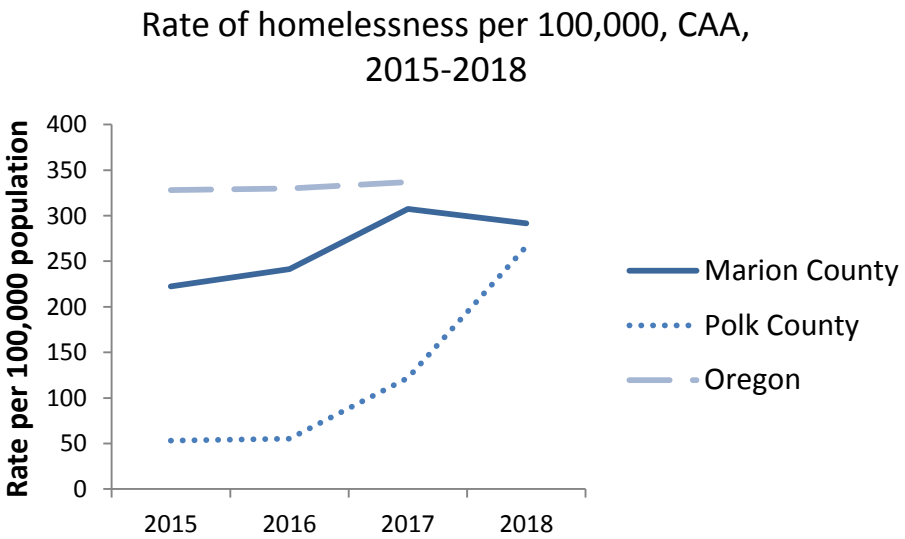
Housing in the community, ACS, 2012-2016			
	Marion	**Polk**	**Oregon**
Number of homes	124,162	31,470	NA
Average household size (persons per household)	2.8	2.7	2.5
Renter burden (% of renters who pay 30% or more of household income on rent)	51.2	54.7	52.9
Rental vacancy rate (%)	4.0	2.5	3.8
Severe housing problems* (% of households)	21.7	20.4	20.5
Homelessness† # (rate of homelessness per 100,000 people))	995(291.5)	223(266.4)	13,953(336.8)**

***** Households with at least one of the following problems: overcrowding, high housing costs, lack of kitchen, or lack of plumbing facilities. US Department of Housing & Urban Development, Comprehensive Housing Affordability Strategy (CHAS), 2010-2014.

† Community Resource Program, Homeless Point in Time Count, 2018

** Count and rate from 2017

NA = Not available



- There were 1,965 students in the community who were homeless or in an unstable housing situation during the 2016-2017 school year, which was about 3% of all enrolled students, and slightly lower than the state value.[17] The Falls City School District in Polk had an especially high percentage of students who were homeless or in an unstable housing situation.

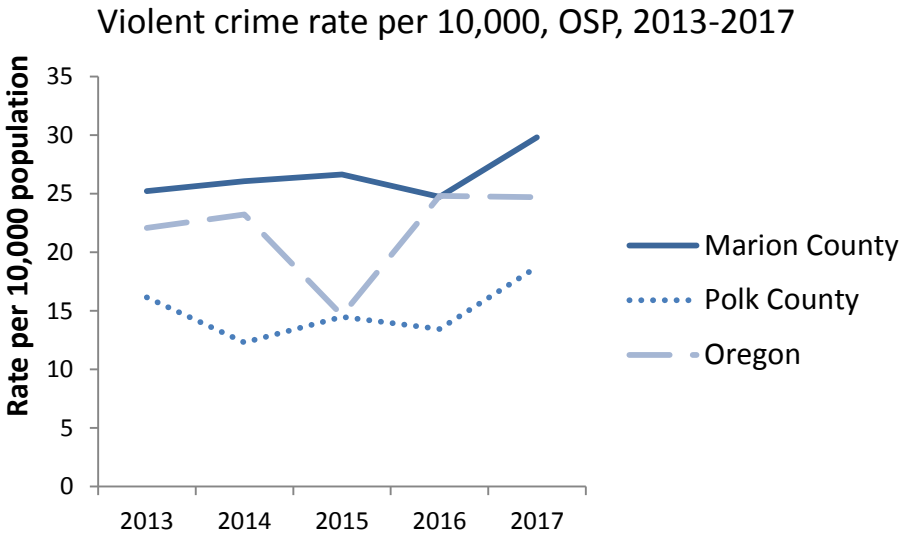
Students in grades K-12 who were homeless or in an unstable housing situation by school district, ODE, 2016-2017		
School District	**Number**	**Percent of district enrollment**
Marion County		
Cascade	65	2.8%
Gervais	43	4.3%
Jefferson	50	5.8%
Mt Angel	26	3.5%
North Marion	17	0.9%
North Santiam	67	2.9%
Salem-Keizer	1162	2.8%
Silver Falls	69	1.8%
St Paul	11	4.5%
Woodburn	255	4.5%
TOTAL	1765	2.8%
Polk County		
Central	88	2.7%
Dallas	81	2.5%
Falls City	31	17.7%
Perrydale	0	0.0%
TOTAL	200	2.8%
Oregon		**Percent of state enrollment**
TOTAL	21340	3.7%

Safety & Violence

A safe environment, free of crime and violence, is critical to the health and well-being of community members. Oregon experiences less violence than most other states and is currently ranked 14th in the country for violent crime.[10] The most common serious violent crimes are aggravated assault, robbery, and rape.

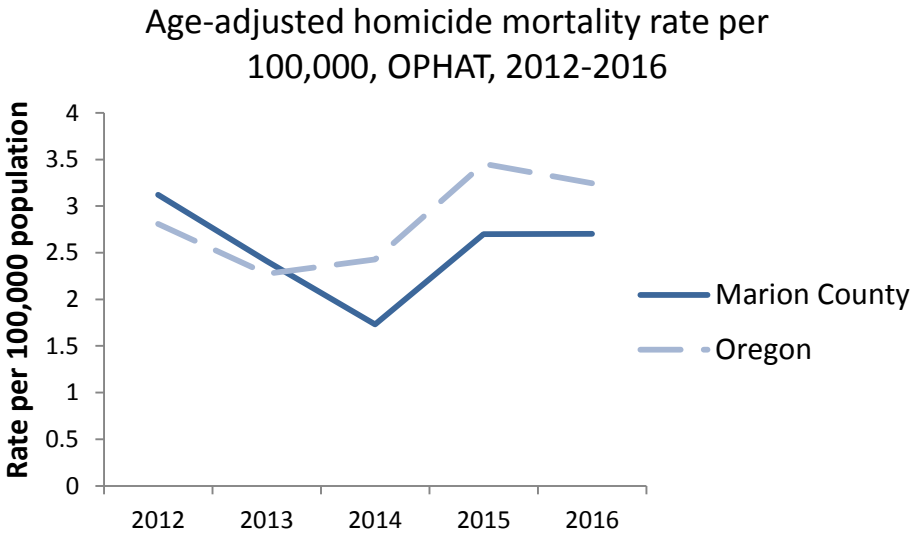
- Violent crime rates have been gradually increasing in recent years both in the community and the state.[18] The violent crime rate was higher in Marion than Polk and the state.

Note: violent crime includes willful murder, forcible rape, robbery, and aggravated assault



Note: In 2015 several police departments did not report criminal offenses, thus the estimate for violent crimes for that year in Oregon is an underestimate.

- Homicide rates have been increasing in recent years both in Marion and the state after experiencing a brief decline in 2013 and 2014.[19] The homicide rate was slightly higher in Oregon than in Marion.

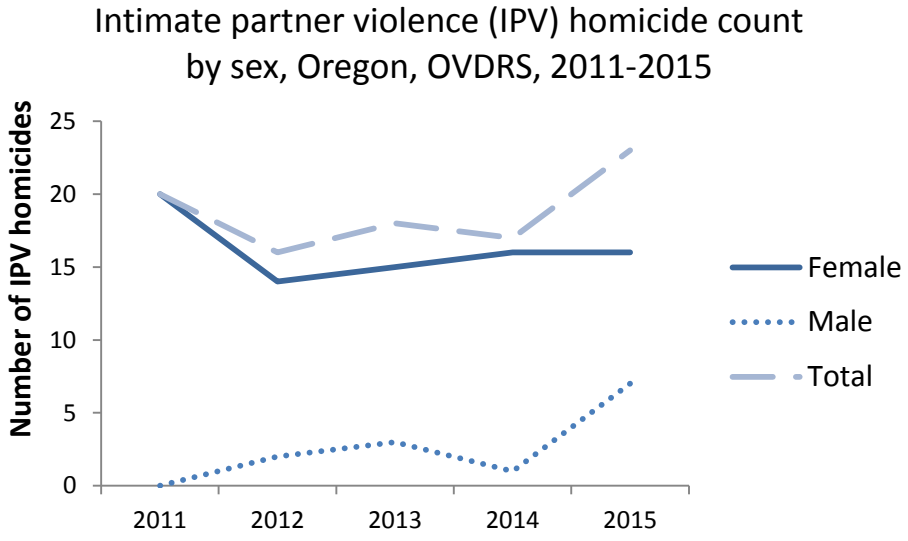


Note: Polk data not included as there were too few homicides to calculate reliable rates

Intimate Partner Violence

Intimate partner violence (IPV) is a serious public health issue that involves physical, sexual, psychological, or emotional violence between two partners in a current or past dating relationship. IPV can also include stalking, which can occur in-person, or virtually via technological advances (e.g. text messaging). In 2015, 1 in 5 homicides in Oregon was the result of IPV.[20]

- In Oregon, the number of homicides that were the result of IPV has been increasing.[20] More females were killed as a result of IPV than males.



Wakeboarder at Detroit Lake

Quality of Life

Quality of Life

Self-reported health status includes the individual's consideration of his or her own physical, mental, and emotional health as well as his or her social functioning within peer groups. This can also be a good indicator of the effects of chronic illness, long term medical treatments, and short or long-term disabilities.

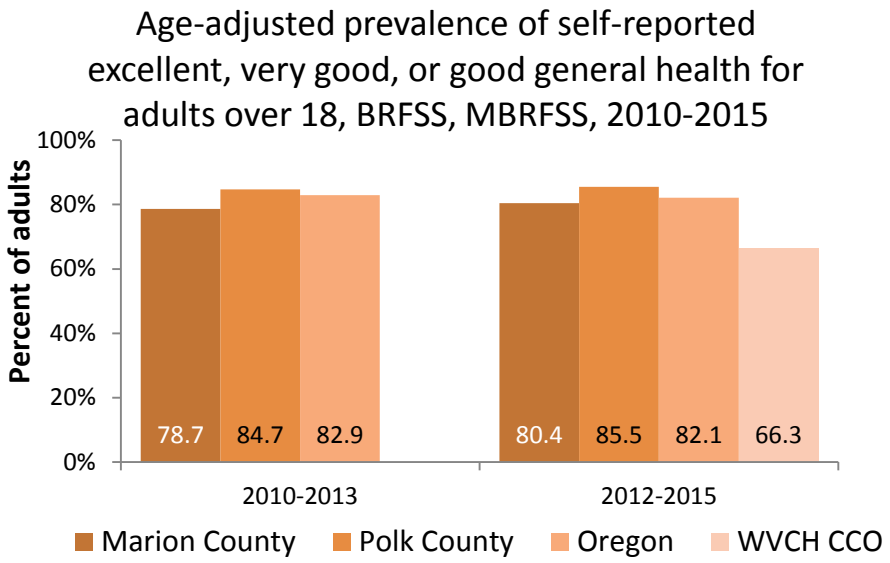
Key Findings for Marion & Polk County:

- About 80% of adults in Marion and 86% of adults in Polk reported that their health was good or excellent, compared to 82% of adults in Oregon.
- Older adult community members were less likely to report that their health was good or excellent, compared to younger adults.
- Adult community members living below the Federal Poverty Level were less likely to report good or excellent health.
- About 25% of adult community members reported limitations due to mental, physical, or emotional problems. Adult community members living below the Federal Poverty Level were more likely to report limitations.

Self-Reported Health Status

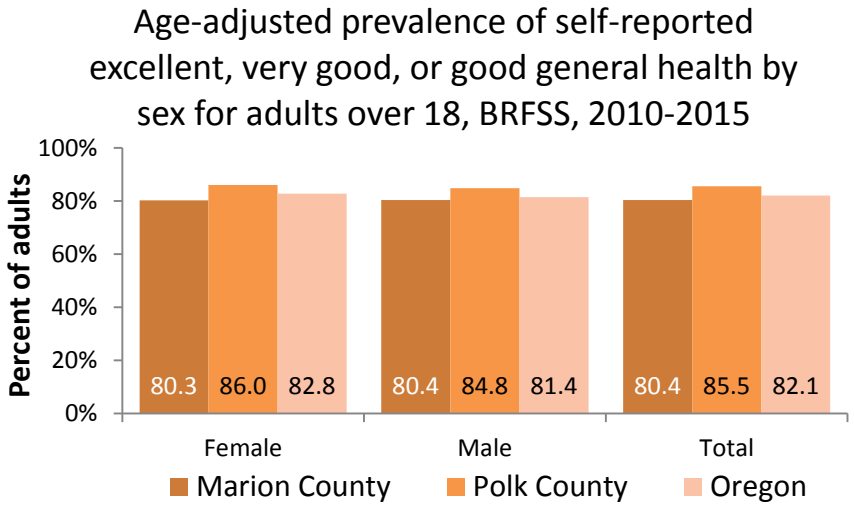
How an individual rates his or her own health can be a good indicator of future disability, hospitalization, and death. Those who report poor general health may be more likely to suffer premature death than those who report good general health.

- Between 2012 and 2015, about 80% of adults in Marion and 86% of adults in Polk reported that their general health was good or excellent, compared to 82% in Oregon.[21] Although not directly comparable, a smaller percentage of adult community members on Medicaid (WVCH CCO) reported good or excellent health than the community as a whole.[13,21]

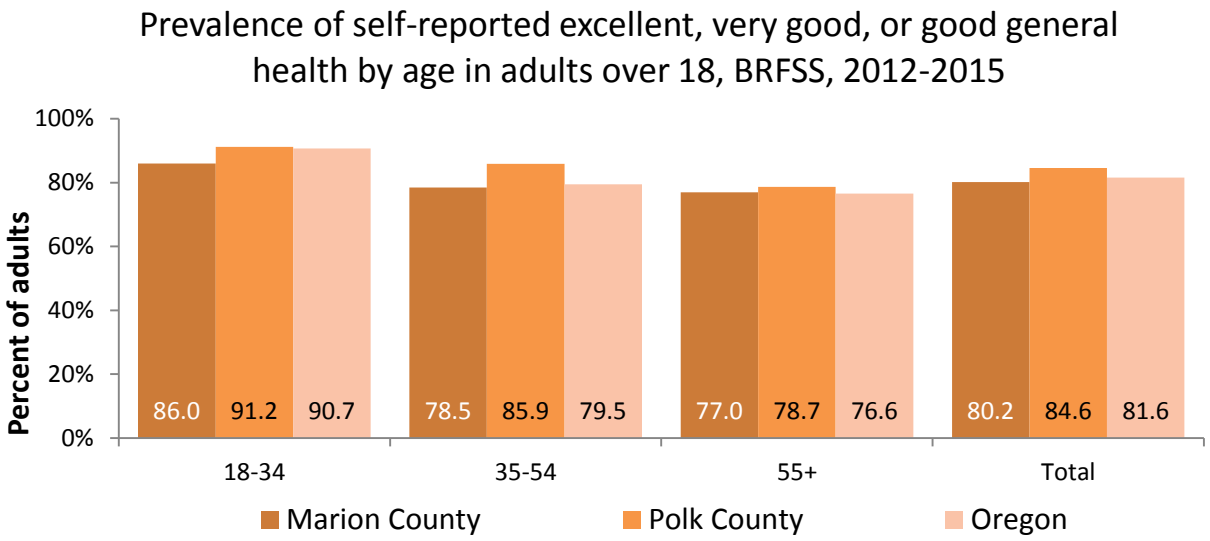


Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. MBRFSS data is from 2014

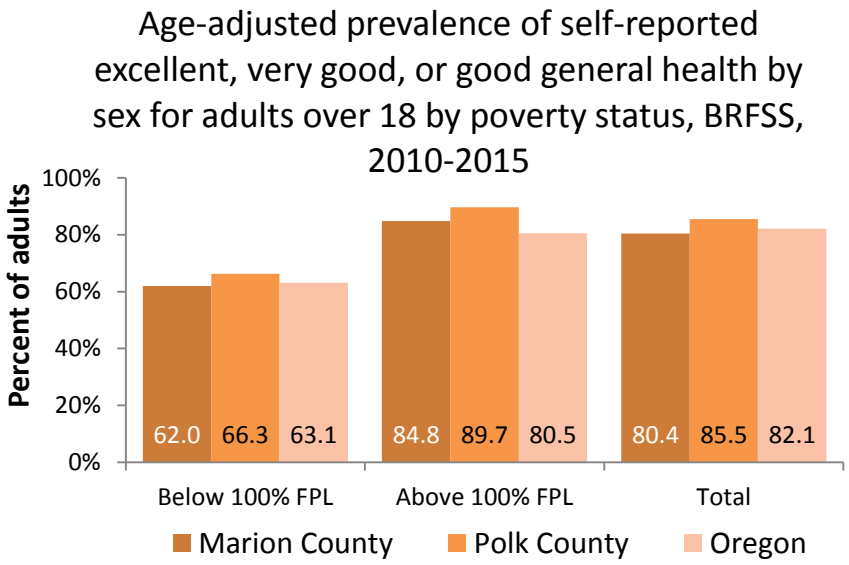
- A slightly higher percentage of adult females in Polk and Oregon reported good or excellent health than adult males.[21]



- A lower percentage of community members of older age groups reported good or excellent health.[21]



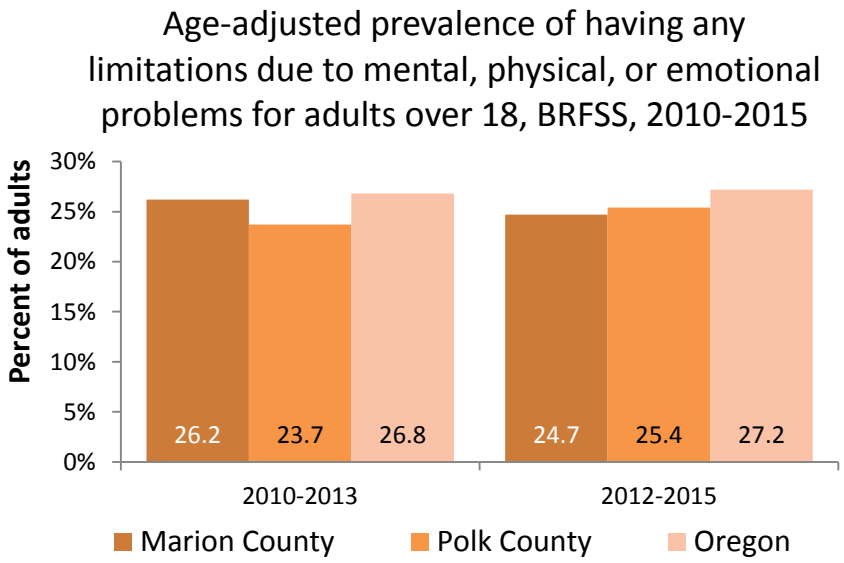
- Adult community members living below the Federal Poverty Level (FPL) were less likely to report good or excellent health than those living above the FPL.[21]



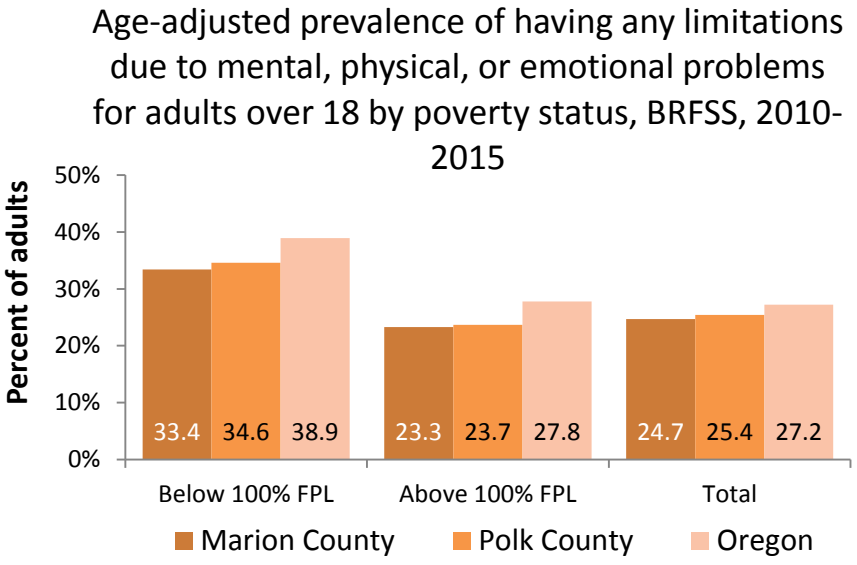
Limitations Due to Mental, Physical, or Emotional Problems

When a person is unable to engage in daily activities due to mental, physical, or difficulties with emotions, they are more susceptible to chronic disease, and a lower quality of life.

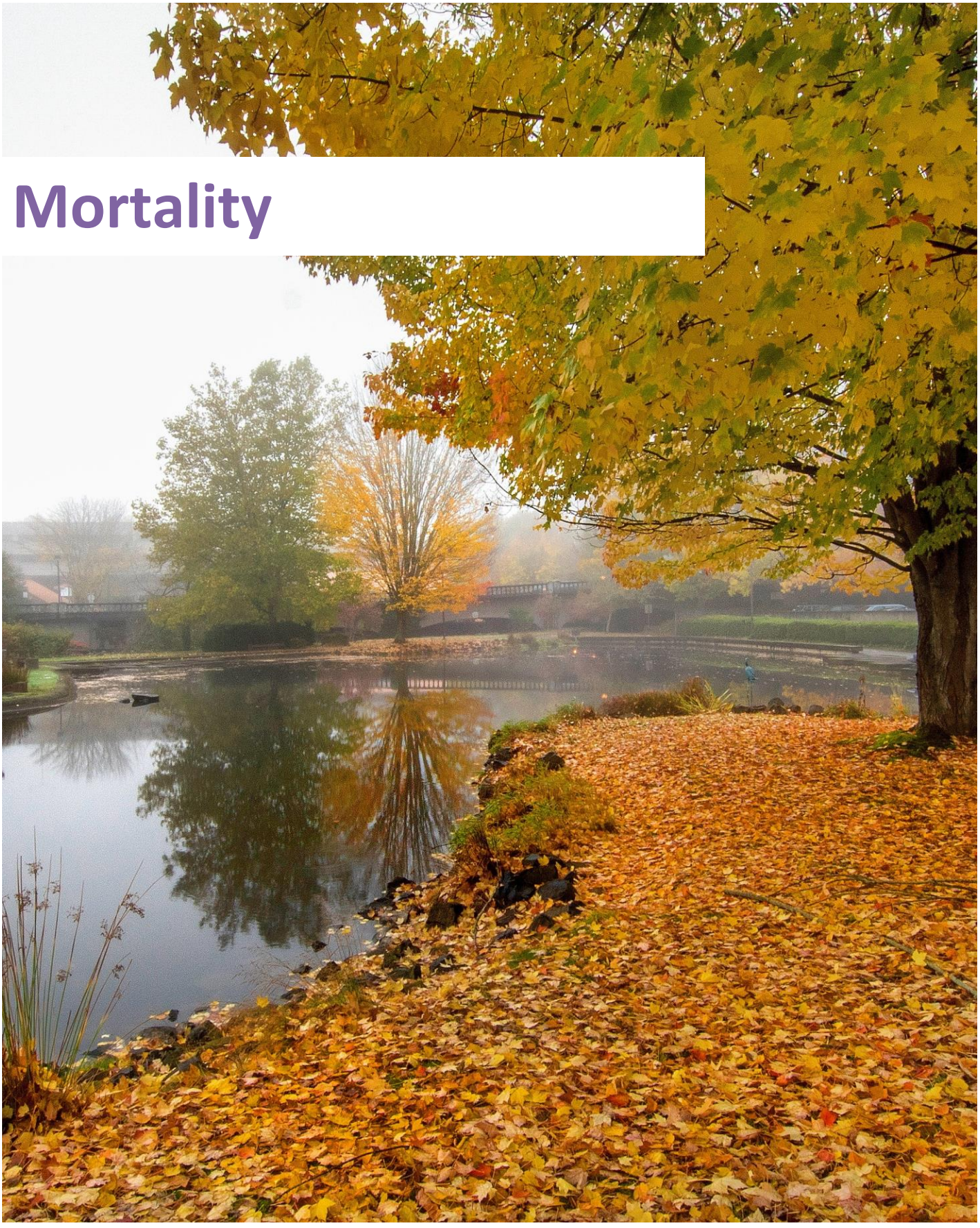
- Between 2012 and 2015, about one quarter of adults in the community reported limitations due to mental, physical, or difficulties with emotions, which was lower than the state.[21]



- Adults in the community below the Federal Poverty Level were more likely to report having limitations due to mental, physical, or emotional problems.[21]



Mortality



Mortality

Mortality rates identify who is dying of what cause in a community. It is important to note the leading causes of death because it helps to inform where prevention activities should be focused. If the leading cause of death is heart disease, community health agencies may choose to focus on alleviating health problems that contribute to heart disease such as high blood pressure, high cholesterol, unhealthy eating habits, and lack of physical activity.

Key Findings for Marion & Polk County:

- The top five leading causes of mortality in the community were: (1) cancer, (2) heart disease, (3) unintentional injuries, (4) stroke, and (5) chronic lower respiratory diseases.
- Community members in Marion died at a higher rate than members in Polk and the state. Over time, the mortality rate has been increasing in Marion and decreasing in Polk.
- Males in the community died at a higher rate than females.
- In general, those who identified as White, non-Hispanic, African American/Black, or American Indian/Alaskan Natives died at higher rates in the community than Asian/Pacific Islanders and Hispanics.
- The average life expectancy for a newborn in the community was about 80 years, which was similar to the state. Male newborns, along with African American/Black, and White, non-Hispanic newborns, had lower life expectancies than their peers.
- Life expectancies by census tract in the community varied greatly, with some tracts ranging from 66-76.6 years at the lowest to 81.4 – 89 years at the highest. Census tracts with the lowest life expectancies tended to cluster around the larger cities, especially Salem.
- About 26,600 years of life would be added back to the community each year if premature death before the age of 75 was avoided.

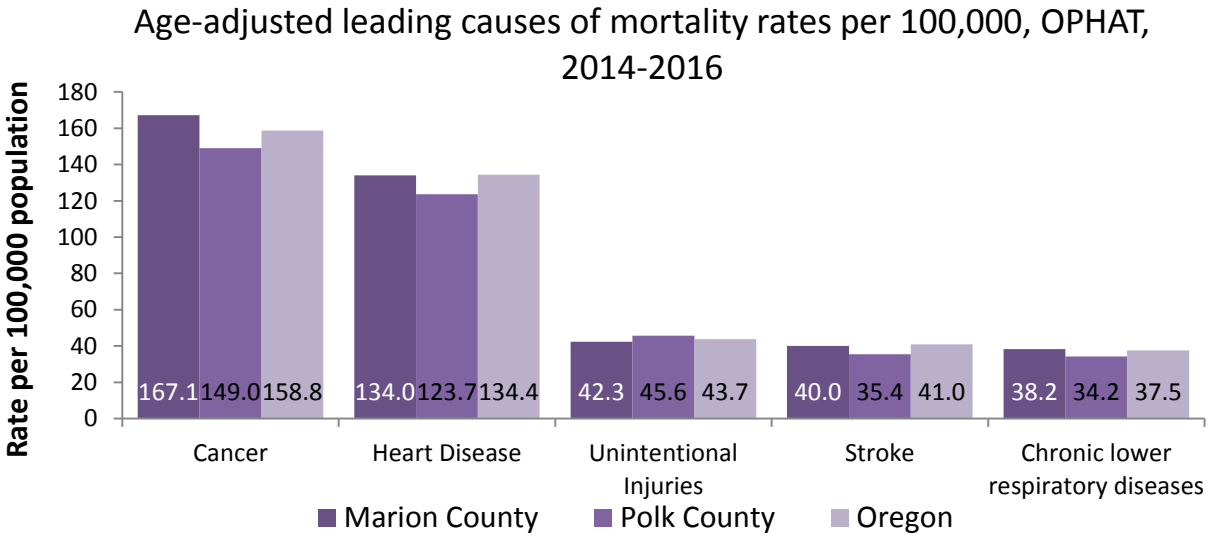
Leading Causes of Mortality

Identifying what's most responsible for death in the community allows us to target prevention efforts to extend life spans, improve quality of life, and reduce the burden on the local health care system. Interventions designed to address health disparities in those with disproportionately high mortality rates will do much to help achieve health equity in the community.

- The five leading causes of death in the community were cancer, heart disease, unintentional injuries, stroke, and chronic lower respiratory diseases.[22] These leading causes are the same leading causes for the state as a whole. The cancer mortality rate was higher in Marion than Polk and the state.

Unintentional injuries = motor vehicle/transport accidents, falls, accidental firearm discharge, poisoning, drowning, smoke/fire exposure, and other accidents

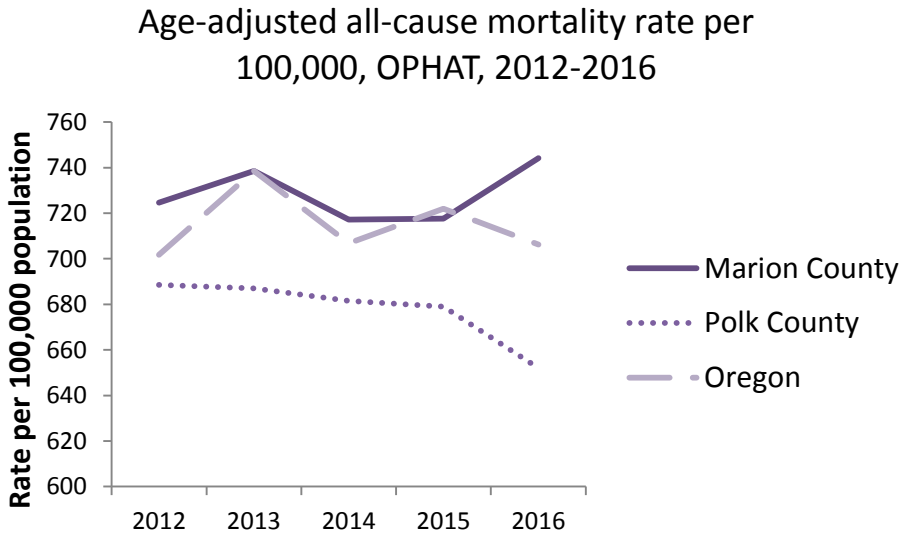
Chronic lower respiratory diseases = bronchitis, emphysema, and asthma



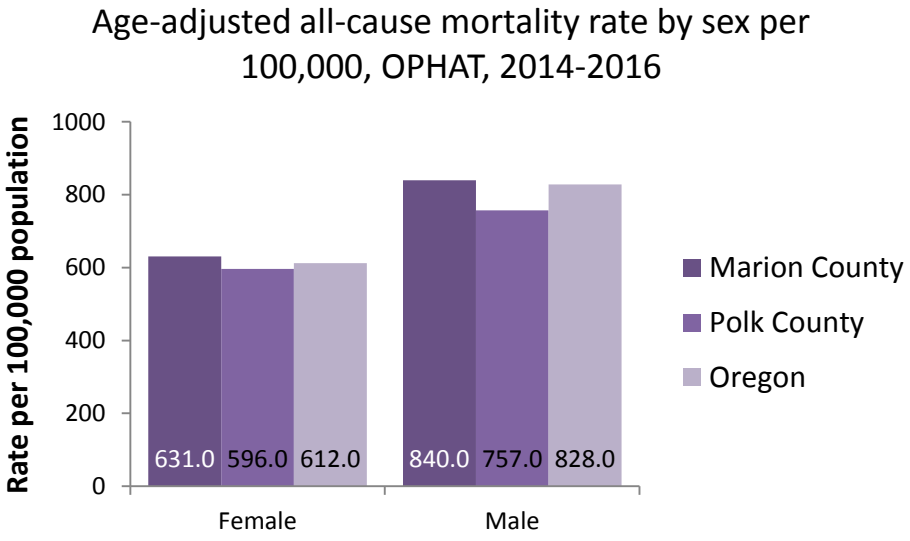
All-Cause Mortality Rate

This measure shows the total amount of people who are dying in the community over time, standardized to a population of 100,000, and age-adjusted for comparison purposes.

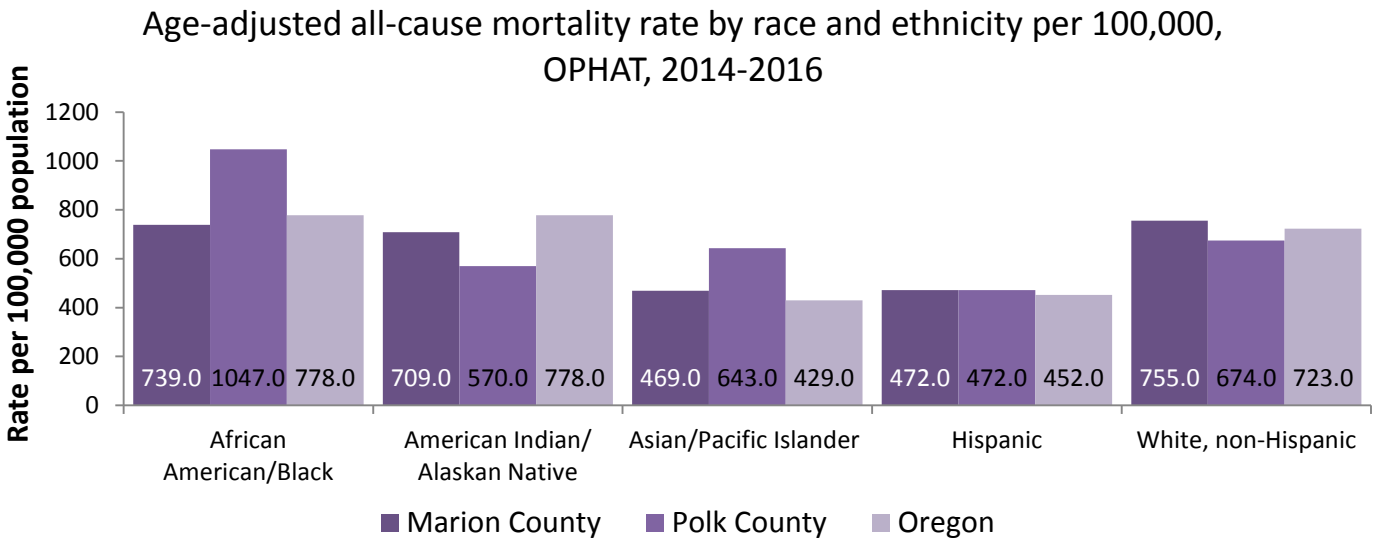
- In 2016, 2,846 community members died in Marion and 680 died in Polk, while 35,799 died in the state as a whole.[19] Community members in Marion were dying at a higher rate than members in Polk and the state. The mortality rate has been decreasing overall in Polk, but has been increasing in Marion in recent years.



- Males in the community had a higher mortality rate than females.[19] This may be due to higher chronic disease rates among men, occupation differences, and because men die at a higher rate from injury than women.



- In the community in general, White, non-Hispanics, African American/Blacks, and American Indian/Alaskan Natives die at higher rates than Asian/Pacific Islanders and Hispanics.[19] This might be due to higher disease incidence among certain racial or ethnic groups, or a lack of access to health care services amongst groups. The mortality rate of African American/Blacks and Asian/Pacific Islanders was considerably higher in Polk compared to Marion and the state. In Marion, American Indian/Alaskan Natives have a markedly higher mortality rate than Polk, but was lower than the state.



Life Expectancy

This measure determines the amount of life in years on average that a newborn can expect to live if current death rates do not change. Medical advances, improvements to the healthcare system, health equity initiatives, and other efforts can all increase life expectancies in the community.

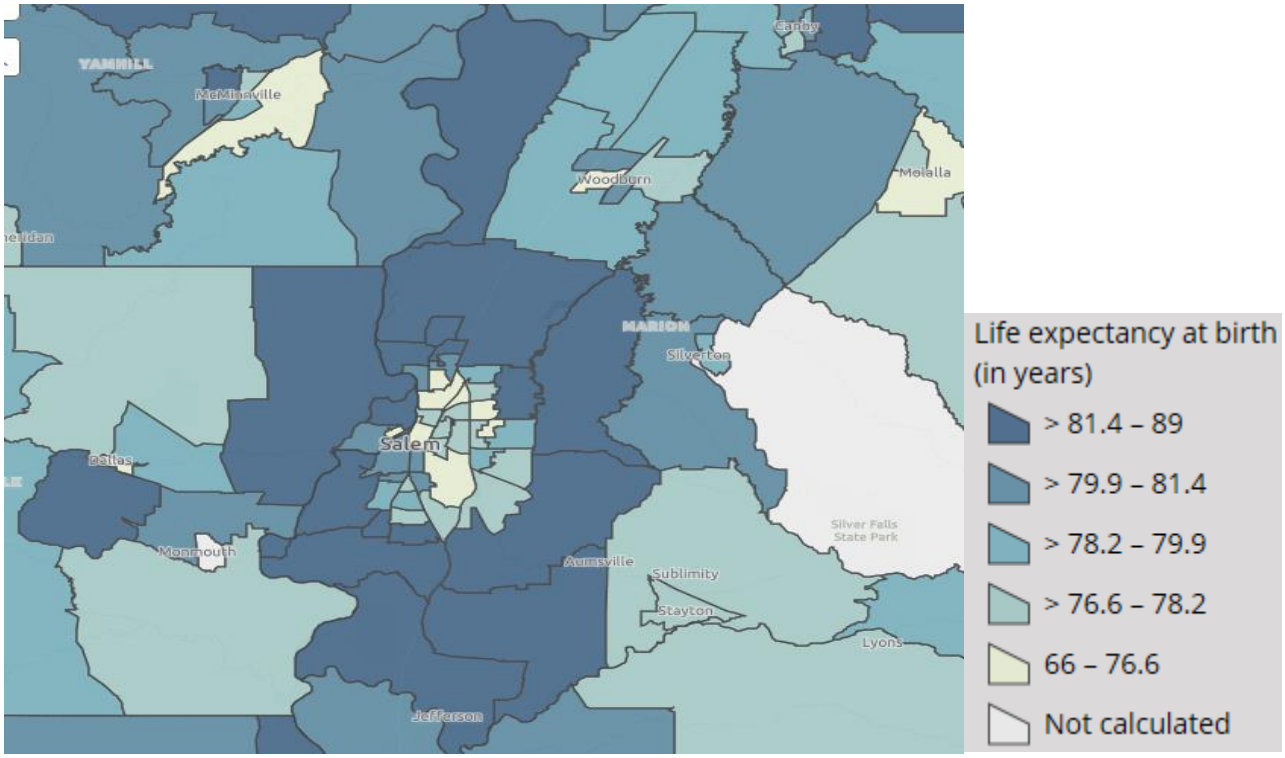
- The life expectancy in the community is roughly 80 years on average for a newborn that was born between 2014 and 2016, which is similar to the state.[19]
    - The average life expectancy for a male newborn was 77 to 78 years in the community, compared to 82 for female newborns.[19]
    - African American/Black and White, non-Hispanic newborns in the community had lower life expectancies compared to the total life expectancies for newborns in the community.[19]

Life expectancy (in years) at birth in the community, OPHAT, 2014-2016			
	Marion	**Polk**	**Oregon**
Female	81.5	82.0	81.9
Male	77.4	78.4	77.5
African American/Black (NH)	79.5	75.3	77.8
American Indian/Alaskan Native (NH)	80.5	83.1	78.1
Asian/Pacific Islander (NH)	85.8	82.1	86.4
Hispanic	85.7	84.1	86.3
White (NH)	78.8	80.2	79.5
Total	79.5	80.3	79.7

NH = Non-Hispanic

- Life expectancy at birth varies greatly in the community by census tract; ranging from 66-76.6 years at the lower end to 81.4-89 years at the higher end depending on where people live.[23] Areas of lower life expectancy clustered around the city of Salem and other larger cities in the community.

Life expectancy at birth by census tract, USALEEP, 2010-2015



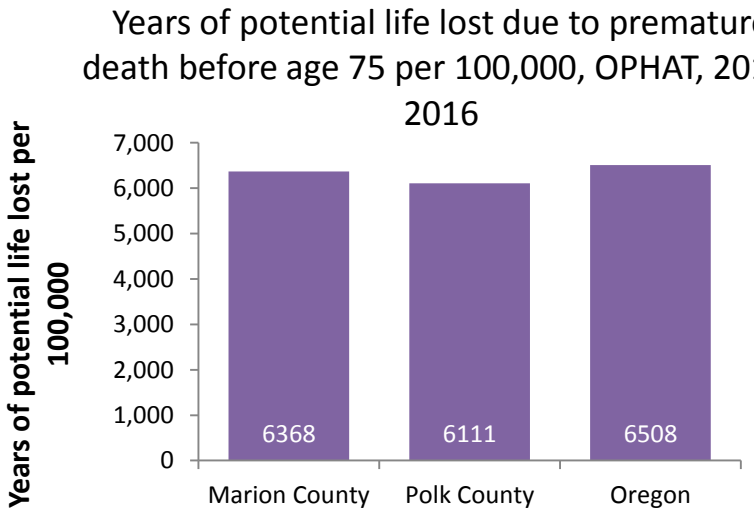
Note: Not all census tracts within Marion and Polk County are shown

Source:
https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/Pages/lifeexpectancy.aspx
Generated: 10/25/2018

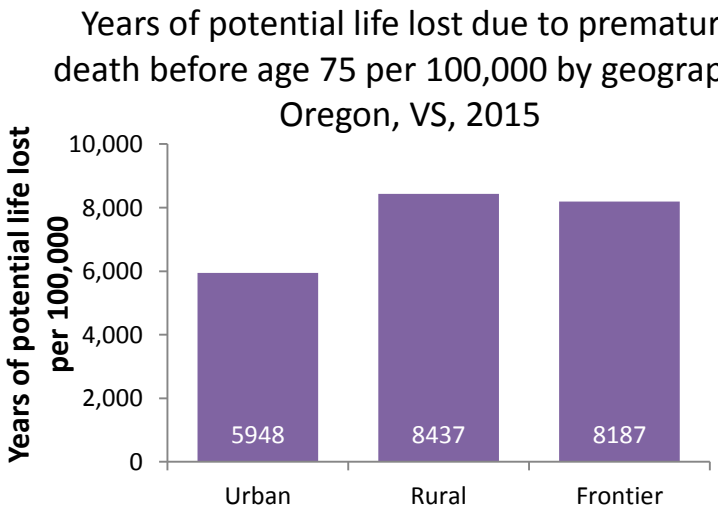
Years of Potential Life Lost

Years of potential life lost (YPLL) is the number of years lost to premature death and is a gauge of assessing early death burden along with the amount of time that could be added back to the community if these deaths were avoided.

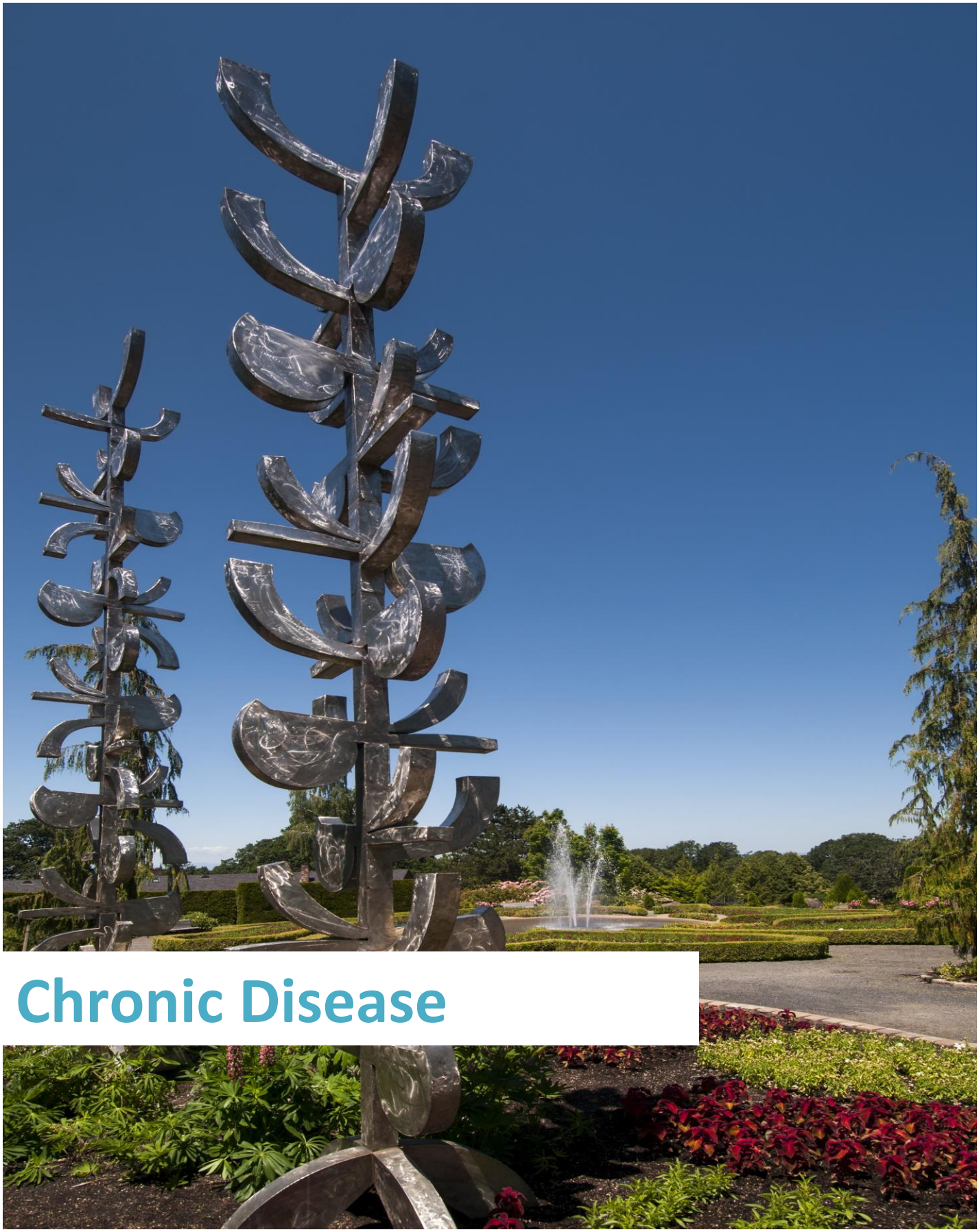
- About 26,600 years of life would be added back to the community each year if premature death before the age of 75 was avoided.[19] Community members in Marion would gain 21,561 years and members in Polk would gain 4,949 years. For every 100,000 community members, there was between 6,111 and 6,368 years of potential life lost each year.
- The community had a lower YPLL than Oregon and the YPLL in Marion is slightly higher than Polk.[19]



- In Oregon, more potential life was lost for those who lived in rural or frontier regions compared to urban.[10]



Oregon Garden, Silverton, Oregon



Chronic Disease

Chronic Disease

Chronic disease is responsible for 7 out of every 10 deaths and accounts for 86% of the nation's health care costs each year.[24] Chronic diseases are long term and most times are not transmissible from human to human. Chronic diseases can lead to premature death, a diminished quality of life, and increased health care costs. Examples of this type of disease include but are not limited to: cancer, diabetes, heart disease, arthritis, depression, and asthma.

Key Findings for Marion & Polk County:

Overall

- The most common chronic conditions for adults in this community were depression, disability, arthritis, asthma (current), and diabetes.
- Many chronic diseases are becoming more common locally, and subsequently, mortality rates associated with them are rising.
- The top five most common causes of chronic disease hospitalization in the community were heart disease, arthritis, stroke, diabetes, and chronic obstructive pulmonary disease (COPD).
- Chronic disease mortality and prevalence differed between the sexes, counties, races or ethnicities, and the social determinants of health.
    - In general, males died at higher rates from and had a greater prevalence of chronic disease compared to females.
    - In general, African Americans/Blacks, American Indians/Alaska Natives, and White, non-Hispanics had higher chronic disease mortality rates and prevalence of these diseases than their peers.
    - In general, Marion had a greater burden of chronic disease than Polk.
    - Community members living below the Federal Poverty Level (FPL) had a greater prevalence of chronic disease. This aligns with the findings from the local Medicaid population (WVCH CCO), which, although not directly comparable to the counties, had a higher prevalence of chronic disease than the community in general.
    - Disparities were detected with regard to geographical location (urban, rural, frontier), where those who lived further from a major city had a greater prevalence of chronic disease.
    - Disparities were found with regard to disability status, where people living with a disability had a greater prevalence of chronic disease.

Cancer

- Despite being the number one cause of death in the community, cancer mortality rates have been declining in recent years. The cancer mortality rate in the community was similar to the state. Males in the community, African Americans/Blacks, and White, non-Hispanics had higher cancer mortality rates than their peers.
- The top five deadliest types of cancer in the community were lung, prostate, breast (female), colorectal, and pancreatic.
- The overall cancer incidence rate (number of new cases diagnosed relative to population at risk) has been stable in the community. Males were more commonly diagnosed with cancer than females and African Americans/Blacks, American Indians/Alaska Natives, and White, non-Hispanics had higher cancer incidence rates than their peers.
- The most commonly diagnosed types of cancer in the community were cancers of the breast (female), prostate, lung, colorectal, and skin (melanoma).

Other Chronic Diseases

- Heart disease was the second most common cause of death and the top source of chronic disease hospitalization. Males died at a higher rate from heart disease than females and African Americans/Blacks, American Indians/Alaskan Natives, and White, non-Hispanics died at higher rates from heart disease than their peers. About 3-4% of community members had heart disease or survived a heart attack.
- Stroke was the fourth leading cause of death and the third leading cause of chronic disease hospitalization in the community. The stroke mortality rate has been increasing in recent years and was higher in Marion than Polk and the state. Females and American Indian/Alaska Native community members died at higher rates from stroke than their peers. About 3-4% of community members are stroke survivors.
- Diabetes was the fourth most common cause of chronic disease hospitalization and a leading cause of death in the community. The diabetes mortality rate has been increasing in the community and was higher than the state. Males and African American/Black, Asian/Pacific Islander, and Hispanic community members died at higher rates from diabetes than their peers. About 10% of adult community members in Marion have been diagnosed with diabetes, compared to 8% in Polk and 9% in the state.
- Chronic obstructive pulmonary disease (COPD) was the fifth leading cause of death and chronic disease hospitalization in the community. The COPD mortality rate was higher in Marion than Polk, but was similar to the state. In general, males, African Americans/Blacks, American Indians/Alaska Natives, and White, non-Hispanics had higher COPD mortality rates than their peers. About 4-6% of community members have been diagnosed with COPD.

Risk Factors for Chronic Disease

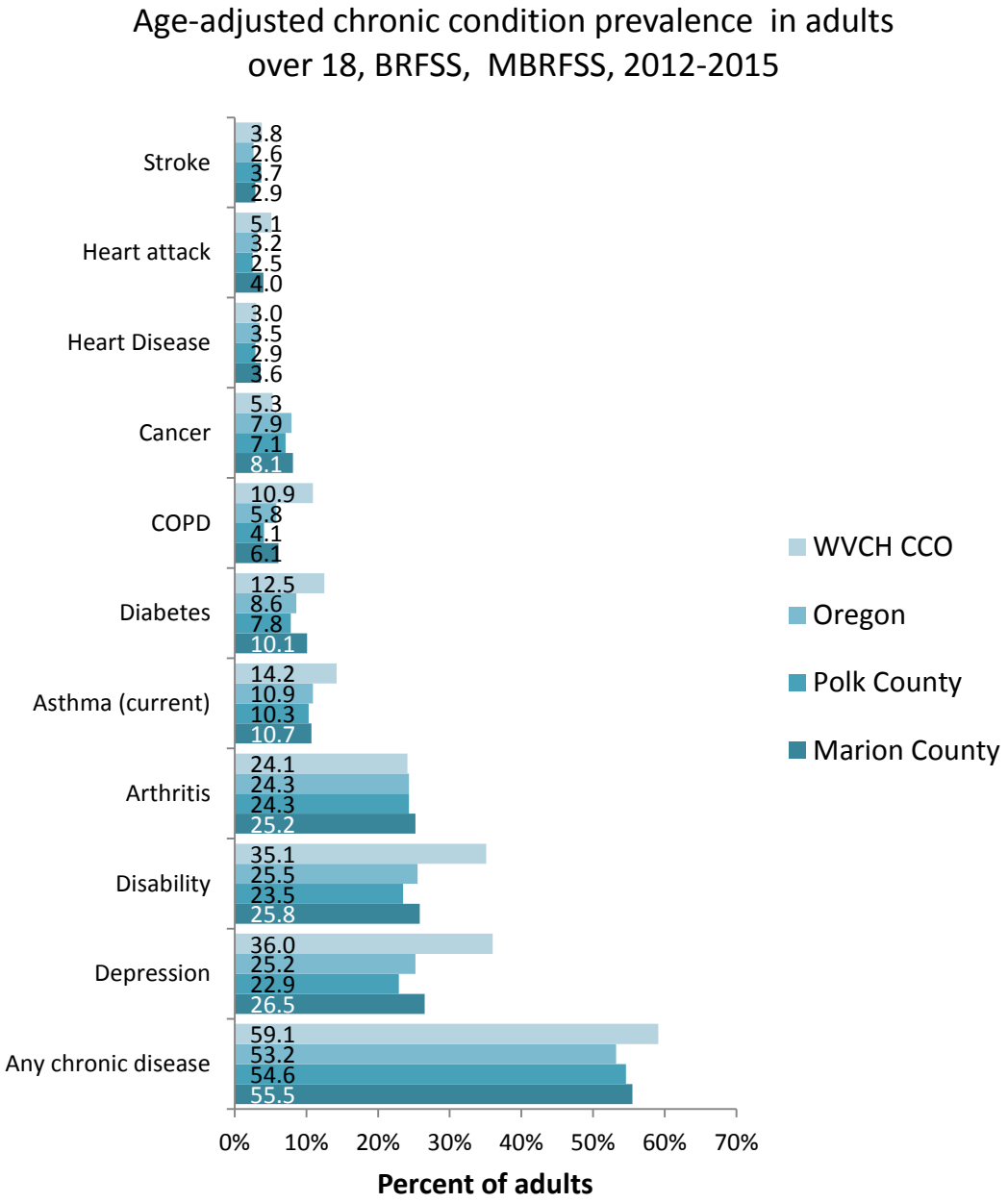
- In general, Marion had a greater prevalence of chronic disease risk factors than Polk, but was similar to the state.
- About 17% of adults in Marion and 14% in Polk were current cigarette smokers, compared to 18% in Oregon. Cigarette smoking has been decreasing in the community, however it has not met the Healthy People 2020 goal (12%). Electronic cigarette use has been increasing amongst youth and adults.
- About 1 in 3 adult community members are obese (33%), compared to 27% in the state. Adults who identified as African American/Black, American Indian/Alaska Native, Hispanic, or Pacific Islander had a higher prevalence of obesity than their peers.

Health Screening and Disease Monitoring

- The community is not currently meeting the Healthy People 2020 goals for chronic disease screenings (e.g. colorectal cancer, mammogram, Pap test, blood cholesterol).
- About 33% of adults in Marion and 30% in Polk have been diagnosed with high blood pressure, which was higher than Oregon adults (28%) and has been increasing in recent years.
- About 31% of adults in Marion and 25% in Polk have been diagnosed with high blood cholesterol, compared to 31% of Oregon adults.
- A higher percentage of community members are receiving cholesterol and high blood sugar/diabetes testing than they have in the past.

Chronic Condition Prevalence

- The most common chronic conditions in adults in the community and the state were depression, disability, arthritis, asthma (current), and diabetes.[21]
- Although not directly comparable due to differences is survey methodologies, the prevalence of some chronic conditions appeared to be higher in adult community members enrolled in Medicaid (WVCH CCO) compared to adults in the community as a whole.[13,21]



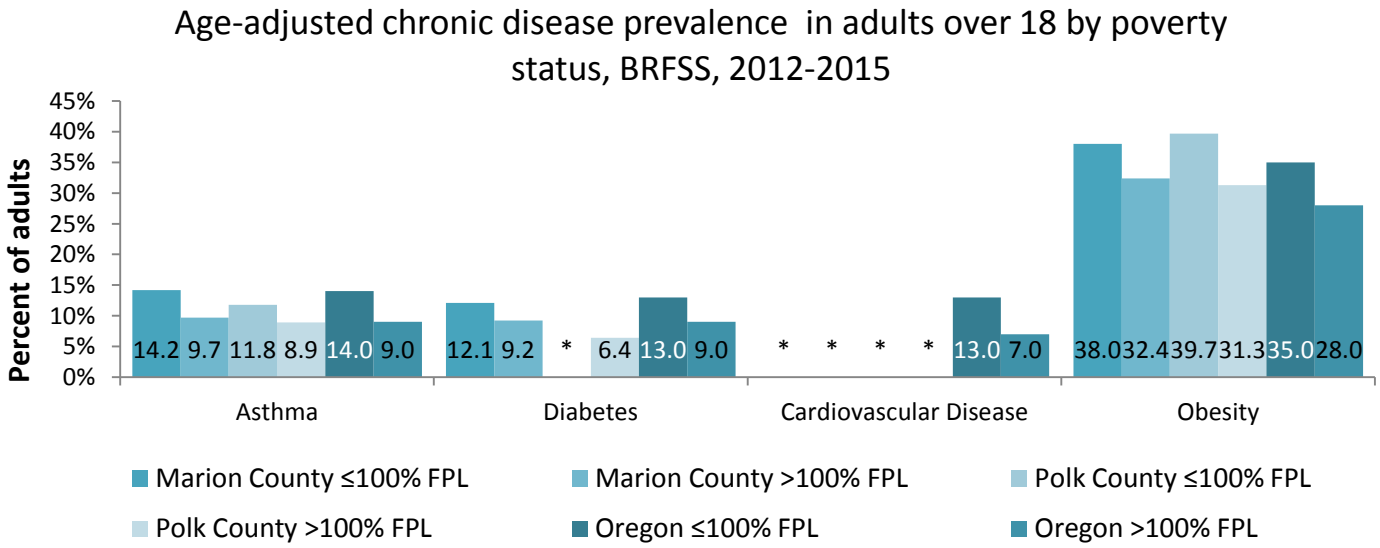
Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. MBRFSS data is from 2014

Any chronic disease = arthritis, diabetes, asthma, heart disease/stroke, cancer, depression, and/or COPD

Chronic Disease & the Social Determinants of Health

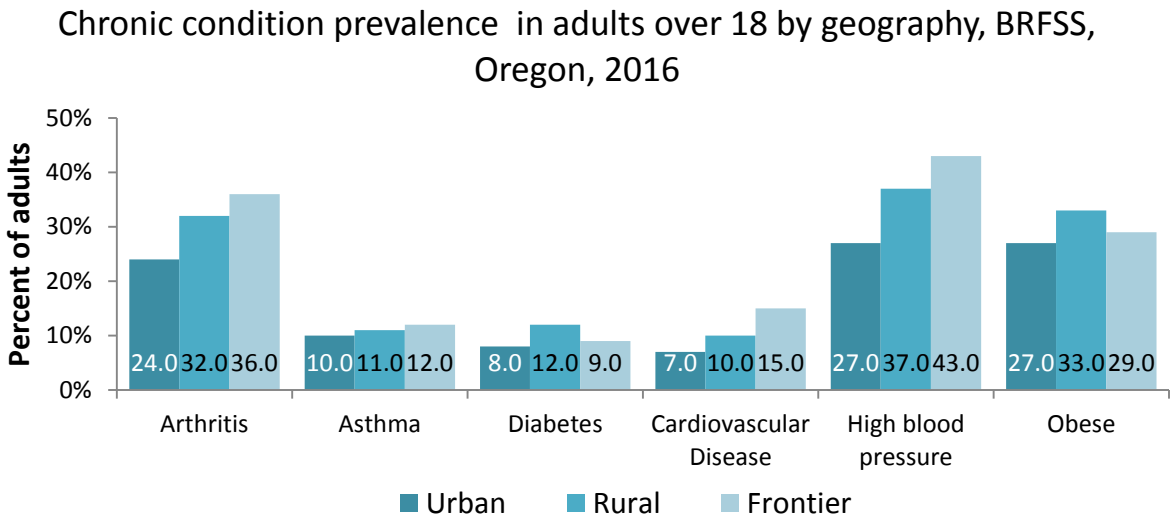
Income, geography, and disability status are just some of the examples of the social determinants of health that can influence chronic disease.

- Community members below the Federal Poverty Level (FPL) had a higher prevalence of chronic disease (e.g. asthma, diabetes, obesity) than people who were above the FPL.[22,25]

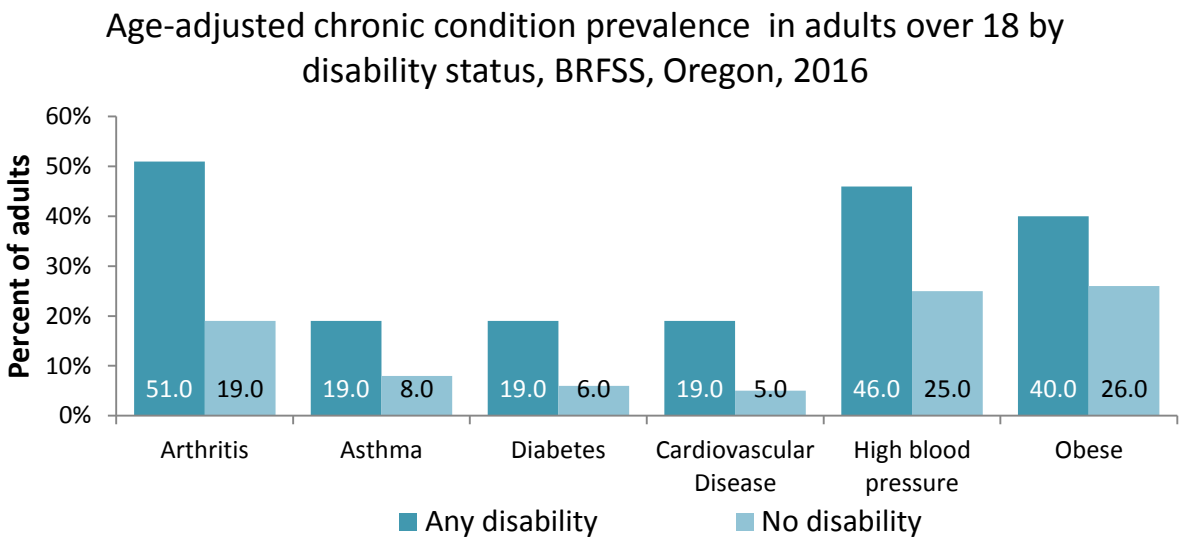


** Note: Values of (*) were not available or were unreliable. Oregon data was from 2015-2016**

- In Oregon, the prevalence of chronic conditions was higher for people living in rural or frontier areas compared to people who live in urban areas.[25]



- Oregonians living with disabilities had a higher prevalence of chronic conditions.[25]

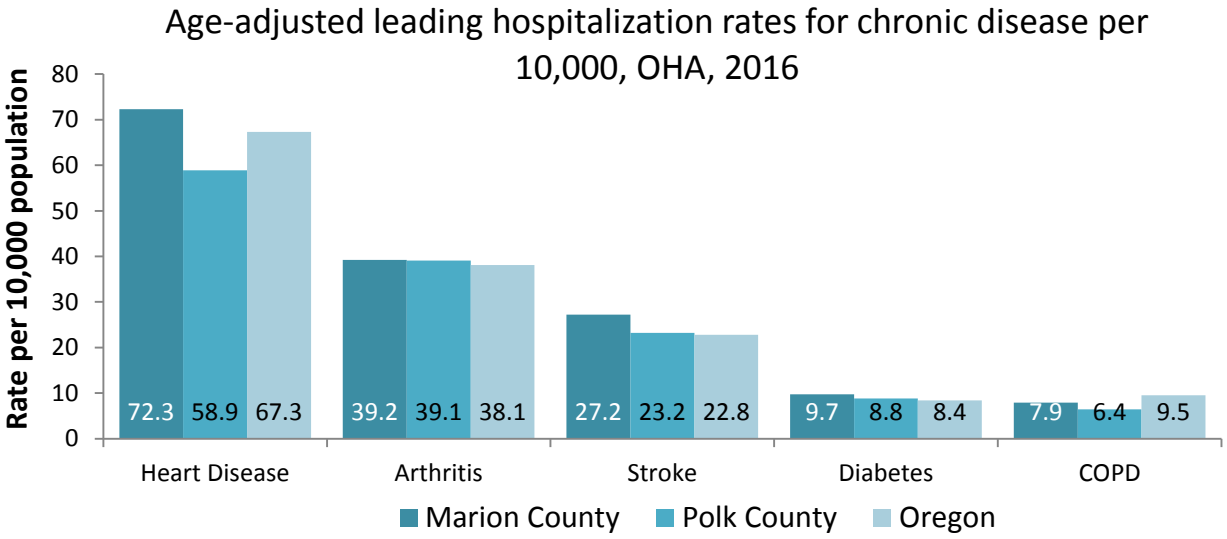


Hospitalizations

Chronic disease hospitalizations are costly and a major burden on the local health care system. Identifying the top sources of hospitalization allows us to target risk factors responsible for these diseases, which can reduce cost and improve care for community members.

- The top five chronic diseases most responsible for hospitalization in the community were heart disease, arthritis, stroke, diabetes, and chronic obstructive pulmonary disease (COPD).[26] The top five chronic disease hospitalizations were the same in the community as the state. Hospitalizations for heart disease and stroke were higher in Marion than Polk and the state.

Heart disease includes heart attack, Arthritis includes osteoarthritis and rheumatoid arthritis, Stroke includes ischemic attack, Diabetes= Type 1 and 2, Chronic Obstructive Pulmonary Disease (COPD)= Chronic bronchitis & emphysema

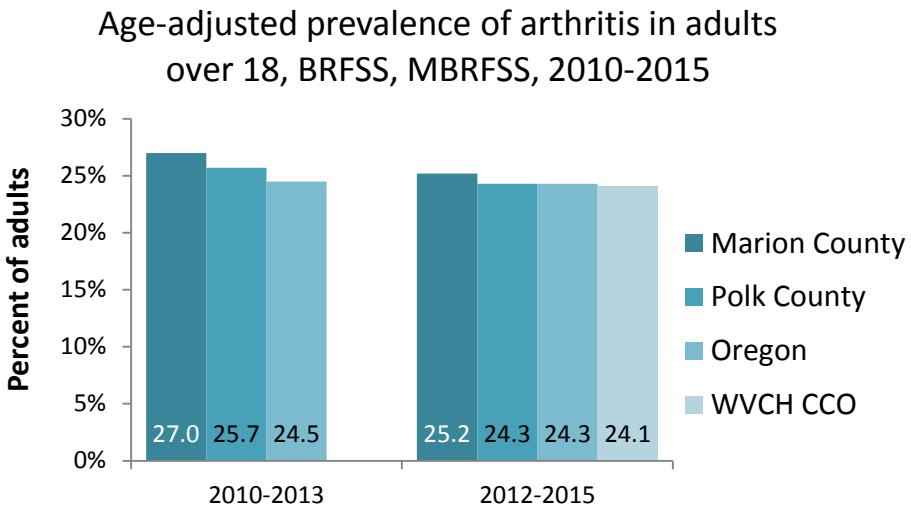


Arthritis

Arthritis, an inflammation of the joints, is a chronic condition that can affect quality of life, the ability to work and the ability to carry out the basic activities of daily living. Arthritis commonly occurs with other chronic conditions such as diabetes, heart disease and obesity. Interventions to manage arthritis pain can help to reduce functional limitations and encourage people to be more physically active.

- Arthritis was the second most common cause of chronic disease hospitalization in the community and the state.[26]
- Just over one out four community members was diagnosed with arthritis by a health professional, which has been decreasing slightly in recent years.[13,21] The prevalence of arthritis was slightly higher in Marion than Polk and the state.
- The prevalence of arthritis was higher in females than males in the community and the state.[19]

Arthritis = diagnosed with some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia by a health care professional



Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. MBRFSS data is from 2014.

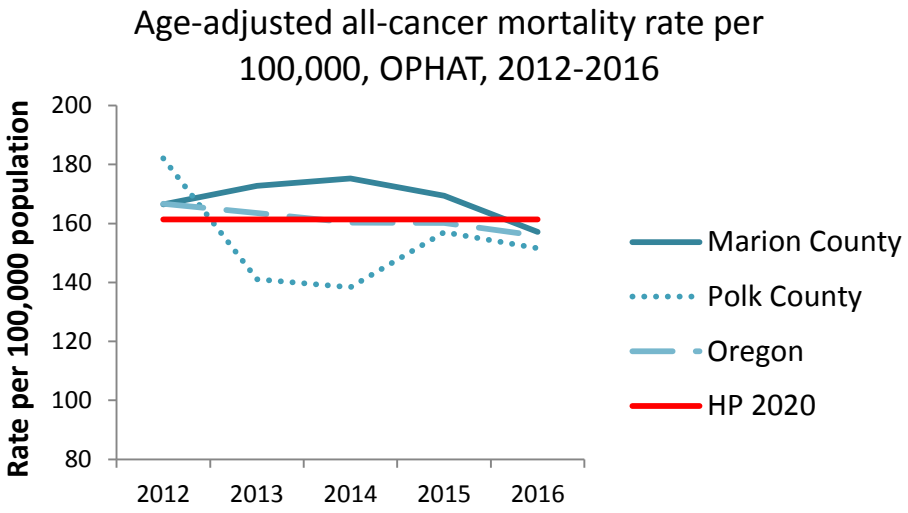
Cancer

Cancer occurs when cells replicate uncontrollably. These cells can then potentially spread to other sites of the body (metastasize) where they do can do further damage. Increased risk of cancer is associated with increased age, alcohol abuse, tobacco use or exposure to tobacco smoke, exposure to radiation, exposure to carcinogenic substances such as arsenic, benzene and asbestos in the environment, chronic inflammation due to infections, or abnormal immune reactions, exposure to hormones, immunosuppression, contraction of certain viruses, and obesity.[27] Detecting cancer early can help increase the chances of survival.

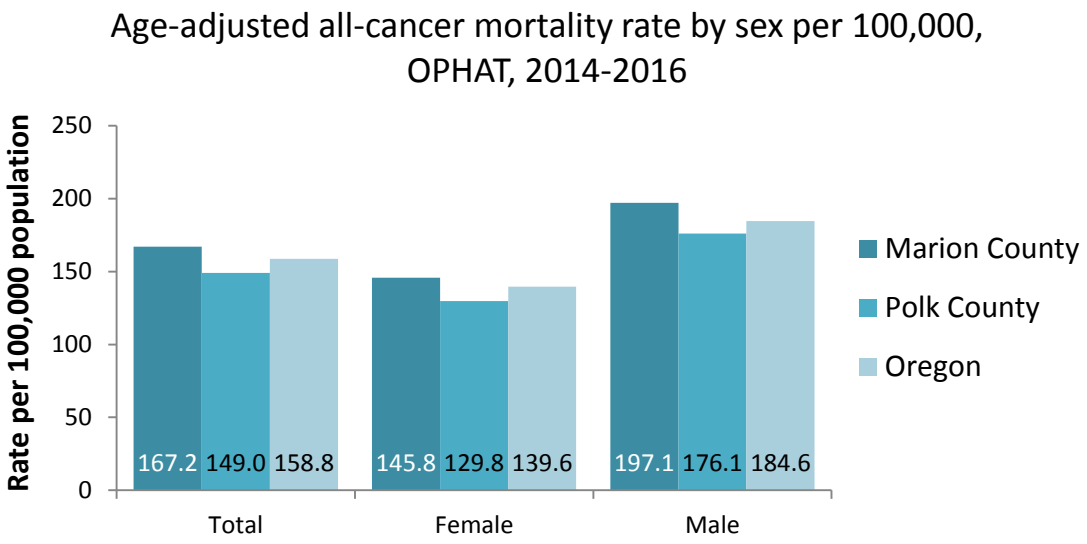
Overall Cancer Mortality

Cancer can occur almost anywhere in the human body and some forms of cancer are more common and deadlier than others. Overall cancer mortality is the amount of deaths that occur as a result of any type of cancer.

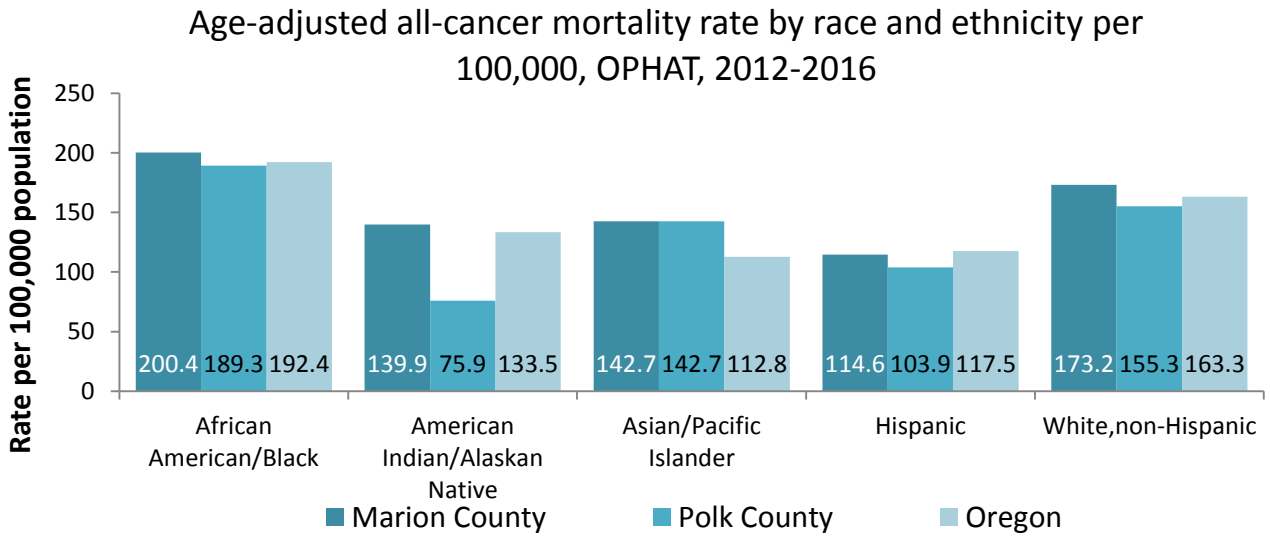
- Cancer was the leading cause of death in the community. In 2016, cancer was responsible for the deaths of 609 community members in Marion and 160 in Polk.[19]
- Cancer mortality rates have been decreasing slightly in the community and the state in recent years.[19] Both the community and the state have met the HP 2020 goal (161.4 per 100,000) for cancer mortality.[28]



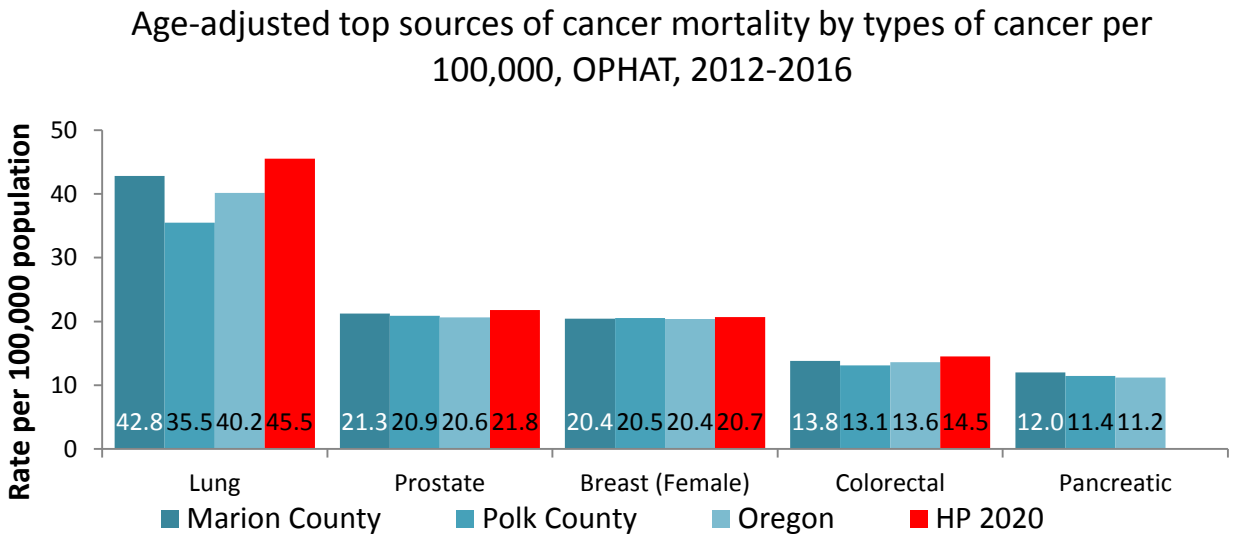
- Males in the community had higher cancer mortality rates than females.[19]



- African Americans/Black and White, non-Hispanic community members had higher cancer mortality rates than other races and ethnicities.[19]



- In this community, the top five most common types of cancer death were lung, prostate, breast (female), colorectal, and pancreatic cancer, which was the same as the state.[19] Deaths due to lung cancer were elevated in Marion compared to Polk and the state. The community has currently met the HP 2020 goals for lung, prostate, breast (female), and colorectal cancer mortality.[28]

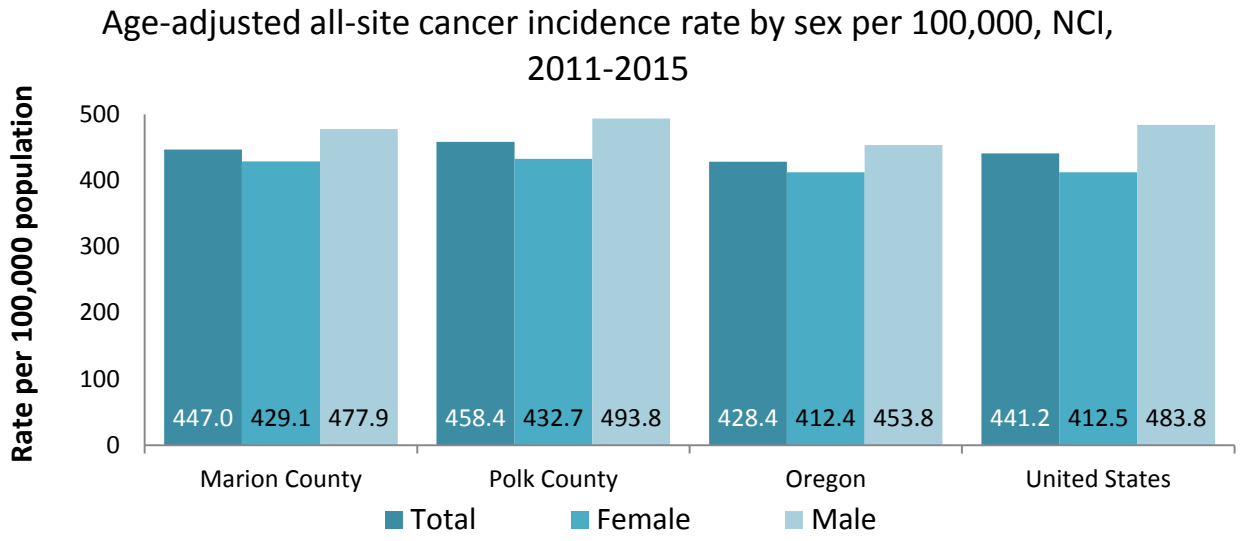


Note: No Healthy People 2020 goal for cancer of the pancreas.

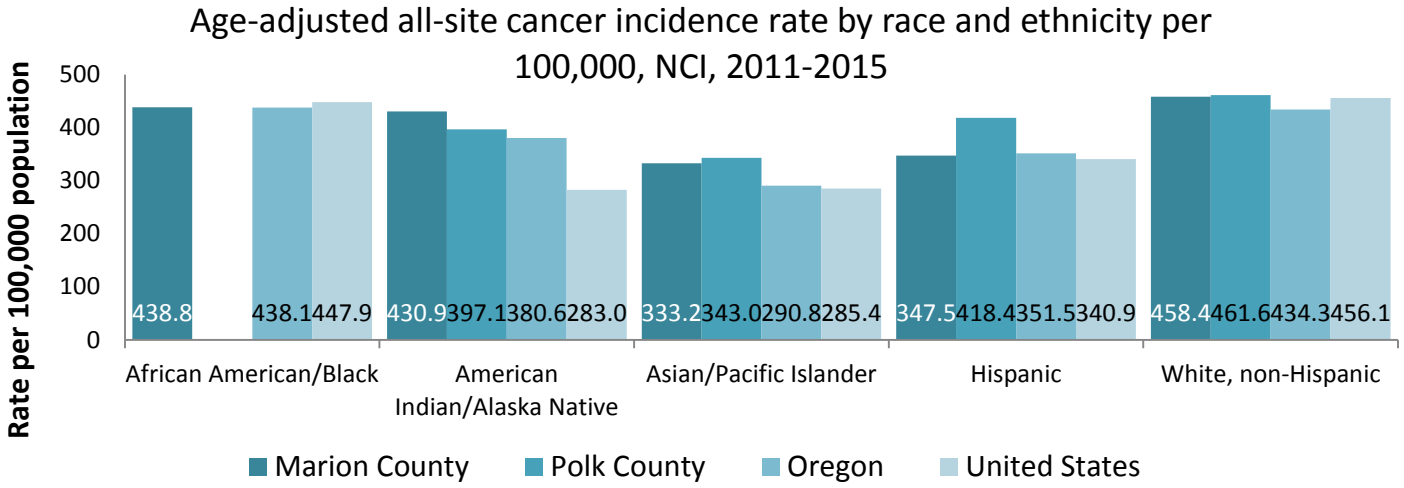
Overall Cancer Incidence

Overall cancer incidence captures how many new cancer cases are occurring in a specific population within a defined period of time. Rising cancer incidence may suggest that more community members are being exposed to carcinogens or other environmental hazards.

- The community had a higher all-site cancer incidence than the state and the US as a whole.[29] Between 2011 and 2015, each year on average, there were 1603 new cases of cancer diagnosed in Marion and 426 cases diagnosed in Polk. All-site cancer incidence has remained stable in the community in recent years, but has been decreasing in the state and the country as a whole (not shown).
- Males in the community had higher incidences of all-site cancer than females, which correlate with the higher all-cancer mortality rates demonstrated in males.[19,29]

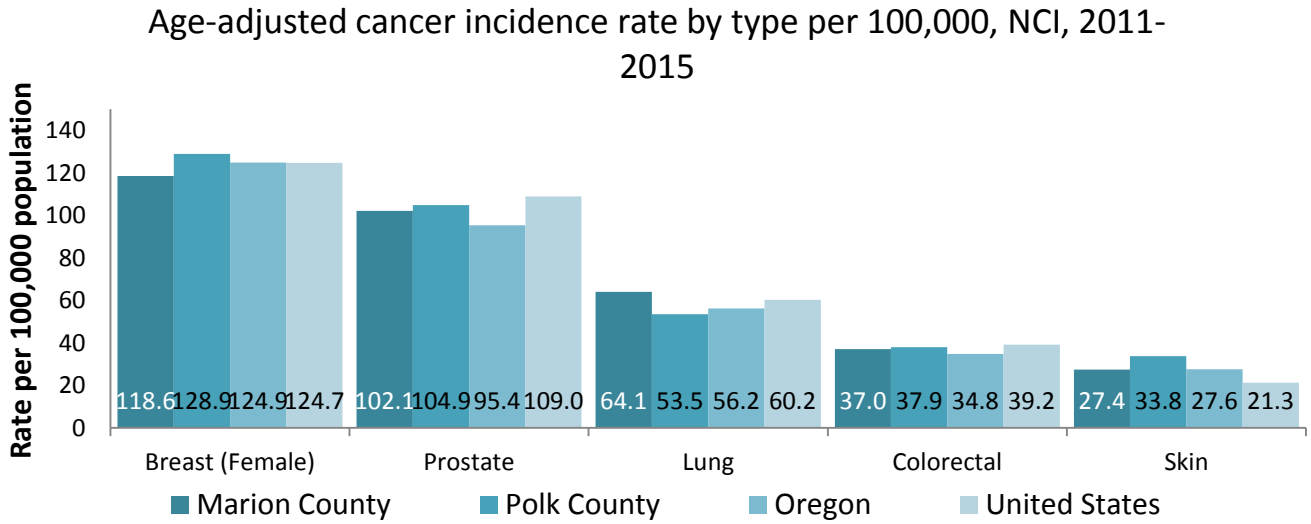


- In general, community members who identified as African American/Black, American Indian/Alaskan Native, or White, non-Hispanic had higher incidences of all-site cancer than Asian/Pacific Islanders and Hispanics.[29] Hispanic community members in Polk had an elevated incidence of all-site cancer compared to Marion, Oregon, and the US. American Indians/Alaskan Natives in the community and the state had higher incidences of cancer than the US as a whole. Asian/Pacific Islanders in the community had higher incidences of cancer than the state and the country.



Note: Too few cancer cases for African Americans/Blacks in Polk to generate a reliable rate.

- In this community, the top five cancer incidence rates by type were breast (female), prostate, lung, colorectal, and skin cancer, which was the same as the state and the country.[29] Polk had slightly higher incidences of breast (female), prostate, and skin cancer compared to Marion and the state. Marion had a higher incidence of lung cancer compared to Polk, Oregon, and the country.

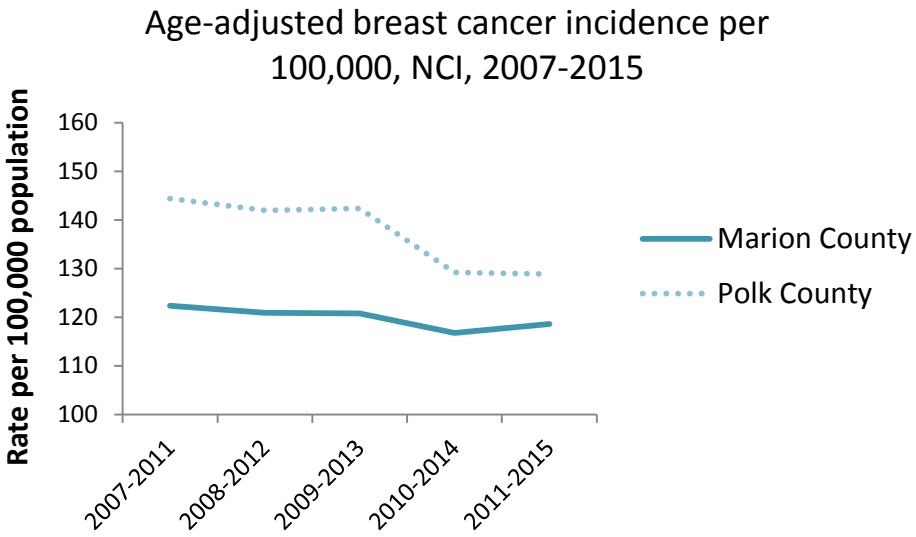


Site Specific Cancers

Breast Cancer (Female)

According to the Centers for Disease Control and Prevention, breast cancer is the most common cancer among American women.[30] Risk factors include older age, white race, alcohol use, overweight/obesity, physical inactivity, and family history of breast cancer. The U.S. Preventive Services Task Force recommends that women ages 50-74 should have a mammogram screening every two years. Women between 40-49 years old should talk with their health care provider about whether they should have a mammogram.

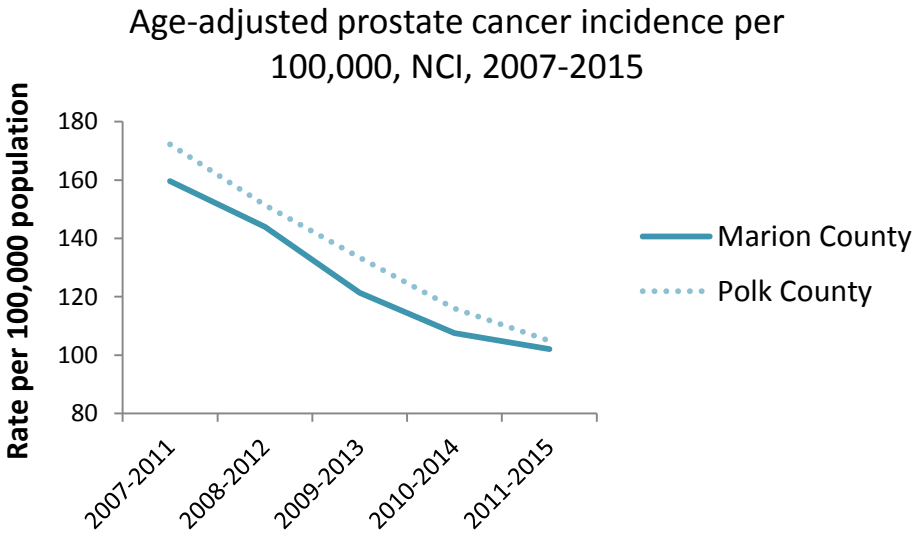
- Breast cancer was the third most common cause of cancer death in this community and had the highest incidence rate of all types of cancer.[19,29]
- The incidence of breast cancer has been decreasing in the community in recent years.[29] Polk had a higher incidence of breast cancer than Marion.



Prostate Cancer

Prostate cancer is the most common cancer diagnosed in men.[31] Risk factors include older age, family history of prostate cancer, and African American/Black race. If detected early, this form of cancer is typically treatable.

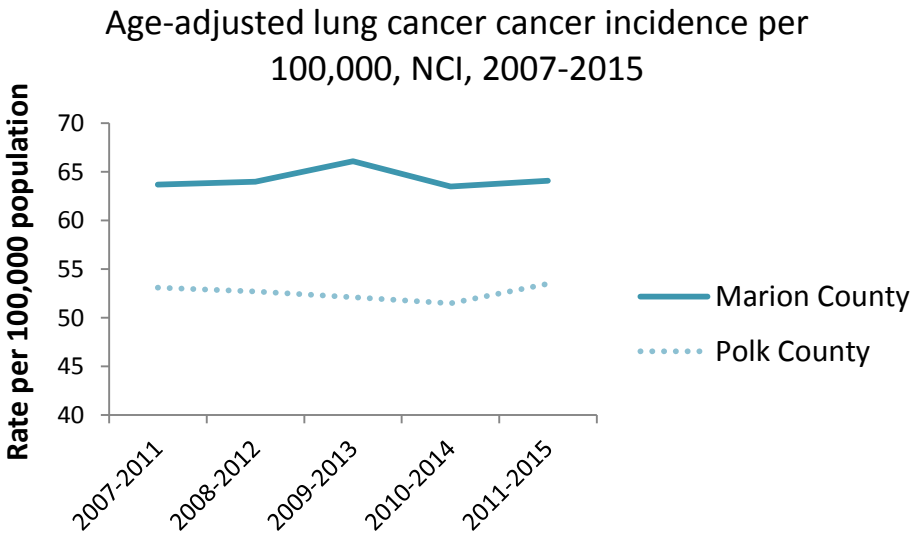
- Prostate cancer was the second most common cause of cancer death in the community and had the second highest incidence rate of all types of cancer.[19,29]
- The incidence of prostate cancer has been decreasing recently in the community.[29]



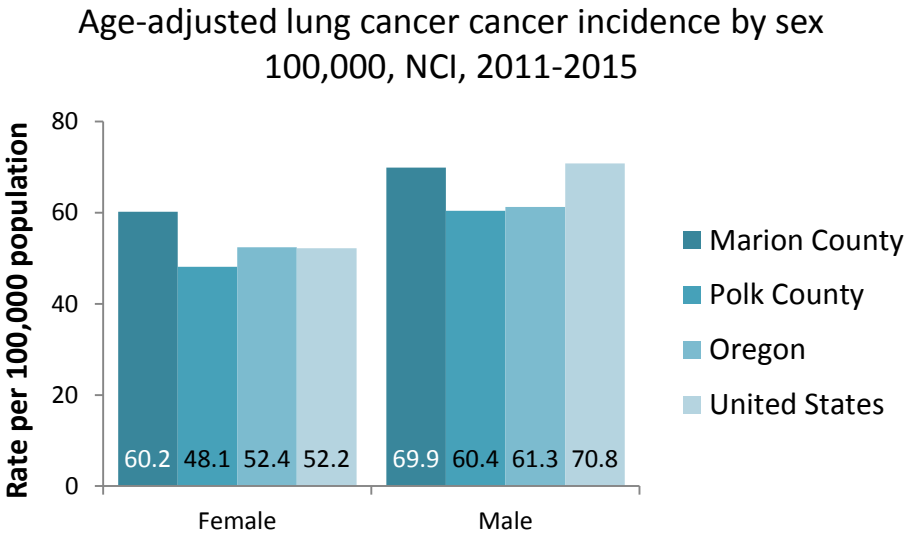
Lung Cancer

According to the Centers for Disease Control and Prevention, lung cancer is the leading cause of cancer death for both men and women in the United States.[32] Persons are encouraged to quit smoking and avoid secondhand smoke to lower their risk of lung cancer. The second leading cause of lung cancer is radon, a naturally occurring gas that comes from rocks and dirt and can get trapped in houses and buildings. Marion County has areas with higher than recommended levels of radon, so people are encouraged to have their homes tested. More information about testing can be found on the Marion County Health & Human Services webpage: http://www.co.marion.or.us/HLT/communityassessments/Documents/sc%20Health%20Profile%20Report%20RADON.pdf

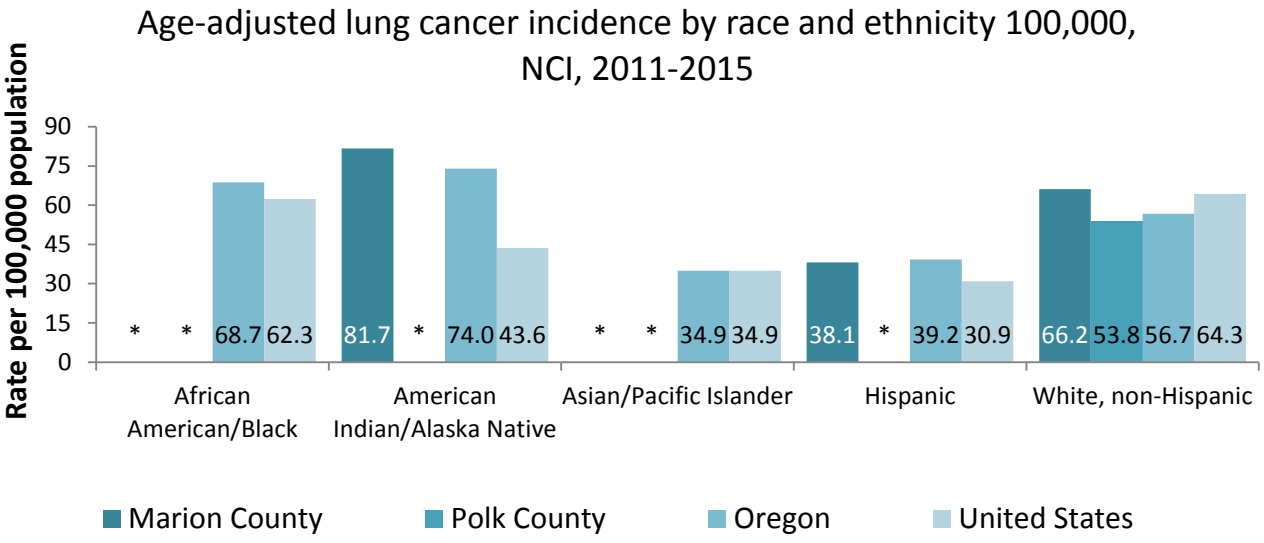
- Lung cancer was the top cause of cancer mortality in the community and had the third highest incidence rate of all types of cancer.[19,29]
- The incidence of lung cancer has been relatively stable in recent years after witnessing a brief spike in Marion between 2009 and 2013.[29]



- Males in the community had a higher incidence of lung cancer than females.[29] This is likely due to the higher prevalence of tobacco smoking in males.[22]



- African Americans/Blacks, American Indians/Alaska Natives, and White, non-Hispanics had higher incidences of lung cancer than their peers both locally (when measurable), at the state, and in the US.[29]

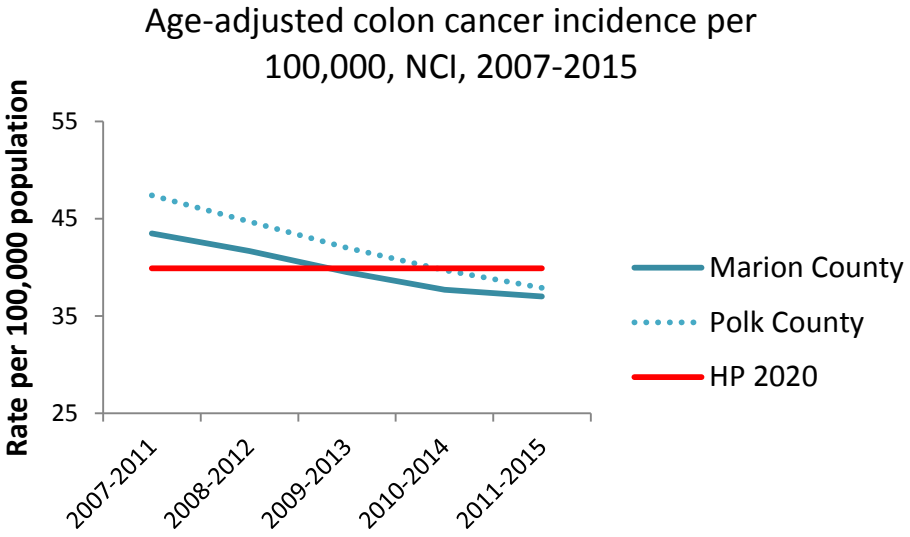


Note:* = rate unreliable.

Colorectal (Colon) Cancer

According to the Centers for Disease Control and Prevention, colorectal cancer, also called colon cancer, is most common in adults older than 50.[33] Risk factors include older age, African American/Black race, inflammatory bowel disease, family history of colon cancer, lack of physical activity, diets low in fruit and vegetables, obesity, alcohol, and tobacco use. Colorectal cancer screening saves lives by finding and removing precancerous growths in the colon, and/or by finding the cancer at an early, more treatable stage. The U.S. Preventive Services Task Force recommends that adults aged 50 to 75 be regularly screened for colon cancer.

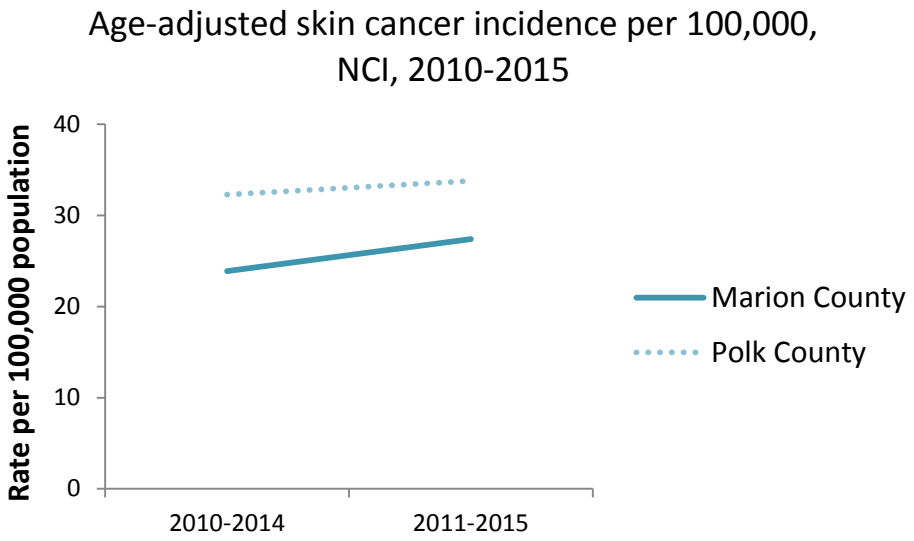
- Colon cancer was the fourth leading cause of cancer death in the community and had the fourth highest incidence rate of all types of cancer.[19,29]
- The incidence of colon cancer has been decreasing in the community in recent years and both Marion and Polk are currently meeting the Healthy People 2020 goal (39.9 per 100,000).[28,29]



Skin Cancer (Melanoma)

Melanoma is a type of skin cancer. Risk factors include having fair skin, a history of one or more severe blistering sunburns, exposure to ultraviolet light, living closer to the equator or at a higher elevation, having many moles, having a family history of melanoma, and having a weakened immune system.[34]

- Skin cancer was the fifth most common type of cancer diagnosed in the community.[29]
- The incidence of skin cancer has been increasing in the community in recent years.[29]



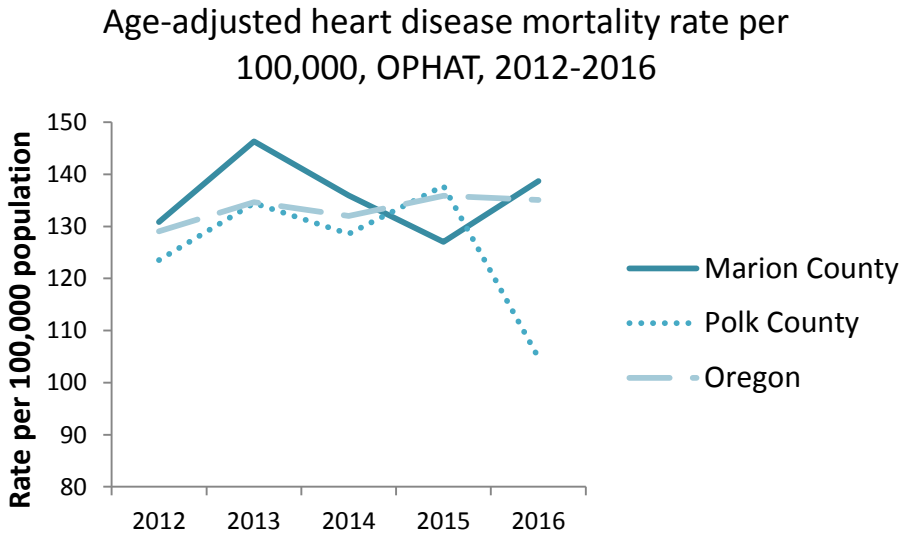
Cardiovascular Disease

Cardiovascular disease is a broad classification of diseases that includes the heart and blood vessels. It is the leading cause of death locally, in Oregon, and the US; accounting for about 31% of all deaths in the US each year.[35] The cost of cardiovascular disease averages more than $317 billion every year, and treatment accounts for about $1 of every $6 spent on health care in the country. Risk factors include older age, uncontrolled high blood pressure, uncontrolled high LDL (low-density lipoprotein) cholesterol, poor nutrition, lack of physical activity, diabetes, obesity, and tobacco smoking.

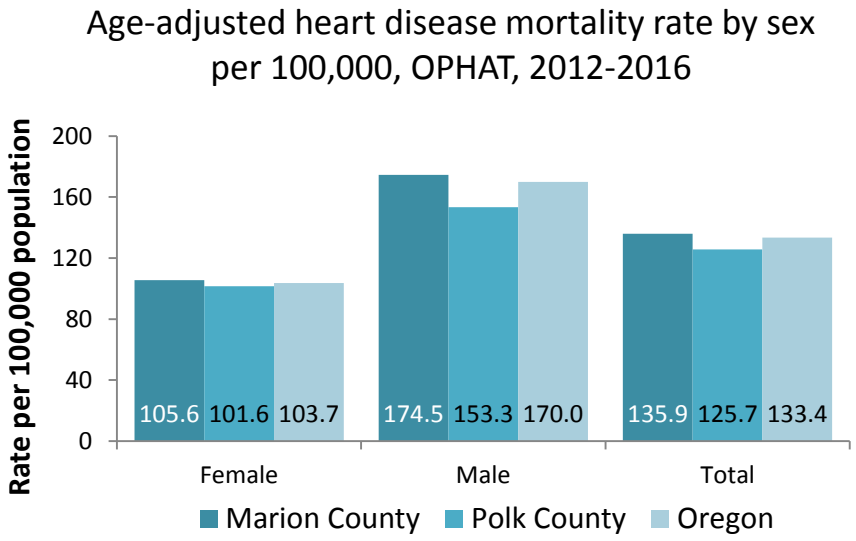
Heart Disease and Heart Attack

Heart disease includes several types of heart conditions: myocardial infarction (heart attack), angina (chest pain), and any other condition that affects the ability of the heart to pump blood to the rest of the body.

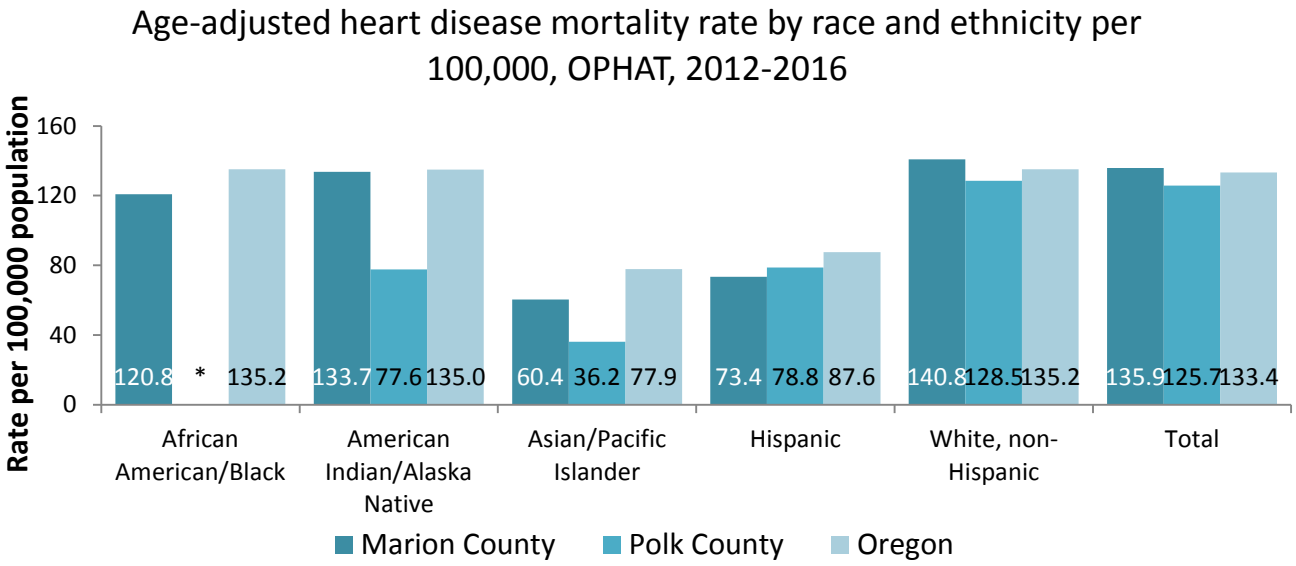
- Heart disease was the second most common cause of death and top source of chronic disease hospitalization in the community and the state.[19,26]
- The heart disease mortality rate has been increasing in Marion and the state, but decreasing in Polk in recent years.[19] Marion had a higher heart disease mortality rate than Polk, but was similar to the state.



- Males had a higher heart disease mortality rate than females in the community and the state.[19]

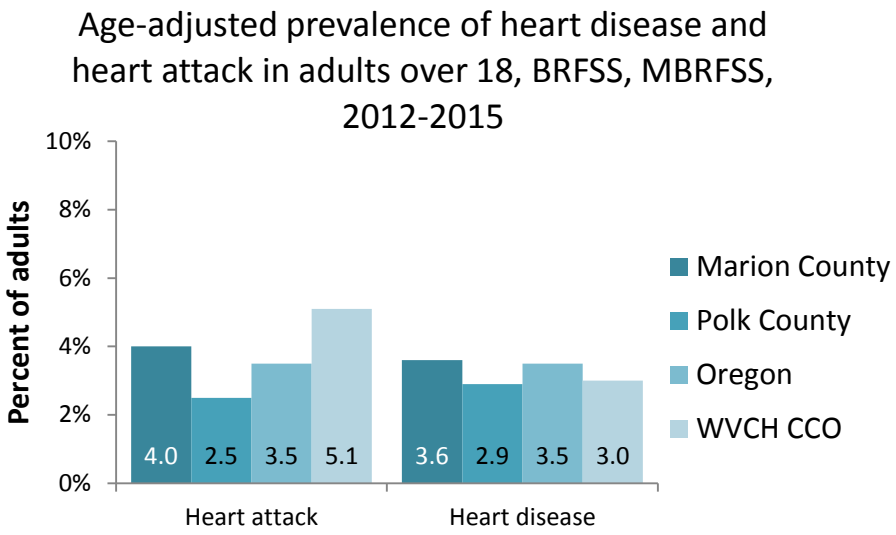


- In general, African Americans/Blacks, American Indians/Alaska Natives, and White, non-Hispanics had higher heart disease mortality rates than other races and ethnicities both locally (when measurable) and at the state level.[19]



Note:* = rate unreliable.

- About 4% of adults in Marion and 3% of adults in Polk were diagnosed with heart disease, compared to 4% in the state as a whole.[21] Roughly 4% of adults in Marion and 3% in Polk have survived a heart attack, compared to 4% of adults in the state. Although not directly comparable, adult community members on Medicaid (WVCH CCO) had a higher prevalence of heart attacks than adults in the community as a whole.[13]

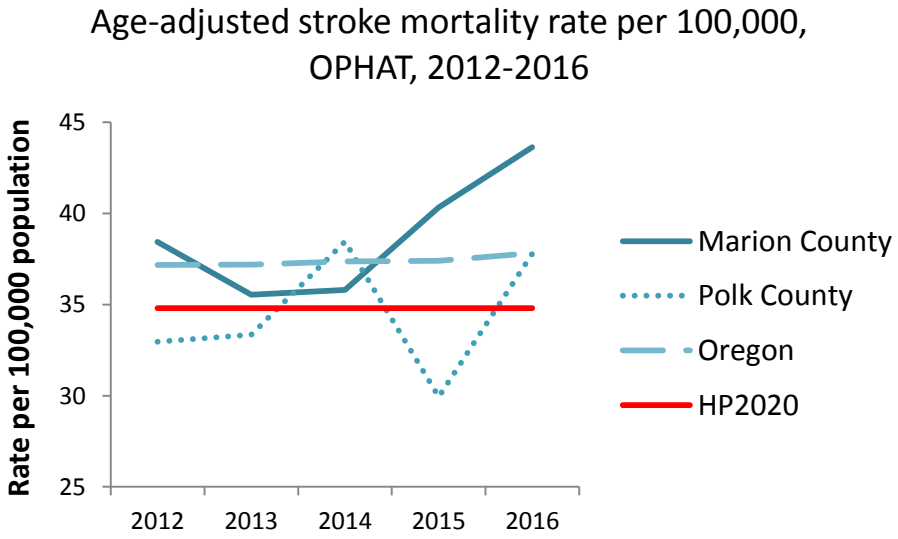


Note: County and State estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. MBRFSS data for WVCH CCO is from 2014. Heart disease diagnosis includes coronary heart disease or angina.

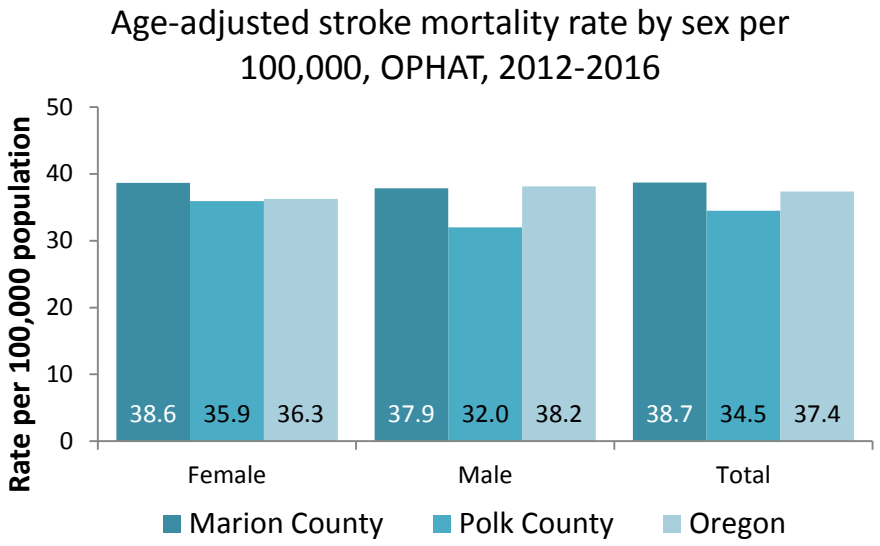
Cerebrovascular Disease and Stroke

Cerebrovascular disease occurs when blood flow to the brain is blocked. Stroke is one of the primary forms of cerebrovascular disease and is a leading source of death, disability, and hospitalization.[35] A stroke is characterized by blockage to the brain which deprives it of oxygen causing brain damage. With stroke, time is critical. Recognizing the signs and symptoms and getting help as soon as possible is essential to preventing death and disability from stroke. Controlling blood pressure, cholesterol, taking medication, and not smoking can reduce the risk of stroke.

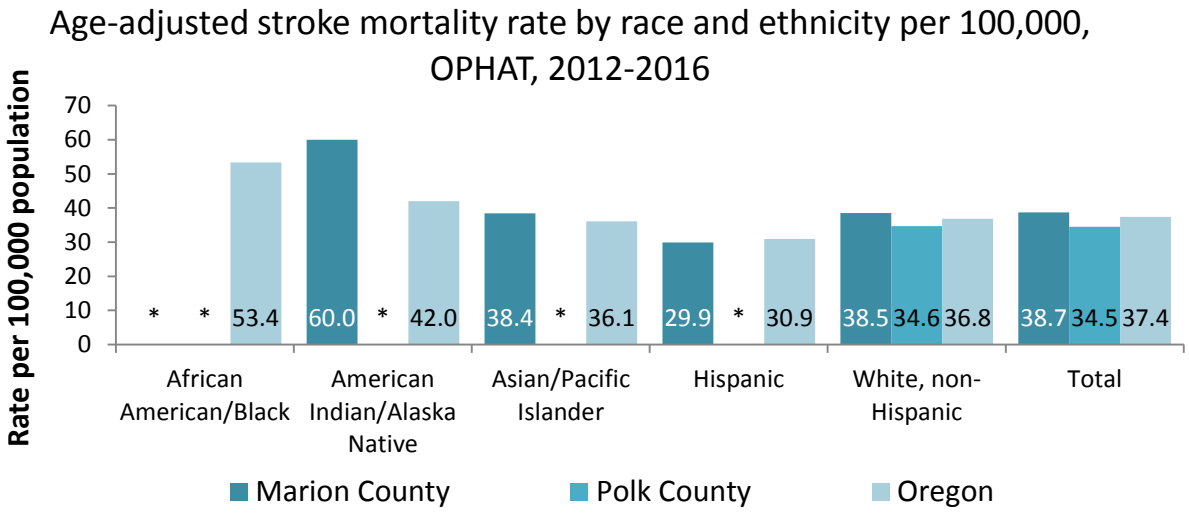
- Stroke was the fourth leading cause of death and the third leading cause of chronic disease hospitalization in the community.[19,26]
- The stroke mortality rate has been increasing in recent years in the community.[19] Marion had a higher stroke mortality rate than Polk and the state. Neither the community nor the state has currently met the Healthy People 2020 goal for stroke mortality (34.8 per 100,000).[28]



- Stroke mortality rates varied between the sexes depending on the region.[19] Females and males had similar stroke mortality rates in Marion, however Polk females had higher rates than males, and the state rates were lower for females than males.

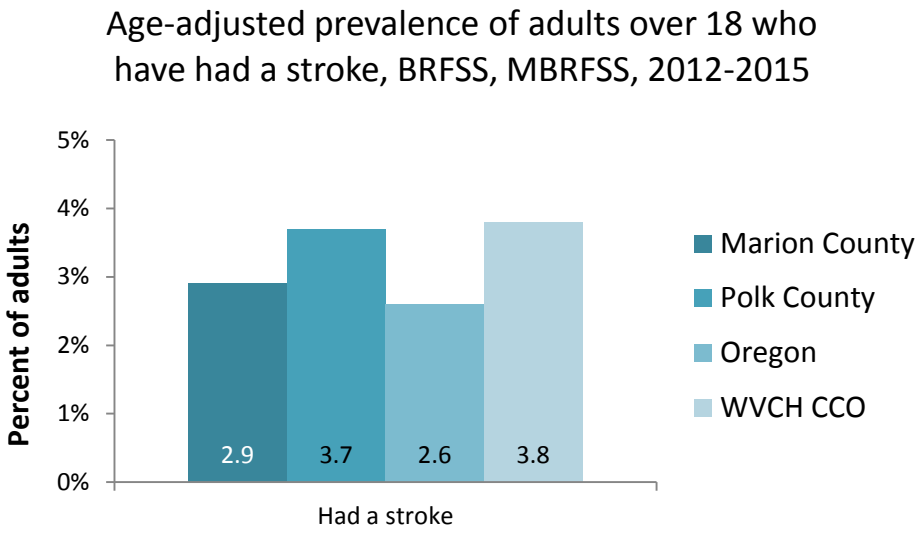


- American Indian/Alaska Native community members had higher stroke mortality rates than other races and ethnicities.[19] The stroke mortality rate for African Americans/Blacks in the state was also elevated by comparison.



Note: * = rate unreliable.

- Roughly 3% of adults in Marion and 4% in Polk have had a stroke and survived, compared with 3% of adults in the state.[21] Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appeared to have a higher prevalence of stroke than the community as a whole.[13]

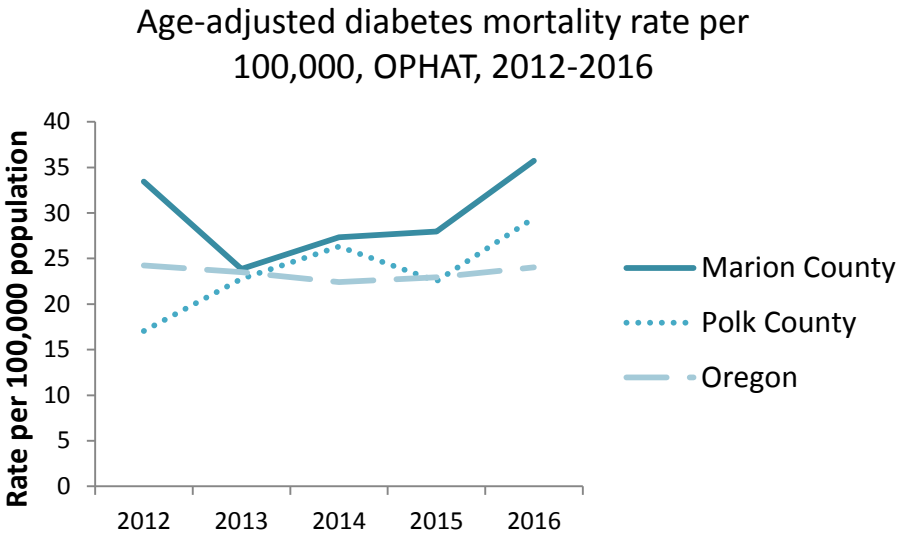


**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

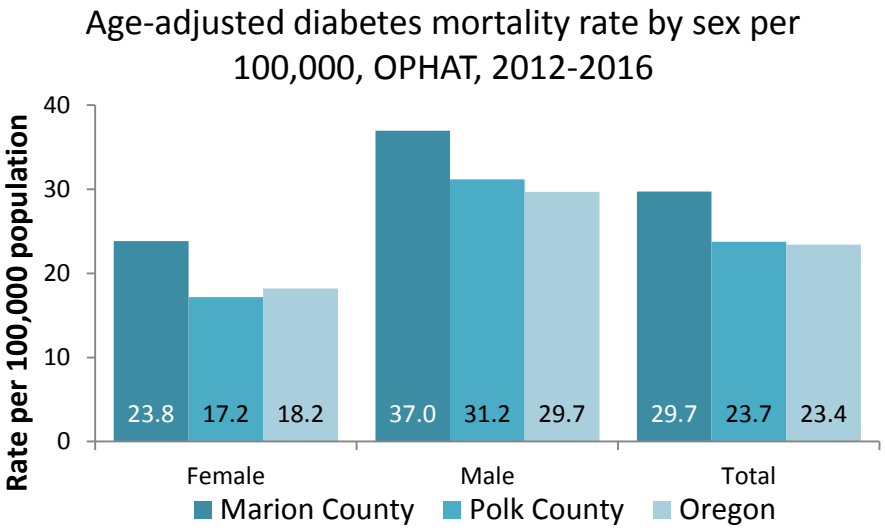
Diabetes

Diabetes is a disease in which blood sugar levels are higher than normal and can be type 1, type 2, and gestational diabetes.[36] Type 1 is an autoimmune disorder that develops at an early age. Type 2 typically develops in adults and gestational diabetes only occurs in pregnant women, which usually goes away after the child is born. According to the CDC, some risk factors for diabetes are: family history of diabetes, being overweight or obese, high blood pressure, engaging in physical activity less than three times per week, and history of having diabetes while pregnant. Diabetes can lead to heart disease, stroke, blindness, and kidney problems.

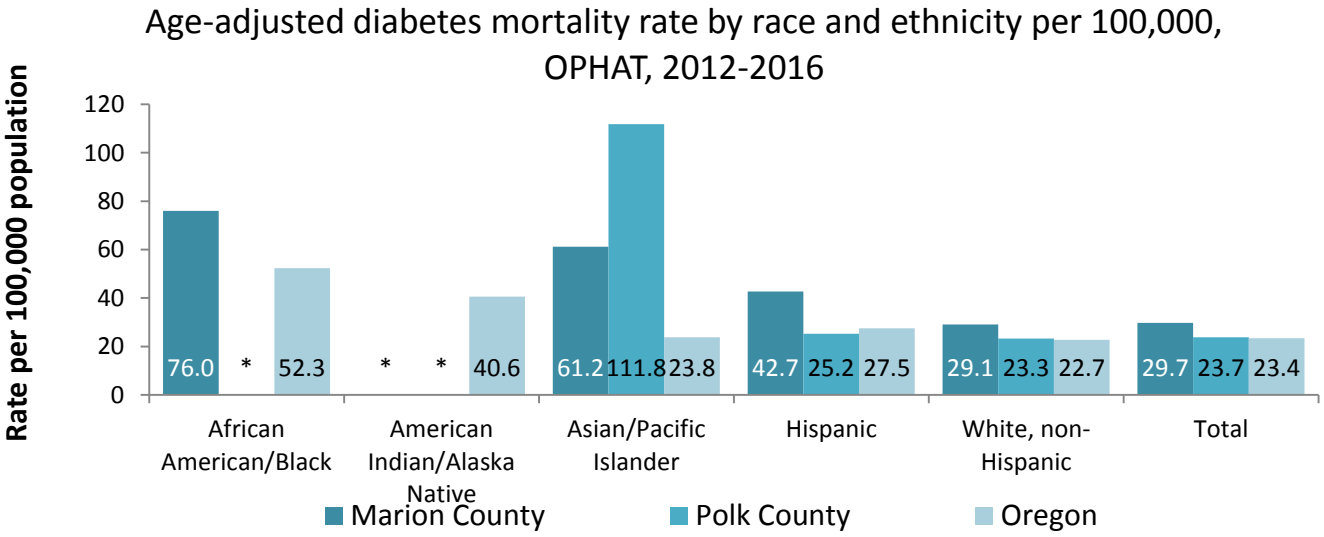
- Diabetes was a leading cause of death and the fourth most common cause of chronic disease hospitalization in the community.[19,26]
- The diabetes mortality rate was higher in the community than the state and has been increasing in recent years.[19]



- Males in the community died at a higher rate from diabetes than females.[19]



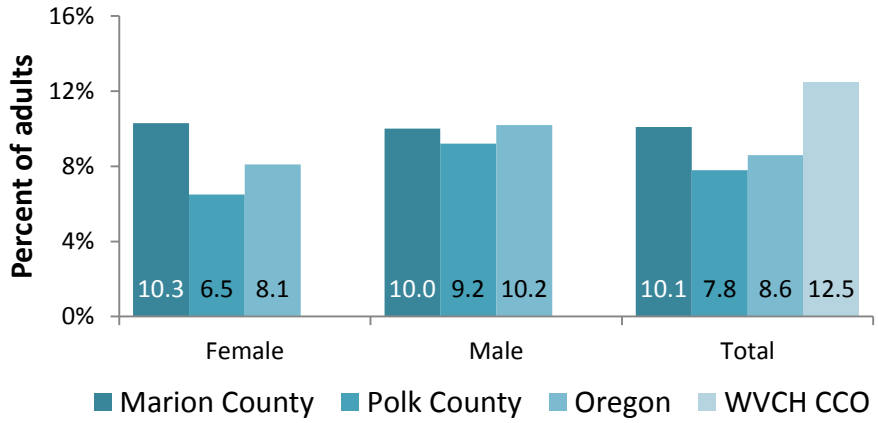
- Community members who identified as African American/Black or Asian/Pacific Islander had higher diabetes mortality rates than other races and ethnicities.[19] Hispanic community members in Marion had higher diabetes mortality rates than Hispanics in Polk and the state.



Note:* = rate unreliable.

- About 10% of adults in Marion and 8% of adults in Polk have been diagnosed with diabetes, compared to 9% in the state as a whole. [21] Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appeared to have a higher prevalence of diabetes than the community as a whole.[13]
- In general, adult males had a higher prevalence of diabetes than adult females, except in Marion, where females were similar to males. [13,21]

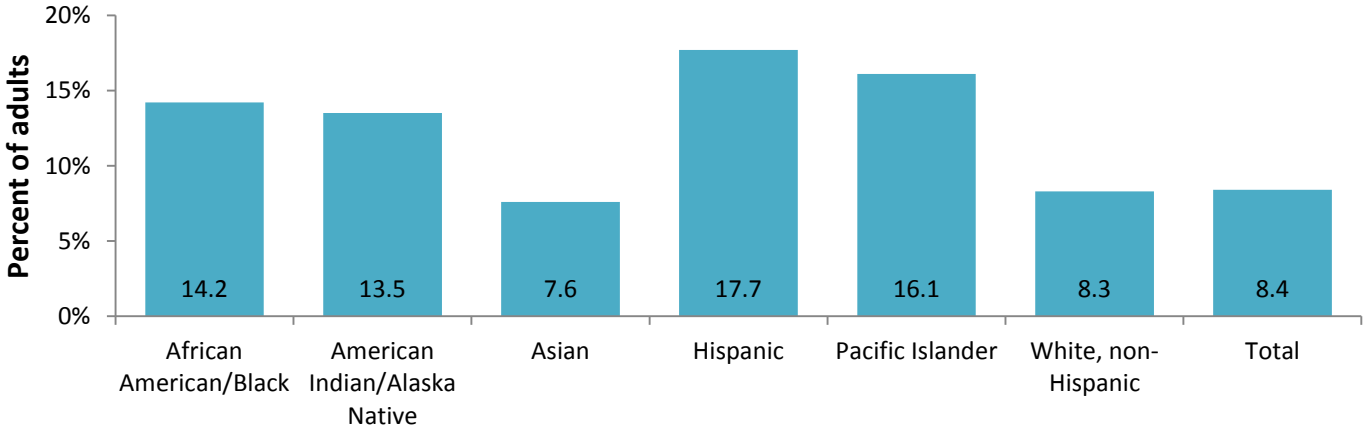
Age-adjusted prevalence of diabetes in adults over 18, BRFSS, MBRFSS, 2012-2015



**Note: County and State estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

- In Oregon, adult Hispanics and Pacific Islanders had a higher prevalence of diabetes than other races and ethnicities.[25]

Age-adjusted prevalence of diabetes in adults over 18, BRFSS, Oregon, 2015-2016



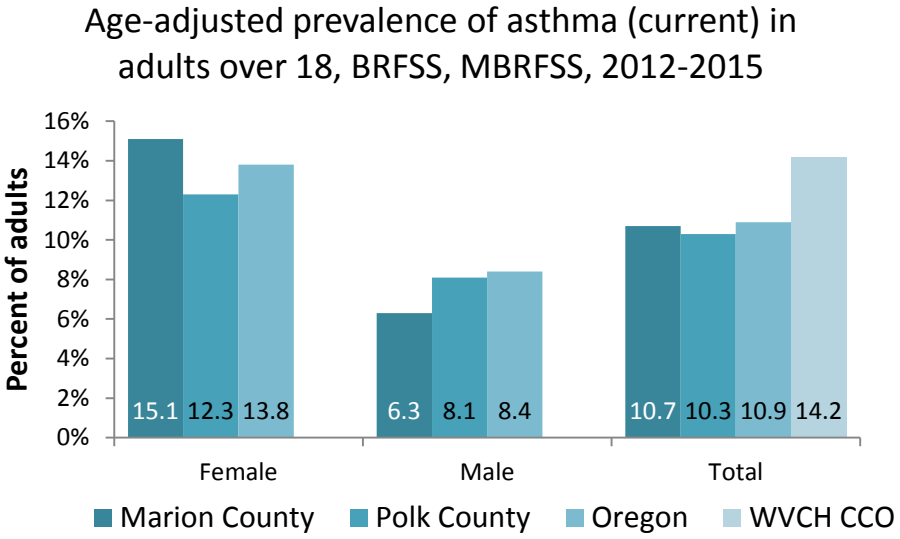
Respiratory Diseases

Respiratory diseases affect the ability to breathe and absorb oxygen, which can diminish longevity and quality of life for individuals who suffer from them. Asthma and chronic obstructive pulmonary disease (COPD) are the most common forms of respiratory disease. About 25 million people in the United States currently have asthma and over 14.8 million have been diagnosed with COPD, while 12 million people have COPD, but have yet to be diagnosed. [3728] Annual health care costs for asthma alone in the U.S. are estimated at $20.7 billion.

Asthma

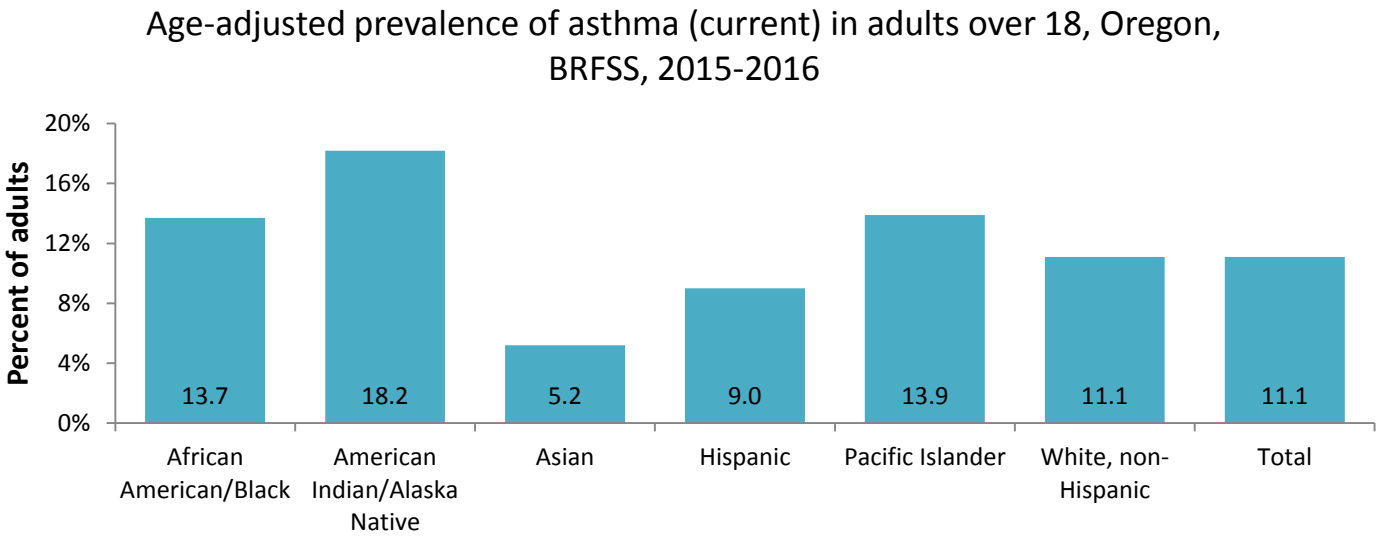
Asthma is a disease that affects the lungs, causing wheezing, breathlessness, chest tightness, and coughing. Asthma can be controlled by taking proper medications and avoiding activities that cause asthma attacks. A person of any age can be affected by asthma, but in children it is one of the most common chronic diseases. According to the Mayo Clinic, the exact cause of asthma is not known, but may be partly genetic and attacks may be triggered by things in the air such as tobacco smoke.

- About 1 in 10 community members had asthma, which was similar to the state.[21] Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appeared to have a higher prevalence of asthma than the community as a whole.[13]
- In the community and the state, adult females had a higher prevalence of asthma than adult males.[22]

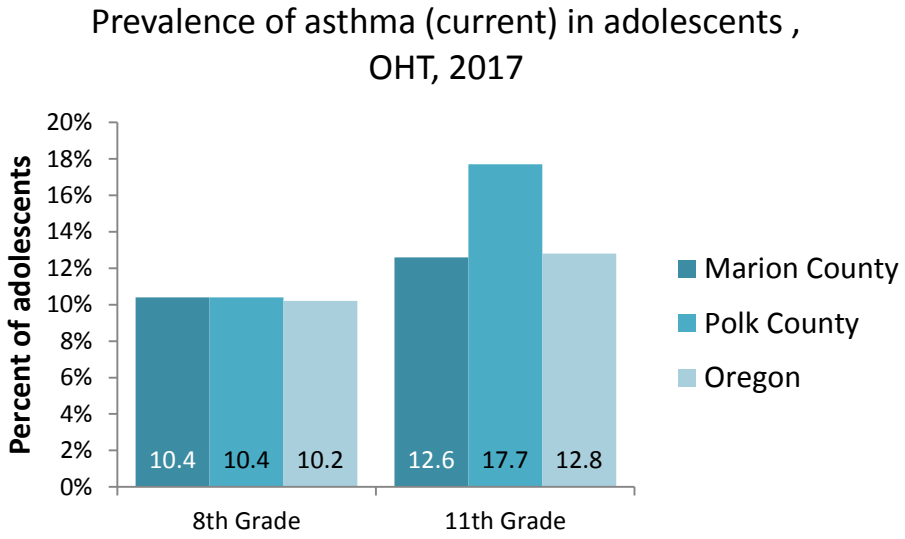


**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

- In Oregon, people who identified as African American/Black, American Indian/Alaska Native, or Pacific Islander had a higher prevalence of asthma than other races and ethnicities.[25]

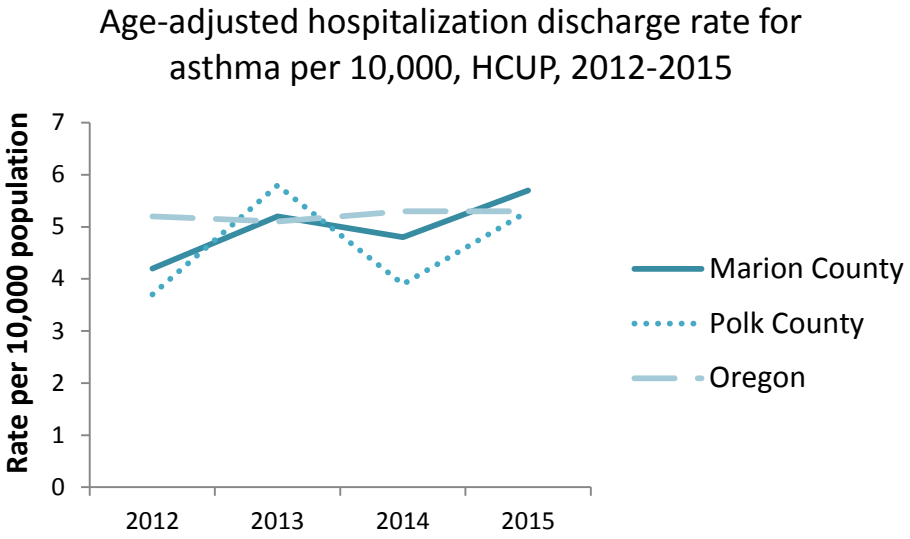


- The prevalence of current asthma increases with grade level. Roughly 10% of 8th graders currently have asthma compared with 13% of 11th graders in Marion* and 18% in Polk.[38]



Note: Asthma prevalence in Marion County adolescents might not be representative of the County as a whole

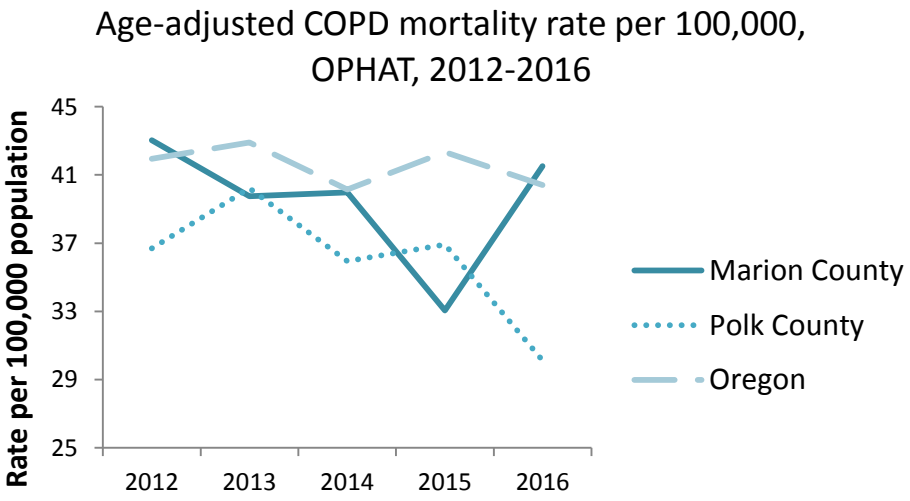
- Hospitalization rates are an indicator of how well asthma is being managed in a population. Lower rates may indicate better use of medications (inhalers) and symptom management. Hospitalization rates for asthma were similar to Oregon, which have been increasing slightly in recent years.[39]



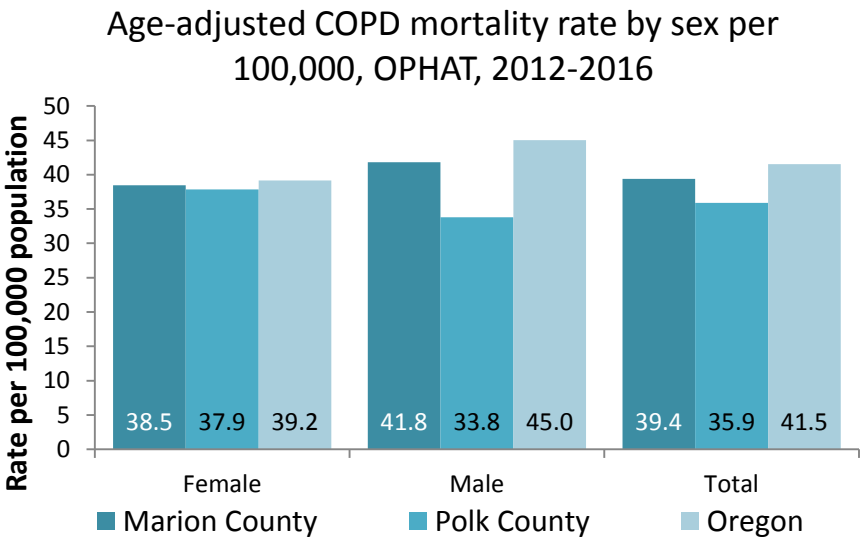
Chronic Obstructive Pulmonary Disease (COPD)

Chronic obstructive pulmonary disease (COPD) is a broad term for a group of diseases that involve airflow blockage that makes breathing difficult. COPD is the third leading cause of death in the United States and includes both emphysema and chronic bronchitis.[40] Millions of Americans suffer from COPD, and millions more have the disease, but they have not yet been diagnosed and are not receiving treatment. There is no cure for COPD, however it can be treated. Those who are over the age of 65, identify as American Indian/Alaska Native or Multiracial non-Hispanic, female, have a history of asthma, or are a current or former smoker, are at greater risk of developing COPD.

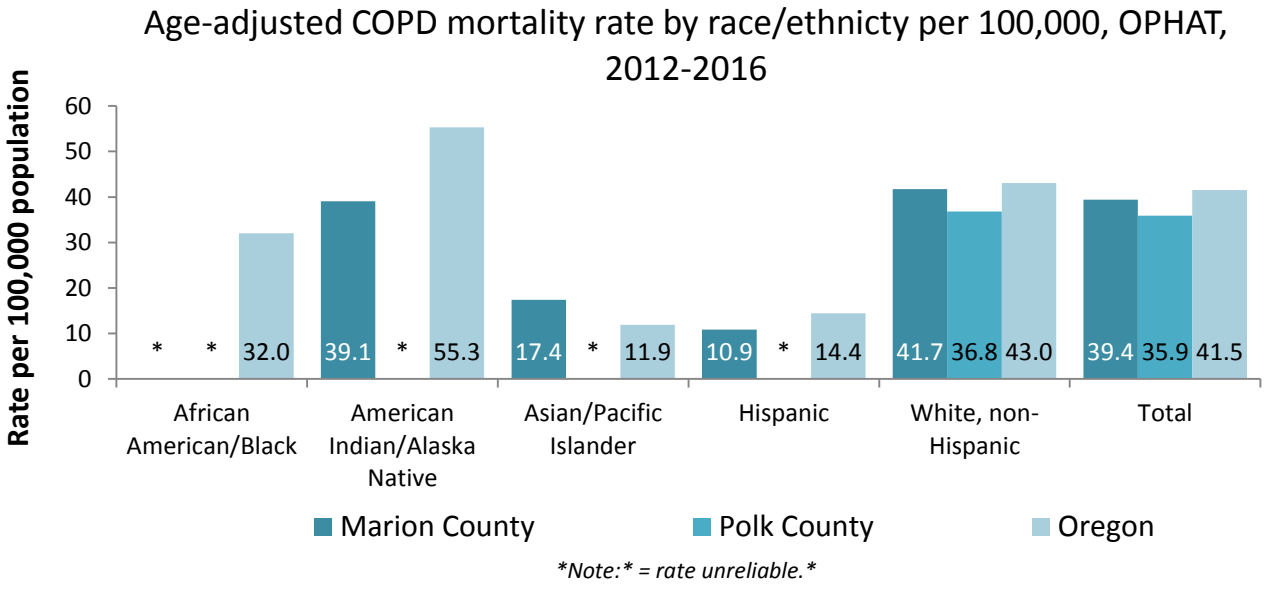
- COPD was the fifth leading cause of death and the fifth most common cause of chronic disease hospitalization in the community.[19,26]
- The COPD mortality rate has been increasing in Marion, but decreasing in Polk in recent years.[19] Marion had a higher COPD mortality rate than Polk, but was similar to the state.



- In general, male community members had higher COPD mortality rates than females, except in Polk where females had higher rates.[19]

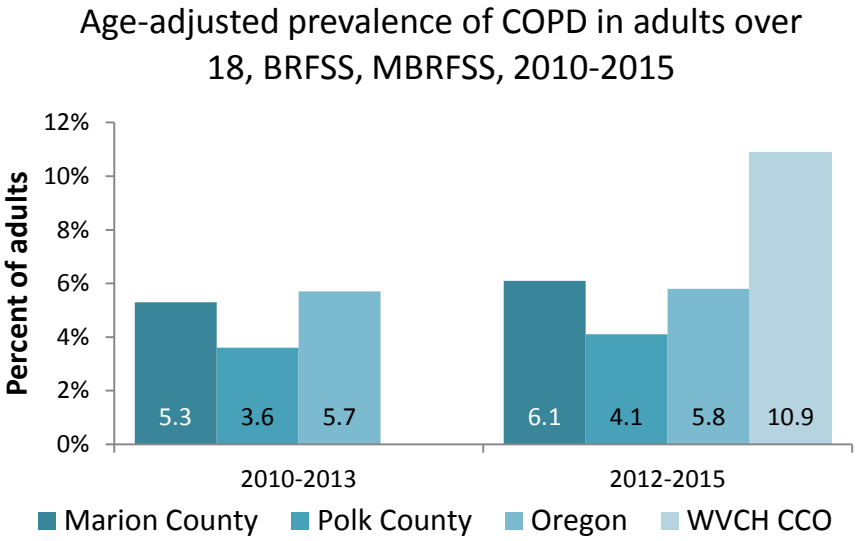


- African Americans/Blacks, American Indians/Alaska Natives, and White, non-Hispanics had higher COPD mortality rates than other races and ethnicities.[19]



Note:* = rate unreliable.

- About 6% of adults in Marion and 4% in Polk were diagnosed with COPD, compared to 6% of adults in the state as a whole.[21] Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appeared to have a higher prevalence of COPD than the community as a whole.[13] The prevalence of COPD in adults has been increasing in recent years in the community.[21]

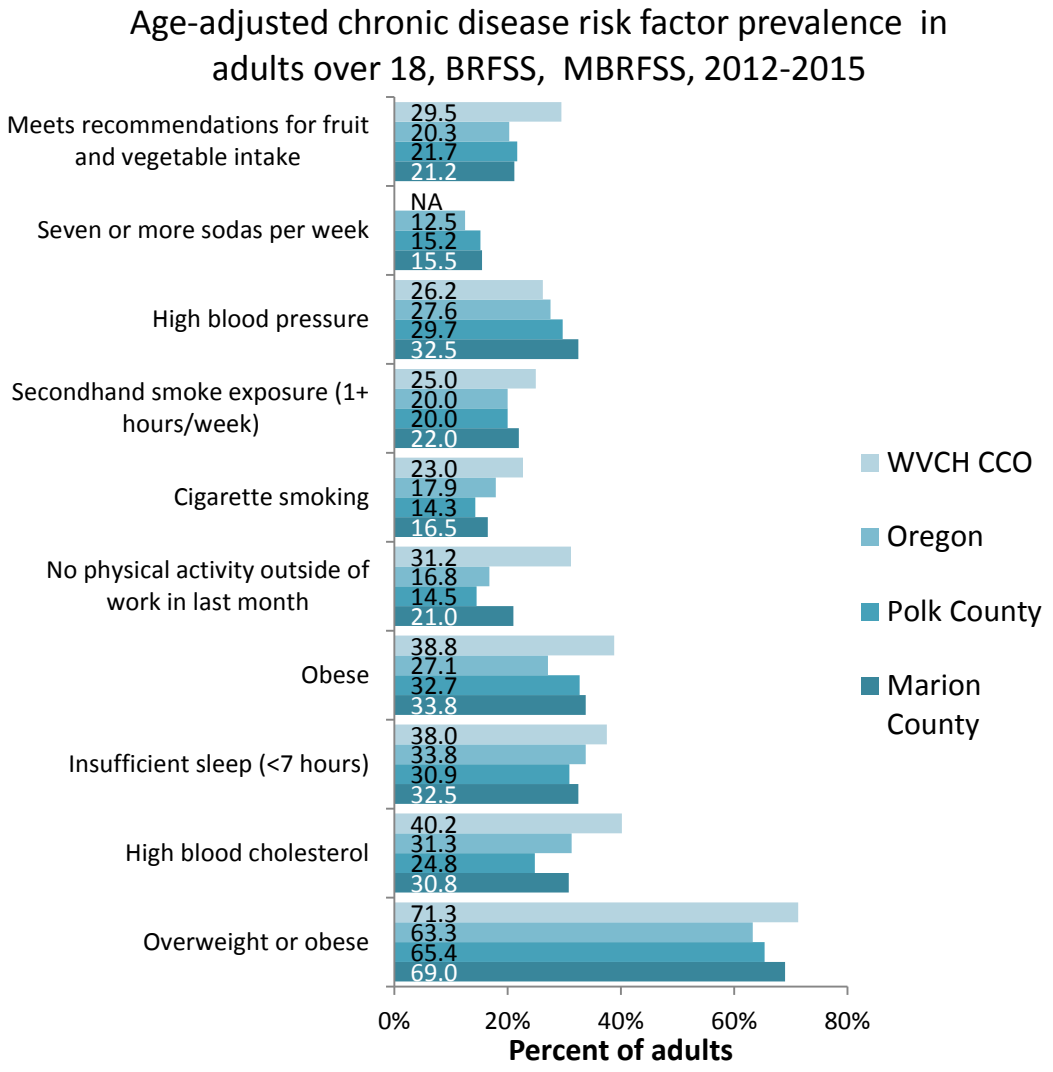


**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

Risk Factors for Chronic Disease

The risk for developing a chronic disease is increased or decreased based on multiple factors. While some individuals are predisposed to chronic disease based on genetics, many factors that contribute to disease are modifiable. Some of these factors include tobacco use, unhealthy eating habits that lead to becoming overweight or obesity, and not being screened for diseases.

- The community had a higher prevalence of overweight/obesity, high blood pressure, and greater soda consumption than the state.[21] Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appear to have a higher prevalence of chronic disease risk factors than the community as a whole; this likely correlates with the higher observed prevalence of chronic disease in the Medicaid population.[13] Marion had a higher prevalence of chronic disease risk factors than Polk.

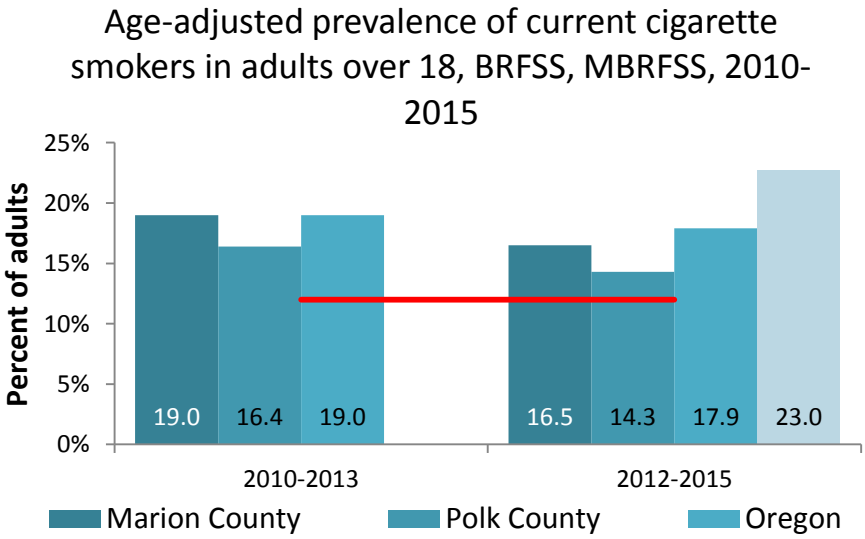


**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014. Secondhand smoke data is from 2010-2013. NA = Not available*.*

Tobacco

Smoking tobacco is the leading cause of preventable death locally and in the United States. [41] It is responsible for 1 out of every 5 deaths in the community, Oregon, and the country.[19,25] Virtually every organ of the body is harmed by smoking. Over $300 billion is lost every year in this country to treat disease caused by smoking and secondhand smoke along with lost productivity due to premature death. Smoking increases the risk of heart disease, cancer, stroke, asthma, chronic obstructive pulmonary disease, and many other diseases. Nationally, cigarette smoking prevalence has been decreasing over the years, but about 16% of adults are still current smokers. For more information about tobacco, see the Behavioral Health section.

- About 17% of adults in Marion and 14% in Polk were current tobacco smokers, compared with 18% of adults in Oregon. [21] The prevalence of cigarette smoking has been decreasing in the community in recent years, however we have yet to meet the Healthy People 2020 goal (12%).[21,28] Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appeared to have a higher prevalence of cigarette smoking than community members who were not enrolled.[13]

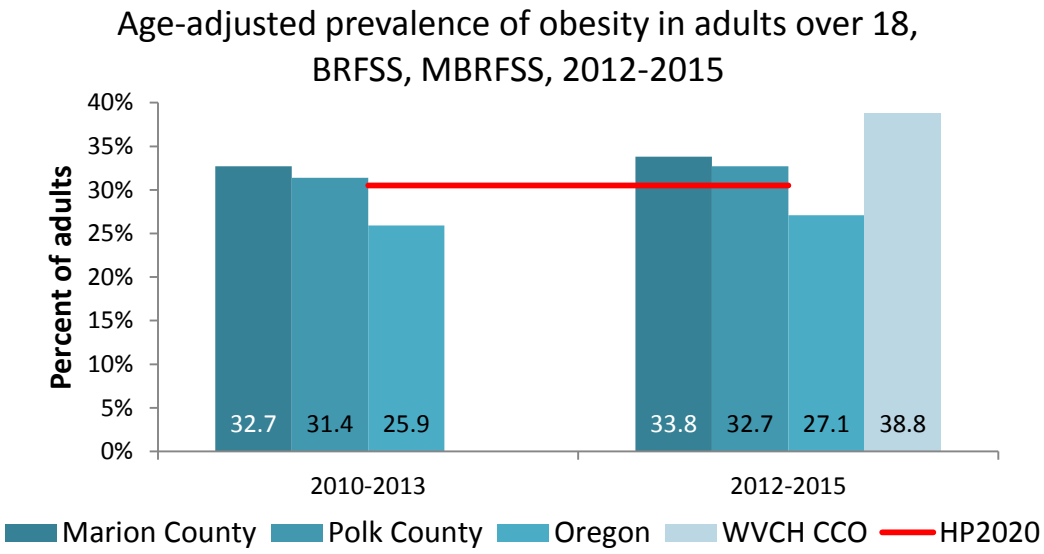


**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

Overweight & Obesity

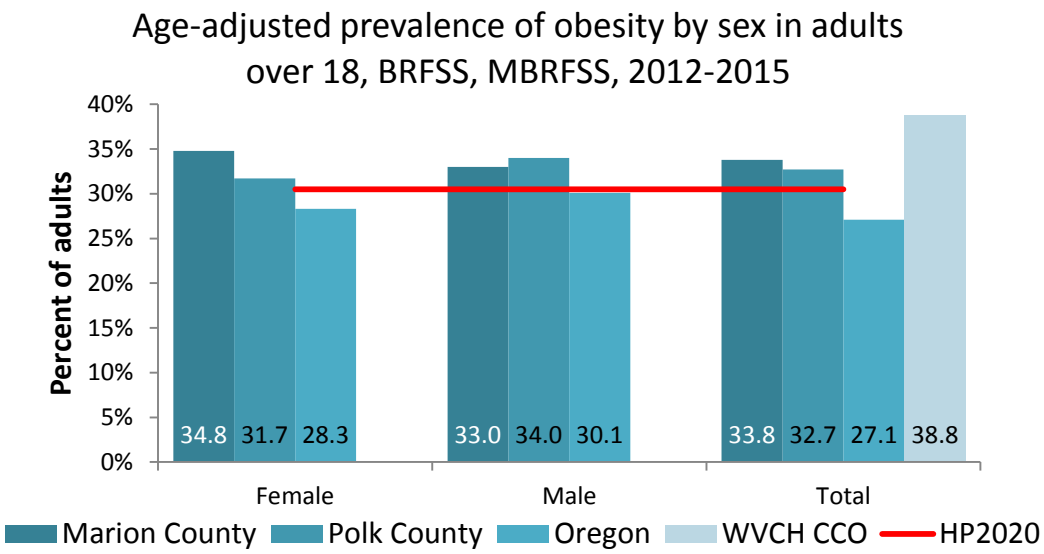
A high body mass index (BMI) is associated with increased risk of many types of chronic disease including heart disease, stroke, type 2 diabetes, and certain types of cancer.[42] Those with a BMI between 25 and 29 are considered to be overweight, while those with a BMI of 30 or greater are considered to be obese. About 40% of Americans are considered to be obese. The estimated annual medical cost of obesity in the US is estimated at $147 billion. The prevalence of obesity increases in younger age groups (20-39 years) before peaking at middle age (40-59 years) and falling off in adults age 60 and over. Higher education has been shown to protect against obesity, as those with college degrees have a lower prevalence of obesity compared to those with less education.

- About 1 out of every 3 adult community members (33%) was obese, compared to 27% of adults in Oregon.[21] The prevalence of obesity has been increasing locally and in the state in recent years. The community has not met the Healthy People 2020 goal for obesity (31%).[28] Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appeared to have a higher prevalence of obesity than community members who were not enrolled.[13] Statistics for youth obesity can be found in the Infant, Child, and Adolescent Health section.



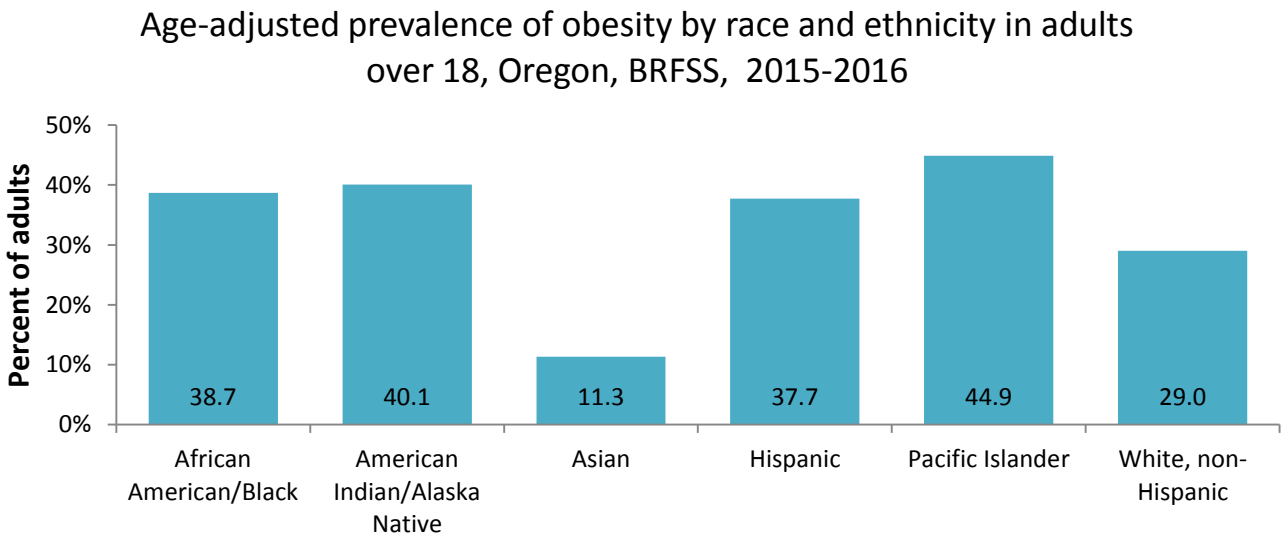
**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

- In general, adult males had a higher prevalence of obesity than adult females, except in Marion where females had a higher prevalence than males.[22]



**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

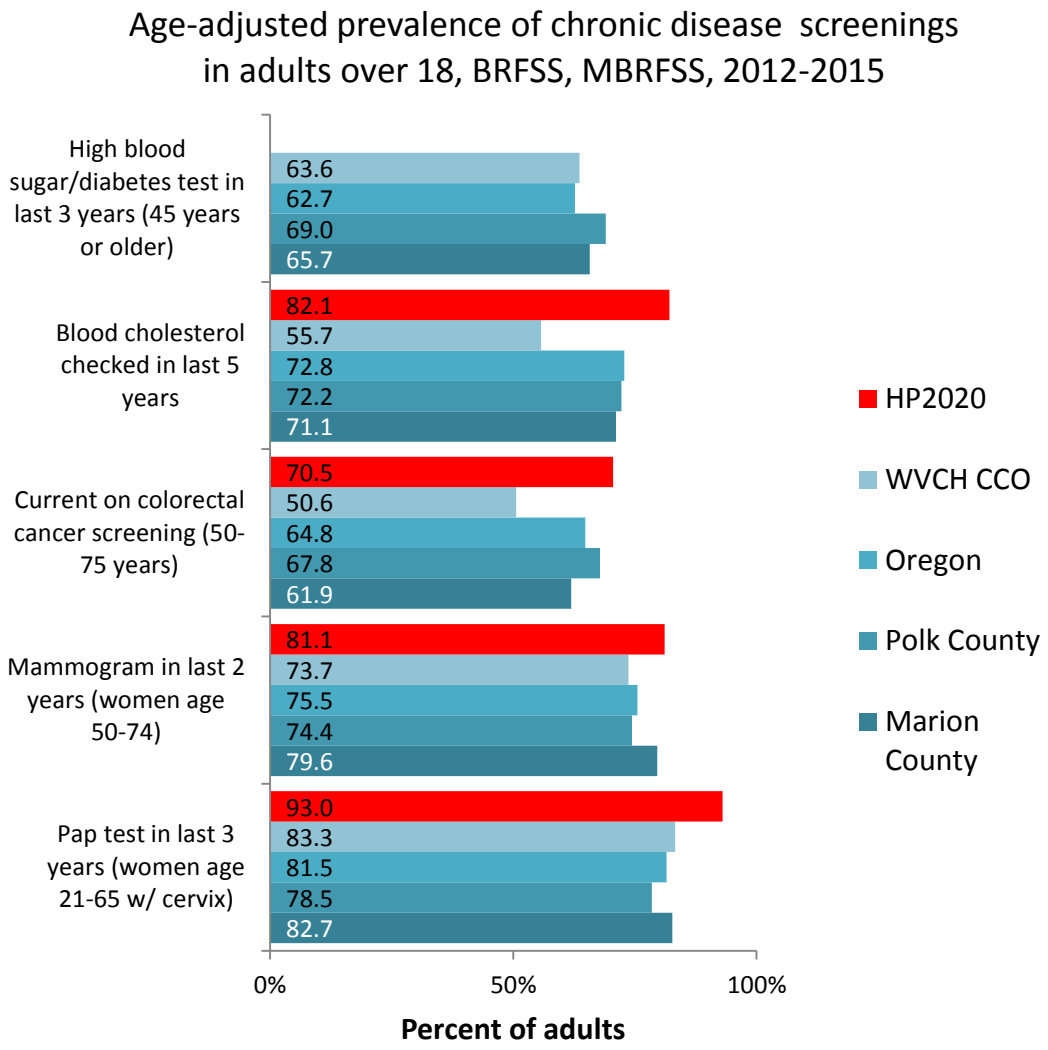
- In Oregon, adults who identified as African American/Black, American Indian/Alaska Native, Hispanic, or Pacific Islander had a higher prevalence of obesity than their peers.[25] People who identified as Pacific Islander had a higher prevalence of obesity than all other races/ethnicities.



Health Screening and Disease Monitoring

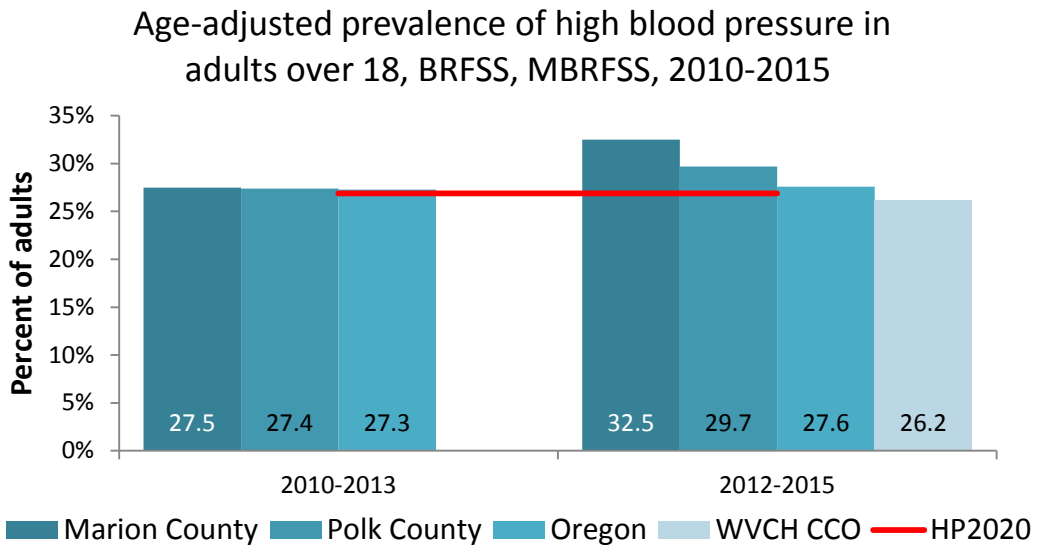
Monitoring and screening for chronic disease is essential for early detection and control of conditions, which can improve quality of life and increase longevity. If detected early, some chronic diseases can be prevented entirely. Examples of monitoring include blood pressure and cholesterol tests, which can decrease risk of heart disease and stroke. Other examples include screening for cervical cancer with a Pap test and mammograms for breast cancer.

- When last measured, the community and the state were not meeting the Healthy People 2020 goals for chronic disease screenings in adults.[21,28] Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appear to have had a lower percentage receiving chronic disease screenings than the community as a whole; with the exception of Pap test.[13]



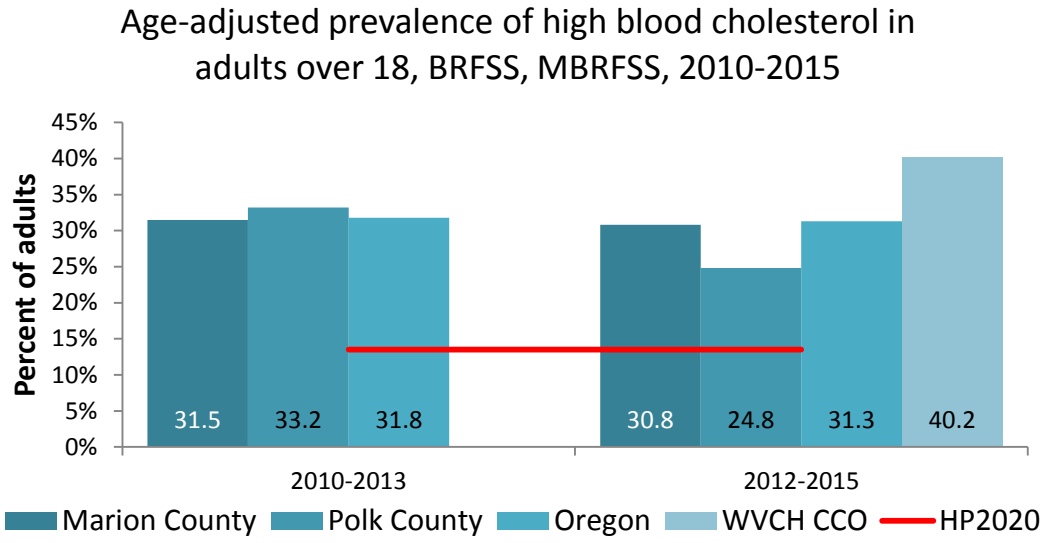
Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014. No Healthy People 2020 goal for sugar/diabetes testing.

- The prevalence of high blood pressure in adults has been increasing in the community in recent years as nearly 1 out of 3 members (30-33%) had high blood pressure.[21] Neither the community nor the state is meeting the Healthy People 2020 goal for high blood pressure prevalence (27%).[28] Although not directly comparable, adult community members enrolled in Medicaid (WVCH CCO) appeared to have had a lower prevalence of high blood pressure than community members who were not enrolled.[13]



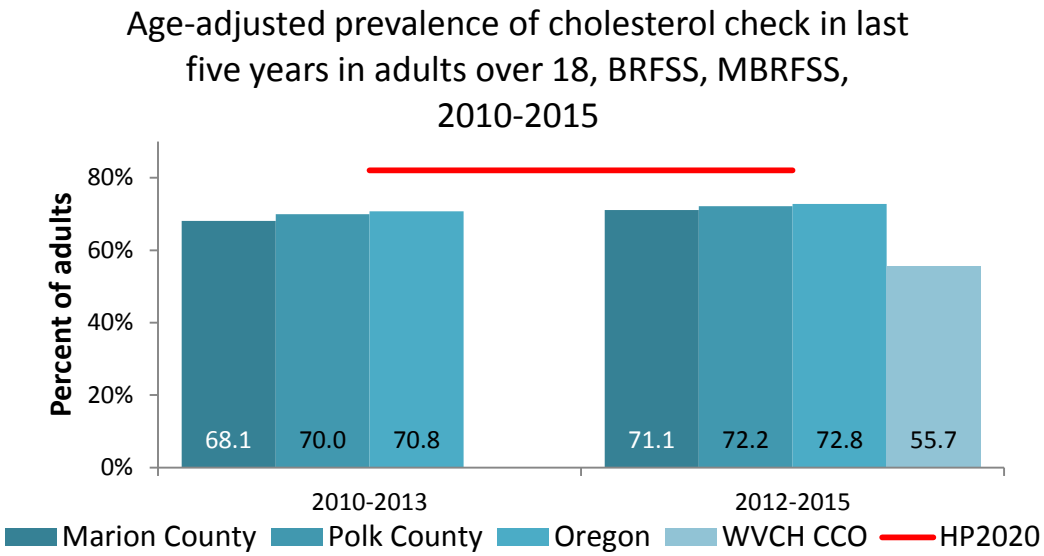
**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

- About 31% of adults in Marion and 25% in Polk had high blood cholesterol, compared to 31% of adults in Oregon.[21] The prevalence of high blood cholesterol in adults has been decreasing in the community and the state in recent years. However, when last measured, the community was not meeting the Healthy People 2020 goal for high blood cholesterol (14%).[28] Although not directly comparable, adult community members enrolled in Medicaid (WVCH CCO) appeared to have had a higher prevalence of high cholesterol than community members who were not enrolled.[13]



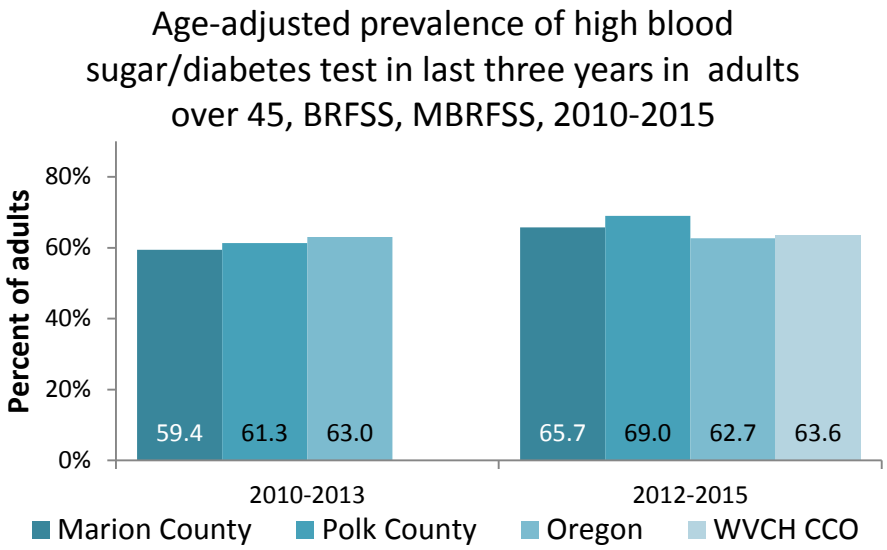
**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

- About 71% of adults in Marion and 72% in Polk received a cholesterol check in the last five years, compared to 73% of adults in Oregon.[21] Despite a recent increase in cholesterol screening, neither the community nor the state was meeting the Healthy People 2020 goal (82%).[28] Although not directly comparable, adult community members enrolled in Medicaid (WVCH CCO) appeared to have lower percentage receiving a cholesterol check than the community as a whole.[13]



**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

- About 66% of adults (over age 45) in Marion and 69% in Polk received high blood sugar/diabetes screening in the last three years, compared to 63% of adults in Oregon.[21] The percentage of adults over 45 receiving high blood sugar/diabetes screening has been increasing in recent years. Although not directly comparable, adult community members enrolled in Medicaid (WVCH CCO) appeared to have lower percentage receiving a high blood sugar/diabetes screening than community members who were not enrolled.[13]



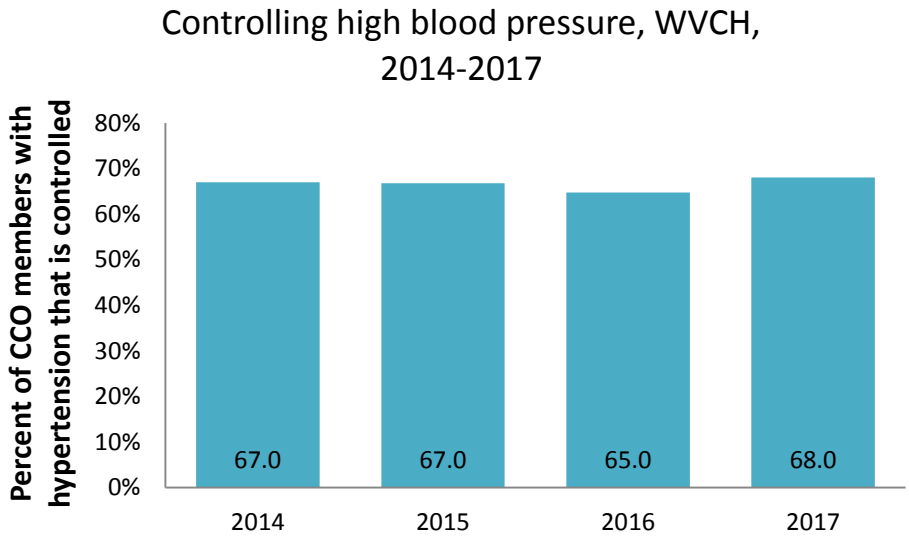
**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

CCO Measures for Chronic Disease

Controlling High Blood Pressure

The CCO has made little improvement in improving the control of hypertension for those members with a hypertension diagnosis. The graph below illustrates the percentage of CCO members with a hypertension diagnosis, whose hypertension was controlled within a safe range at their last primary care visit.

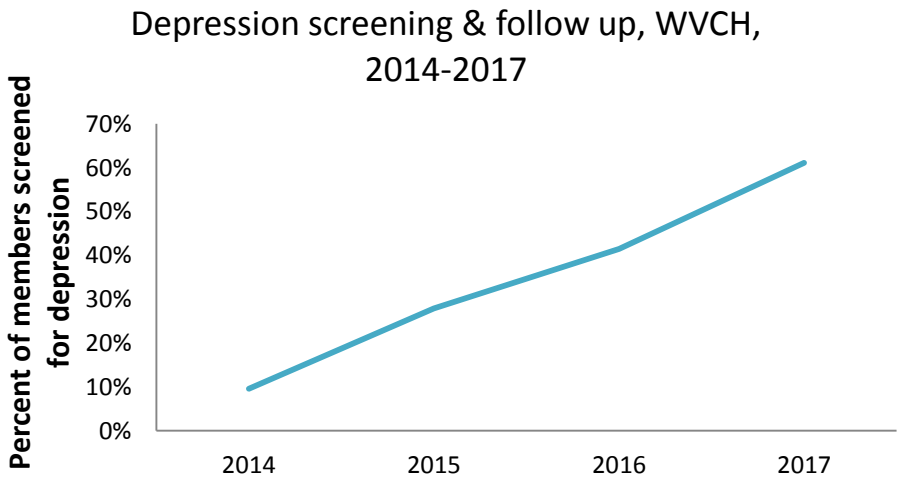
Note: WVCH CCO metrics are measured and submitted to the Oregon Health Authority (OHA) on an annual basis according to technical specifications outlined by the Oregon Health Authority which can be found here: **https://www.oregon.gov/OHA/HPA/ANALYTICS/Pages/CCO-Baseline-Data.aspx).**



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Depression Screening

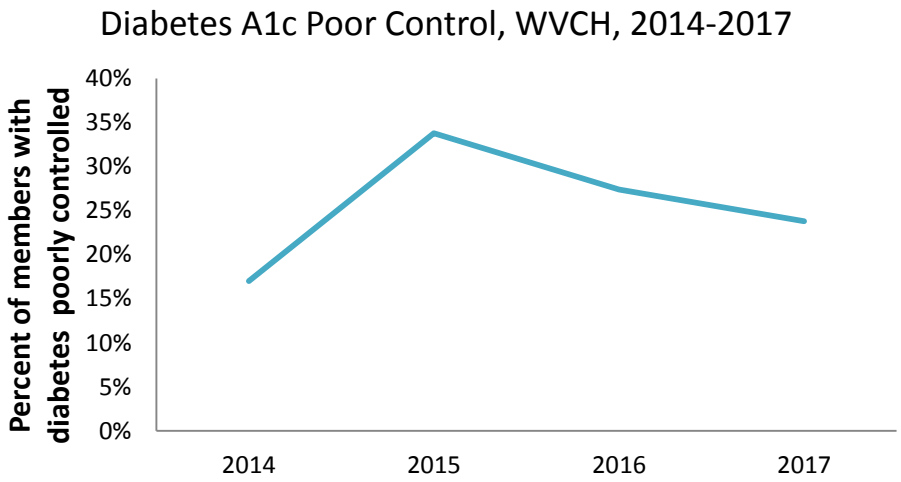
The CCO has made tremendous improvements in screening member for depression. The graph below illustrates the percentage of CCO members that were screened for depression and if screened positive, received follow up care to address the depression.



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Controlling Diabetes

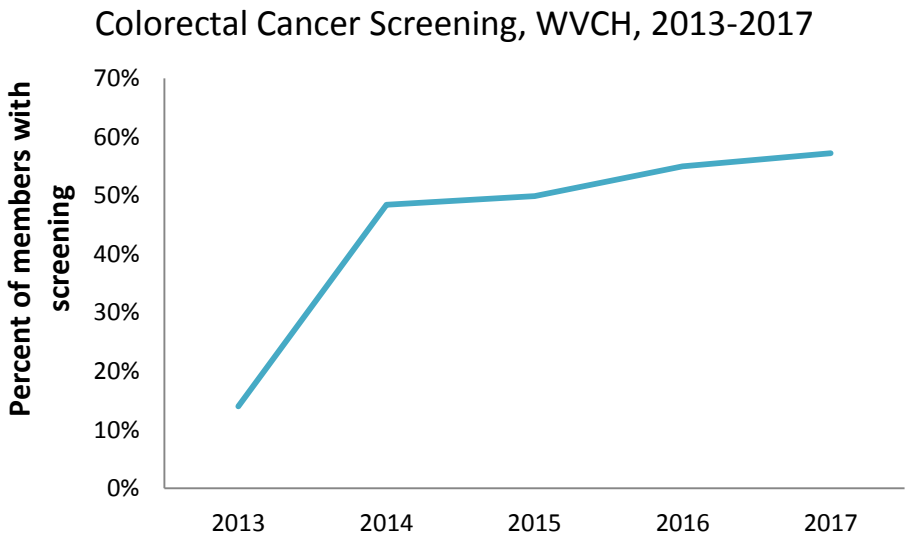
The CCO has made steady improvements in reducing the number of members with diabetes whose disease is not controlled. The graph below illustrates the percentage of CCO members with a diabetes diagnosis whose HbA1c was not controlled.



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Colon Cancer Screening

The CCO has made steady improvements in increasing the number of members that are screened for colon cancer. The graph below illustrates the percentage of CCO members that received a colon cancer screening with the measurement year.



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Flower seed farm in rural Marion County

Communicable Disease Control

Communicable Disease Control

Communicable or infectious diseases differ from chronic diseases because they can pass from human to human or from animals to humans. Globally, there has been a reduction in infectious disease mortality over the last century largely due to immunization, improved drinking water safety, and food regulation. Despite these advances, infectious disease remains a major cause of illness, disability, and death worldwide. For each birth cohort in the United States, the recommended childhood vaccine series saves 33,000 lives, prevents 14 million cases of disease, reduces direct health care costs by $9.9 billion, and saves $33.4 billion in indirect costs. Unfortunately, about 42,000 adults and 300 children die each year in the United States from vaccine preventable diseases. Disease-specific information in this section comes from the Control of Communicable Diseases Manual reference used by public health departments across the nation.[43]

Key Findings for Marion and Polk County:

- Sexually transmitted infection (STI) rates are on the rise in the community.
- Chlamydia incidence rates are increasing in Marion County (422 per 100,000 in 2013 to 492 per 100,000 in 2017; a 17% increase) and decreasing in Polk County (357 per 100,000 in 2013 to 334 per 100,000 in 2017; a 6% decrease).
- Gonorrhea incidence rates are increasing in Marion County (21 per 100,000 in 2013 to 155 per 100,000 in 2017; a 635% increase) and in Polk County (17 per 100,000 in 2013 to 75 per 100,000 in 2017; a 346% increase).
- Syphilis incidence rates are increasing in Marion County (2 per 100,000 in 2012 to 26 per 100,000 in 2017; a 1,268% increase) and increasing in Polk County. (3 per 100,000 in 2012 to 11 per 100,000 in 2017; a 348% increase)
- HIV incidence rates are decreasing in Marion County (6 per 100,000 in 2012 to 3 per 100,000 in 2016; a 53% decrease) and in Polk County (2 per 100,000 in 2012 to 1 per 100,000 in 2016; 37% decrease)
- Hepatitis B (chronic) incidence rates are decreasing in Marion County (9 per 100,000 in 2012 to 7 per 100,000 in 2016; a 22% decrease) and increasing in Polk County (5 per 1000,000 in 2012 to 8 per 100,000 in 2016; a 43% increase).

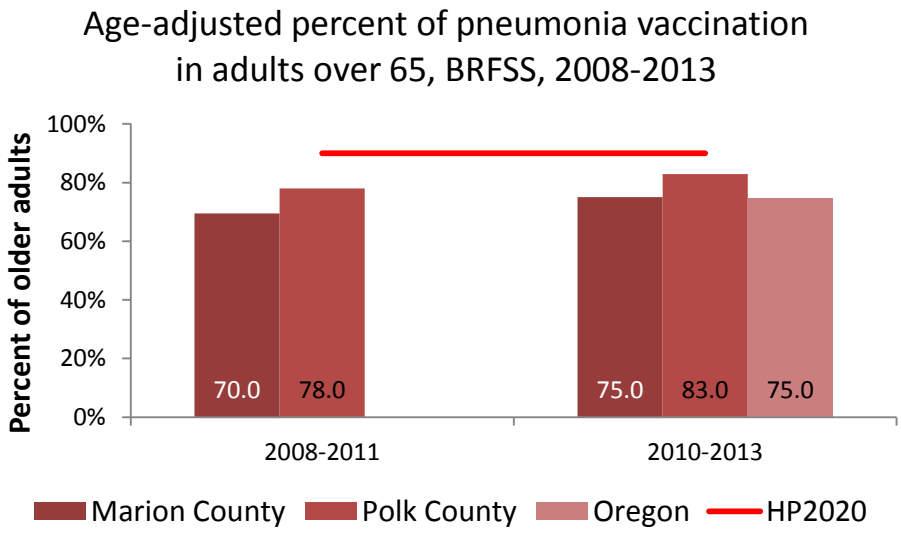
Adult Immunizations

Adults continue to receive new immunizations and update past immunizations based on recommendations from doctors and public health professionals. For example, tetanus boosters are recommended every 10 years, and the herpes zoster vaccination to protect against shingles is recommended for healthy adults when they turn 60.

Pneumonia Vaccination Rate

Pneumonia, a serious lung infection, along with ear infections, sinus infections, meningitis, and blood infections can all be caused by different types of pneumococcal bacteria. According to the CDC, there are more than 90 known types of pneumococcal bacteria.[44] The two pneumococcal vaccinations that are recommended for adults are PCV13 that protects against 13 types of pneumococcal bacteria, and PPSV23 that protects against 23 types of pneumococcal bacteria. The vaccinations do not prevent all infections or symptoms but they are very good at preventing severe disease that results in hospitalization and/or death.

- The percentage of adults over 65 years old with a pneumonia vaccine increased in both Marion and Polk Counties. The Marion County vaccination rate was the same as the state, while the Polk County vaccination was higher than both the state and the Marion County. Neither county, nor the state as a whole achieved the Healthy People 2020 goal of 90%.[28]

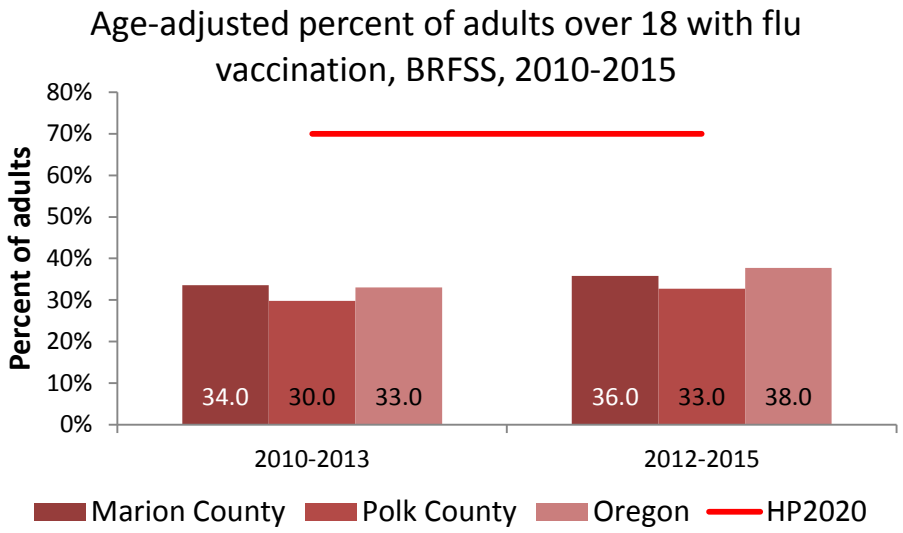


(Note: 2008-2011 Oregon data unavailable)

Adult Influenza Vaccination

Influenza, commonly known as the "flu", is a contagious respiratory illness caused by a virus. Most people with the flu have a fever with a cough and a sore throat. The flu usually lasts between a few days and a couple of weeks and can cause complications like pneumonia, hospitalization or death. The CDC recommends an annual flu vaccination for everyone 6 months and older.[44] Vaccine can prevent disease in the person, who got vaccinated, protect infants born to mothers who got vaccinated, and prevent disease in family members, friends, and coworkers that cannot receive flu vaccine. While individuals who are vaccinated may still become ill with flu, illness severity is reduced.

- The percentage of adults receiving flu vaccinations has been increasing in the community and the state.[21] However, the community has not yet achieved the Healthy People 2020 goal (70%).[28]



Hepatitis

Hepatitis can occur as a result of several different types of viruses which cause inflammation of the liver. In the United States, the most common types of hepatitis are A, B, and C.[45] Hepatitis A causes acute disease only, while Hepatitis B and C can cause acute disease and chronic disease. Symptoms of acute hepatitis are fatigue, low appetite, stomach pain, nausea, and jaundice (yellowing of the skin and eyes). Chronic hepatitis can result in increased risk of liver disease and liver cancer. Hepatitis A is transmitted person to person through exposure to contaminated food or water and can be prevented by vaccination. Hepatitis B is transmitted person to person through exposure to blood, semen, and vaginal secretions. Most commonly this occurs through sexual contact, sharing needles, syringes, or other drug-injection equipment, or from mother to baby at birth. There are much higher rates of hepatitis B in other areas of the world such as China, Africa, and India. In Marion and Polk Counties hepatitis B has historically been more common in individuals who were born outside of the United States, however as rates of other sexually transmitted infections increase, rates of hepatitis B have also been increasing. Hepatitis B can be prevented through vaccination. Hepatitis C is transmitted person to person through exposure to blood. Today in the United States, most people become infected through sharing needles or other injection drug equipment. There is no vaccination against Hepatitis C. The best way to prevent Hepatitis C is to avoid injecting drugs.

- Chronic hepatitis B occurred less frequently in the community than the state as a whole.[19]
- The rates of hepatitis A, and both acute hepatitis B and C in Marion County were similar to the state rates.[19]
- The rate of chronic hepatitis C in Polk County was lower than the state rate.[19] The rates of chronic hepatitis C in Marion County were higher than both Polk and state rates.

Age-adjusted hepatitis rates per 100,000 population, OPHAT, 2007-2016

	Marion	Polk	Oregon
Hepatitis A rate(#)	0.3(9)	*	0.5(203)
Hepatitis B (acute) rate(#)	0.8(26)	*	1.0(379)
Hepatitis B (chronic) rate(#)	8.8(274)	7.3(52)	11.8(4,609)
Hepatitis C (acute) rate(#)	0.7(20)	*	0.6(226)
Hepatitis C (chronic) rate(#)	154.7(4,900)	87.6(687)	133.7(55,992)

* = rate unreliable

Diarrheal Diseases

Diarrheal diseases are often caused by bacteria or parasites. They are usually transmitted through contaminated water or food, or exposure to fecal matter (animal or human).

- Incidence rates of Campylobacter infections were lower in both Marion and Polk than the state as a whole.[19]
- Incidence rates of reportable parasites, Cryptosporidium and Giardia, were lower in both Marion and Polk than the state as a whole.[19]
- The Yersinia incidence rate was lower in Marion than in the state as a whole.[19]

Age-adjusted diarrheal disease rates per 100,000 population, OPHAT, 2007-2016			
	Marion	**Polk**	**Oregon**
Campylobacter rate(#)	18.1(581)	14.5(111)	21.8(8,560)
Cryptosporidium rate(#)	2.8(89)	0.8(6)	5.3(2,042)
E. coli (STEC) rate(#)	4.7(153)	3.9(29)	4.0(1,478)
Giardia rate(#)	6.5 (210)	8.6(64)	10.7(4,049)
Legionella rate(#)	0.3(11)	0.6(5)	0.6(291)
Listeria rate(#)	0.3(11)	*	0.3(129)
Salmonella (non-typhoidal) rate(#)	10.8(349)	10.6(83)	11.1(4,224)
Shigella rate(#)	2.6(83)	1.1(9)	2.0(754)
Vibrio rate(#)	0.286(8)	*	0.5(193)
Yersinia rate(#)	0.3(10)	*	0.6(219)

* = rate unreliable

Healthcare Associated Infections (HAIs)

Hospital Associated Infections include things like central line associated bloodstream infections, infections related to bypass grafts and diarrheal illnesses like Clostridium difficile. Hospitals and other health care providers have improved processes and protocols to help reduce the incidence of HAIs in facilities. This is measured using a Standardized Infection Ratio (SIR). This ratio is used to track HAI prevention progress. The ratio compares the number of infections in a facility or state to the number of infections that were "predicted" or would be expected to have occurred based on previous years of data. The lower the ratio the better it is.

Catheter-associated Urinary Tract Infections (CAUTI)

Urinary tract infections (UTIs) are infections involving any part of the urinary system including urethra, bladder, ureters, and kidney. This is the most common type of HAI.[46] About 75% of HAI UTIs are associated with a catheter (a tube inserted into the bladder through the urethra. Prolonged use of catheters is strongly associated with increased risk of infection.

- Salem Hospital and Oregon facilities had the same SIR for CAUTI in 2017 with an increasing trend of infections.[47]
- Neither Salem Hospital nor Oregon as a whole met the HHS 2020 target.[47]

Central Line-associated Bloodstream Infections (CLABSI)

Central line-associated bloodstream infections cause thousands of deaths each year and cost billions of dollars.[48] A central line is a tube that is usually placed in a large vein in the neck, chest, or groin to provide medication, or fluids to a patient, or to collect blood for tests. CLABSI occur when bacteria or viruses enter the bloodstream through the central line.

- Salem Hospital had a slightly higher ratio that Oregon facilities as a whole, but both Salem Hospital and Oregon facilities have a decreasing trend of CLABSI.[47]
- Neither Salem Hospital nor Oregon met the HHS 2020 target.[47]

Clostridium Difficile

Clostridium Difficile is a bacterium that causes colon inflammation (colitis). It is estimated that there were almost 500,000 infections in the US in 2011 and 29,000 deaths within a month of the initial diagnosis.[49] This bacterium generally causes diarrhea, fever, loss of appetite, nausea, and abdominal pain. It is transmitted through exposure to fecal matter and can live for long periods outside of the body. Surface areas, devices, or other materials that become contaminated with feces can make patients ill if they come in contact with them, or if healthcare professionals touch the surfaces and then the patients. Individuals who have one or more illnesses or conditions that require prolonged use of antibiotics and older individuals are at increased risk of acquiring this infection.

- Silverton Hospital and Santiam Hospital both have higher SIRs than Salem Hospital and Oregon facilities.[47] Clostridium Difficile infection trends are increasing at Salem Hospital and Santiam Hospital, but are improving at Silverton Hospital and in the state.
- Silverton Hospital met the HHS 2020 target.[47]

Methicillin-resistant Staphylococcus Aureus Bloodstream Infections (MRSA BSI)

MRSA is a type of staphylococcus bacteria that is resistant to antibiotics called beta-lactams (methicillin, oxacillin, penicillin, and amoxicillin.[50] MRSA BSI occur when this bacteria gets into the bloodstream.

- Salem Hospital and Oregon facilities had the same MRSA BSI SIR with a decreasing infection trend.[47]
- Neither Salem Hospital nor Oregon has met the HHS 2020 target.[47]

Surgical Site Infection

Surgical site infections are infections that occur after surgery in the part of the body where the surgery took place.[51] Surgical site infections can involve skin, tissue, organ, or implants.

- Salem Hospital had a higher SIR for hysterectomy surgical site infections than Oregon, although trends are increasing both locally and at the state level. Neither Salem Hospital nor Oregon have met the HHS 2020 target.[47]
- Salem Hospital had a higher SIR for colon surgical site infections than Oregon, although infection trends are increasing both locally and statewide. Neither Salem Hospital nor Oregon have met the HHS 2020 target.[47]
- Salem Hospital had a higher SIR for hip replacement surgical site infections than Oregon and both have increasing infection trends of this type. Neither Salem Health nor Oregon have met the HHS 2020 target.[47]
- Salem Hospital had a higher SIR for knee replacement surgical site infections that Oregon and both have an increasing infection trend. The HHS 2020 target has not been met locally or at the state level.[47]
- Salem Hospital had a higher SIR for laminectomy than Oregon facilities as a whole with a decreasing infection trend. Both Salem Hospital and the state have met the HHS 2020 target.[47]

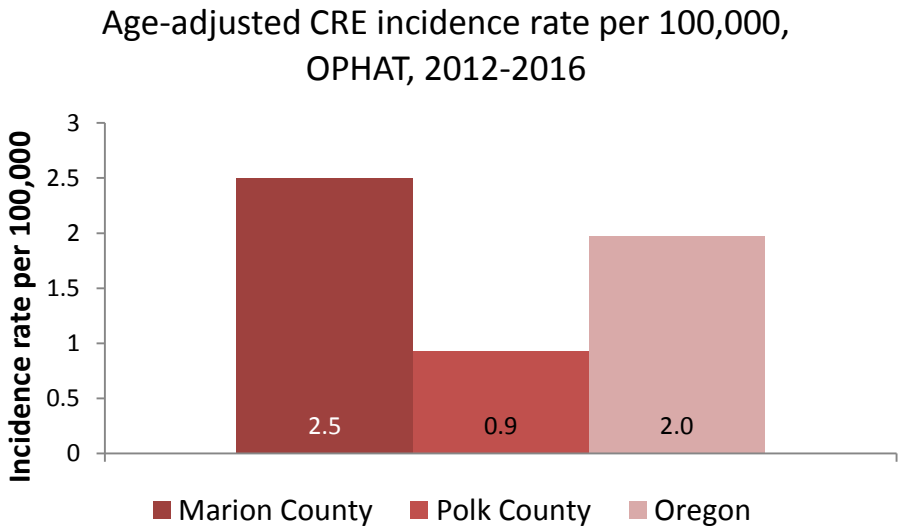
Standard Infection Ratios (SIR) of selected HAI among Marion and Polk healthcare facilities, OHA, 2017										
	Salem Hospital		Santiam Hospital		Silverton Hospital		West Valley Hospital		Oregon	
	SIR	Trend	SIR	Trend	SIR	Trend	SIR	Trend	SIR	Trend
CAUTI	1.1	↑	*	*	*	*	0.0	*	1.1	↑
CLABSI	0.8	↓	0.0	*	0.0	*	--	--	0.7	↓
Clostridium Difficile	1.1	↑	1.6	↑	*1.8*	↓	0.0	*	0.8	↓
MRSA BSI	0.8	↓	0	*	0.0	*	0.0	*	0.8	↓
Hysterectomy	1.6	↑	0	*	0.0	*	--	--	1.1	↑
Colon Surgery	1.5	↑	0	*	0	*	--	--	0.8	↑
Hip Replacement	3.4	↑	0	*	0	*	--	--	1.2	↑
Knee Replacement	3.2	↑	*	*	*	*	--	--	1.5	↑
Laminectomy	*0.6*	↓	--	--	--	--	--	--	*0.4*	↓

* = too small to calculate a reliable SIR
-- = SIR not calculated at this location
Italicized SIRs are currently meeting the HHS 2020 target

Carbapenem-Resistant Enterobacteriaceae

Carbapenem-Resistant Enterobacteriaceae (CRE) is a group of bacteria that are hard to treat because they are resistant to commonly used antibiotics. Many bacteria in this family are found in normal human intestines, but sometimes they can move outside of the intestines and cause serious infections like pneumonia, sepsis, urinary tract infections, wound infections, and meningitis.[52] These infections are most common in individuals that are staying in health care settings and are being treated for another disease or condition. Individuals at highest risk are those who have compromised immune systems or have devices going into their bodies such as catheters. Long term use of certain antibiotics may also increase a person's risk of being infected with CRE. CRE infections can be spread from person to person and are usually spread in health care settings. CRE infections are of public health concern because they indicate increasing antibiotic resistance in the community.

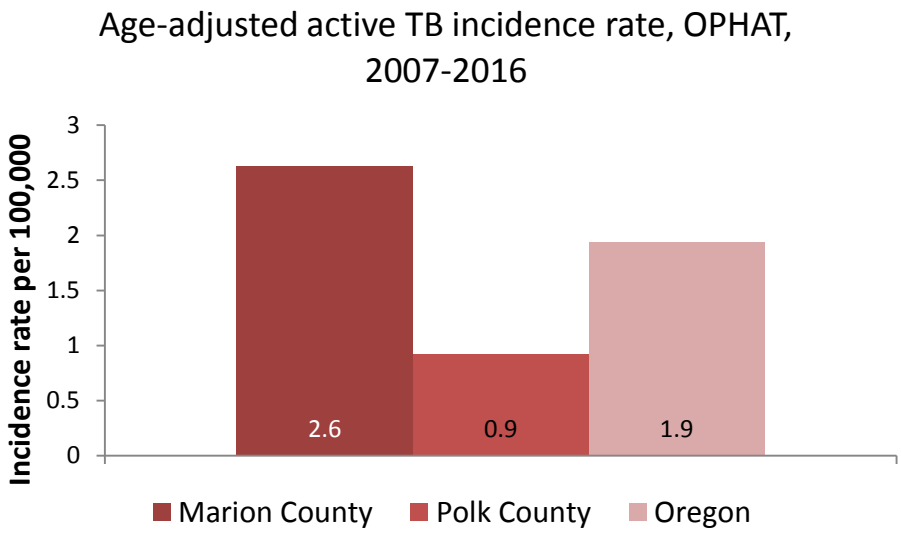
- The CRE incidence rates were lower in Polk than Marion and the state.[19]



Tuberculosis

Tuberculosis (often called TB) is a bacterial disease. It exists in an active or latent state. The latent state is called Latent Tuberculosis Infection or (LTBI). When a person is first exposed to TB bacteria, they breathe the bacteria in and the bacteria will enter the lungs where the immune system walls them off. Approximately 25% of the world's population is infected with LTBI.[53] When a person has LTBI they are not sick or infectious. The bacteria can remain in a state of latency indefinitely or the bacteria can break through the immune system and enter an active state. Once the bacteria are active a person will become ill and depending on the site of the TB disease, infectious. TB disease most commonly affects the lungs, which means that the person with TB may spread the infection to others by coughing. Tuberculosis requires treatment with antibiotics and can lead to death if not treated. It is best to diagnose and treat TB when it is latent because it takes less time and prevents the person from becoming ill with active disease. With the availability of adequate treatment, the rate of new cases of TB in the United States has decreased from 52.6 cases per 100,000 in 1956 to 3 cases per 100,000 in 2013.[54] Most of the tuberculosis cases in Marion and Polk Counties were born outside of the United States in other regions of the world where tuberculosis incidence is higher. In 2017, the regions with the highest tuberculosis rates were Southern Africa, Southeast Asia, and the Pacific Islands.[55]

- Marion County had a higher incidence of active tuberculosis than both Polk County and the state as a whole.[19]



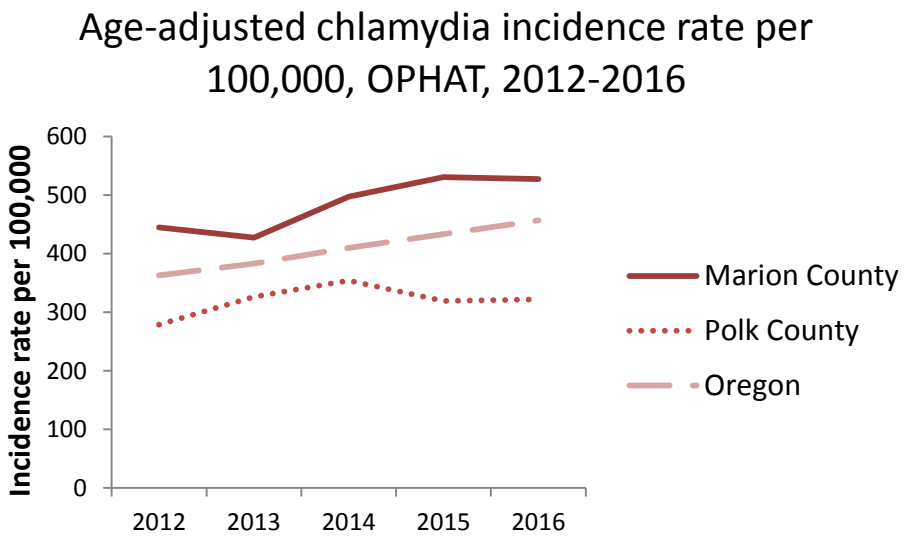
Sexually Transmitted Infections

Chlamydia Incidence Rate

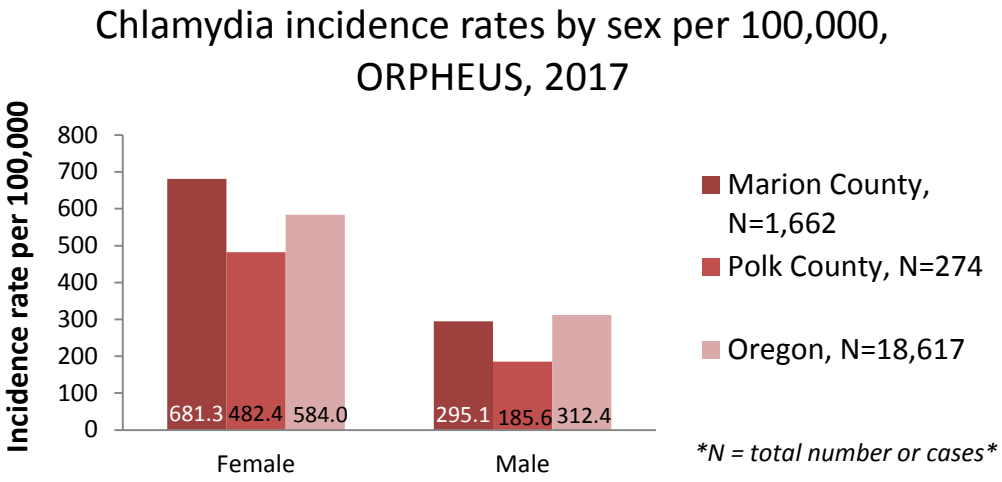
Chlamydia is a sexually transmitted bacterial infection that often causes no symptoms. If untreated in women, the infection can lead to infertility and other problems. Chlamydia is transmitted by having vaginal, anal, or oral sex with an infected person. Previous chlamydia treatment would not prevent a new infection. Infection during pregnancy can result in eye and lung infections in the newborn.[56] Anyone who has unprotected vaginal, anal, or oral sex and/or has multiple partners is at a higher risk of being infected with chlamydia. Males who have sex with males are also at risk of being infected with chlamydia due to behaviors and biological factors.

Marion County Health & Human Services has developed a health profile describing this issue in more depth; visit the web address below to learn more:
http://www.co.marion.or.us/HLT/communityassessments/Documents/Marion%20County%20Chlamydia%20Health%20Profile%202016.pdf

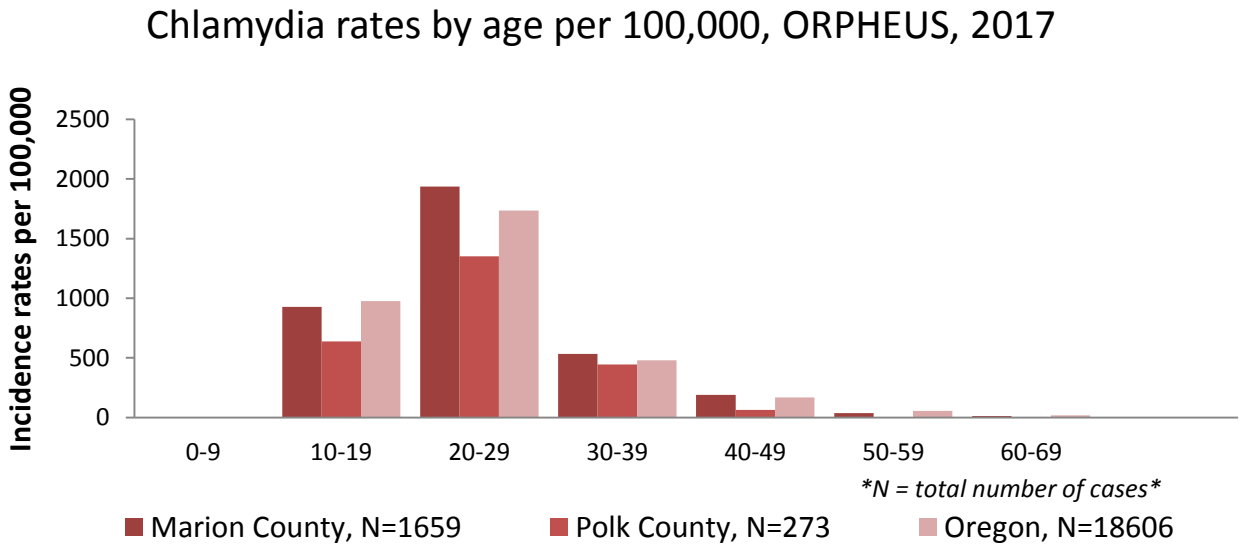
- Chlamydia incidence rates in Marion and Oregon have continued to increase.[19] Polk had a lower chlamydia incidence rate than Marion and Oregon.



- Chlamydia incidence rates were higher in females than males.[57]



- Chlamydia incidence rates were higher in younger age groups.[57]



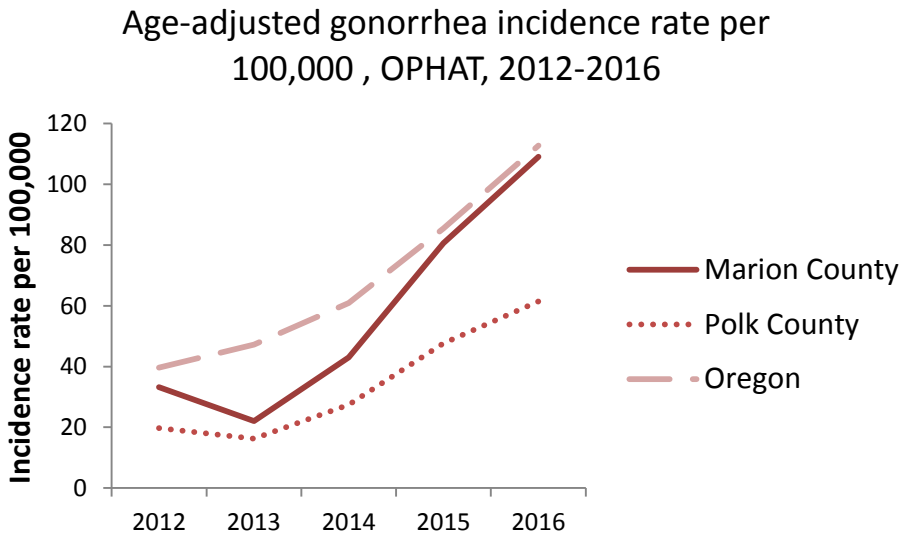
Note: Data not shown for some age groups due to small case counts

Gonorrhea Incidence Rate

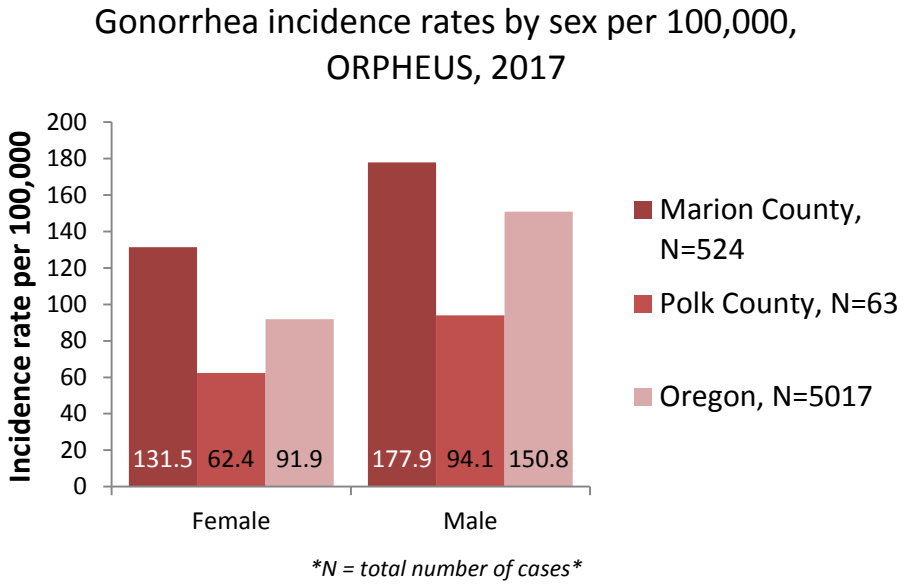
Gonorrhea is a sexually transmitted bacterial infection. Gonorrhea is transmitted by having vaginal, anal, or oral sex with an infected person. Untreated infection in men and women can lead to complications, including infertility. Risk of HIV infection is increased when a person is already infected with gonorrhea.[58]

Marion County Health & Human Services has developed a health profile describing this issue in more depth; visit the web address below to learn more:
http://www.co.marion.or.us/HLT/communityassessments/Documents/Marion%20County%20Chlamydia%20Health%20Profile%202016.pdf

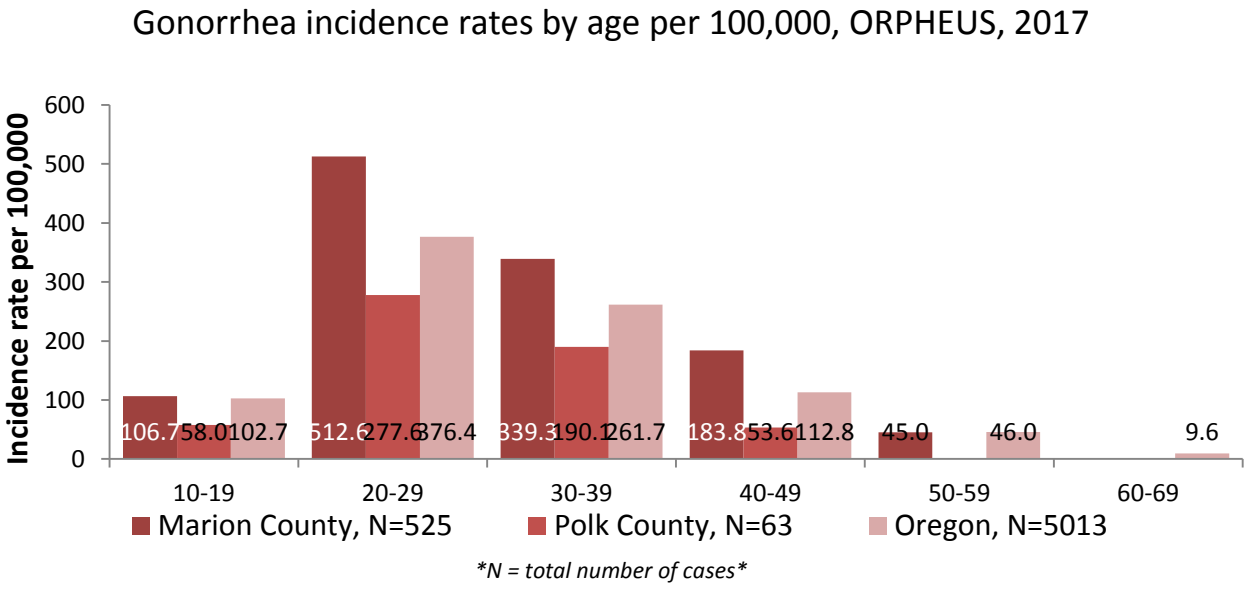
- Gonorrhea rates have been increasing significantly in the community and the state in recent years.[19] Marion had a 635% increase in gonorrhea rates surpassing the increase in Polk (346%) and the state from 2012 to 2017.[57]



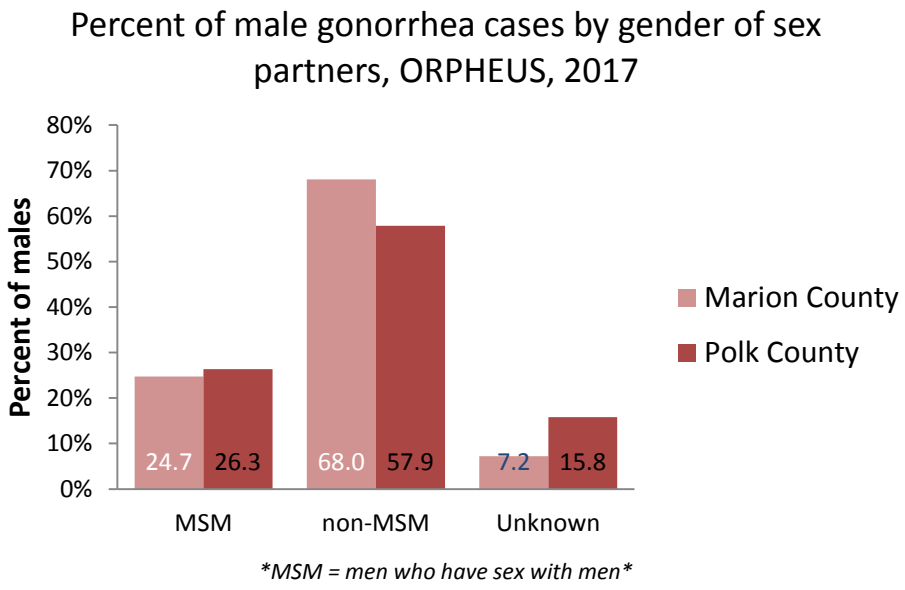
- Males had a higher incidence rate of gonorrheal infections than females.[57] This may be because men are more likely to have symptoms than women and so are more likely to seek care. Pregnant women who have gonorrhea infections can pass the infection on to their baby during birth so it is important that pregnant women and their partners are treated properly.



- Gonorrhea incidence rates were highest between the ages of 20 and 29.[57] This aligns with national statistics estimating that the highest rate of infection is in individuals under 25.[58]



- About one quarter of the male gonorrhea cases in Marion and Polk reported that they had a male sex partner (MSM).[57]

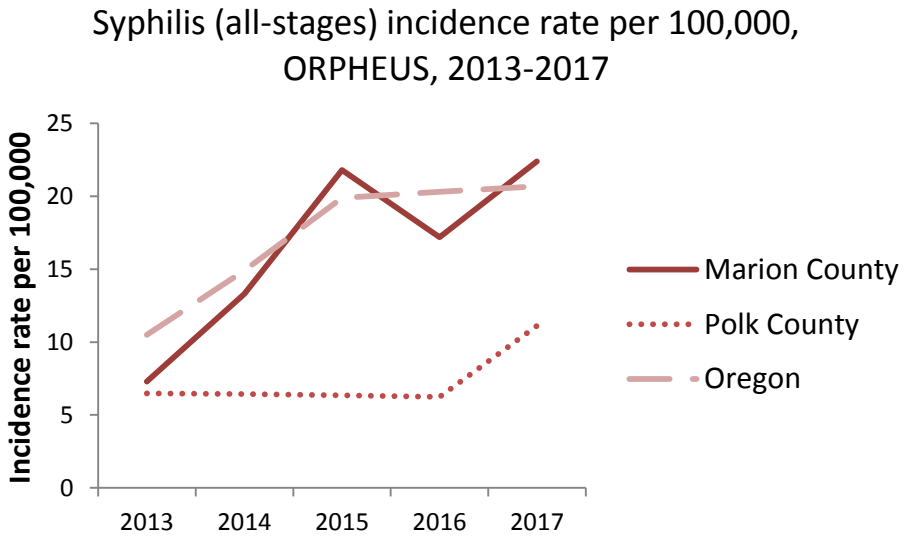


Syphilis (All-Stages) Incidence Rate

Syphilis is a sexually transmitted bacterial infection. The illness progresses in stages, and treatment is dependent of stage. Pregnant women may transmit the infection to their fetus with a high risk that the baby will be stillborn or have other serious health problems. Persons who are not treated may develop late stage syphilis, including nervous system problems.[59]

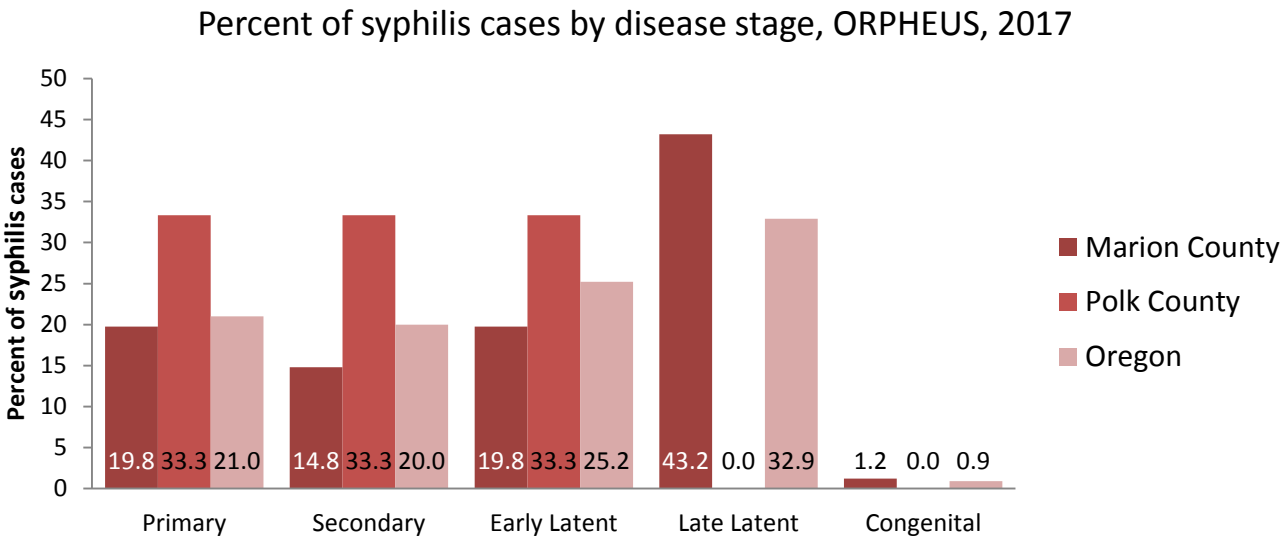
Marion County Health & Human Services has developed a health profile describing this issue in more depth; visit the web address below to learn more:
http://www.co.marion.or.us/HLT/communityassessments/Documents/Marion%20County%20Chlamydia%20Health%20Profile%202016.pdf

- Syphilis incidence rates for both Marion and Polk County and the state of Oregon have been increasing.[57] The goal of Healthy People 2020 is to lower the incidence of syphilis to 1.3 cases per 100,000 for females and 6.7 cases per 100,000 for males.[60] Neither Marion and Polk County nor Oregon has achieved the Healthy People 2020 goal.



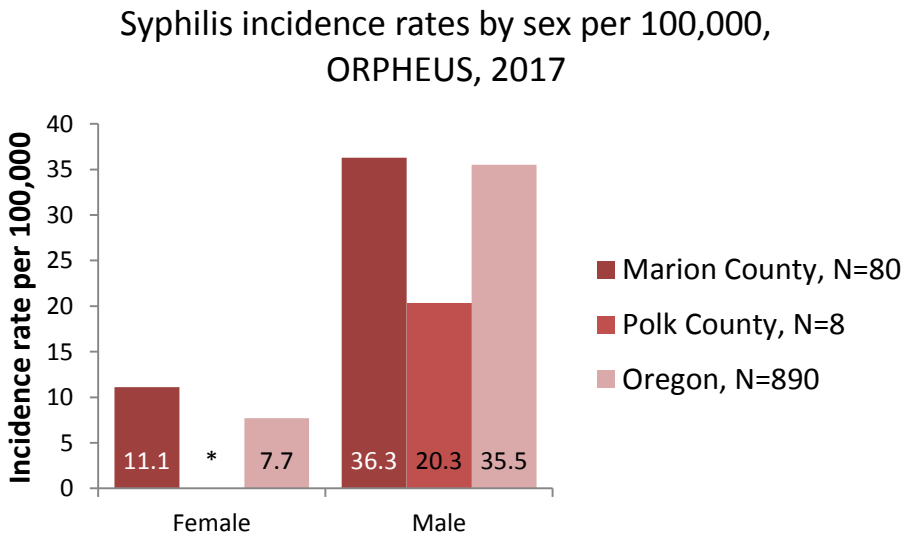
Syphilis progresses in stages. Each stage has different symptoms and requires different treatment. Additionally, each stage has a different level of infectivity. Primary and secondary syphilis are infectious while latent stages are not infectious to other people even though a person still has the infection. In Marion County, latent stage syphilis is the most common syphilis stage diagnosis.[57] The latent stage is a period of time without symptoms and without treatment, syphilis will continue in the body for years.[59] One of the reasons of diagnosing more latent stages is due to late screening. Congenital syphilis occurs when an infected mother gives it to her baby. Congenital syphilis has reached a 20 year high in the U.S.; once syphilis has been diagnosed in pregnant women, it can be cured with the antibiotics.

- A higher percentage of syphilis cases were diagnosed in the latent stage in Marion and the state than any other stage.[57] Polk County had a similar percentage of primary, secondary, and early latent stage syphilis diagnoses.



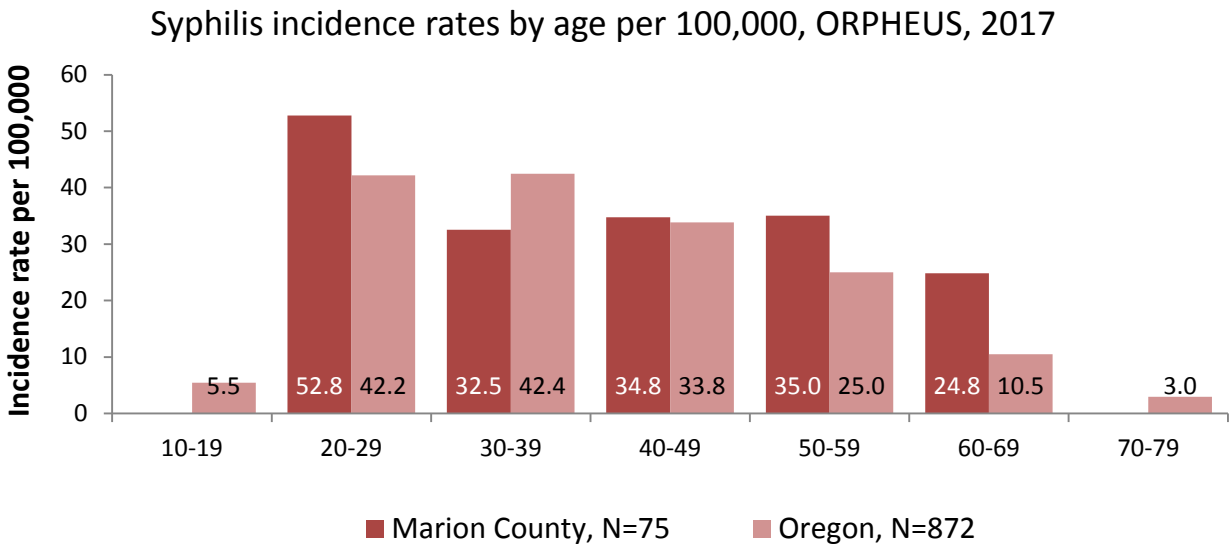
Note: Values for late latent and congenital syphilis in Polk were unreliable and not shown.

- Males had a higher incidence rate of syphilis than females.[57]



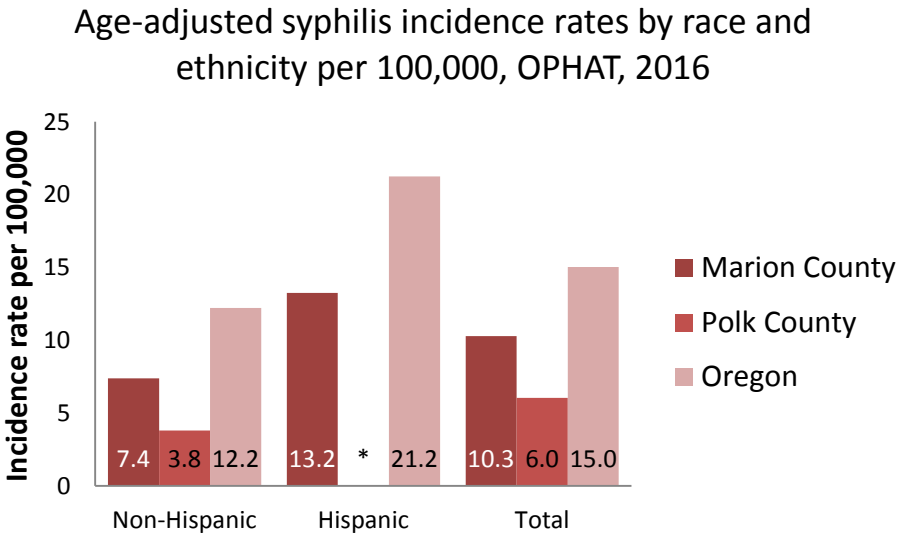
N = total number of cases. Polk rate for females were unreliable and not displayed.

- In Marion, the highest incidence of syphilis was among 20 to 29 year olds which align with national trends.[57,59] In Oregon, the highest incidence of syphilis was among 30-39 year olds which does not align with the national trend.[59]



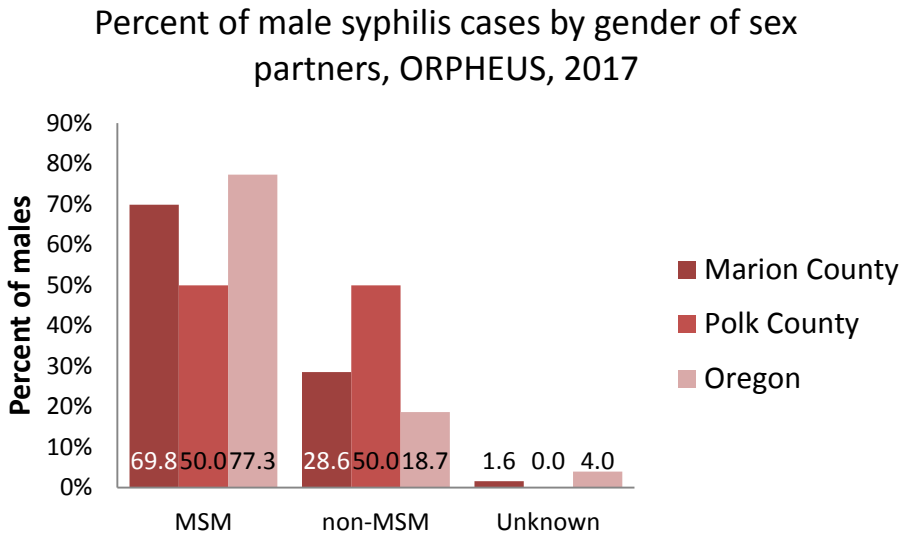
N = total number of cases. Polk data and rates for some age groups for Marion were unreliable and not displayed.

- The Marion County Hispanic population had a higher syphilis incidence rate than the White, non-Hispanic population.[19]



Polk data not displayed for some groups due to low case numbers.

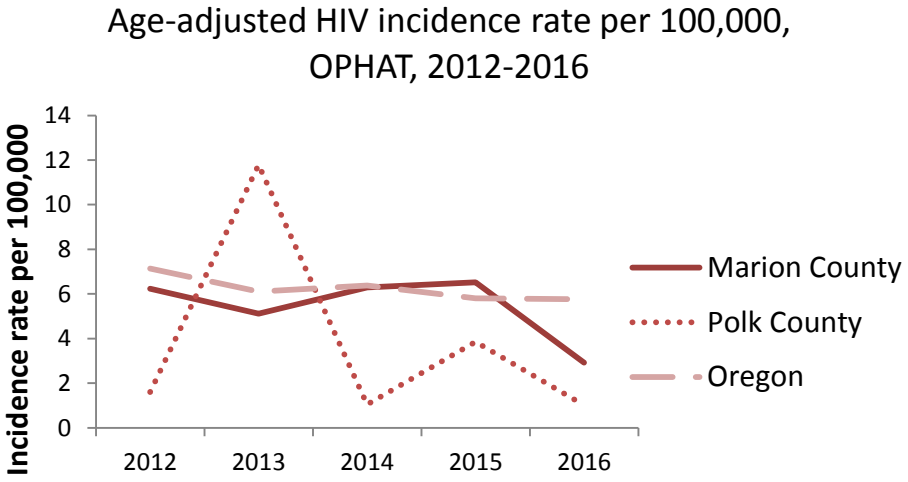
- Over two thirds of male Marion County syphilis cases had sex with men (MSM), which was similar to the state.[57] About half of syphilis cases in Polk reported having sex with men.



HIV Incidence Rate

HIV (Human Immunodeficiency Virus) attacks specific cells in the immune system. Over time, HIV can destroy so many of these cells that the body cannot fight off other diseases. At that point, HIV infection leads to AIDS (Acquired Immunodeficiency Syndrome). At this time there is no safe, effective cure for HIV, so once infected, you will have HIV for life.[61]

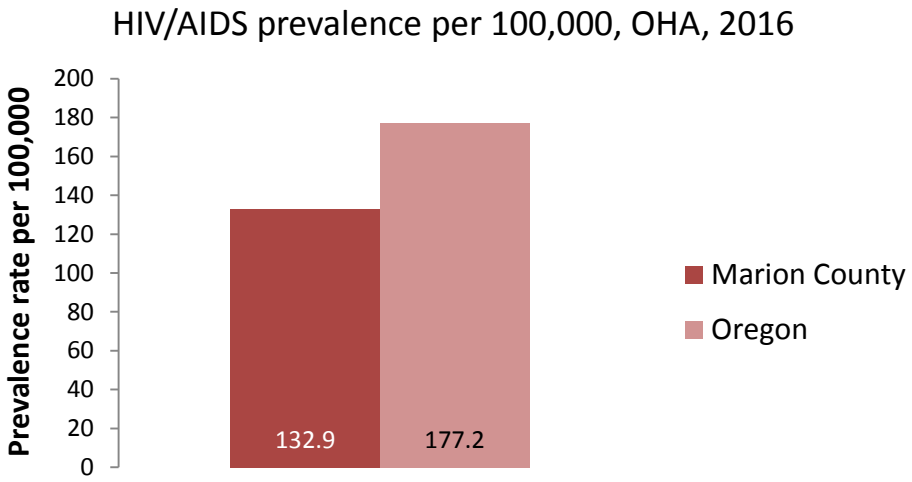
- The overall trend in HIV incidence has been decreasing in the community and the state in recent years.[19]



HIV/AIDS Prevalence

Prevalence rates include new cases of HIV/AIDS and people who were diagnosed with HIV/AIDS before 2016.

- Oregon had a larger prevalence rate of HIV/AIDS than Marion County.[62]



Vector-Borne Diseases

Vector-borne disease is when a person gets sick after being bitten by a vector, often a mosquito, tick, or flea, which can spread illness. Vectors need to be infected with the pathogen to transmit the disease to humans. Other vector borne diseases such as West Nile Virus, Colorado Tick Fever, and Tick Paralysis have been found in Oregon but not in Marion and Polk County.[63] As of 2018, no cases of Zika have originated from Oregon, and have instead been acquired abroad.[64]

- Incidence rates of Lyme, Malaria, and West Nile Virus Disease were lower in both Marion and Polk than the state as a whole.[19]
- Incidence rates of Zika Virus were higher in Polk than in Marion and the state of Oregon.[19] *Note that these cases were acquired abroad*.

Age-adjusted rate per 100,000 population of vector borne disease, OPHAT, 2014-2016			
	Marion	**Polk**	**Oregon**
Lyme Disease rate(#)	0.2(2)	0.5(1)	1.1(128)
Malaria rate(#)	0.4(4)	0.0(0)	0.5(59)
West Nile Virus rate(#)	0.0(0)	0.0(0)	0.1(13)
Zika Virus rate(#)	0.7(7)	1.1(2)	0.5(57)

Vaccine Preventable Diseases

Vaccine preventable diseases still occur in Marion and Polk County as well as the state despite having available vaccines. Haemophilus Influenza has decreased in the last decades nonetheless is the leading cause of bacterial meningitis in the U.S among children younger than five years old.[65] Pertussis, also known as Whooping Cough, is a contagious disease characterized by a whoop at the end of coughing. Infants are at a higher risk for complications and even death; they often have apnea or no symptoms. Other vaccines preventable are shown under immunization at the beginning of this section.

Haemophilus Influenza Rate

Haemophilus Influenza is a bacterium that can cause different kinds of infections. H. influenza can cause invasive disease; the most common types are pneumonia, swelling throat, inflammation of the joints, and infections of the bloodstream, brain, spinal cords, and skin. H. influenza is spread by people who have the bacteria in their nose or throat coughs or sneezes. Children younger than five years, adults 65 years or older, and people with certain medical conditions are also at increased risk.[65]

Pertussis Incidence Rate

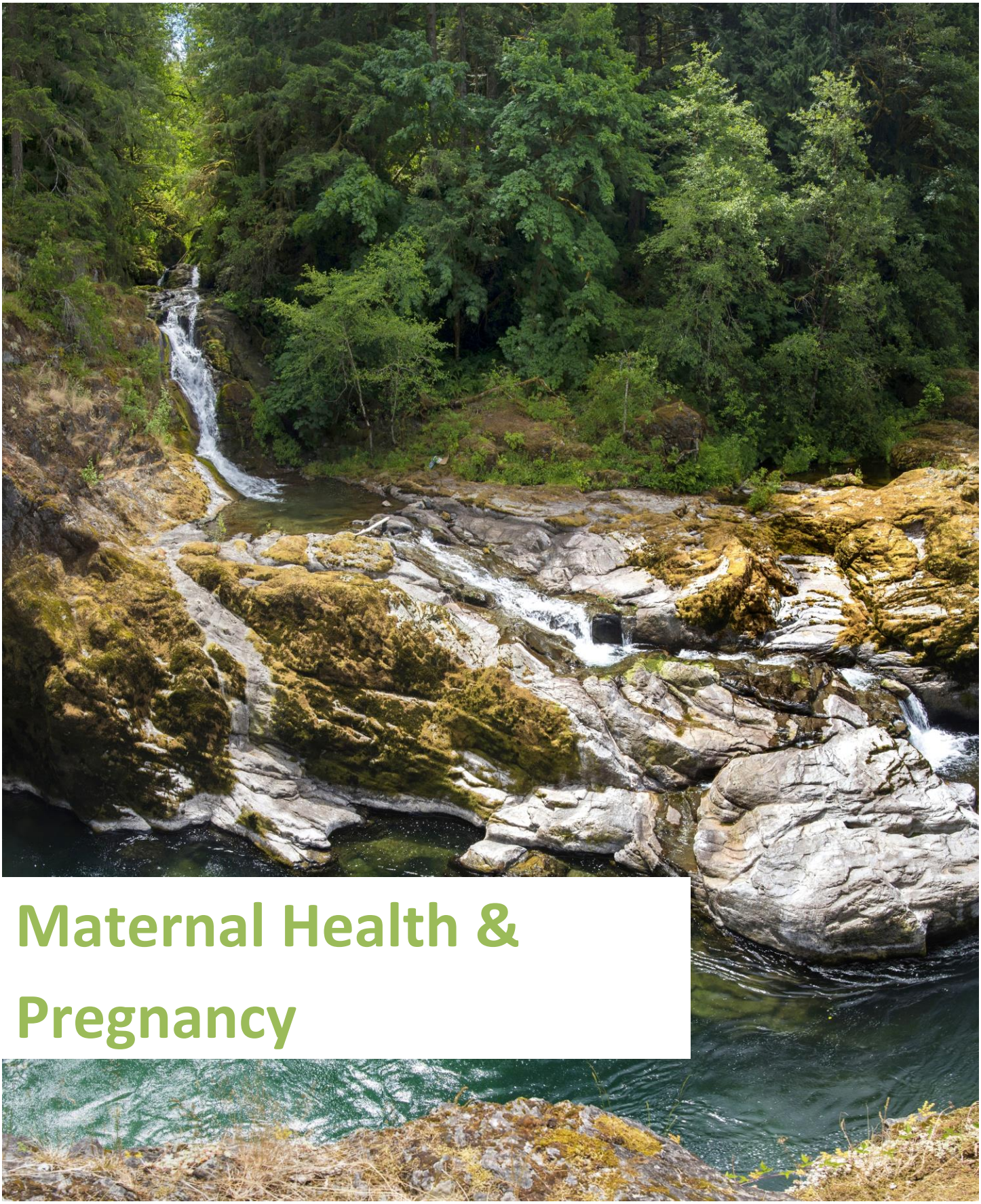
Pertussis, also known as Whooping Cough, is caused by a highly contagious bacterium that infects the respiratory tract. Pertussis can result in serious illness and sometimes death, especially in infants younger than six months. In older persons who have been vaccinated, the illness may be milder. Pertussis is considered a vaccine-preventable disease and a complete vaccine series is recommended for young children. As immunity can decrease over time, a one-time booster dose is recommended for persons who are middle-school age or older.[66]

- Incidence rates of Haemophilus Influenza were higher in Marion than Polk and the state.[19]
- Incidence rates of Pertussis were higher in Polk than Marion and the state.[19] Marion has been experiencing an overall decrease in pertussis incidence in recent years. Decreasing rates may be due to increased vaccination rates.

Age-adjusted rate per 100,000 population for vaccine preventable diseases, OPHAT, 2012-2016

	Marion	Polk	Oregon
Haemophilus influenza rate(#)	2.2(39)	1.9(8)	1.9(430)
Pertussis rate(#)	14.3(228)	18.2(66)	15.0(2,586)

Niagara Park, Mill City, Oregon



Maternal Health & Pregnancy

Maternal Health and Pregnancy

Assuring a healthy start for a child's life begins with supporting the health of a mother and her pregnancy. Working to reduce risk factors during pregnancy such as tobacco smoking, alcohol and drug use, overweight and obesity, along with the promotion of healthy factors, such as oral health and early prenatal care, can help to ensure good health of the next generation.

Key Findings for Marion and Polk County:

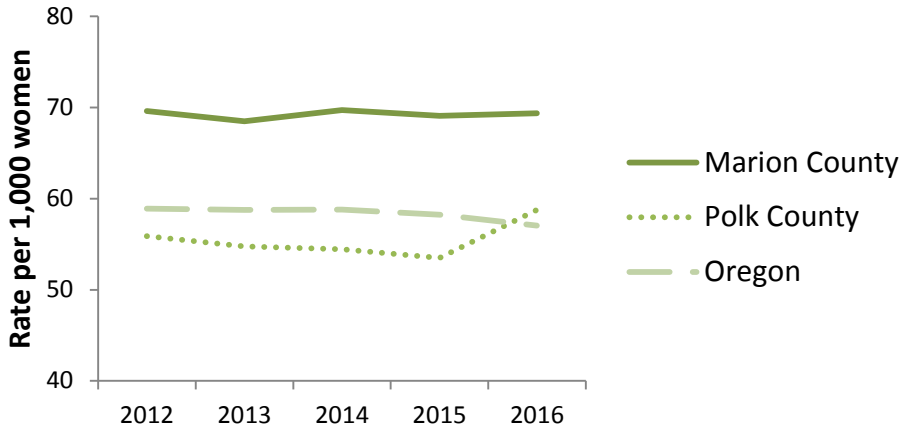
- The birth rate was higher in Marion than Polk and the state, which was due primarily to higher rates in women under the age of 24. A higher percentage of births in Marion were paid by Medicaid (Oregon Health Plan (OHP)).
- The percent of women who smoked during pregnancy has been decreasing in recent years. However, about 1 in 10 women are still smoking during their pregnancy in the community, which is far short of the Healthy People 2020 goal (1.4%). Maternal smoking prevalence differed by age, race, ethnicity, and type of insurance.
- The prevalence of other birth risk factors was similar in the community and the state, with a few exceptions. Pregnant women in the community were more likely to be obese before they became pregnant, which was also likely associated with the higher prevalence of infants born with high birth weight in the community than the state. Obesity prevalence pre-pregnancy has been increasing in the community and the state in recent years. Maternal obesity prevalence differed by age, race, and ethnicity.
- The percentage of women accessing prenatal care in the first trimester has been increasing slightly in the community in recent years, which could be due in part to Community Health Improvement Plan (CHIP) initiatives as this was selected as a key area for improvement in the last CHIP (2016-2018).
- Pregnant women in Marion were less likely to access prenatal care in the first trimester than pregnant women in Polk and the state. Additionally, women who identified as White, non-Hispanic were more likely to access prenatal care in the first trimester than their peers.

Births

Identifying the number of births that are occurring helps in planning for the immediate and future needs of the community. The age of the mother is a significant factor for predicting the health of the infant and has implications on both ends of the age spectrum. Women who give birth at younger ages can have difficulty affording the costs of raising a child, which can have long-term health implications.[67] On the other end of the spectrum, women who are older are at higher risk of birth complications.

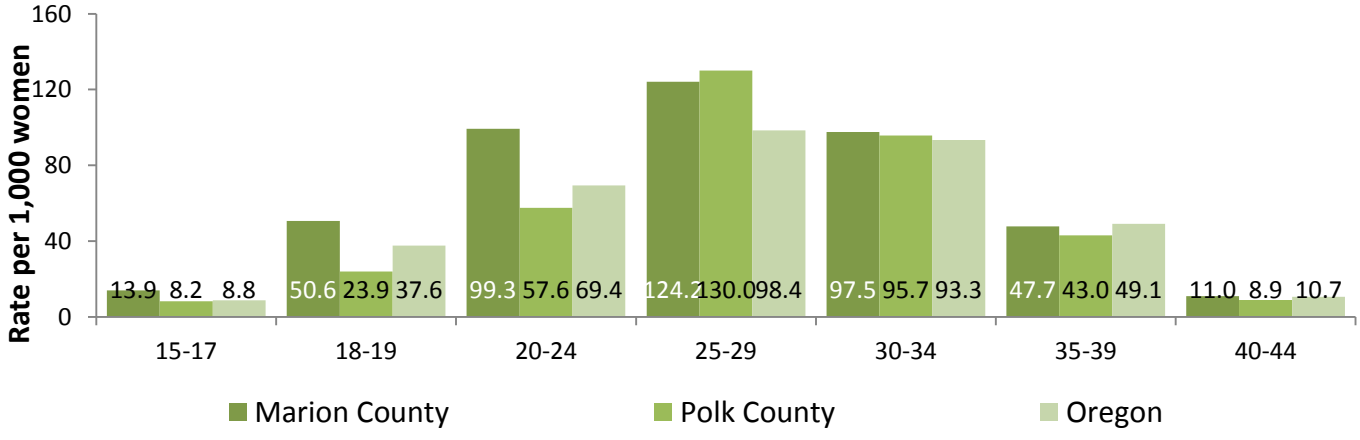
- The overall birth rate has been mostly stable in the community in recent years; however in 2016 there was a slight increase in Polk.[19] The birth rate in Marion was higher than Polk and the state.

Birth rate per 1,000 women ages 15-44, OPHAT, 2012-2016

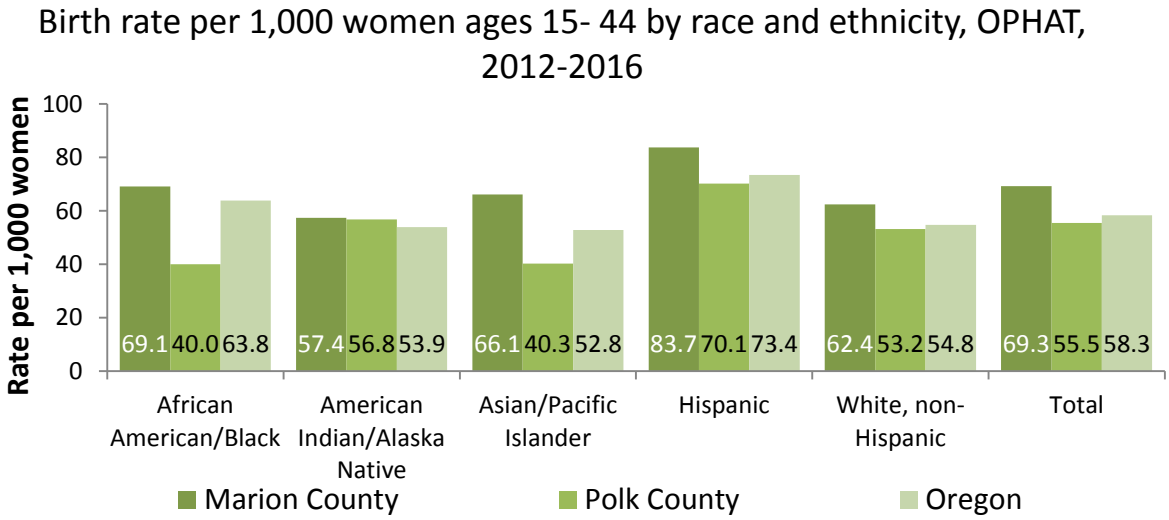


- The birth rate for younger women under the age of 24 was much higher in Marion than Polk and the state.[22] The community is currently meeting the Healthy People 2020 goal for teen pregnancy (15-17 = 26.2/1,000) (18-19 = 104.6/1,000).[28]

Birth rate per 1,000 women ages 15- 44 by age groups, OPHAT, 2012-2016



- In the community and the state, women who identified as Hispanic had higher birth rates than other races/ethnicities.[22]

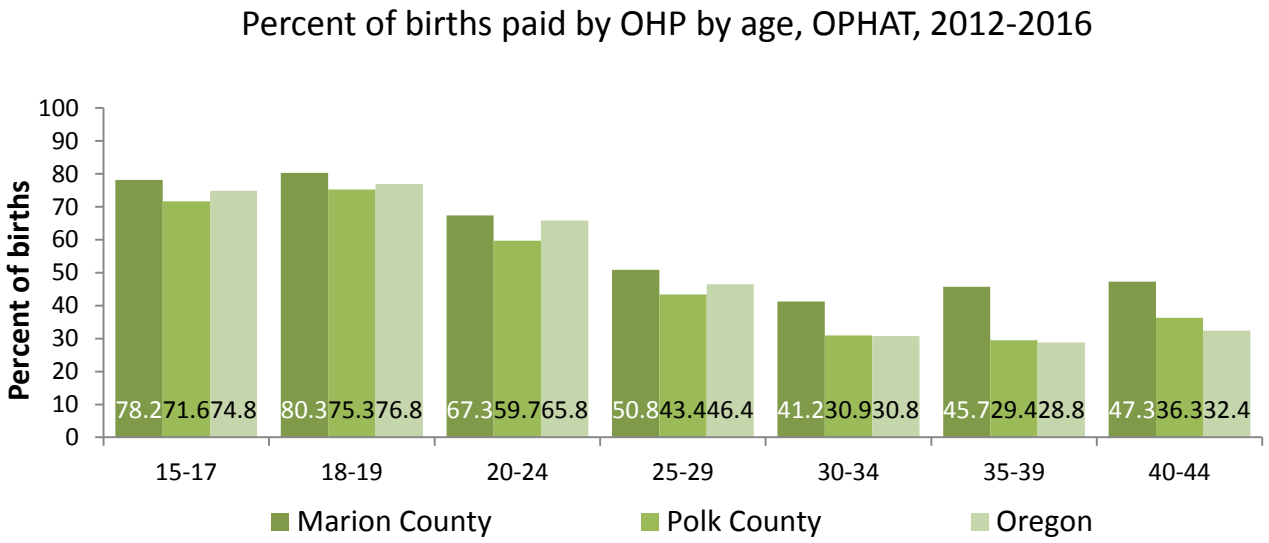


- In 2016, 45,533 births occurred in Oregon and 5,494 births occurred in the community.[22] Over half of the births in Marion were paid by Oregon Health Plan (OHP), which was higher than Polk and the state.[22]

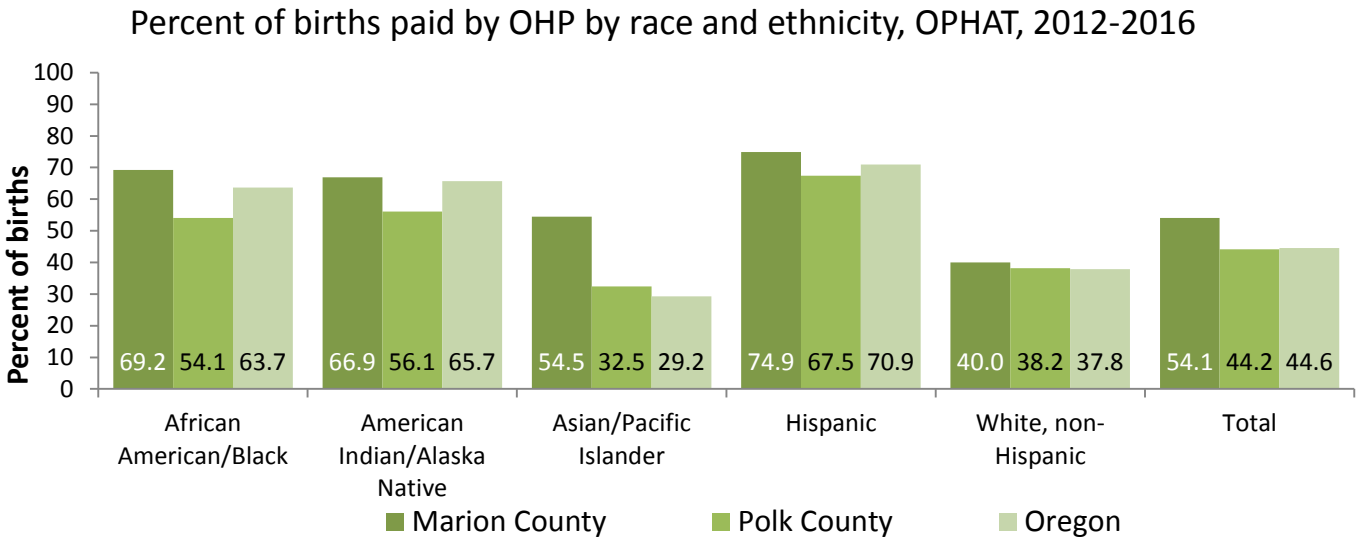
Total number of births by county and payer type, OPHAT, 2016			
	Marion	**Polk**	**Oregon**
Number of births	4,519	975	45,533
Births paid by OHP (%)	53.2	44.5	44.4
Births paid by a source other than OHP (%)	46.8	55.5	55.6

OHP = Oregon Health Plan

- The percentage of births paid by OHP was higher in younger age groups in the community and the state.[22]



- Women who identified as African American/Black, American Indian/Alaska Native, and Hispanic had a higher percentage of births paid by OHP than other races/ethnicities.[22] Notably, women who identified as Asian/Pacific Islander in Marion had a greater percentage of births paid by OHP than Asian/Pacific Islander women who gave birth in Polk or Oregon.

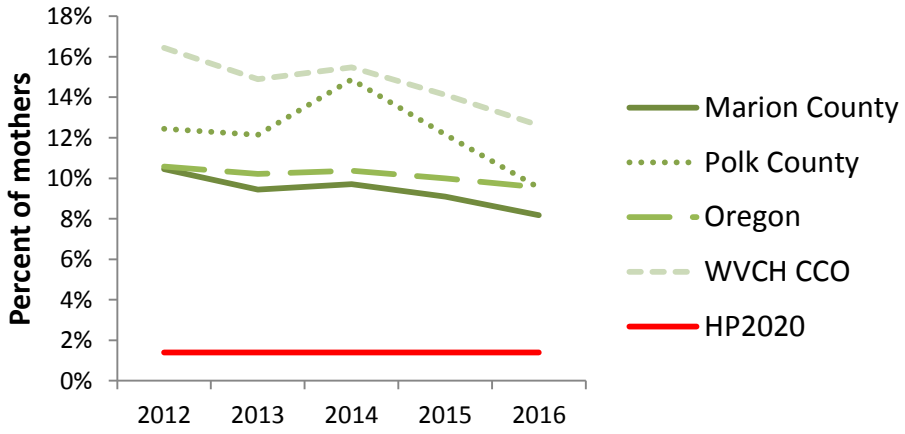


Risk Factors for Pregnancy

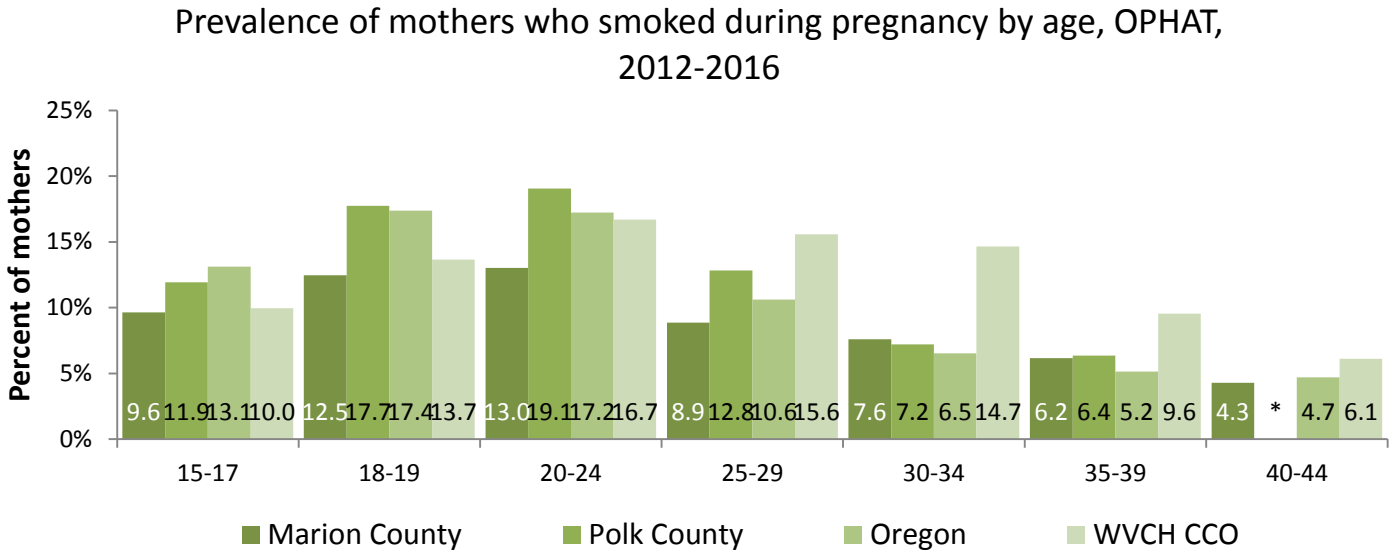
Various factors can complicate a pregnancy and put the mother and child at greater risk, such as tobacco smoking, alcohol or drug use, unhealthy eating habits, high maternal body mass index (BMI), and maternal age. Targeted interventions aimed at these and other factors can help improve pregnancy outcomes.

- In Oregon from 2012 to 2015, the prevalence of mothers who used alcohol in the last three months of pregnancy increased (8.1% vs. 11.6%).[68]
- In Oregon from 2012 to 2015, the prevalence of mothers who used alcohol during the three months before pregnancy decreased (63.6% vs. 60.5%).[68]
- The prevalence of mothers who smoked during pregnancy has been decreasing in the community in recent years; Polk experienced a brief increase in maternal smoking in 2014.[22] Mothers in Polk and mothers enrolled in Medicaid (WVCH CCO), had a greater prevalence of mothers who smoked during pregnancy than Marion. Neither the community nor the state is currently meeting the Healthy People 2020 goal for maternal smoking (1.4%).[28]

Prevalence of mothers who smoked during pregnancy, OPHAT, 2012-2016

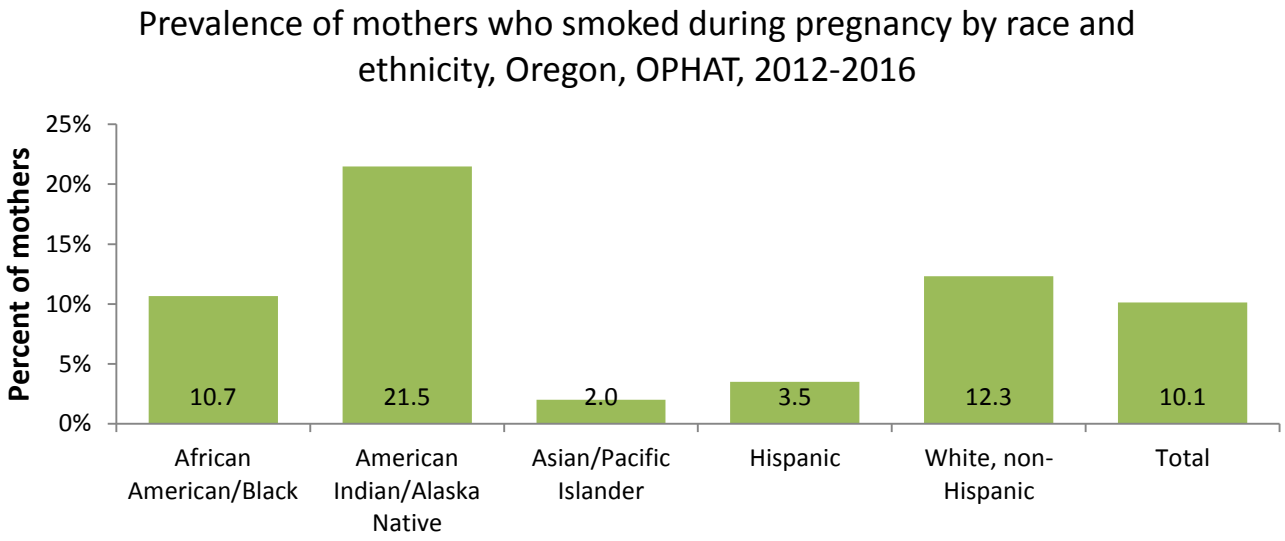


- The prevalence of women who smoked during pregnancy increased with age before decreasing at around ages 25-29.[22] Pregnant women enrolled in Medicaid (WVCH CCO) didn't see a noticeable decrease in smoking prevalence until later ages (35-39).

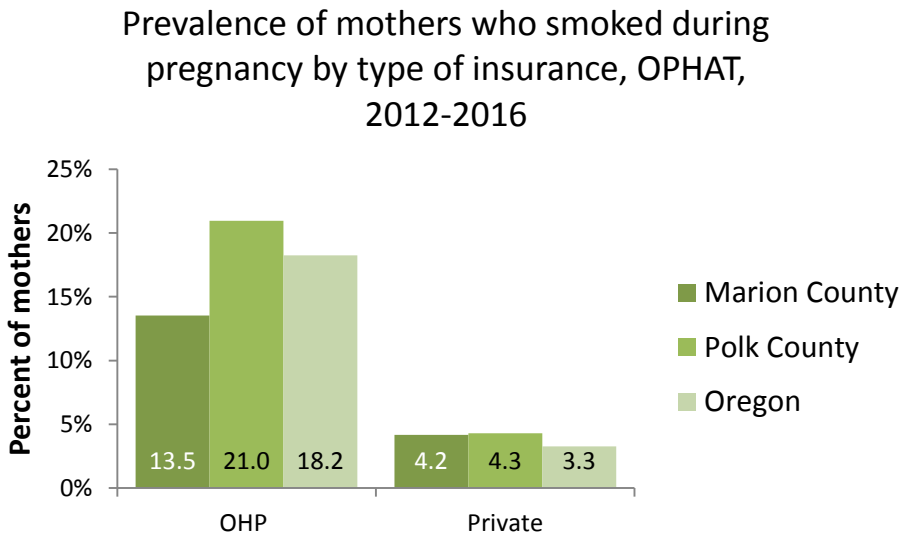


Note: Polk pregnant women between ages 40-44 not shown as it was unreliable.

- In Oregon, women who identified as American Indian/Alaska Native had the highest prevalence of maternal smoking, with roughly 1 out of 5 (20%) mothers smoking at some point during their pregnancy.[22]



- In the community and the state, the prevalence of smoking during pregnancy was two to four times higher in women whose births were paid by OHP than births paid with private insurance.[22]

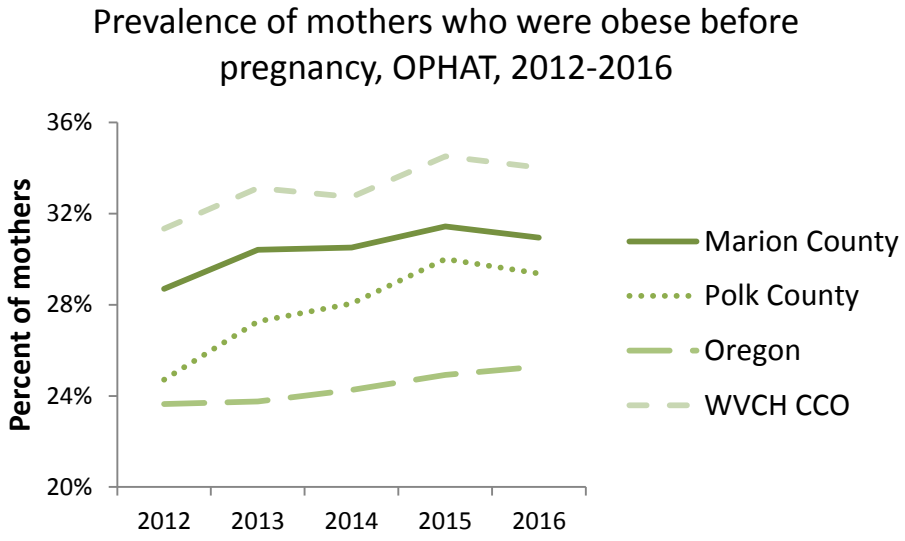


- In general, the prevalence of birth risk factors was similar in the community to the state.[22] A higher percentage of pregnant women in Polk had high blood pressure than Marion, WVCH CCO, and the state. The community had a greater prevalence of women who gave birth to infants with a high birth weight than WVCH CCO and the state, which was likely related to the high prevalence of women in the community who were obese before pregnancy. Currently, the community and the state are meeting the Healthy People 2020 goal for pre-term births (11%) and low birth weight infants (8%).[28]

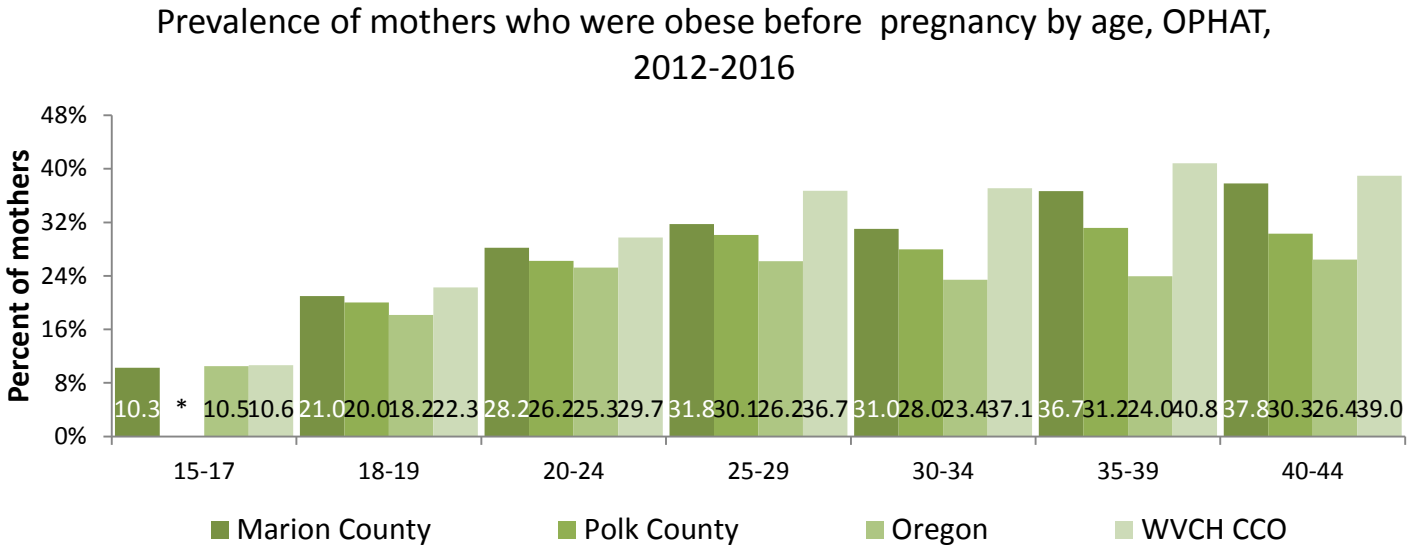
Percent of births by pregnancy risk factor, OPHAT, 2016				
	Marion	**Polk**	**WVCH CCO**	**Oregon**
Smoked during pregnancy (%)	8.2	9.5	12.6	9.6
Obese pre-pregnancy maternal BMI (%)	30.9	29.4	34.0	25.3
Pre-pregnancy diabetes (%)	1.2	1.6	1.4	0.9
Gestational diabetes (%)	8.6	8.6	8.2	8.5
Gestational hypertension (high blood pressure) (%)	7.0	8.3	6.9	7.4
Pre-term birth (<37 weeks) (%)	8.1	8.1	8.0	7.9
Low birth weight (<2500 grams) (%)	6.2	6.4	6.2	6.6
High birth weight (≥4000 grams) (%)	11.9	14.3	10.4	10.3

BMI = body mass index
Obese = >= 30 kg/m^2

- The prevalence of mothers who were obese before pregnancy has been increasing in the community in recent years.[22] The community had a higher prevalence of women who were obese before pregnancy than the state. Women enrolled in Medicaid (WVCH CCO) in the community had a greater prevalence of obesity before pregnancy than community members who were not enrolled.

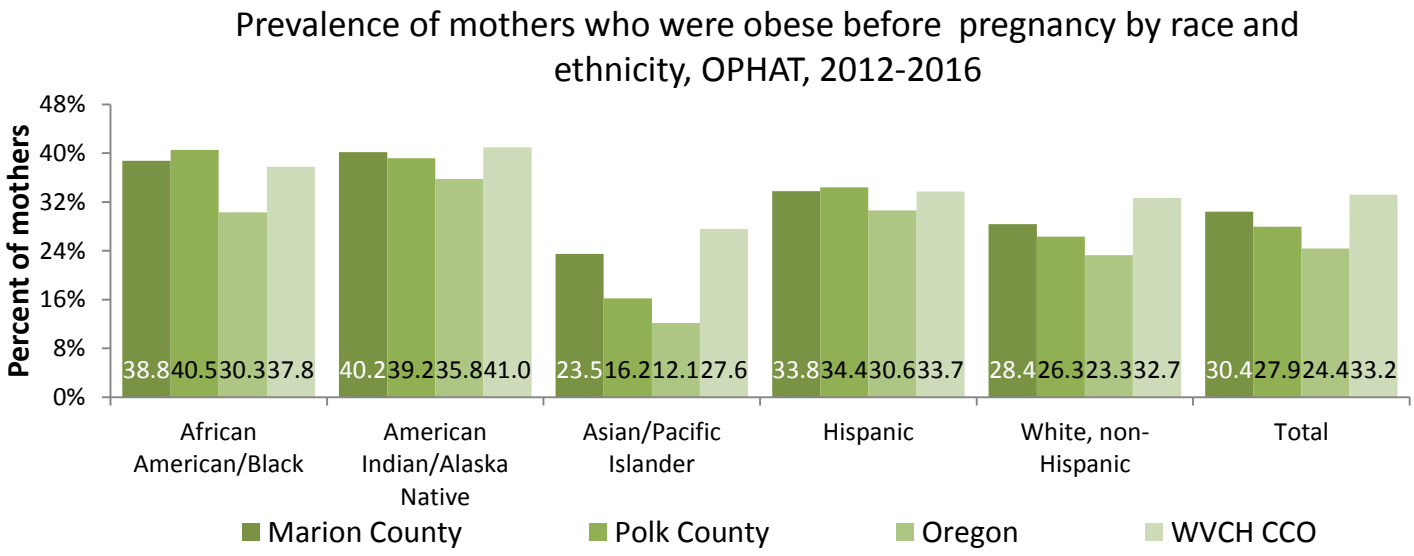


- The prevalence of mothers who were obese before pregnancy increased with age.[22]



Note: Polk pregnant women between ages 15-17 not shown as it was unreliable.

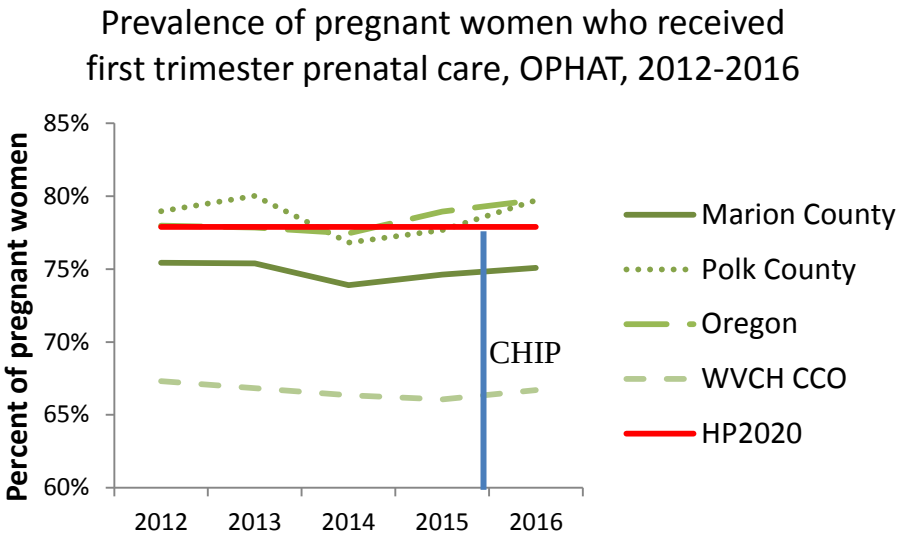
- Mothers in the community who identified as African American/Black, American Indian/Alaska Native, or Hispanic had a higher prevalence of obesity before pregnancy than other races/ethnicities.[22]



Prenatal Care

Healthcare received throughout a pregnancy is known as prenatal care. The earlier a woman can get in to see her provider after becoming pregnant the better to ensure a healthy pregnancy. Providers can detect issues early and support the health of the mother and child. First trimester prenatal care was selected as a priority area in the 2016-2018 Community Health Improvement Plan (CHIP).

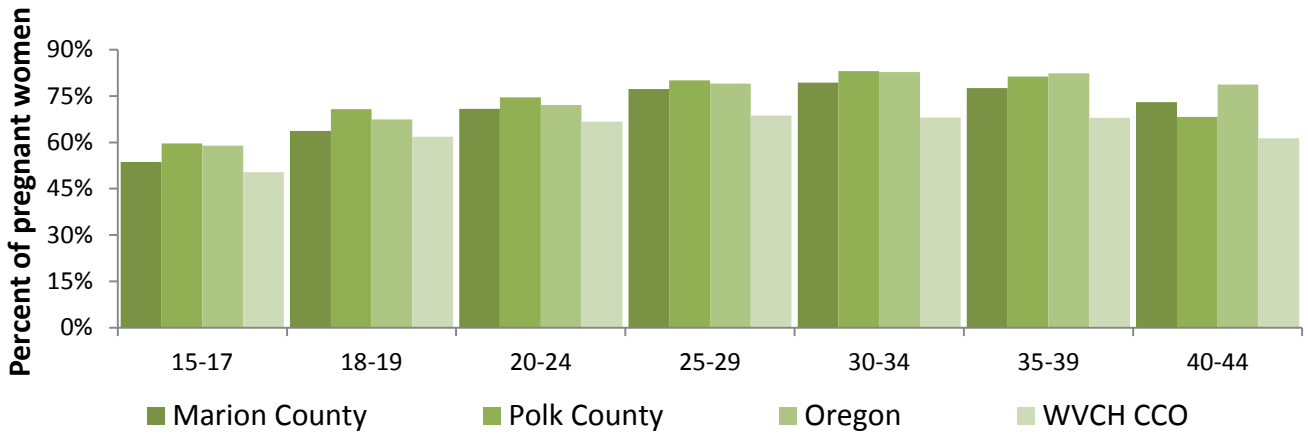
- The prevalence of pregnant women accessing early prenatal care in the first trimester has been increasing slightly in the community in recent years.[22] A lower percentage of women in Marion received first trimester prenatal care compared to Polk and the state, both of which are currently meeting the Healthy People 2020 goal (78%).[28] Women enrolled in Medicaid (WVCH CCO) had a lower percentage of women accessing early prenatal care compared to the community as a whole.



**Note: CHIP = Community Health Improvement Plan (2016-2018)*.*

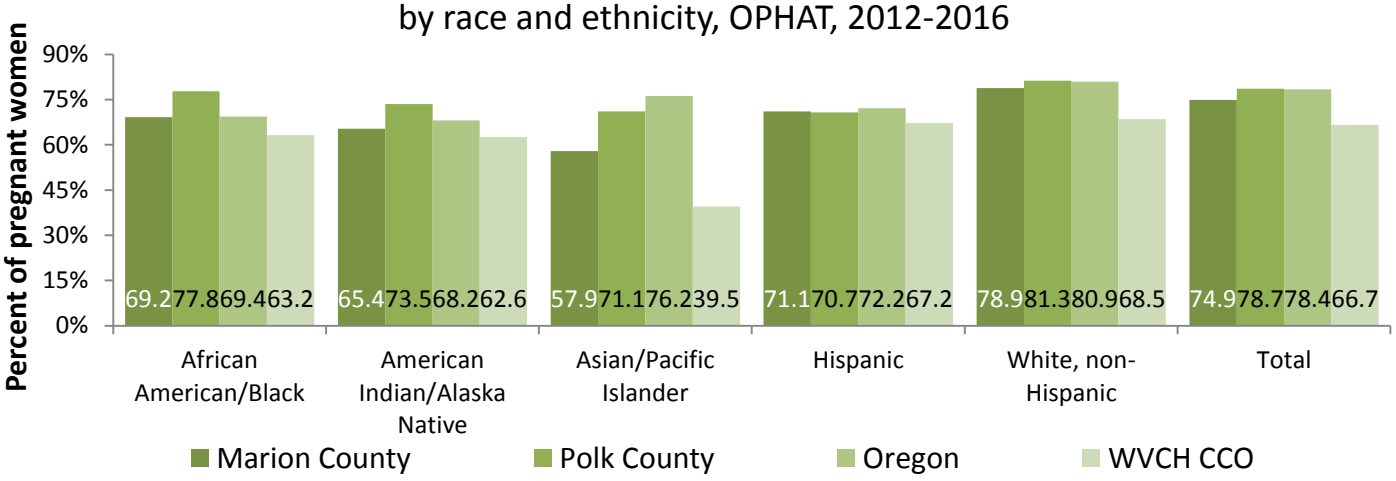
- Prenatal care access increased with age in the community before falling off slightly in older age groups.[22]

Prevalence of pregnant women who received first trimester prental care by age, OPHAT, 2012-2016



- Women who identified as White, non-Hispanic had a higher prevalence of first trimester prenatal care than other races/ethnicities.[22] Asian/Pacific Islander women in Marion had the lowest prevalence of prenatal care access in the first trimester compared to other races/ethnicities, which was especially true if they were enrolled in Medicaid (WVCH CCO).

Prevalence of pregnant women who received first trimester prental care by race and ethnicity, OPHAT, 2012-2016



- A higher percentage of women in the community accessed prenatal care in the first trimester compared to the second and third, which fell off with each subsequent trimester.[22] Less than 1% of women received no prenatal care at all during pregnancy in the community, which was similar to the state.
- Utilizing the Kotelchuck Index to assess the adequacy of prenatal care received, a lower percentage of women in Marion received adequate care compared to Polk and the state.[22] Women enrolled in Medicaid (WVCH CCO) had a lower percentage receiving adequate care compared to the community as a whole.

Prenatal care access by trimester and adequacy, OPHAT, 2016				
	Marion	**Polk**	**WVCH CCO**	**Oregon**
First Trimester (%)	75.1	79.7	66.7	79.8
Second Trimester (%)	20.6	17.4	27.2	15.5
Third Trimester (%)	3.5	2.3	5.2	3.9
No Prenatal Care (%)	0.8	0.6	0.9	0.8
Kotelchuk Index-Adequacy of Prenatal Care (%)	71.9	74.2	65.8	74.8

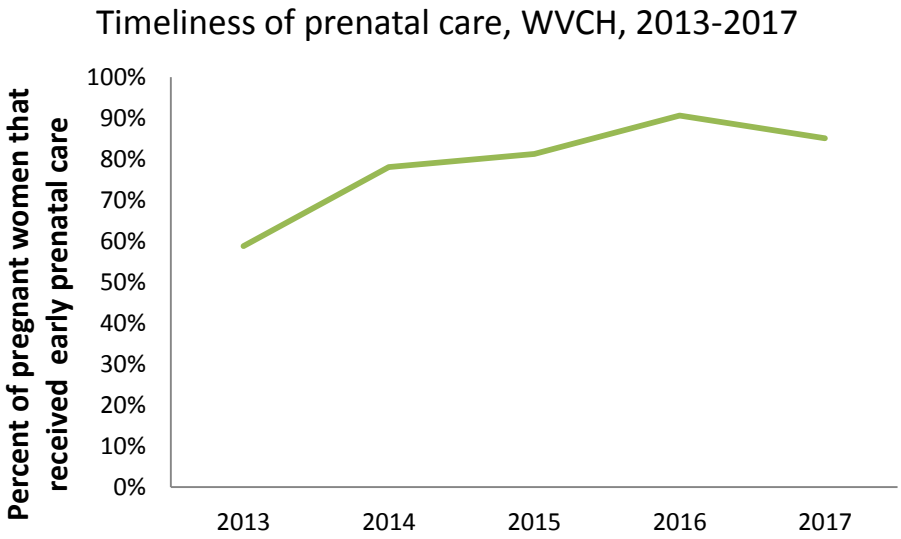
Kotelchuk Index – Measure of the adequacy of prenatal care that considers both month of initiation and number of prenatal care visit relative to expected visits based on gestational age.

CCO Measures for Maternal Health & Pregnancy

First Trimester Prenatal Care

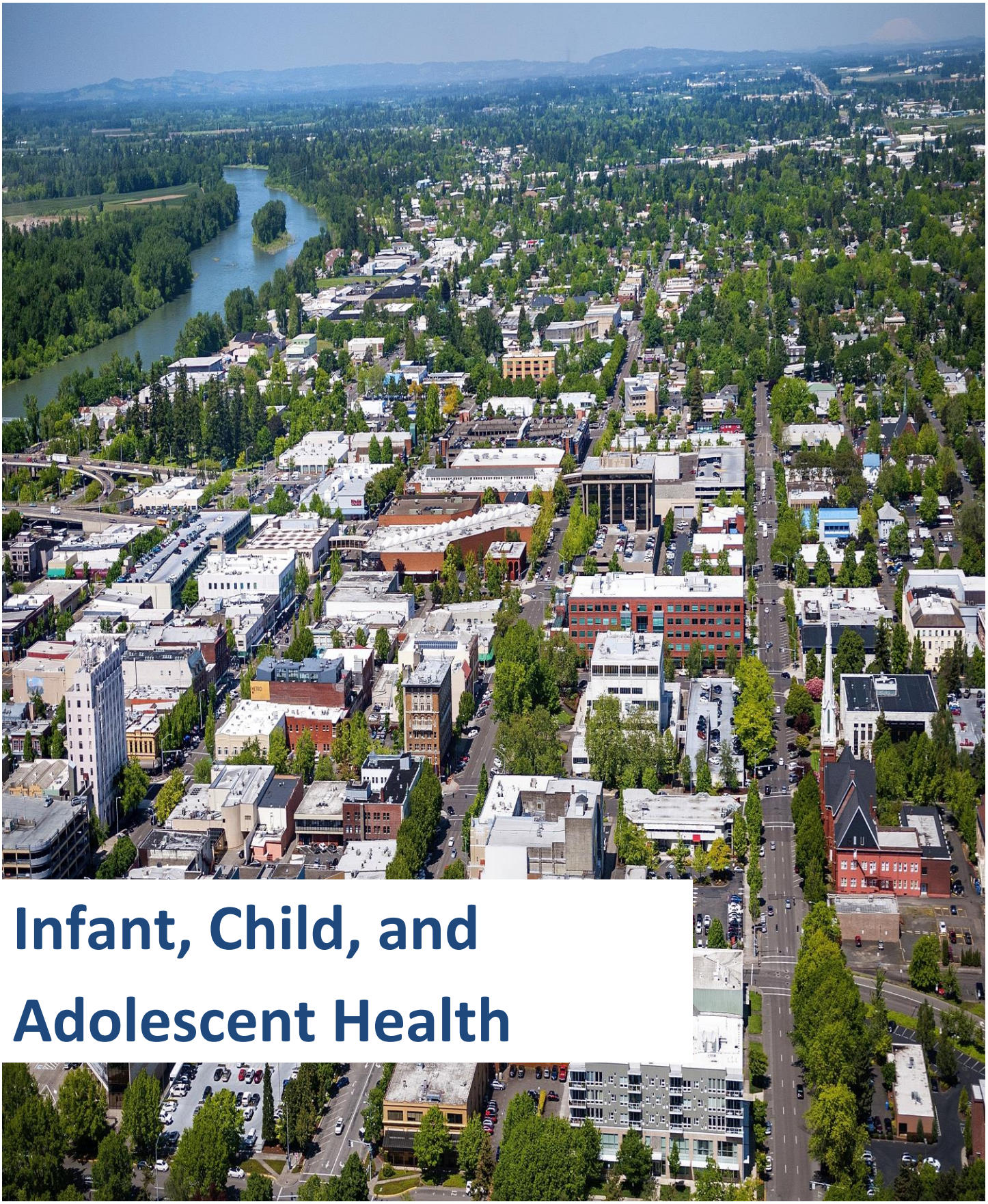
Overall the CCO has made improvements in increasing the number of members that receive early prenatal care after becoming pregnant. The graph below illustrates the percentage of pregnant CCO members that received prenatal care within the first three months of pregnancy.

Note:(WVCH CCO metrics are measured and submitted to the Oregon Health Authority (OHA) on an annual basis according to technical specifications outlined by the Oregon Health Authority which can be found here: https://www.oregon.gov/OHA/HPA/ANALYTICS/Pages/CCO-Baseline-Data.aspx).



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Downtown Salem, Oregon



Infant, Child, and Adolescent Health

Infant, Child, and Adolescent Health

Children and adolescents are more vulnerable than adults with regard to susceptibility of health behaviors and environmental exposures that can set the course for the rest of their lives. This period of life is critical for intervention and education to promote healthy behaviors.

Key Findings for Marion and Polk County:

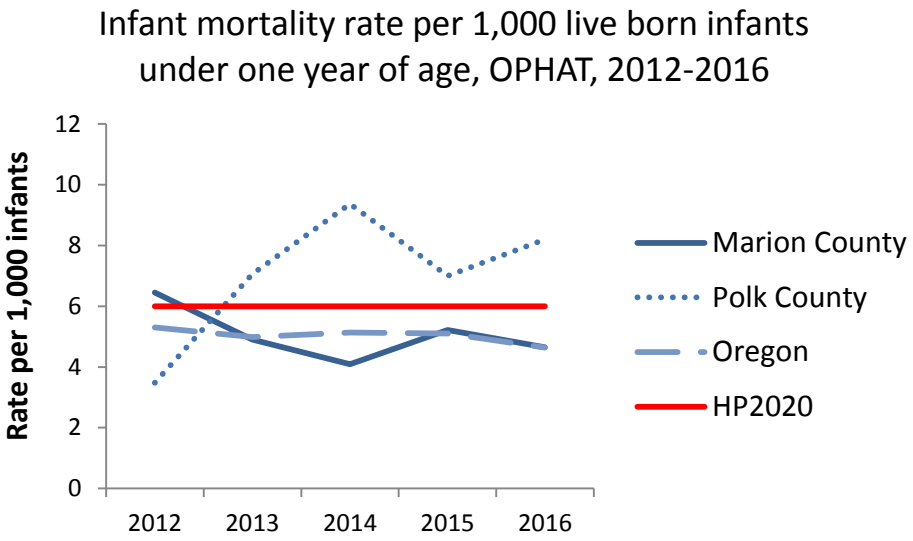
- Infant mortality rates were higher in Polk than Marion and the state. Higher rates were detected in African American/Black and American Indian/Alaska Native infants compared to their peers.
- About 71% of 24-35-month-olds were up-to-date on vaccinations in Marion, compared to 64% in Polk and 68% in the state. Child vaccination rates have been increasing in the community in recent years, however these rates are still short of the Healthy People 2020 goal (80%). African American/Black and Hawaiian/Pacific Islander children in the community were less likely to be up-to-date than their peers.
- Meningococcal and HPV vaccination coverage amongst adolescents in the community was lower than the state and is not meeting the Healthy People 2020 goal.
- Children in Marion were more likely to be food insecure and live in a household that was receiving government assistance than Polk and the state.
- The rate of confirmed child abuse and neglect has been increasing in the community and the state in recent years. Child abuse and neglect rates were higher in Polk than Marion and the state.
- Childhood education varies greatly in the community. About 30% of 3-4-year-olds were enrolled in early education in the community, compared to 42% in the state. Third grade reading and math proficiency was lower in Marion than Polk and the state; chronic absenteeism was higher in Marion and four year high school graduation rates were lower in Marion than Polk and the state. Differences were found by sex, race and ethnicity, and amongst the school districts themselves.
- Health risk factors in children and adolescents, such as alcohol use, illicit & prescription drug use, marijuana use, tobacco use, and overweight/obesity increased with grade level. Healthy activities, such as eating breakfast every day, and regular physical activity/muscle strengthening, decreased with grade level.
- Cigarette smoking has been decreasing in teens, while electronic cigarette use has been increasing. In Marion about 13% of 11th graders used electronic cigarettes compared to 9% in Polk and 21% in Oregon; this was three to four times as much as those who smoked cigarettes. Cigarette and electronic cigarette use was higher in 11th graders who identified as American Indian/Alaska Native compared to their peers.
- About 38% of 11th graders in Marion and Polk were overweight or obese, compared with 33% in the state. The percentage of 11th graders who are obese or overweight has been increasing in recent years. Male, African American/Black, American Indian/Alaska Native, and Latina(o) 11th graders were more likely to be obese than their peers.

- Adverse childhood experiences (ACEs) are playing an important role in the overall health of the community. Oregon adults who identified as American Indian/Alaska Native, had lower educational achievement, or were below the Federal Poverty Level, were more likely to report experiencing a high number of ACEs in childhood.

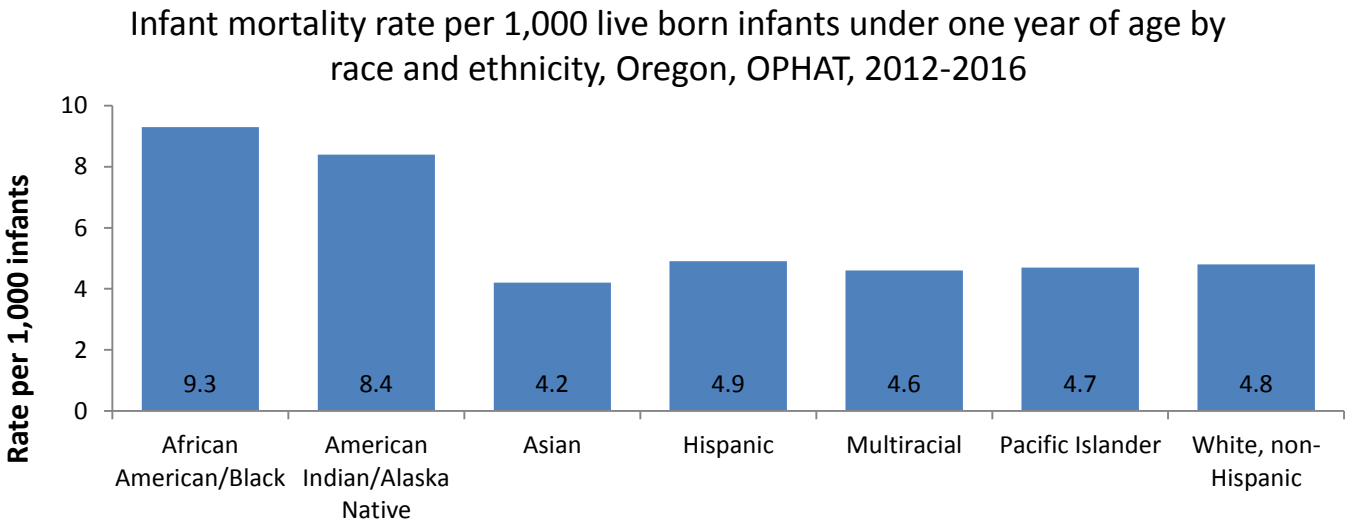
Infant Deaths

The infant death, or mortality rate, is an important indicator of not only maternal and infant health, but the overall health of society as a whole. According to the CDC, the five leading causes of infant death in the US are birth defects, preterm birth, sudden infant death syndrome (SIDS), maternal pregnancy complications, and injuries such as suffocation.[69] Oregon has one of the lower infant mortality rates of the 50 states, falling below the national value of 5.9 infant deaths before one year of age for every 1,000 live born infants.

- The infant mortality rate has been increasing in Polk in recent years and is higher than Marion and the state.[22] Marion and Oregon are currently meeting the Healthy People 2020 goal for infant deaths (6.0/1,000 live born infants under one year of age); however Polk is not currently meeting the goal.



- In Oregon, African American/Black and American Indian/Alaska Native infants had higher mortality rates than other races and ethnicities.[25]



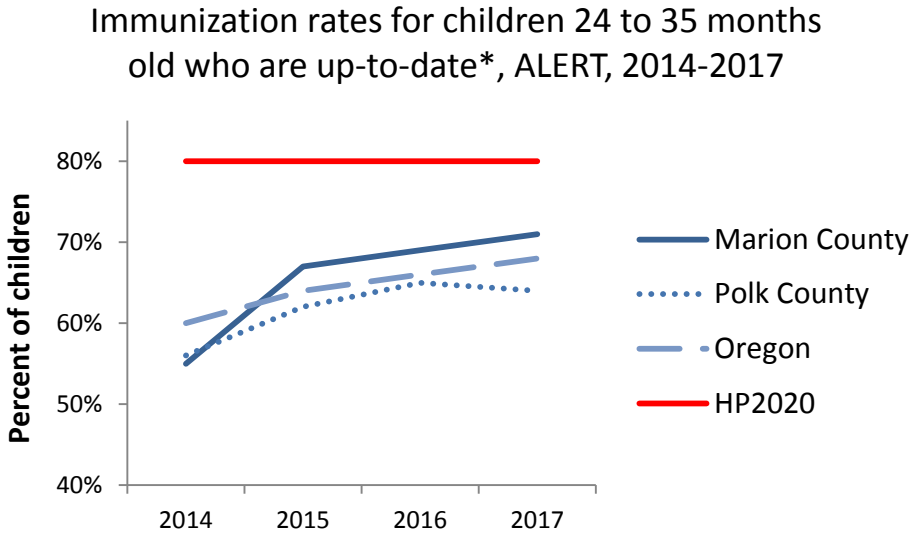
Immunizations

Child Immunizations

Oregon requires certain immunizations for children in school and child care. The purpose of the immunization requirements is to protect everyone in a population from vaccine preventable diseases. If enough people are immunized, herd immunity can be achieved, and thus disease is unlikely to spread.

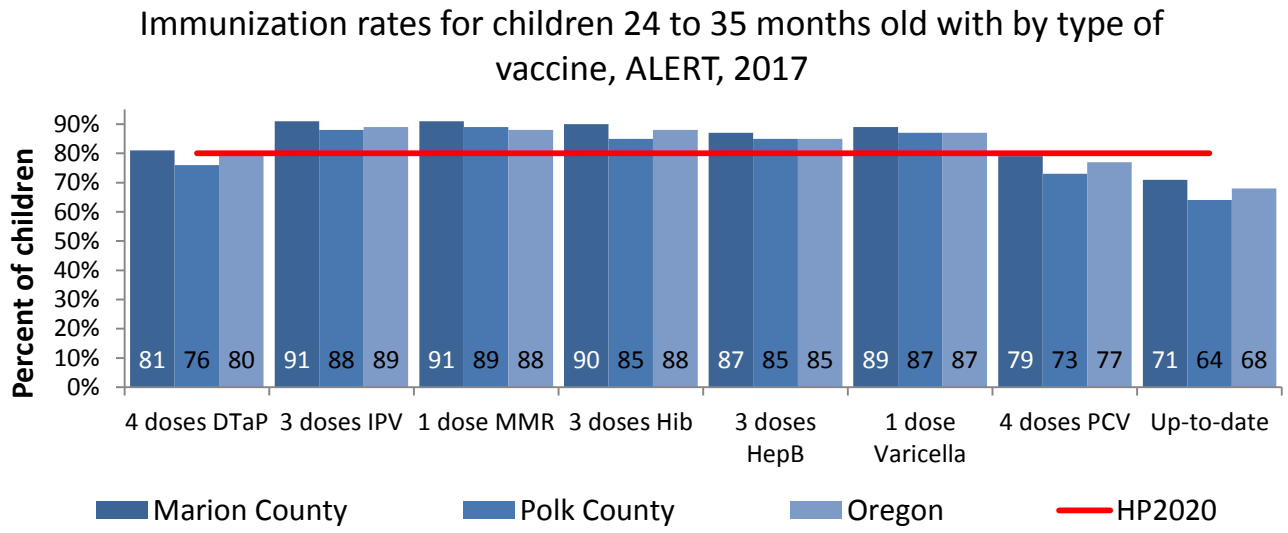
For a child to be considered up-to-date they must receive the following vaccines between 24 to 35 months of age: 4 doses of DTaP, 3 doses of IPV, 1 dose of MMR, 3 doses of Hib, 3 doses of HepB, 1 dose of Varicella, and 4 doses of PCV.[70] This series of immunizations protect children from diphtheria, tetanus, pertussis, polio, measles, mumps, rubella, Haemophilus influenza type b, hepatitis B, chicken pox, and pneumonia.

- The percentage of children between the ages of 24 to 35 months who are up-to-date on their immunizations has been increasing in the community in recent years.[71] Polk had a lower percentage of two year olds with up-to-date immunizations than Marion and the state. The community and the state have yet to meet the Healthy People 2020 goal (80%) for up-to-date immunizations in children of this age group.



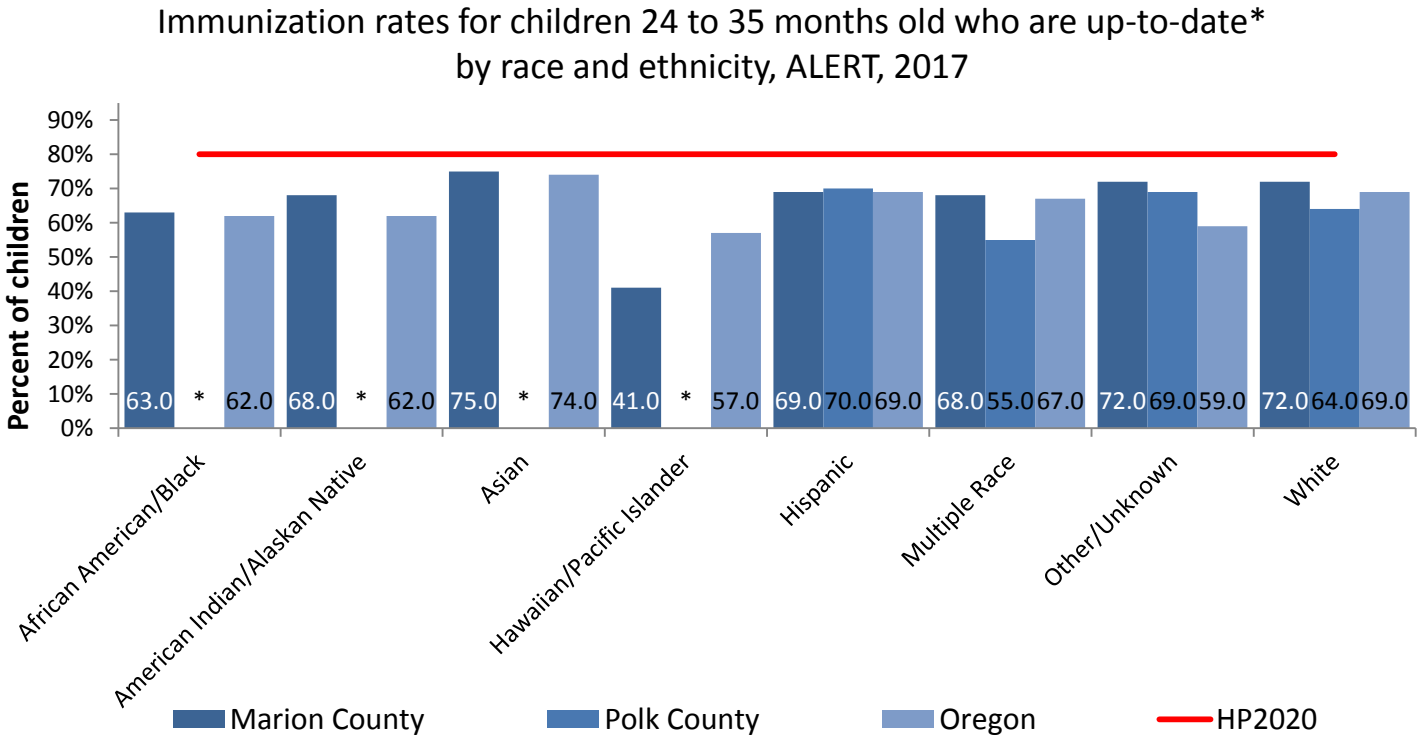
Up-to-date: 4 doses of DTaP, 3 doses of IPV, 1 dose of MMR, 3 doses of Hib, 3 doses of HepB, 1 dose of Varicella, and 4 doses of PCV

- A lower percentage of children in the community received four doses of DTaP and four doses of PCV than is required to be considered up-to-date.[71]



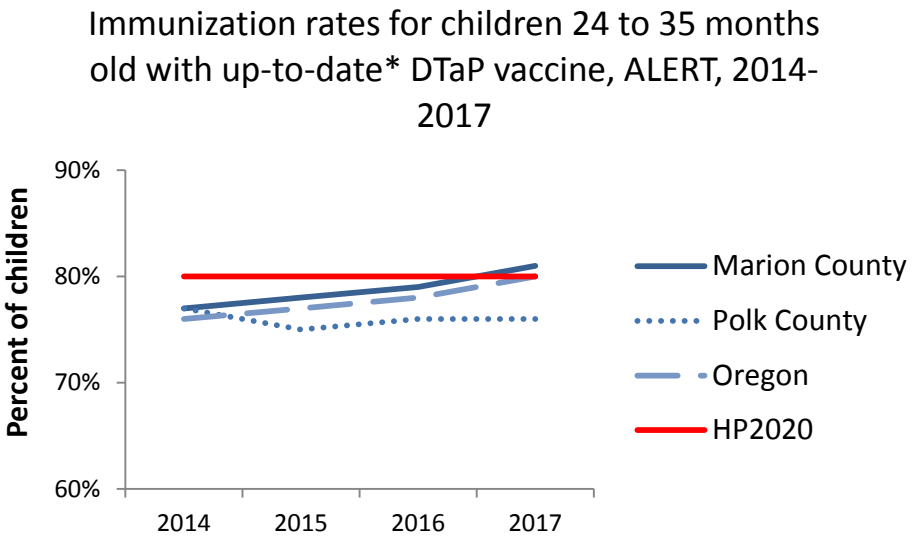
Up-to-date: 4 doses of DTaP, 3 doses of IPV, 1 dose of MMR, 3 doses of Hib, 3 doses of HepB, 1 dose of Varicella, and 4 doses of PCV

- Children in the community who identified as African American/Black or Hawaiian/Pacific Islander had a lower percentage with up-to-date immunizations than other races/ethnicities.[71]



Up-to-date: 4 doses of DTaP, 3 doses of IPV, 1 dose of MMR, 3 doses of Hib, 3 doses of HepB, 1 dose of Varicella, and 4 doses of PCV

- The percentage of children who have received four doses of DTaP has been increasing in the community in recent years.[71] A lower percentage of children in Polk have received four doses of DTaP than Marion and the state. Marion and Oregon are currently meeting the Healthy People 2020 goal (80%) for DTaP immunization in children; however Polk is not currently meeting.

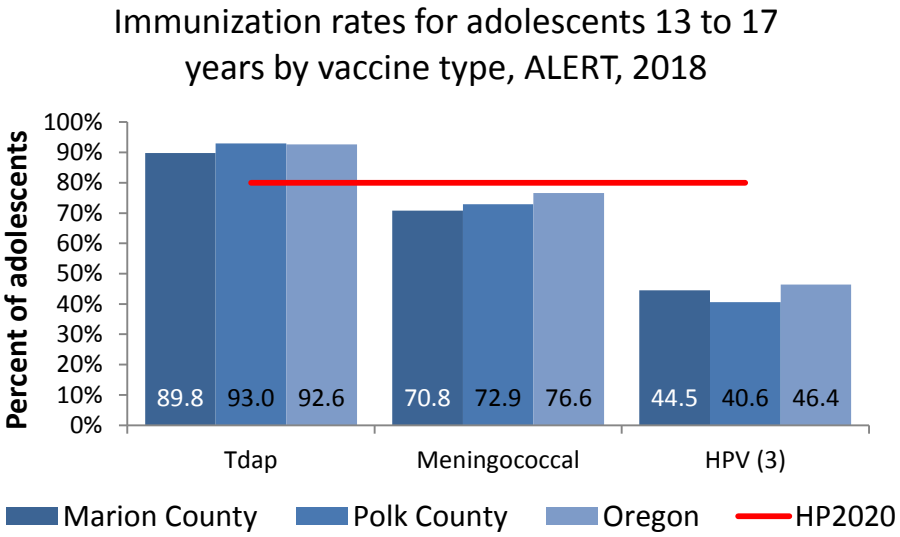


Up-to-date: 4 doses of DTaP

Adolescent Immunizations

Continuing the recommended vaccination series into adolescence can help to protect against disease and ensure lifelong health. Recommended vaccines include: Tdap, meningococcal, and 3 doses of HPV.[70] These vaccines protect against tetanus, diphtheria, pertussis, meningitis, and the virus that causes genital warts (human papillomavirus), which can cause several kinds of cancer.

- Adolescents in the community are currently meeting the Healthy People 2020 goal (80%) for Tdap vaccine, but are falling short of the goal for meningococcal and HPV vaccine (80%).[71]



Breastfeeding

For most infants, the best source of nutrition is breastfeeding, which can also reduce the risk of some short and long-term health conditions for infants and mothers. According to the CDC, only one in four infants exclusively breastfeeds as recommended by the time they are six months old.[72] Lower rates of breastfeeding are contributing to additional medical costs in the US that exceed $3 billion annually. Infants who are breastfed have reduced risk of asthma, obesity, Type 2 diabetes, ear and respiratory infections, sudden infant death syndrome (SIDS), and gastrointestinal infections. Breastfeeding has benefits for the mother as well, as women who breastfeed are at lower risk of high blood pressure, Type 2 diabetes, ovarian and breast cancer.

- Based on the results of a survey conducted by the CDC in 2015 (Maternity Practices in Infant Nutrition & Care(mPINC)), Oregon ranked 6th out of 53 states and territories for breastfeeding practices.[73] Helping to support hospitals in developing and implementing breastfeeding policies, education on appropriate feeding practices, and hospital discharge planning could further improve breastfeeding in the state.
- Between 2014 and 2016, the percent of mothers who reported breastfeeding their infant in the community was lower than the state (89% vs. 93%).[73] Both the community and the state are currently meeting the Healthy People 2020 goal (82%) for breastfeeding.
- The WIC Program serves about 10,000 people in the community every year and helps with supplemental nutrition and promotion of healthy behaviors.[74] Just over nine out of ten women enrolled in WIC began breastfeeding their infant and about one in three women enrolled in WIC were still breastfeeding their infant at six months of age in the community.

Breastfeeding for WIC Program in the community and Oregon, WIC County Data Reports, 2017

	Marion	Polk	Oregon
Number of people served (#)	8,808	1,886	138,376
Initiated breastfeeding (%)	92.0	96.0	93.6*
Breastfeeding at six months (%)	35.0	34.0	42.8*

WIC = Women, Infants, and Children

* - Data is from 2016

Support for Children and Families

Supporting developing children and their families who need additional assistance is important for achieving a more equitable and healthy community. The Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), and free or reduced school lunch programs, provide families with additional support so that they can eat and work towards becoming self-sufficient. Other system supports help place abused or neglected children in foster care or refer youth to juvenile justice when they've broken the law.

- About one in five children in the community was food insecure, which was similar to the state.[11] Of those children who were food insecure in the community, 68-74% would likely qualify for nutrition assistance such as SNAP or free/reduced lunch. Children who don't qualify for assistance rely on charitable and other community resources to get enough to eat.
- Just about half of households with children in the community received SNAP, which was higher than the state.[4] There was a higher percentage of households with children receiving SNAP in Marion than Polk, which may indicate a greater reliance on public support systems.
- Child were abused or neglected at a higher rate in Polk than Marion and the state.[75] The rate of child abuse and neglect has been increasing in the community in recent years. Neither the community nor the state are currently meeting the Healthy People 2020 goal (8.5/1,000 children) for child abuse and neglect.
- About 1% of children in the community were living in foster care, which was similar to the state and is equal to just over 1,000 children.[76]
- The rate of referrals of youth to the juvenile justice system was slightly higher in Marion than Polk and the state.[76] Overall, the rate of referrals to the juvenile justice system has been decreasing in the community and the state in recent years (not shown).

Community data for child and family support, Various, 2016			
	Marion	Polk	Oregon
Children under 18 who were food insecure in last 12 months* (%)	21.2	20.0	20.0
Food insecure children under 18 who likely qualify for nutrition assistance† (%)	74.0	68.0	63.0
Students eligible for free or reduced lunch‡ (%)	63.0	52.0	49.3
Households with children under 18 who received SNAP benefits in last 12 months[a] (%)	56.7	48.5	45.1
Households receiving cash assistance (TANF)[a] (%)	7.0	4.0	4.0
Rate of child abuse or neglect[b] (per 1,000 children under 18)	12.5	15.9	12.8
Children under 18 in foster care‡ (%)	1.0	0.9	1.2
Rate of referrals to juvenile justice system‡ (per 1,000 under 18)	14.7	13.5	13.6

*Food insecurity rates are determined using data from the 2001-2016 Current Population Survey on individuals in food insecure households; data from the 2016 ACS on median household incomes, poverty rates, homeownership, and race and ethnic demographics; and the 2016 data from the Bureau of Labor Statistics on unemployment rates. Source: Feeding America, 2016

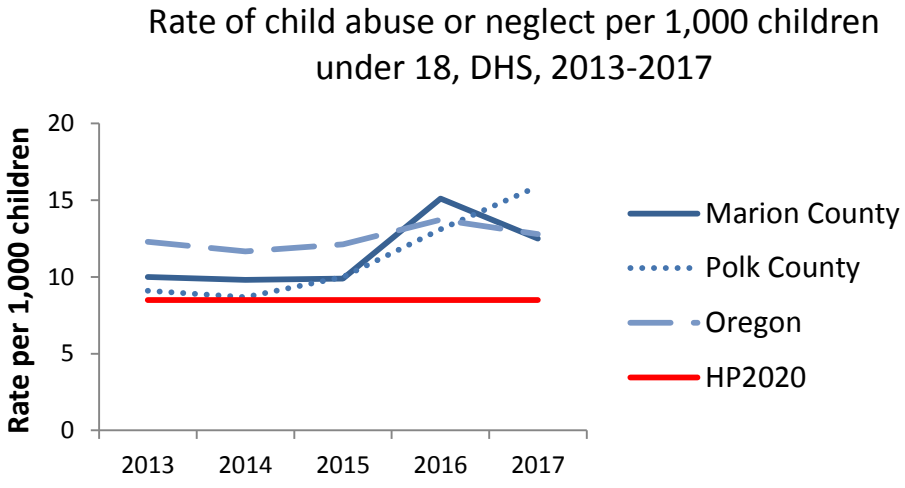
†Estimates reflect percent of food insecure individuals living in households below the 185% poverty threshold and eligibility for assistance can vary by state. Federal Nutrition Assistance programs include SNAP, WIC, free school meals, CSFP, TEFAP. Source: Feeding America, 2016

‡ - Kids Count Data Center, 2016

[a] - American Community Survey, 2012-2016

[b] - Child abuse includes confirmed instances of mental injury, neglect, physical abuse, sexual abuse, or threat of harm.

Source: DHS, Child Data Book, 2017



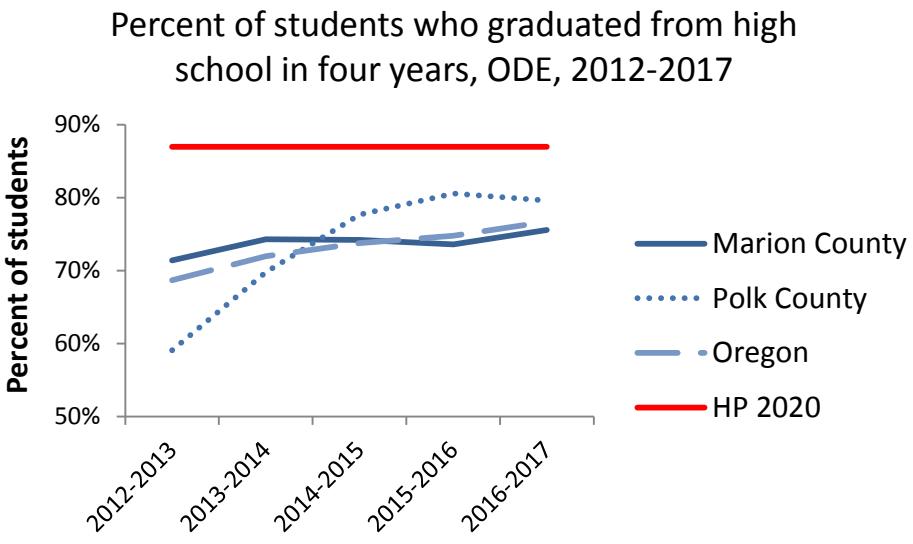
Childhood Education

Education has long been the gateway to economic success, which in turn supports health and quality of life. Learning begins at birth and the early years between zero and age five are critical for setting the course of a person's life. For every $1 spent on early childhood education, there is an economic return of $7 as a result of reduced crime, less reliance on governmental assistance, and higher tax revenues due to a more highly skilled workforce.[77] Beyond childhood, ensuring that adolescents graduate high school, are not chronically absent, and have opportunities to pursue higher education, can help to maximize the potential of the community.

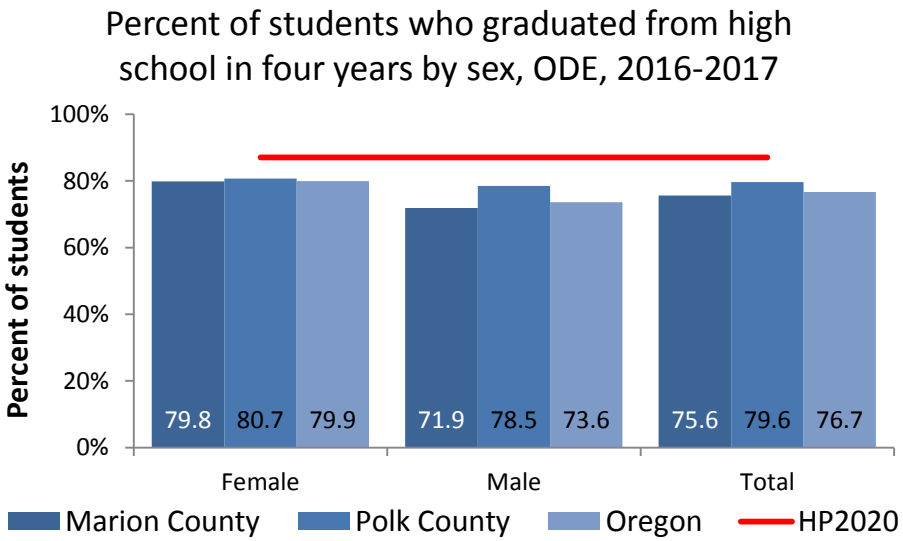
- In 2015, the percent of three and four year olds enrolled in early education was lower in Marion (31%) and Polk (30%) than the state (42%). Out of 36 counties in Oregon, Marion ranked 27th and Polk ranked 28th in terms of early education enrollment.[76]
- Students in Marion had lower four year high school graduation rates, higher dropout rates, and a higher percentage who were chronically absent than Polk and the state.[8, 78]
- The four year high school graduation rate has been increasing in the community in recent years, but is not currently meeting the Healthy People 2020 goal (87%).[8,9] In this community, about 3 out of 4 high school students graduate in four years.
- There is a strong correlation between attendance and student success in school. According to the Oregon Department of Education (ODE), students from lower income families, and/or identify as American Indian/Alaska Native have higher rates of chronic absenteeism than other races and ethnicities.[78] Additionally, females in high school have higher rates of chronic absenteeism than males, however females are more likely to graduate than males. About one in four students in kindergarten through 12th grade was absent for 10% or more school days (chronically absent) in a year in Marion.
- About 1 in 3 third graders were proficient readers in Marion, which was lower than Polk and the state.[76] Reading proficiency increased with grade level, as nearly half of eighth graders were proficient readers in the community, but this was lower than the state.
- Just over one in three third graders were proficient in math in Marion, which is lower than Polk and the state.[75] Math proficiency was slightly higher for eighth graders in Marion, but was lower in Polk, both of which were lower than the state.

Community data for childhood education, ODE, 2016			
	Marion	**Polk**	**Oregon**
Early Education Enrollment† (% of 3-4 year olds)	33.8	36.5	42.0
Students who graduated high school in four years (non-GED)†(%)	75.6	79.6	76.7
Students (grades 9-12) who dropped out of high school†(%)	4.6	2.9	3.9
Students (K-12) who are chronically absent*‡(%)	25.9	16.6	19.7
Third graders who are proficient readers (%)	33.3	44.5	47.4
Eighth graders who are proficient readers (%)	50.7	46.6	57.2
Third graders who are proficient in math (%)	36.2	41.7	47.5
Eighth graders who are proficient in math (%)	37.9	33.3	42.4

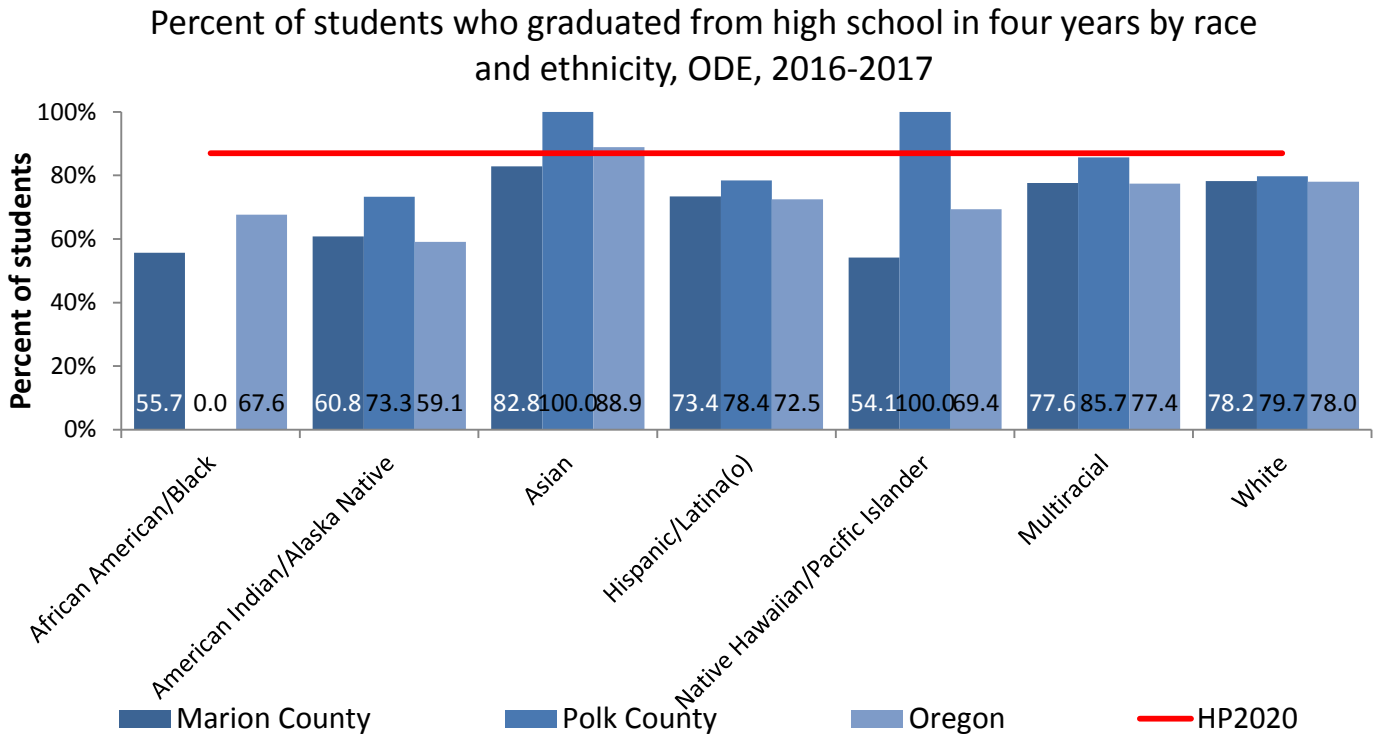
* Chronically absent: Student is absent for 10% or more of class days
† - American Community Survey, 2012-2016
‡ - Data from 2016-2017



- Females had a higher percentage graduating from high school in four years than males, however this difference was much smaller in Polk than Marion and the state.[8]



- In general, students who identified as African American/Black, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander had lower four year high school graduation rates in the community than other races/ethnicities; an exception was Native Hawaiian/Pacific Islanders in Polk who had a high graduation rate compared to Marion and the state.[8]



Note: No students identified as African American/Black and graduated in 2017 in Polk

- The Gervais and Salem-Keizer school districts in Marion had the lowest percentage of students graduating high school in four years.[8] In Polk, the Dallas and Falls City school districts had the lowest percentage of high school students graduating in four years.

Percent of students in the community who graduated high school in four years by school district, ODE, 2016-2017	
School District	**Marion County (%)**
Cascade	89.7
Gervais	71.9
Jefferson	98.6
Mt Angel	75.9
North Marion	83.7
North Santiam	81.3
Salem-Keizer	73.4
Silver Falls	88.2
St Paul	92.6
Woodburn	88.9
TOTAL	75.6
	Polk County (%)
Central	83.7
Dallas	74.8
Falls City	75.0
Perrydale	94.4
TOTAL	79.6
	Oregon (%)
TOTAL	76.7

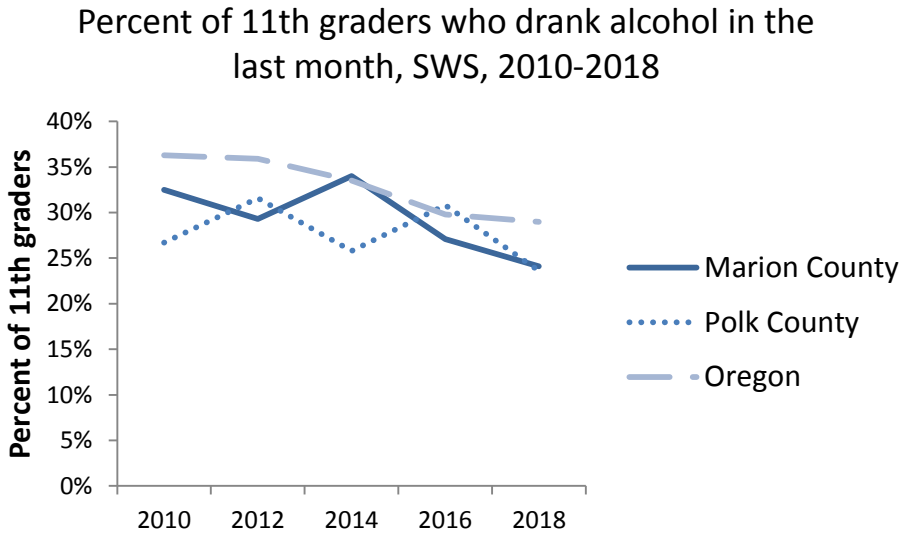
Risk Factors for Children and Adolescents

Developing children and adolescents have many of the same risk factors as adults. Often, the habits and behaviors that are adopted in youth are carried into adulthood, making this period of life a key target for intervention and health promotion.

Alcohol Use

The CDC reports that adolescents who start drinking at a young age are more likely to develop alcohol dependence than those who start drinking at the legal age.[79] Alcohol consumption is associated with other high risk behaviors like drunk driving and unsafe sexual activity.

- The percentage of children who drank alcohol in the last month increased with grade level in the community and the state peaking at 24-29% in 11th grade.[80] The community had a lower percentage of 11th graders who drank alcohol in the last month than the state. In recent years the percentage of 11th graders who drank alcohol in the last month has been decreasing in the community and the state.[80]
- Binge drinking increased with grade level in the community and the state peaking at 13-15% in 11th grade.[80] Marion and the state are not currently meeting the Healthy People 2020 goal for teen binge drinking (8.6%).[28] Polk had a lower percentage of 11th graders who binge drank than Marion and the state. The perception that binge drinking is harmful increased with grade level, as nearly 70-80% of 11th graders believe that binge drinking is harmful.
- Marion had a higher percentage of 11th graders who rode in a vehicle driven by a teenager who had been drinking or drove a vehicle after drinking in the last month than Polk and the state.[80] The community is currently meeting the Healthy People 2020 goal for teenagers who rode in a vehicle with another teen who had been drinking (25.5%).[28]



Note: Data collected for Marion County prior to 2016 may not be representative of the County as a whole and is provided as reference point

Health risks and perception of harm associated with alcohol use among 6th, 8th, and 11th graders, SWS, 2018									
	6th			8th			11th		
	Marion	Polk	Oregon	Marion	Polk	Oregon	Marion	Polk	Oregon
Drank alcohol in last month (%)*	5.6	4.4	4.5	14.3	9.2	15.4	24.1	23.6	29.0
Binge drank in last month (%)†	1.3	0.5	1.0	4.6	2.1	5.6	12.9	7.9	15.3
Perceive binge drinking as harmful (%)‡	64.3	65.3	63.6	70.1	70.1	68.3	69.9	80.5	74.8
Rode in a vehicle with a teenager who had been drinking in last month (%)	NA	NA	NA	NA	NA	NA	6.3	1.5	5.6
Drove a vehicle after drinking in last month (%)	NA	NA	NA	NA	NA	NA	3.9	1.5	3.5

* - Drank at least one alcoholic beverage in last 30 days

† - Drank 5 or more alcoholic drinks in a row within a couple hours within the last month

‡ – Students who think people risk harming themselves (physically or in other ways) when they have five or more drinks of alcohol on one occasion, once or twice a week

NA = Not available

Illicit & Prescription Drug Use

In youth, illicit drug use is associated with heavy alcohol use, tobacco use, violence, and other delinquent behaviors.[81]

- The most commonly used illicit drugs by children in the community and the state were hallucinogens (LSD, etc.), ecstasy (MDMA), and cocaine.[80]
- The percentage of children who used any illicit drug in the last month (other than marijuana) increased with grade level in the community and the state peaking at 2-3% in 11th grade.[80] A slightly higher percentage of 11th graders in Polk used illicit drugs (other than marijuana) than Marion and the state.
- Use of prescription drugs by children without a prescription increased with grade level in the community and the state peaking at 2-5% in 11th grade.[80]

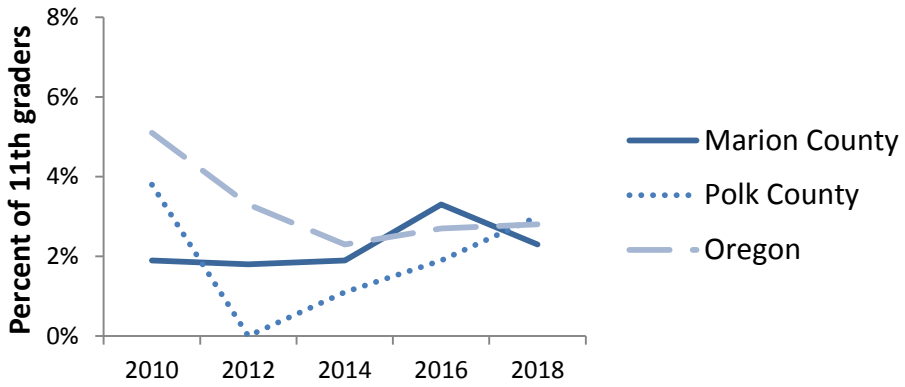
Illicit and prescription drug use among 6th, 8th, and 11th graders, SWS, 2018

	6th			8th			11th		
	Marion	**Polk**	**Oregon**	**Marion**	**Polk**	**Oregon**	**Marion**	**Polk**	**Oregon**
Used any illicit drug in last month (other than marijuana) (%)*	0.6	0.0	0.4	1.2	1.6	1.3	2.3	3.0	2.8
Used cocaine in last month (%)†	0.3	0.0	0.2	0.4	0.0	0.4	0.8	0.7	0.7
Used ecstasy in last month (%)	0.0	0.0	0.1	0.5	0.5	0.4	0.6	0.7	0.6
Used heroin in last month (%)‡	0.2	0.0	0.1	0.1	0.0	0.2	0.3	0.0	0.3
Used hallucinogen in last month (%)[a]	0.2	0.0	0.1	0.6	0.0	0.7	1.3	1.5	1.7
Used methamphetamines in last month (%)[b]	0.1	0.0	0.1	0.2	1.1	0.3	0.4	0.7	0.2
Used a prescription drug without doctor's orders in last month	1.4	1.5	1.2	3.9	1.0	3.8	4.2	1.5	4.5

* - Illicit drugs include cocaine, ecstasy, heroin, hallucinogens, and methamphetamines
† -Includes any form of cocaine (powder, crack, or freebase)
‡ - Includes heroin or other opiates or narcotics
[a] – Includes LSD or other hallucinogens or psychedelics
[b] – Includes methamphetamine (speed, crystal, crank, or ice)

- Illicit drug use (other than marijuana) briefly declined in the community and the state after 2010, however in more recent years illicit drug (other than marijuana) has been on an upward trend.

Percent of 11th graders who used any illicit substance (other than marijuana) in the last month, SWS, 2010-2018



Note: Data collected for Marion County prior to 2016 may not be representative of the County as a whole and is provided as reference point

Marijuana Use

The CDC warns that marijuana intoxication can distort perception, impair problem solving, learning, and memory.[82] Chronic marijuana use can lead to addiction, which may interfere with family, school, work, and recreational activities. Students who perceive marijuana use as harmful to their health are less likely to engage in use.

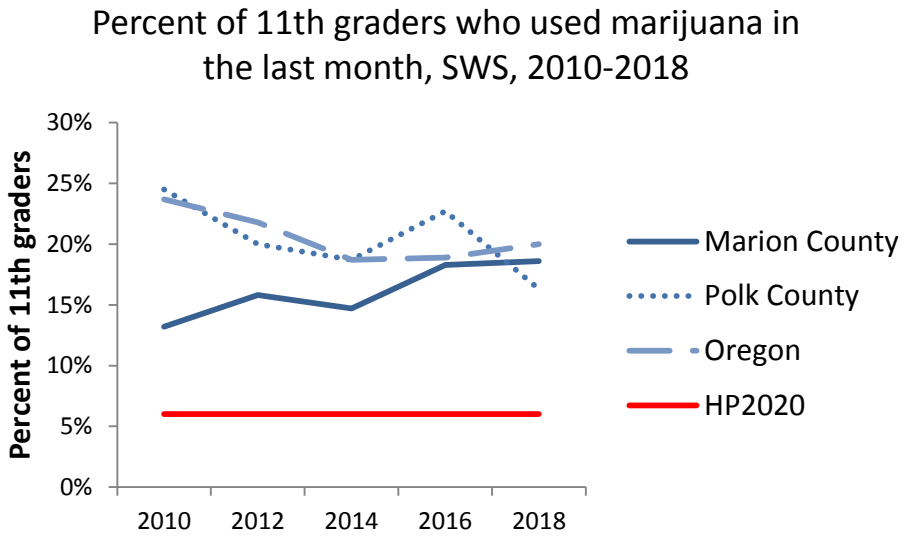
- Marijuana use by children in the last month increased with grade level in the community and the state peaking at 16-20% in 11th grade.[80]
- The perception of harm associated with regular marijuana use decreased with grade level, with just over a third of 11th graders believing that regular use was harmful.[80]

Marijuana drug use among 6th, 8th, and 11th graders, SWS, 2018

	6th			8th			11th		
	Marion	**Polk**	**Oregon**	**Marion**	**Polk**	**Oregon**	**Marion**	**Polk**	**Oregon**
Used marijuana in the last month (%)	1.6	0.6	1.5	8.1	7.7	7.9	18.6	16.3	20.0
Perceive marijuana use once or twice a week as harmful (%)*	62.4	61.9	60.7	54.6	41.4	52.2	35.1	40.8	36.6

* - Students who believe that there is moderate to great risk of harming themselves (physically or in other ways) by smoking marijuana once or twice a week

- The percentage of 11th graders using marijuana has been decreasing in Polk and the state.[80] Neither the community nor the state is currently meeting the Healthy People 2020 goal (6.0%) for teen marijuana use.[28]



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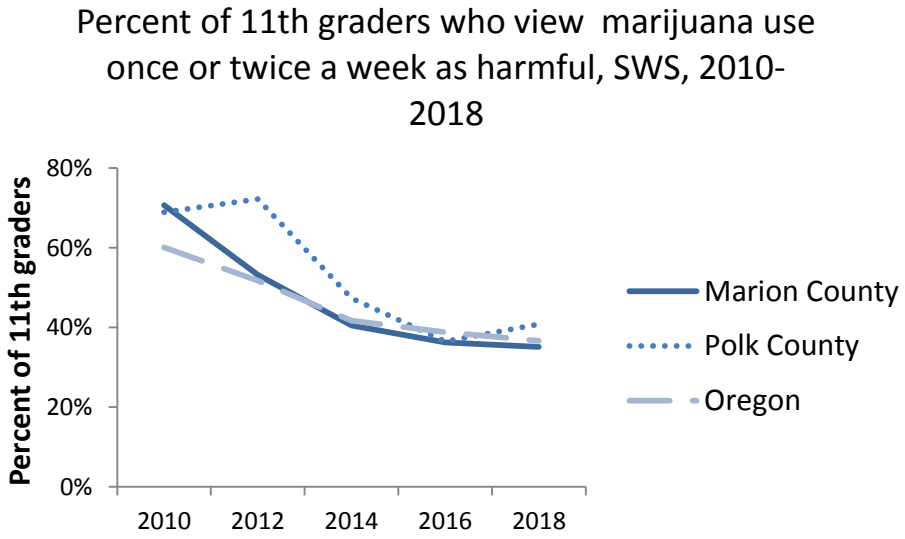
- The percentage of 11th graders who view regular marijuana use as harmful has been decreasing in recent years possibility to its legalization in Oregon in 2015.[80]



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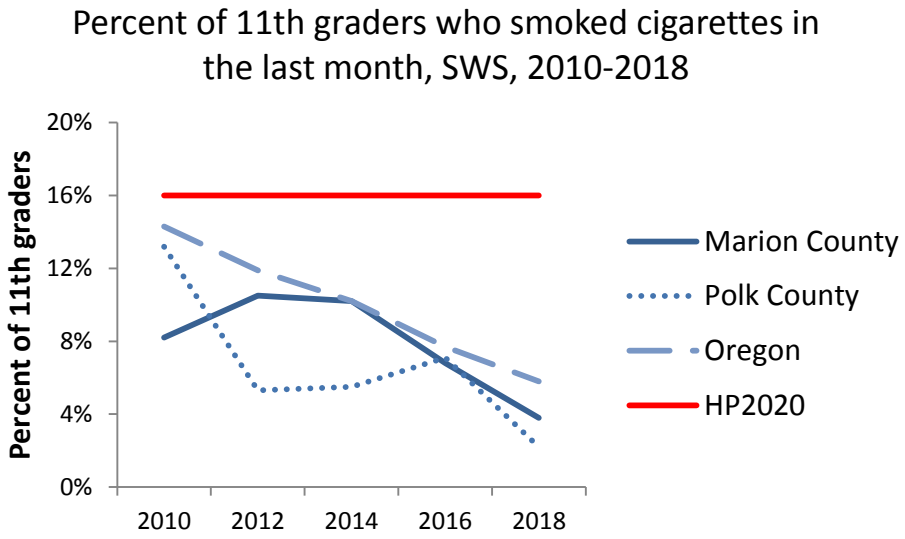
Tobacco Use

Nine out of 10 smokers first tried smoking by age 18.[83] Youth are more likely to smoke if their peers and/or parents also smoke. There are biological and genetic factors that may make it more likely for youth to become regular smokers; for example, there is evidence to support teen dependence on nicotine sooner than adults. Personal perceptions that tobacco is a tool for coping with stress or for controlling weight are related to youth tobacco use. A few other factors that affect youth tobacco use include lack of skills to resist peer pressure to smoke, lower education, and exposure to tobacco advertising.

- The way that tobacco is being consumed has been changing in the community and the state. There's been a shift away from cigarette smoking as the most common means of consumption by children to electronic use in the form of e-cigarettes or vaping[80]; from 2013 to 2017 there was over a two fold increase in electronic tobacco use in Oregon (5.2% vs. 12.9%).[84]
- The percent of children who smoked cigarettes in the last month increased with grade level in the community and the state peaking at 2-6% in 11th grade. A smaller percentage of 11th graders smoked cigarettes in the community than the state and is currently meeting the Healthy People 2020 goal (16.0%). Over time the percentage of 11th graders smoking cigarettes has been decreasing in recent years. The perception that heavy smoking is harmful to health increases with grade level peaking at 76-84% of 11th graders viewing the behavior as harmful.
- About 13% of 11th graders in Marion and 9% in Polk used electronic cigarettes in the last month compared with 21% in the state. Just over a third of 11th graders believe that using electronic cigarettes is harmful to health.



Note: Data collected for Marion County prior to 2016 may not be representative of the County as a whole and is provided as reference point

Tobacco use and perceptions of harm among 6th, 8th, and 11th graders, SWS, 2018									
	6th			8th			11th		
	Marion	Polk	Oregon	Marion	Polk	Oregon	Marion	Polk	Oregon
Smoked cigarettes in last month (%)	1.0	1.0	0.7	2.5	1.1	2.8	3.8	2.2	5.8
Perceive smoking 1-2 packs of cigarettes per day as harmful (%)*	76.9	76.0	75.2	80.2	75.0	77.1	76.0	84.0	79.9
Used electronic cigarettes in last month (%)†	NA	NA	NA	NA	NA	NA	12.5	9.4	20.8
Perceive using tobacco electronically as harmful (%)‡	NA	NA	NA	NA	NA	NA	36.9	38.1	36.2
Used other tobacco products in last month (%)[a]	0.8	0.0	0.6	1.9	0.5	2.2	3.3	2.9	4.4

* - Students who believe that there is moderate to great risk of harming themselves (physically or in other ways) by smoking 1-2 packs of cigarettes per day

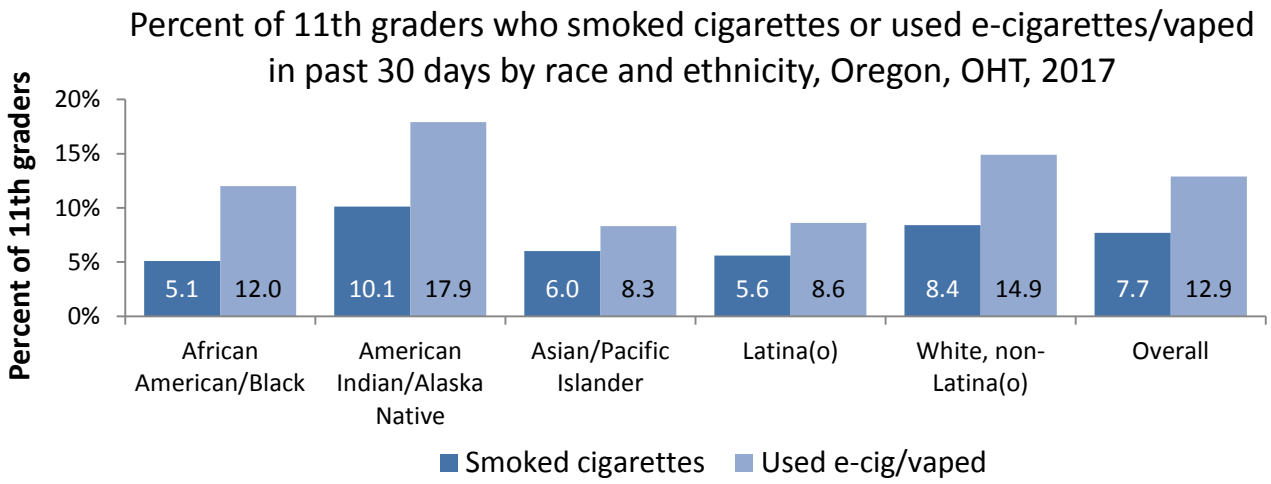
† - Used an electronic cigarette, vape-pen, or e-hookah

‡ - Students who believe that there is moderate to great risk of harming themselves (physically or in other ways) by using electronic cigarettes, vape-pens, or e-hookahs

[a] - Other tobacco products refer to snuff, dip, or chewing tobacco

NA = Not available

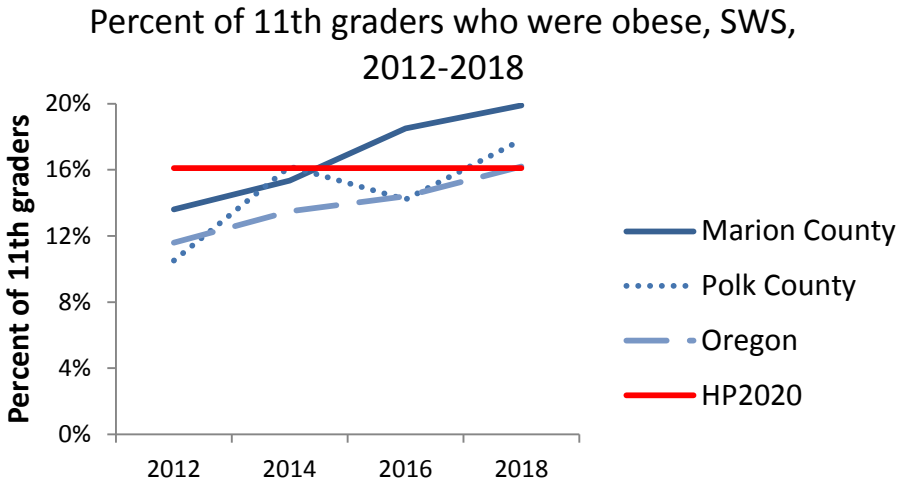
- In Oregon, 11th graders who identified as American Indian/Alaska Native or White, non-Latina(o) had the highest percentage smoking cigarettes or using tobacco electronically compared to other races and ethnicities.



Overweight and Obesity

Obesity in children and teens is defined as a person who has a body mass index (BMI) that is above the 95th percentile for children and teens of the same age and sex.[85] Teens that are obese are more likely to become obese adults. Obesity is linked to other chronic diseases such as diabetes, heart disease, and colon cancer.[42] Eating healthy, drinking water instead of soda, and regular physical activity can help prevent overweight and obesity.

- In general, the percent of children in the community who are overweight or obese increases with grade level as about 32-38% of 11th graders are overweight or obese.[80,84] A higher percentage of 11th graders in Marion are obese compared to Polk and the state, none of which are meeting the Healthy People 2020 goal (16.1%).[28] The percentage of 11th graders who are obese has been increasing in recent years.[80]
- Children eating breakfast and getting the recommended daily fruit and vegetable intake decreased with grade level in the community and the state.[84]
- Regular physical activity and muscle strengthening in children decreased with grade level in the community and the state.[84] A lower percentage of 11th graders in the community participated in regular activity and muscle strengthening than the state, which is not meeting the Healthy People 2020 goals for regular activity and muscle strengthening (32% & 61% respectively).[28]



Note: Data collected for Marion County prior to 2016 may not be representative of the County as a whole and is provided as reference point

Weight, nutrition, and physical activity in 11th graders, OHT, 2017						
	8th			11th		
	Marion	Polk	Oregon	Marion	Polk	Oregon
Overweight (%)*	18.4	14.0	16.8	18.3	19.7	16.8
Obese (%)*	19.2	23.8	15.0	20.0	18.0	16.2
Ate breakfast every day (%)	37.1**	37.9	41.2	29.2**	27.5	32.3
Ate recommended daily amount fruit/vegetable (%)†	24.0**	25.7	25.0	20.7**	16.3	18.8
Drank water regularly (%)‡	76.4**	81.5	82.8	79.1**	81.3	84.0
Drank soda regularly (%)[a]	10.2**	10.6	9.2	11.3**	5.2	10.9
Regular physical activity (%)[b]	27.5**	36.5	29.4	17.2**	20.3	22.5
Regular muscle strengthening (%)[c]	57.6**	67.0	60.1	45.9**	45.1	48.4

* - Data is from Student Wellness Survey, 2018

** - Data collected might not be representative of Marion County as a whole and serves as a reference point

† - Ate fruit and vegetables five or more times per day

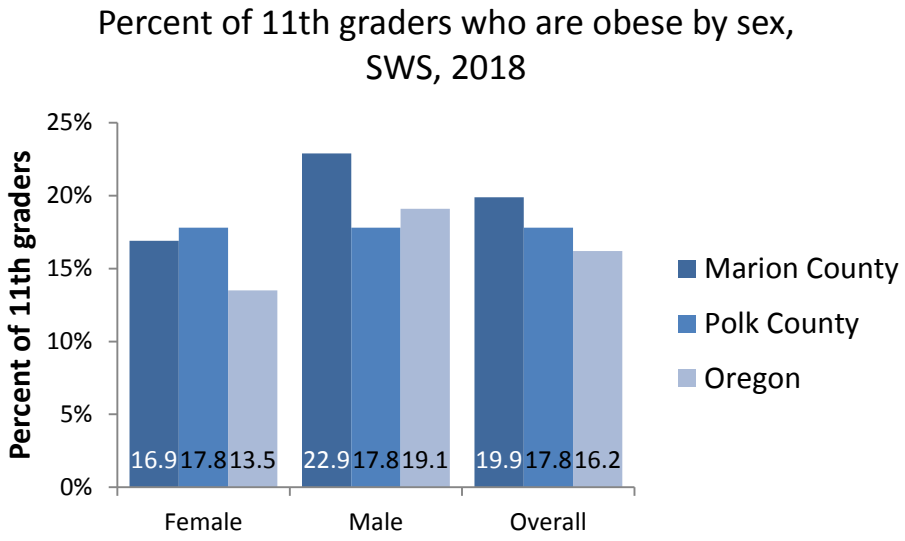
‡ - Drank seven or more glasses of water per week

[a] – Drank seven or more sodas per week

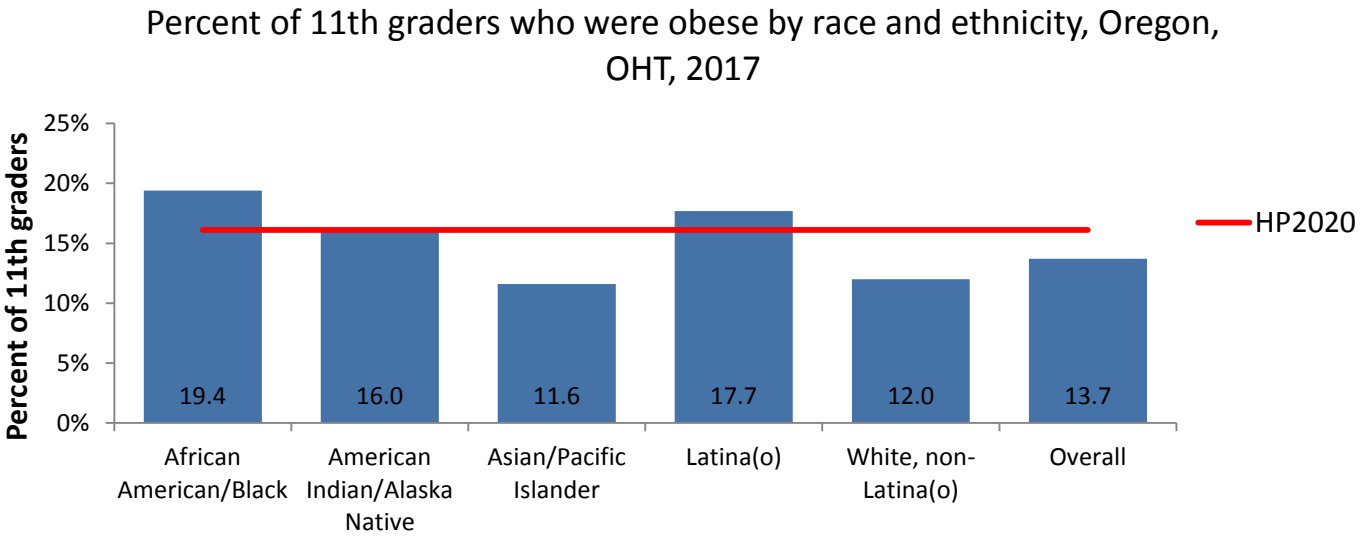
[b] – Participated in 60 or more minutes of physical activity every day

[c] – Participated in muscle strengthening exercises 3 or more times per week

- A higher percentage of 11th grade males were obese than females in the community and the state.[80]



- In Oregon, 11th graders who identified as African American/Black, Latina(o), or American Indian/Alaska Native had a higher percentage that was obese than other races and ethnicities.

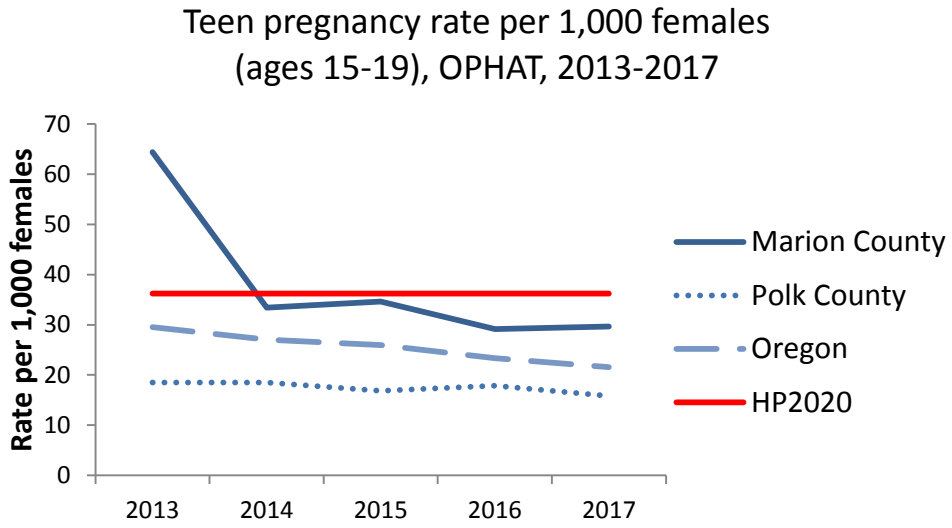


Teen Pregnancy

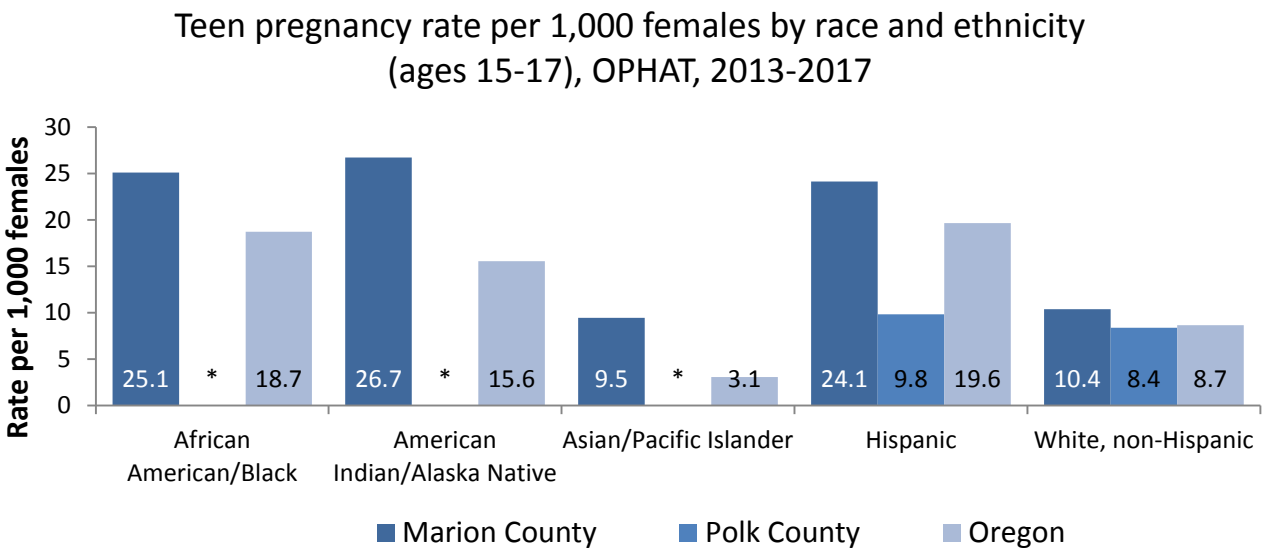
Teen childbearing has consequences for the parents, their child, and society. The teen mother is less likely to finish high school, more likely to rely on public assistance; more likely to be poor as an adult; and more likely to have children who have poorer educational, behavioral, and health outcomes over the course of their lives than children born to older parents.[86] Although the teen pregnancy rate has been decreasing in recent years, it is still higher than other western industrialized nations.

Marion County Health & Human Services has developed a health profile describing this issue in more detail; visit the web address below to learn more:
http://www.co.marion.or.us/HLT/communityassessments/Documents/Teen%20Pregnancy%20Health%20Profile.pdf

- The teen pregnancy rate in the community has been declining in recent years and is currently meeting the Healthy People 2020 goal (32.2 per 1,000 women).[22] In Marion, the teen pregnancy rate was higher than Polk and the state.



- Teens that identified as African American/Black, American Indian/Alaska Native, or Hispanic had higher pregnancy rates than other races and ethnicities.[22]



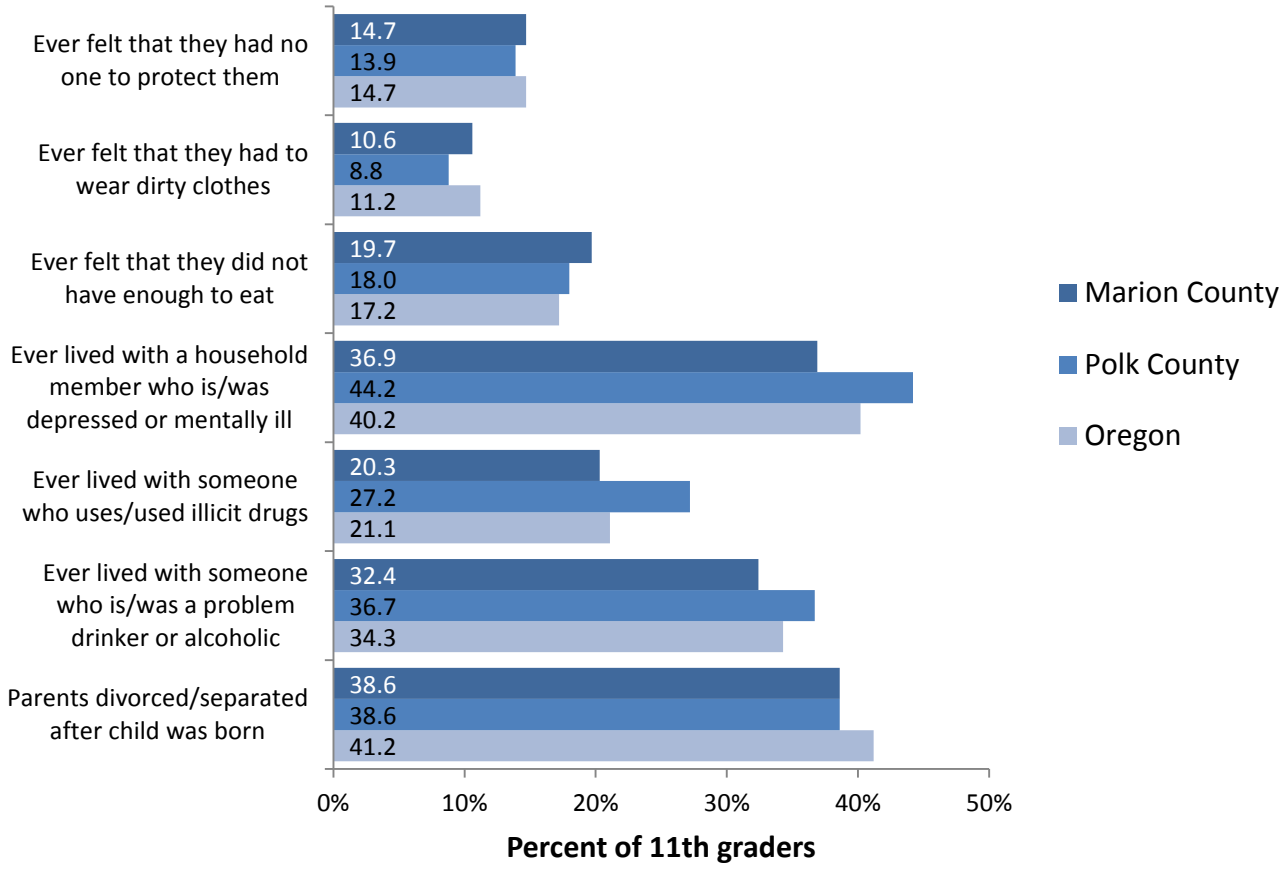
Note: Polk rates were unreliable for some race and ethnicities as indicated by (*).

Adverse Childhood Experiences (ACEs)

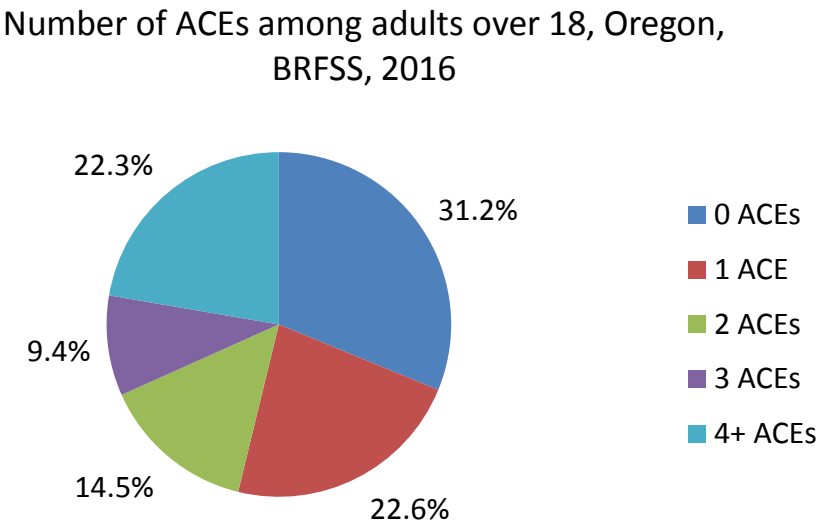
What a child experiences early on in life, both good and bad, has a lasting impact on their lifelong health and well-being. Children that are exposed to adversity and trauma can experience toxic stress, which alters normal brain development. Adverse childhood experiences (ACEs) are a primary source of many social, emotional, physical, and cognitive problems that can lead to high risk behaviors in adulthood, mental illness, chronic disease, disability, and early death.[87] The most common ACEs are household substance abuse (37%), emotional abuse (36%), and parental separation and divorce (33%).[88] A growing body of evidence suggests that the more ACEs a person has, the more susceptible they are to poor health outcomes.

- Nearly 4 out of 10 11th graders in the community and the state indicated that their parents divorced or separated after they were born.[80] About 32-37% of 11th graders in the community reported that they have lived with or live with someone who abuses alcohol. Just over a third of 11th graders in the community have lived with someone who is or was depressed or mentally ill.
- According to a study by the National Survey of Children's Health (NSCH), 22% of children under 18 in Oregon have experienced two or more ACEs and 41% of children in Oregon with special health care needs have experienced two or more ACEs.[25]

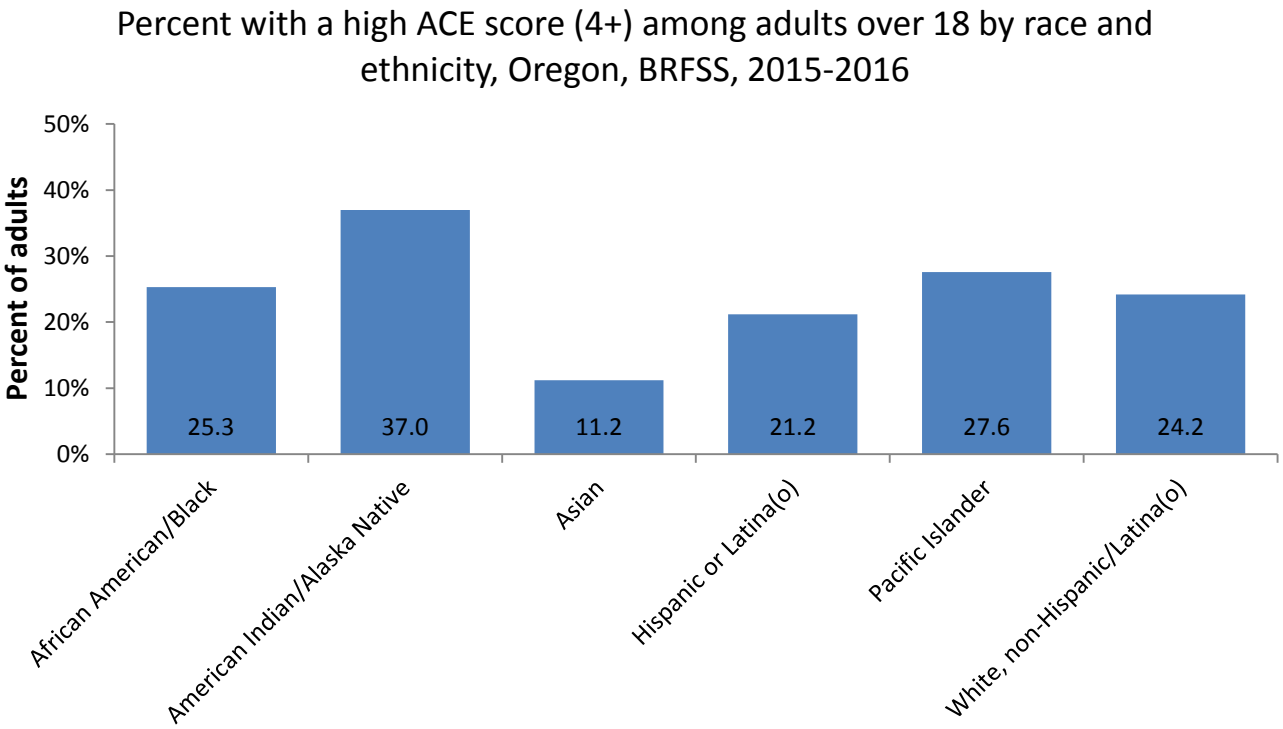
Percent of 11th graders with Adverse Childhood Experiences (ACEs), SWS, 2018



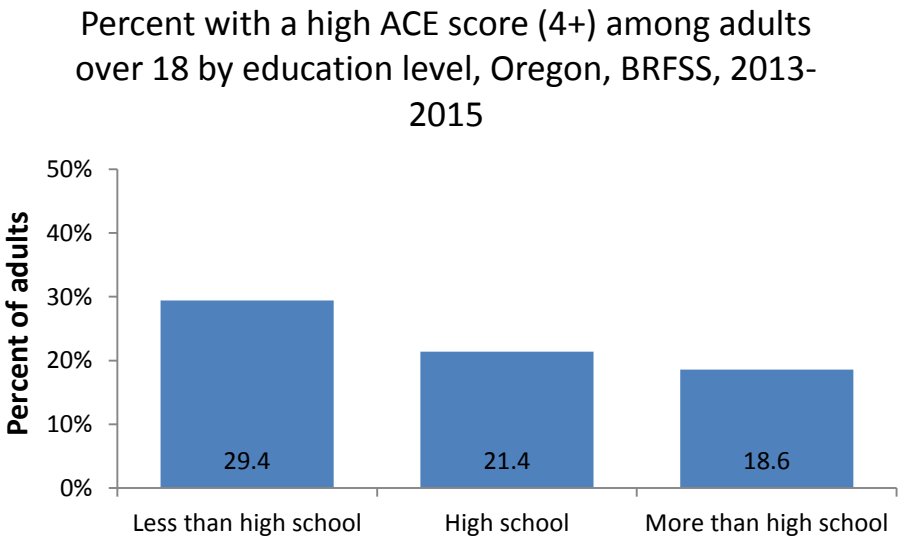
- In Oregon, 46% of adults reported that they have experienced two or more ACEs during childhood, while 22% experienced four or more.



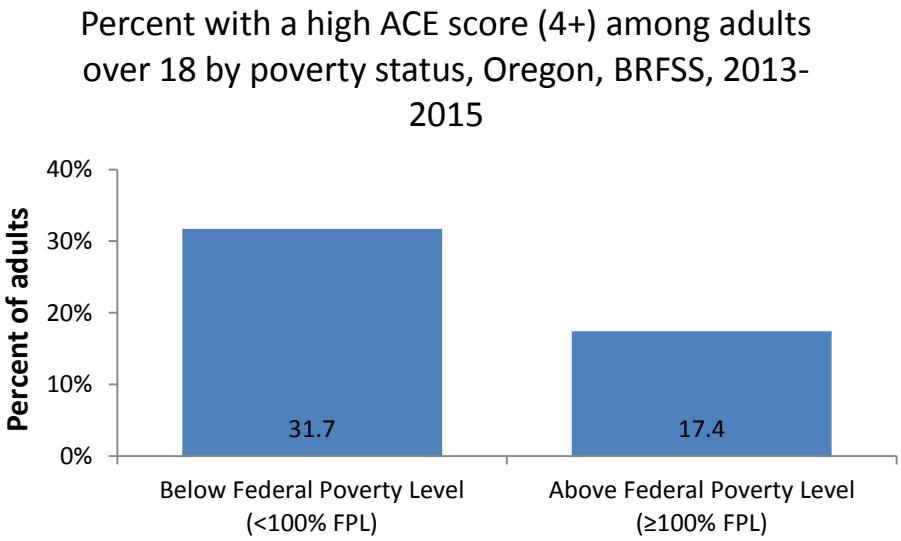
- In Oregon, a higher percentage of adults who identified as American Indian/Alaska Native had experienced four or more ACEs than other races and ethnicities.



- Adults who achieved higher education levels had a lower percentage that experienced four or more ACEs in Oregon.



- In Oregon, people living below the federal poverty level had a higher percentage reporting four or more ACEs compared to those living above the federal poverty level.

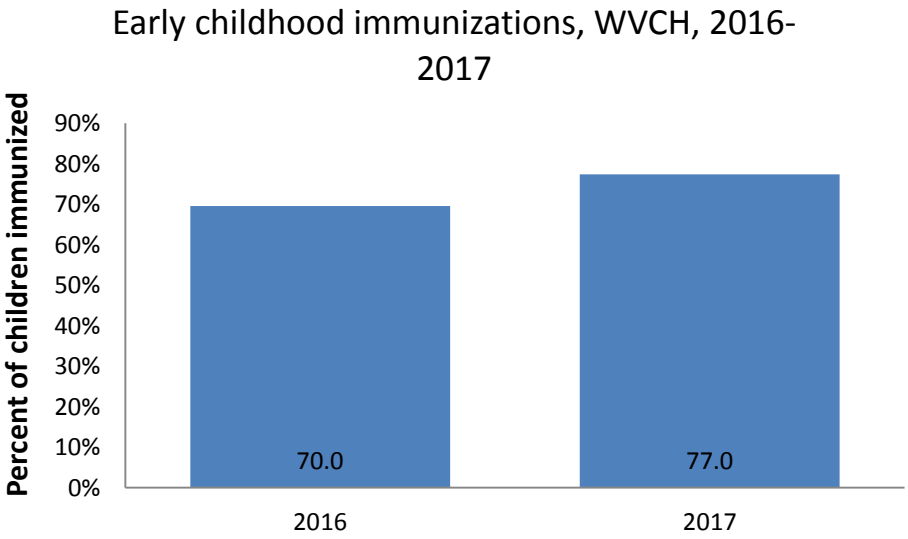


CCO Measures for Children & Adolescents

Childhood Immunizations

This CCO has increased the percentage of young children that it serves who are fully immunized over the past two years. The graph below illustrates the percentage of children who turned two years of age in the measurement year and received all Oregon Health Authority (OHA) recommended vaccines.

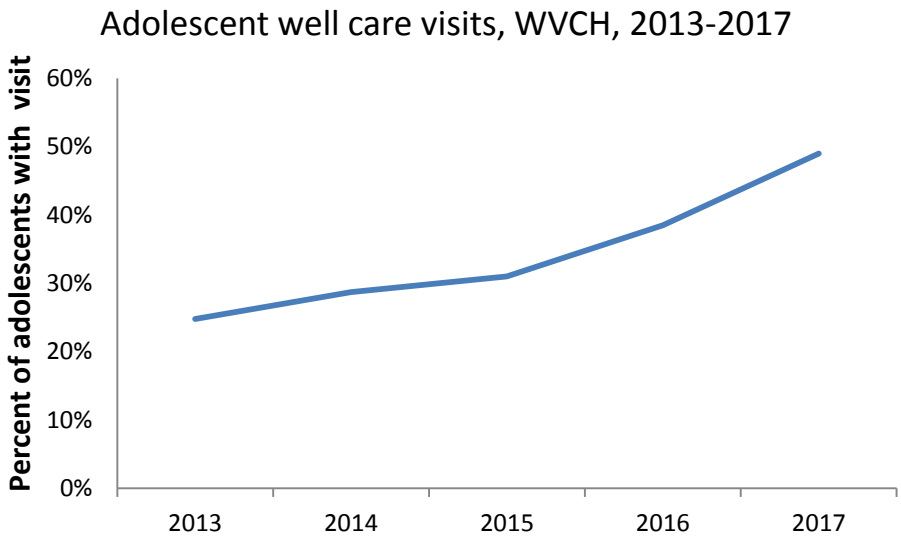
Note: WVCH CCO metrics are measured and submitted to the OHA on an annual basis according to technical specifications outlined by the OHA which can be found here: **https://www.oregon.gov/OHA/HPA/ANALYTICS/Pages/CCO-Baseline-Data.aspx).**



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Adolescent Well Care Visits

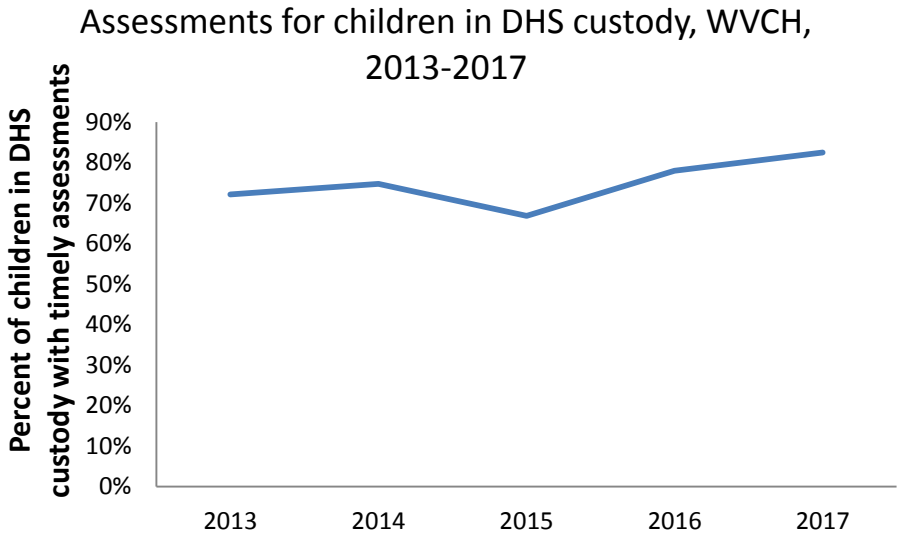
This CCO has steadily increased the percentage of adolescents it serves that are receiving well care visits since 2013. The graph below illustrates the percentage of adolescents who received an adolescent well care visit within the measurement year.



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

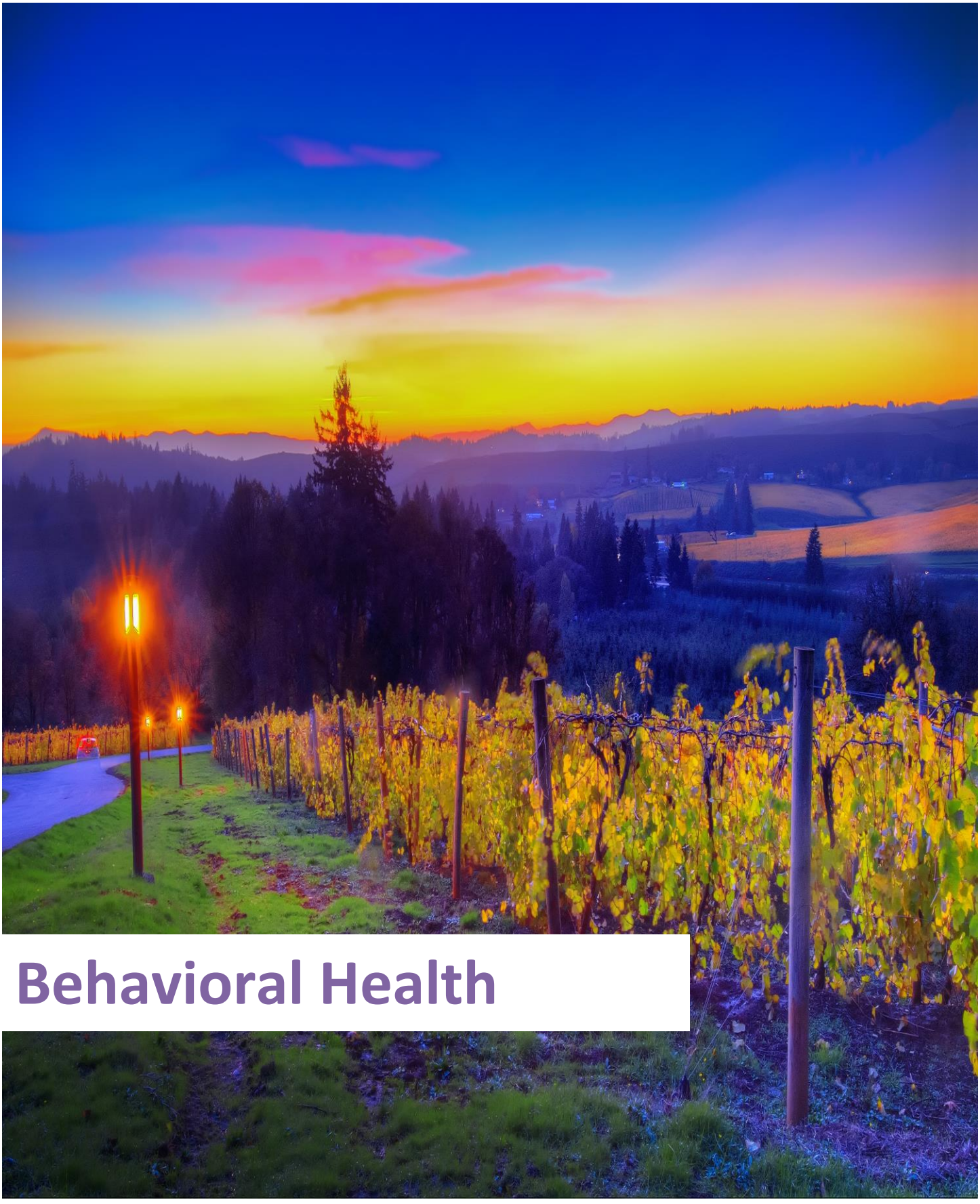
Assessments for Children in Department of Human Services (DHS) Custody

Overall the CCO has slightly increased the percentage of children in DHS custody that are receiving timely mental, oral and physical health evaluations after coming into DHS custody. The graph below illustrates the percentage of children in DHS custody that have received comprehensive assessments in mental, oral and physical health within 90 days of coming into DHS custody, within the measurement year.



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Sunset at Willamette Valley Vineyards



Behavioral Health

Behavioral Health

Behavioral health is concerned with not only preventing or intervening in mental illnesses such as anxiety or depression, but also with preventing alcohol and drug abuse along with other addictions. It refers to a person's entire state of being and how their choices or behaviors can affect their overall health and wellness. A report in 2017 ranked Oregon the 10th highest in the country for deaths related to drug overdoses, alcohol, and suicide.[89]

Key Findings for Marion and Polk County:

- In general, the prevalence of mental health risk factors for youth increased with grade level in the community. About 44% of 11th graders in Polk reported symptoms of depression compared with 35% in Marion and 36% in the state. The percentage of 11th graders reporting symptoms of depression has been increasing in recent years. About 26% of 11th graders in Polk seriously considered suicide compared with 18% in Marion and 20% in the state. Roughly 8% of 11th graders attempted suicide in the last year in the community and the state.
- About 1 in 4 adults has been diagnosed with depression in the community, which was similar to the state. A higher percentage of females have been diagnosed with depression than males.
- About 13% of adults in Marion experienced frequent mental distress, compared to 12% in Polk and 14% in the state. Adults living below the Federal Poverty Level were more likely to report frequent mental distress. Additionally, adults who experienced a greater number of ACEs in childhood were more likely to report frequent mental distress.
- The suicide mortality rate has been increasing in Marion and the state in recent years, while declining in Polk. Marion and the state have not yet met the Healthy People 2020 goal for suicide mortality. Male community members and those who identified as American Indian/Alaska Native or White, non-Hispanic had higher mortality rates than their peers. Additionally, those who lived in rural areas had higher suicide mortality rates than those who lived in urban.
- About 33% of motor vehicle fatalities in Marion involved alcohol, compared to 29% in Polk and 32% in the state. The rate of deaths that involved alcohol has been increasing in the community in recent years. Roughly 15% of adult community members binge drank, compared to 18% of adults in the state. Binge drinking was higher in males, those above the Federal Poverty Level, and Pacific Islanders compared to their peers.
- In Marion, 17% of adults were current cigarette smokers compared to 14% in Polk and 18% in the state. The community is not currently meeting the Healthy People 2020 goal for cigarette smoking. The prevalence of smoking differed greatly amongst various groups.
- Deaths as a result of opioid overdose peaked in 2011 and have since been on the decline in the community and the state. The opioid overdose mortality and hospitalization rate was lower in the community than the state.

Mental Health

Mental health is an important part of overall health and well-being. It is defined by the CDC as, "our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make healthy choices."[90] Mental illnesses are among the most common types of health conditions in the United States as more than 50% of people will experience a mental illness or disorder at some point in their lives.[90] Each year about 1 in 5 Americans experience mental illness. The economic price of serious mental illness is high, resulting in $193 billion in lost earnings per year. Although no single cause exists for mental illness, risk can be increased in those with early adverse childhood experiences (ACEs), chronic illness, family history, and alcohol and drug use. Just like with good physical health, communities that promote the social determinants of health such as affordable housing, safe neighborhoods, economic opportunity, education, and equity also experience better mental health.

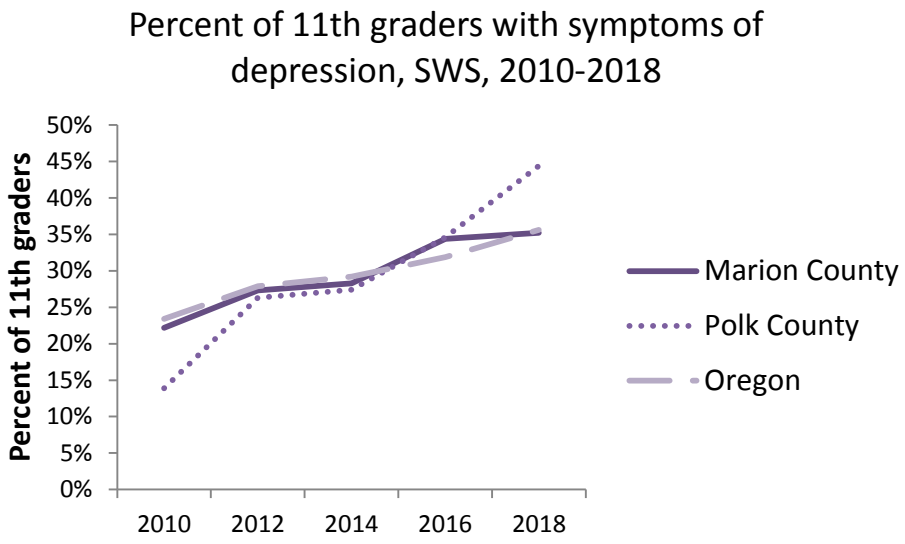
Youth

Good mental health is an essential component for the development of children into healthy adults. Recognizing and treating mental health disorders early can prevent them from becoming chronic problems later in life. For information on child and adolescent substance use, see the Infant, Child, and Adolescent Health section.

- In general, mental health risk factors such as overall general health, emotional/mental health, and teen depression increased with grade level.[80]
- In Polk, 41% of 11th graders reported fair or poor emotional/mental health compared to 33% in Marion and 34% in the state. [80] The percentage of 11th graders reporting fair or poor emotional/mental health has been increasing in the community and the state in recent years (not shown).
- About 44% of 11th graders in Polk and 35% in Marion reported symptoms of depression compared to 36% in the state .[80] The percentage of 11th graders experiencing symptoms of depression has been increasing steadily in recent years.
- In Polk, 26% of 11th graders seriously considered suicide compared with 18% in Marion and 20% in the state. About 8% of 11th graders in the community and the state attempted suicide in the last year.[80]
- Almost half of 8th graders reported being harassed at school in the last month.[80]

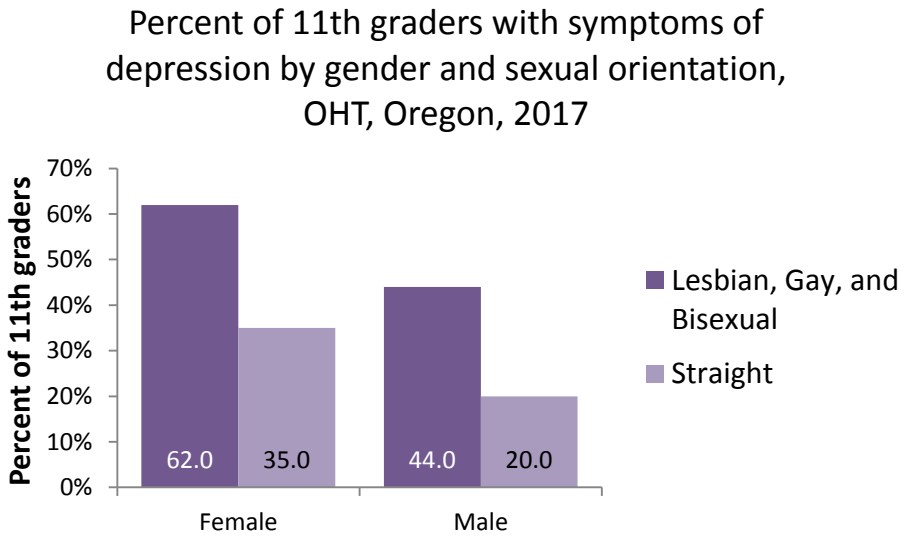
Mental health risk factors and outcomes among 6th, 8th, and 11th graders, SWS, 2018									
	6th			8th			11th		
	Marion	Polk	Oregon	Marion	Polk	Oregon	Marion	Polk	Oregon
Fair or poor general health (%)	11.0	7.5	10.5	16.5	14.8	15.3	25.6	19.6	19.8
Fair or poor emotional and mental health (%)	14.9	11.9	14.5	26.3	15.6	25.1	32.8	40.7	33.9
Teens experiencing symptoms of depression (%)*	25.0	20.8	22.8	28.2	25.6	29.2	35.2	44.4	35.6
Seriously considered suicide in last year (%)	14.3	11.1	13.3	10.1	16.8	19.9	18.3	25.7	19.7
Attempted suicide in last year (%)	8.6	5.5	7.5	10.1	7.1	10.2	8.3	8.3	8.1
Harassed at school in last month (%)	50.2	46.4	49.1	48.6	38.9	50.0	32.5	44.8	37.2

* - Felt so sad or hopeless almost every day for two weeks or more in a row that you stopped doing usual activities.

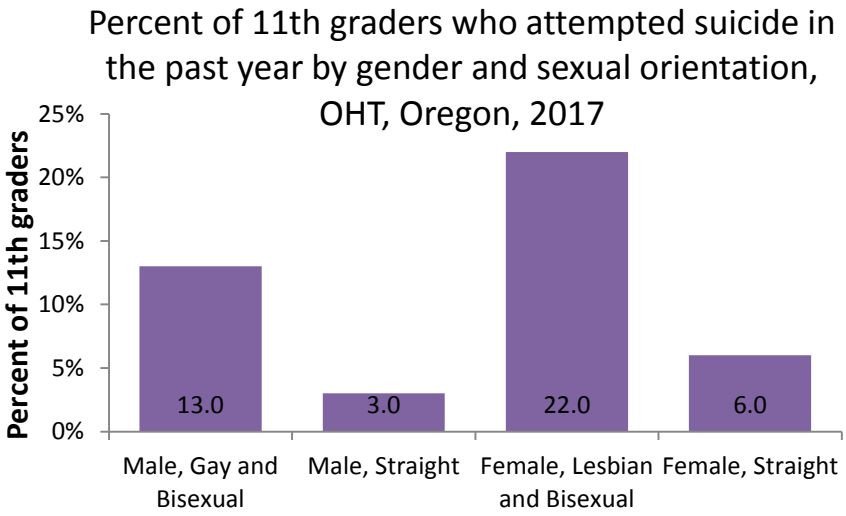


Note: Data collected for Marion County prior to 2016 may not be representative of the County as a whole and is provided as reference point

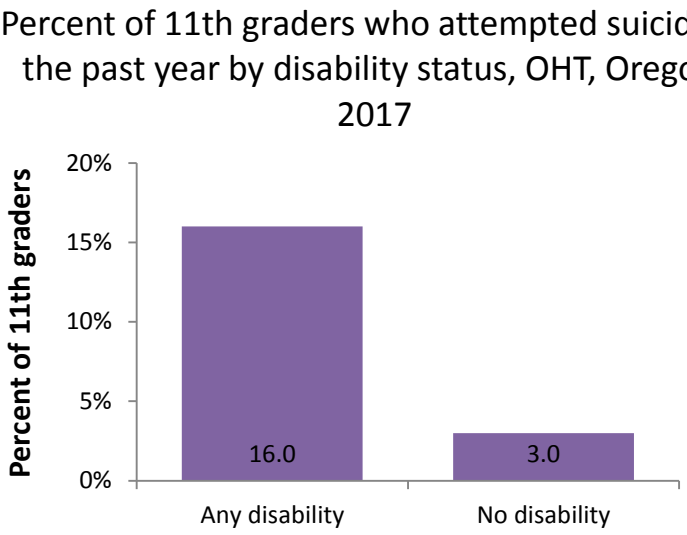
- In Oregon, a higher percentage of 11th grade females reported symptoms of depression than males.[25] Lesbian, gay, and bisexual 11th graders of both genders had a higher percentage reporting symptoms of depression than straight 11th graders of both genders.



- In Oregon, 11th graders who are gay or bisexual were more likely to attempt suicide in the past year.[25]



- In Oregon, 11th graders with a disability were more likely to attempt suicide.[25]

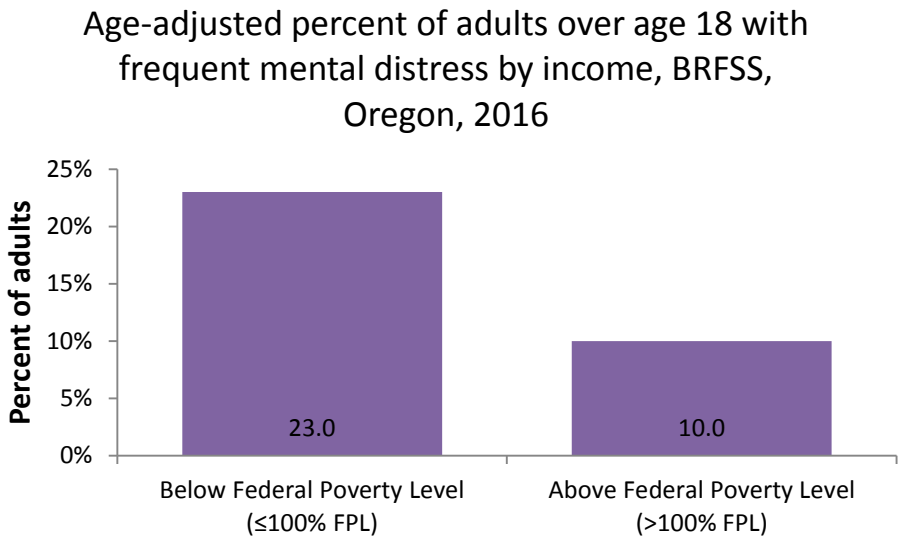


Adults

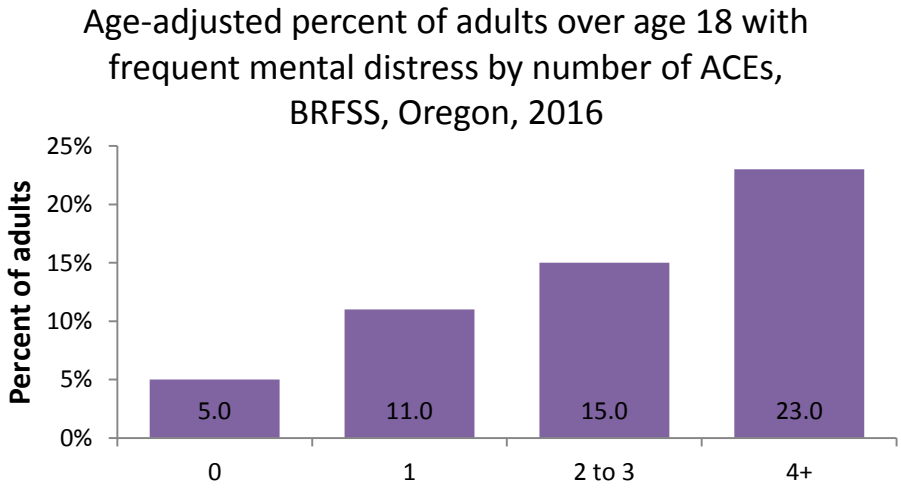
Mental illness in adults is a common condition that affected roughly 43.4 million, or about 1 in 5 adults, over the age of 18 in 2015.[90]About 9.8 million, or 1 in 25 adults over the age of 18 had a serious mental illness in 2015, which is defined as, "experiencing within the past year a mental illness or disorder with serious functional impairment that substantially interferes with or limits one or more major life activities." As with youth, early detection and intervention can help to prevent prolonged chronic conditions and improve quality of life.

- On average, adult community members experienced 4 to 5 days each month where their mental health was unhealthy due to stress, depression, and/or problems with emotions, which was similar to the state (2012-2015).[21] About 4 out of 10 adult community members experienced at least one day of unhealthy mental health each month, falling slightly below the state (2012-2015).
- Adults who experience frequent mental distress, which includes issues with mental health, stress, depression, and/or problems with emotions, for at least 14 days of the month was reported in 13.1% of Marion adults, 12.2% of Polk adults, and 13.7% of Oregon adults in 2016.[91] The percentage of adults reporting frequent mental distress has been increasing in recent years.

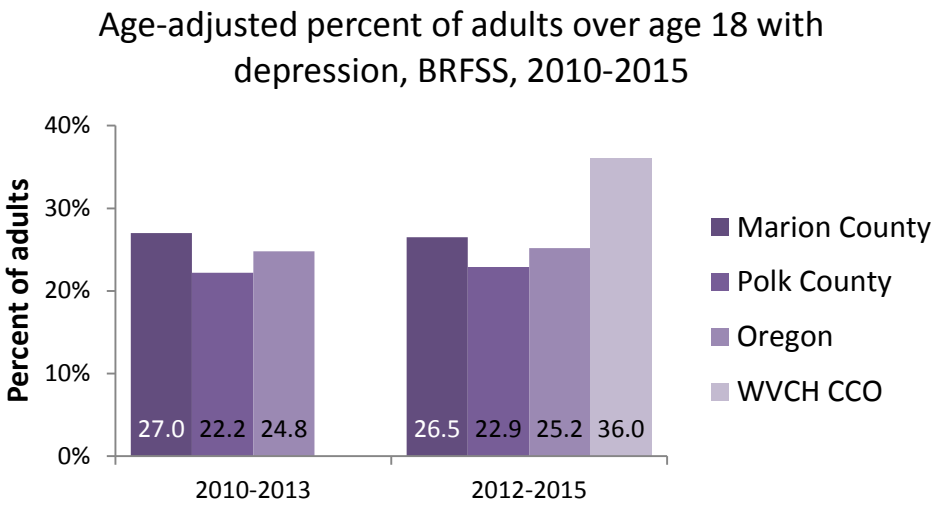
- In Oregon, the percentage of adults experiencing frequent mental distress was higher in those below the federal poverty level than those above it.[25]



- In Oregon, adults who experienced a higher number of adverse childhood experiences (ACEs) were also more likely to report frequent mental distress.[25]

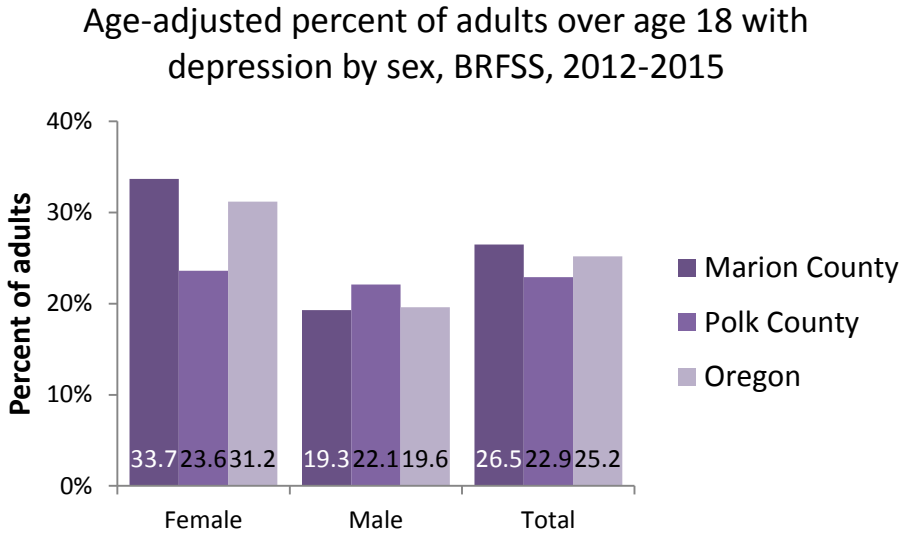


- Just over 1 in 4 adult community members have been diagnosed with depression, which has remained stable in recent years.[21] A higher percentage of adults in Marion have been diagnosed with depression than Polk and the state. Although not directly comparable, community members enrolled in Medicaid (WVCH CCO) appear to have had a higher percentage with depression than the community as a whole.[13]



**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

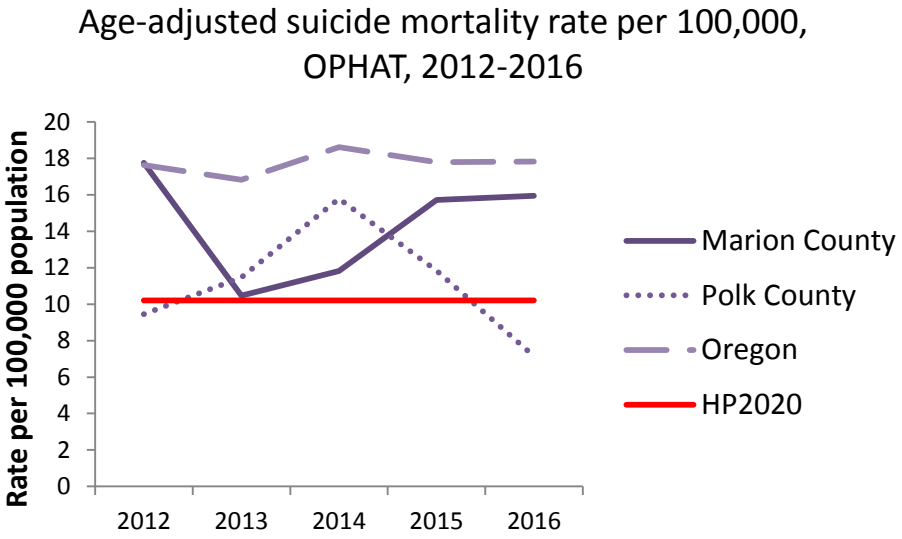
- A higher percentage of females of been diagnosed with depression than males in the community and the state.[21] Polk County females had a much lower percentage diagnosed with depression than females in Marion and the state.



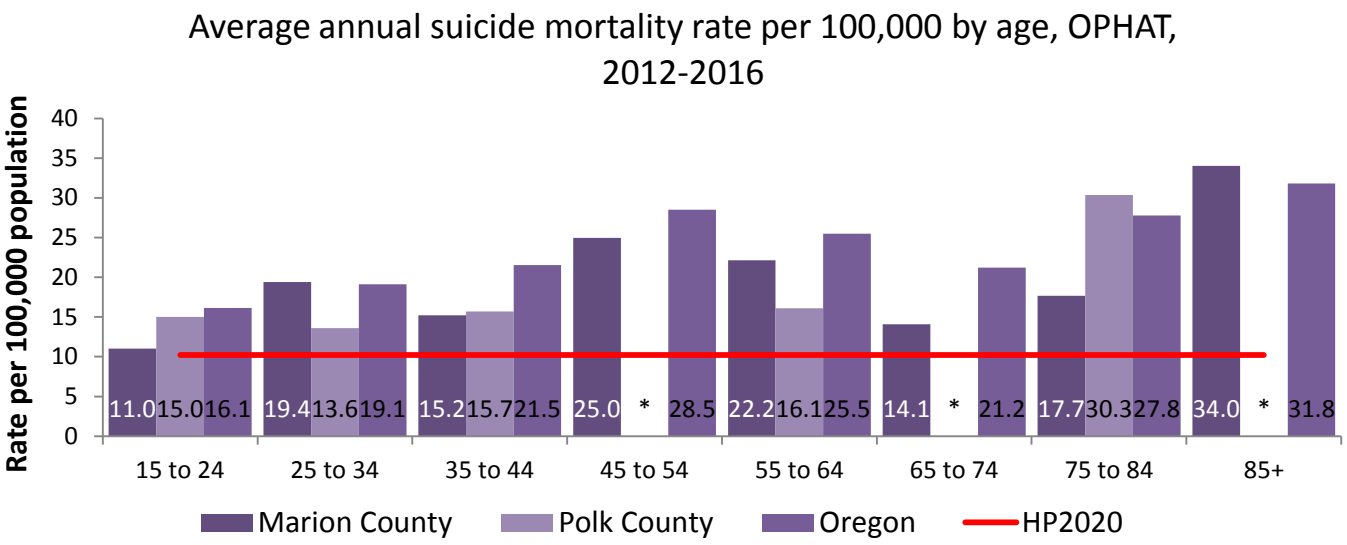
Suicide

Suicide is a complex public health problem that has lasting effects on individuals, families, and communities. Risk factors for suicide include a history of depression or other mental illness, substance abuse, family history of suicide, isolation, physical illness, and unwillingness to seek help due to stigma.[92] Suicide rates have been on the rise over the last decade in both Oregon and the United States; Oregon has consistently had higher suicide rates than the nation for the past 30 years. When non-fatal, those who attempt suicide can have lasting health issues that can include organ failure, depression, and brain damage.

- The suicide mortality rate has been increasing in Marion and the state in recent years, while declining in Polk.[22] The community had a lower suicide mortality rate than the state, and Polk had a lower rate than Marion. Polk has met the Healthy People 2020 goal for suicide mortality (10.2 per 100,000).[28]

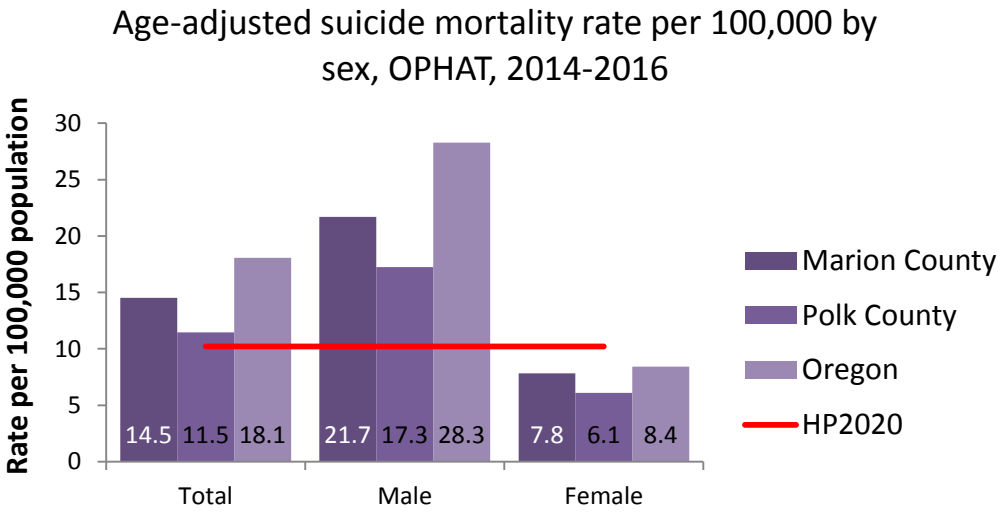


- Between 2012 and 2016, about half of suicides (44-55%) occurred in community members between the ages of 30-59.[22] One in four suicides occurred in members over the age of 60.
- The suicide rate increases with age, first peaking in middle age (45-54) before falling off and rising again to its highest point for those in older age groups (75+).[22]

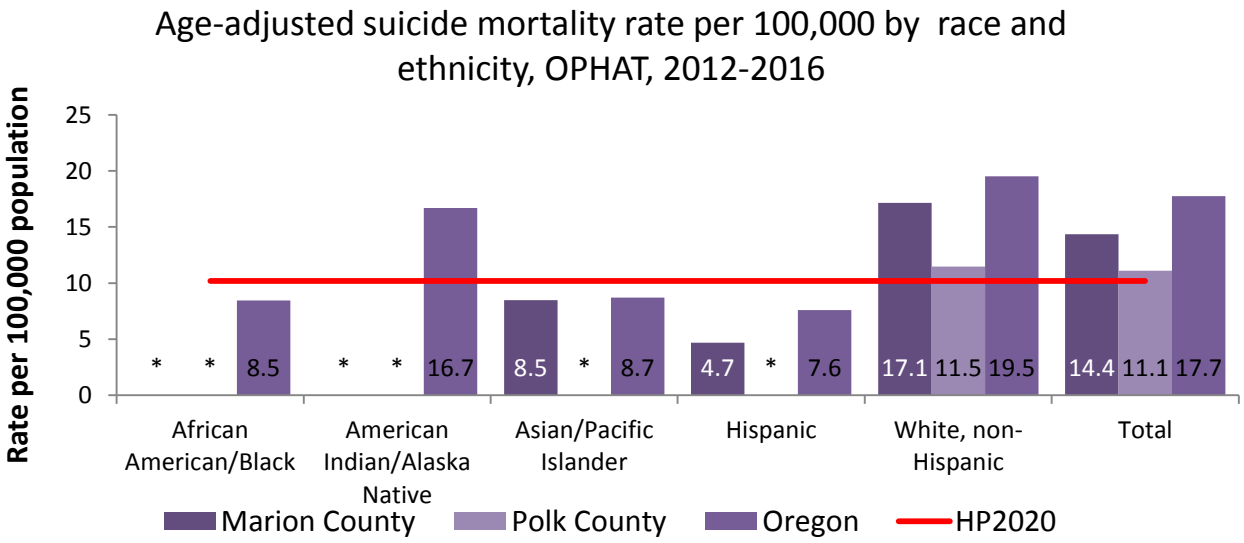


Note: Rates with (*) were unreliable and not displayed

- Suicide mortality rates were higher in males than females.[22]

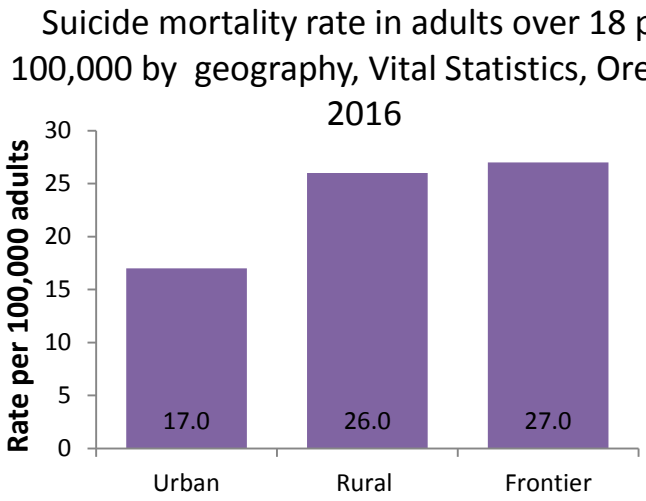


- People who identified as American Indian/Alaska Native or White, non-Hispanic had higher suicide mortality rates than their peers.[22]



Note: Rates with (*) were unreliable and not displayed

- In Oregon, adults who lived in rural or frontier areas had higher suicide mortality rates than those who lived in urban areas.[25]

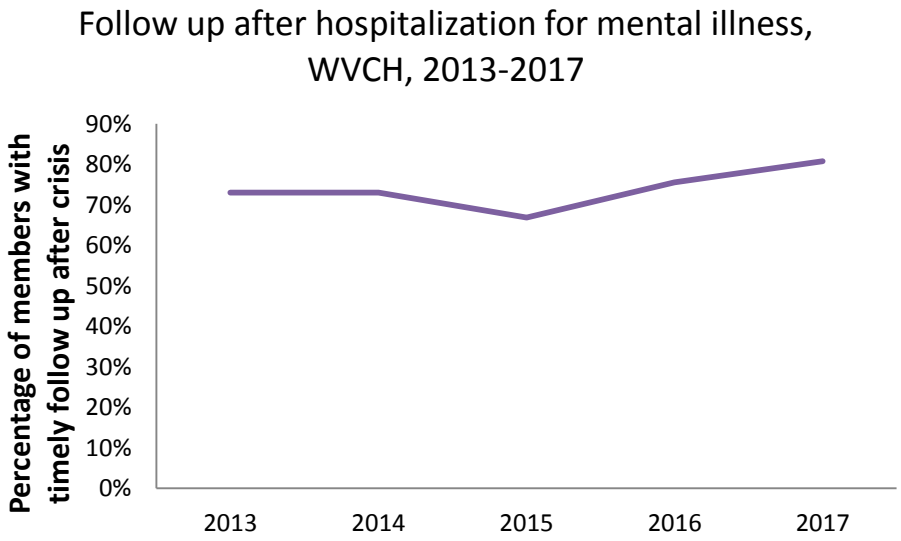


CCO Measures for Mental Health

Follow Up Care after Mental Health Crisis

Overall the CCO has increased the percentage of members who received timely follow up care after a mental health crisis since 2013. The graph below illustrates the percentage of members who received a follow-up healthcare visit in the week following hospitalization for mental illness within the measurement year.

Note: WVCH CCO metrics are measured and submitted to the Oregon Health Authority (OHA) on an annual basis according to technical specifications outlined by the OHA which can be found here: **https://www.oregon.gov/OHA/HPA/ANALYTICS/Pages/CCO-Baseline-Data.aspx)**



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

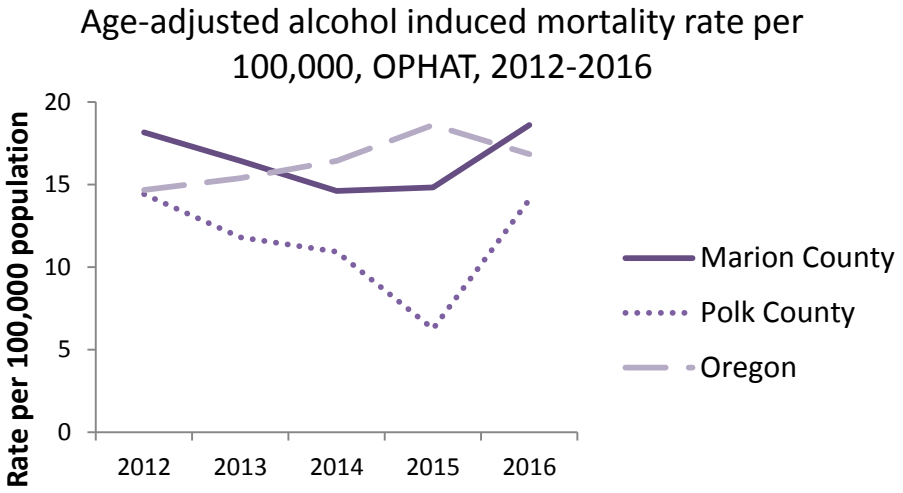
Alcohol, Tobacco, and Drug Use

Substance use and abuse, including alcohol, tobacco, and drugs, remain the primary source(s) of preventable death in the community, state, and the country. Substance use disorders can occur in some people, which the Substance Abuse and Mental Health Services Administration (SAMHSA) defines as, "recurrent use of alcohol and/or drugs that cause significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home."[93] Commonly, mental illness and substance use disorders occur together and are known as "co-occurring". In 2014, 20.2 million adults in the United States (8.4%) had a substance use disorder and of those 7.9 million had both a mental disorder and a substance use disorder. This significant overlap between substance abuse and mental health underscores the importance of capturing who is engaging in behaviors indicative of these disorders in the community.

Alcohol

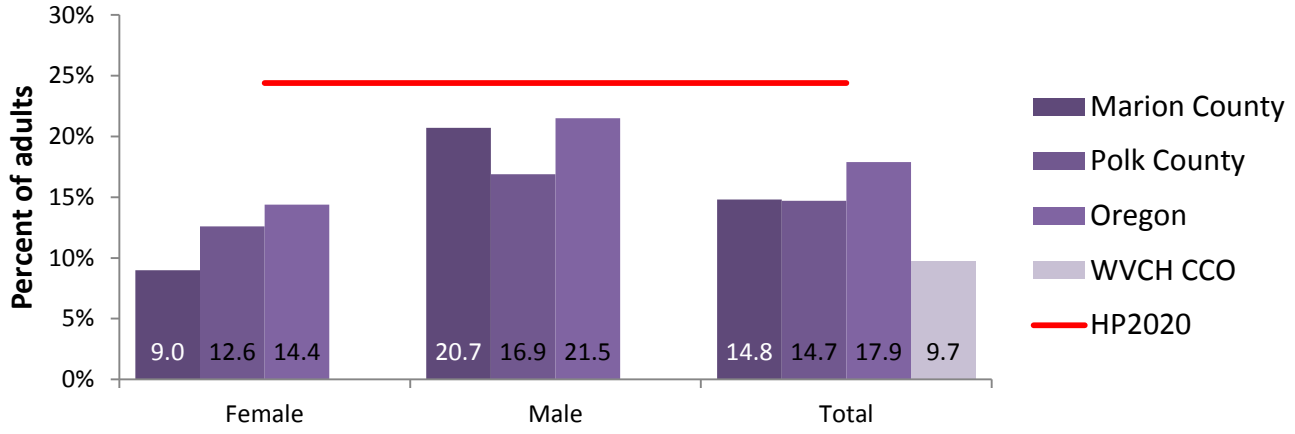
Excessive use of alcohol can increase the risk of developing chronic diseases including heart disease, cancer, and alcoholic liver disease.[79] It is also a risk factor for unintentional injuries including motor vehicle crashes, violence, unintended pregnancy, and sexually transmitted infections. In 2015, 1,933 people in Oregon (43 per 100,000 population) died from alcohol-related causes.[22] The overall alcohol related mortality rate has increased by 38% since 2001. A recent national study ranked Oregon the third highest for deaths related to alcohol.[89] The economic cost of excessive drinking is also high and was estimated to be $249 billion annually in the US in 2010.[79] For more information about alcohol use in teens see the Infant, Child, and Adolescent Health section.

- Between 2012 and 2016, 33% of motor vehicle fatalities in Marion involved alcohol, compared to 29% in Polk, and 32% in the state.[91]
- The alcohol induced mortality rate has been increasing in the community and the state in recent years.[22] Polk had a lower alcohol induced mortality rate than Marion and the state.



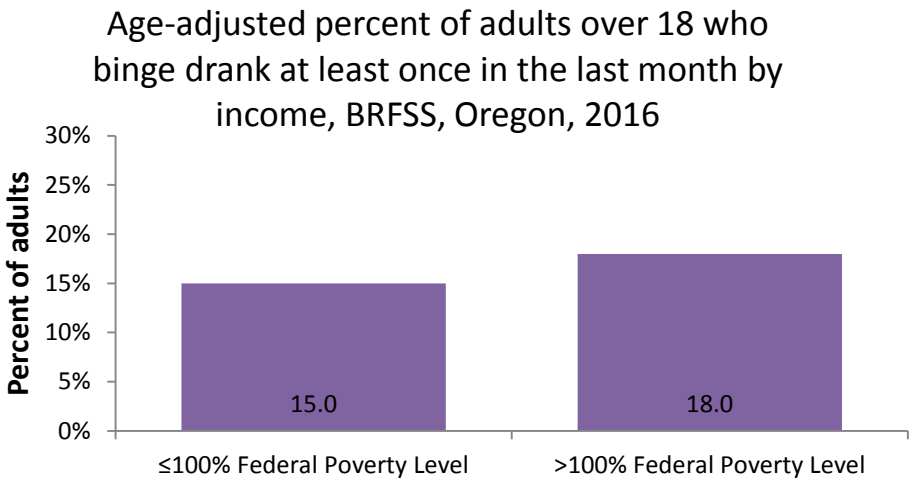
- In 2016, 15% of 11th graders in Marion reported binge drinking at least once in the last month, compared to 17% in Polk and 16% in Oregon.[80]
- A lower percentage of adults reported that they binge drank in the last month in the community compared to the state.[22] The community and the state are currently meeting the Healthy People 2020 goal for binge drinking (24%).[28] A higher percentage of males reported that they binge drank in the last month than females in the community and the state.[22] Although not directly comparable, it would appear that a smaller percentage of community members enrolled in Medicaid (WVCH CCO) binge drank in the last month compared to the community as a whole.[13]

Age-adjusted percent of adults over 18 who binge drank at least once in the last month, BRFSS, 2012-2015



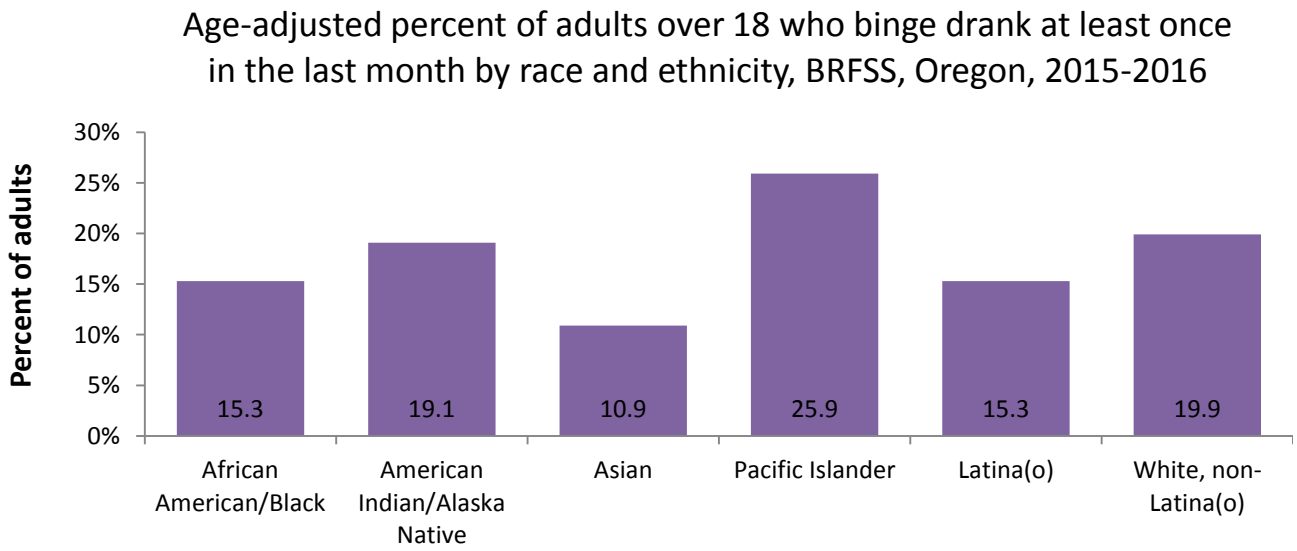
Note: Binge drinking is defined as 4 drinks for women and 5 drinks for men on one occasion in the past 30 days
**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

- In Oregon, a higher percentage of adults living above the Federal Poverty Level (FPL) reported binge drinking in the last month compared to those living below the FPL.[25]



Note: Binge drinking is defined as 4 drinks for women and 5 drinks for men on one occasion in the past 30 days

- In Oregon, those who identified as American Indian/Alaska Native, Pacific Islander, or White, non-Latina(o) had the highest percentage of binge drinking.[25]



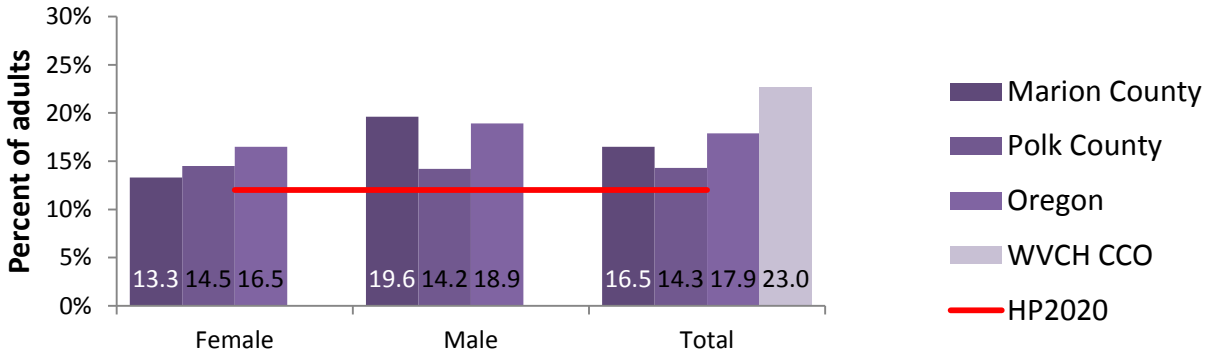
Note: Binge drinking is defined as 4 drinks for women and 5 drinks for men on one occasion in the past 30 days

Tobacco

Tobacco use in all of its various forms is still the number one cause of preventable deaths in Oregon.[25] Every year about 7,500 people die from tobacco use in the state, which is equivalent to 1 out of every 5 deaths. Secondhand smoke is responsible for 650 additional deaths in Oregon each year. People who have lower income or identify as certain racial and ethnic groups are disproportionately affected both in terms of tobacco use and environmental exposure to smoke. Changing policies and the environment where smoking takes place can help to reduce to health burden of tobacco use. For more information about tobacco use in teens see the Infant, Child, and Adolescent Health section and the role of tobacco in the Chronic Disease section.

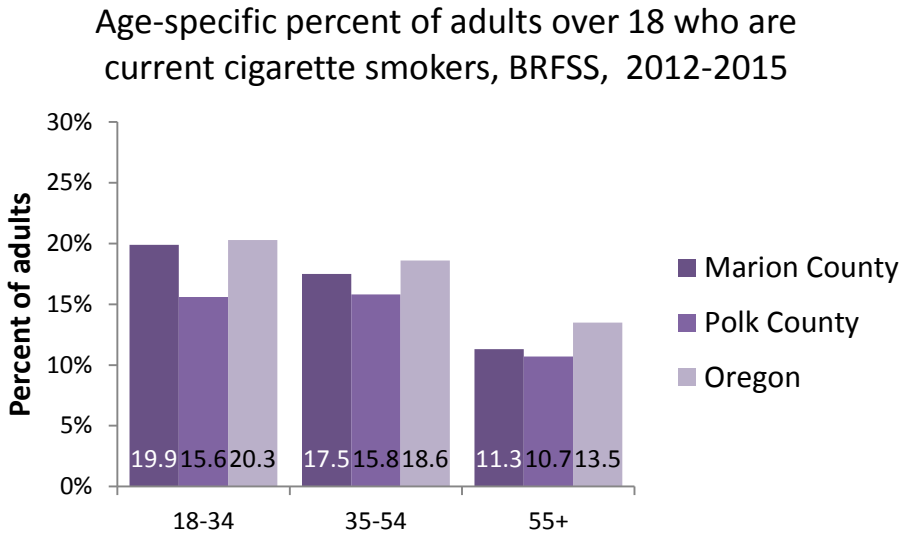
- The way tobacco is being consumed is changing in the state, as cigarette smoking has decreased, there has been an increase in electronic tobacco use for both adults and teens.[21,80,84] In 2016, 4% of adults and 14% of 11th graders were currently using electronic tobacco in Oregon.[21,80]
- The community had a lower percentage of current cigarette smokers than the state, but it's not currently meeting the Healthy People 2020 goal (12%).[21,28] Males were more likely to be current smokers than females, although Polk had a similar prevalence for both sexes. Although not directly comparable, community members on Medicaid (WVCH CCO) were more likely to report current smoking than the community as a whole.[13]

Age-adjusted percent of adults over 18 who are current cigarette smokers by sex, BRFSS, 2012-2015

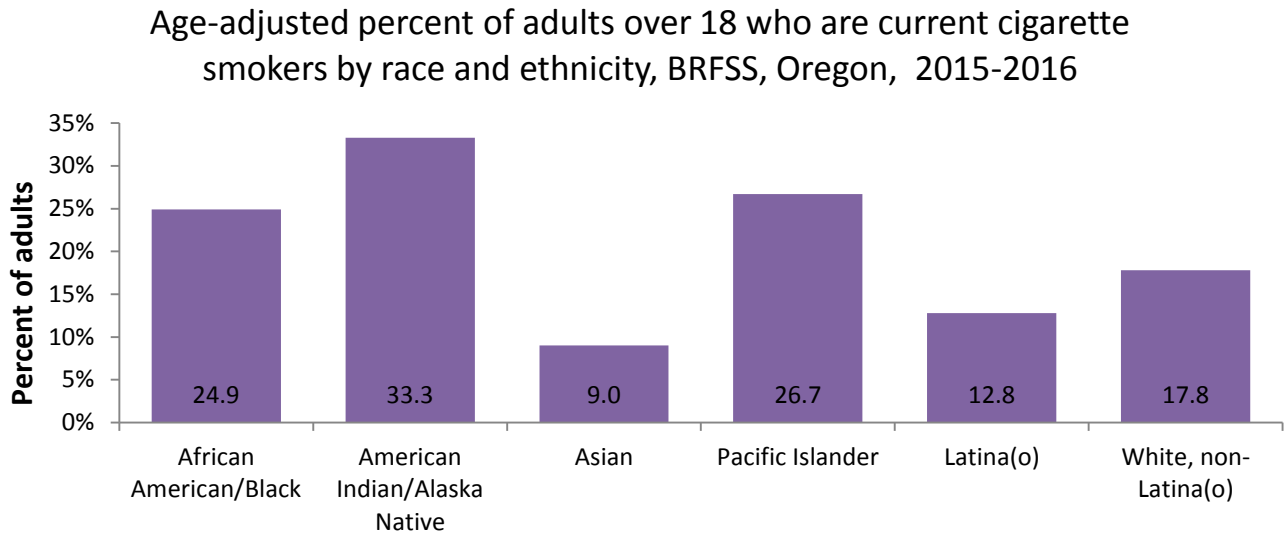


**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

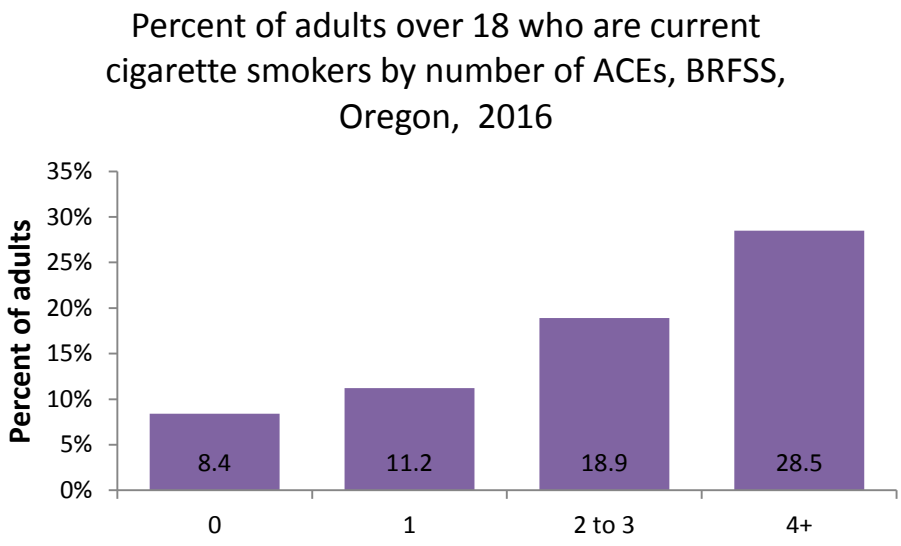
- The percentage of adults reporting current cigarette smoking decreased with age in both the community and the state.[21]



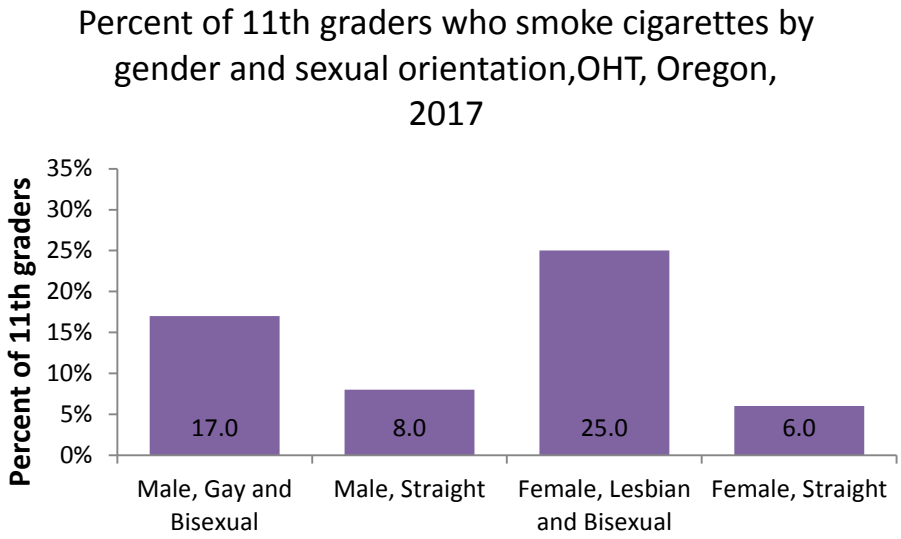
- In Oregon, adults who identified as African American/Black, American Indian/Alaska Native, or Pacific Islander were more likely to be current cigarette smokers than other races/ethnicities.[25]



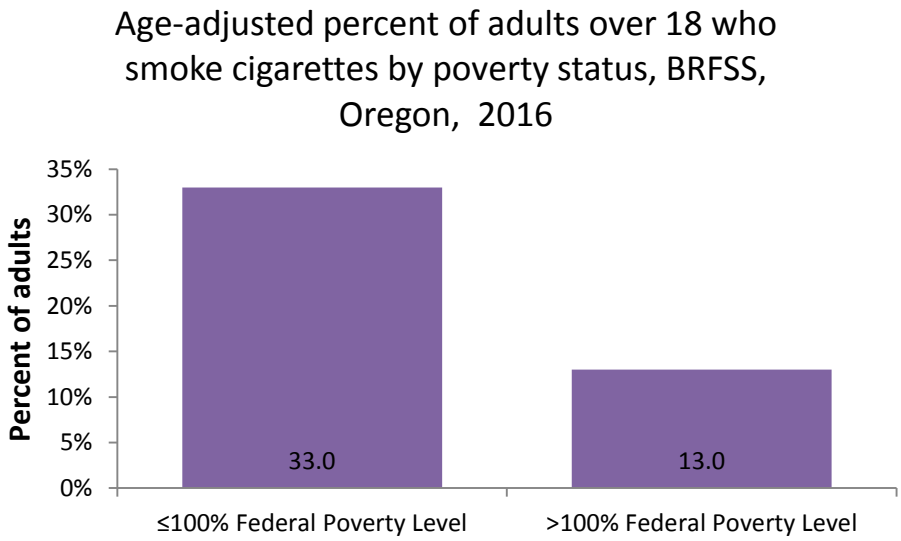
- In Oregon, adults who experienced more ACEs were more likely to be current smokers.[25]



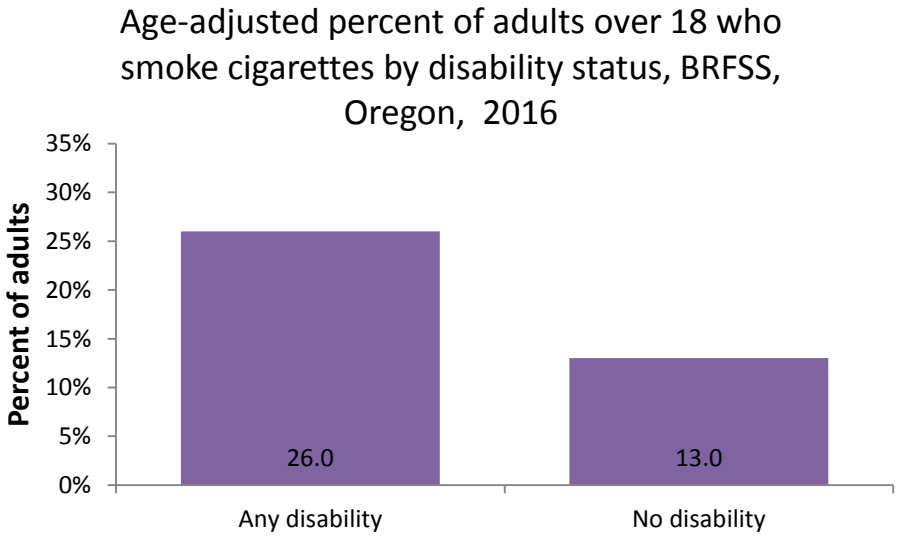
- In Oregon, gay and bisexual 11th graders were more likely to be current smokers than their straight peers.[25]



- In Oregon, adults living below the Federal Poverty Level were more likely to be a current smoker than those living above it.[25]



- In Oregon, adults living with disabilities were twice as likely to report smoking cigarettes as adults without disabilities.[25]

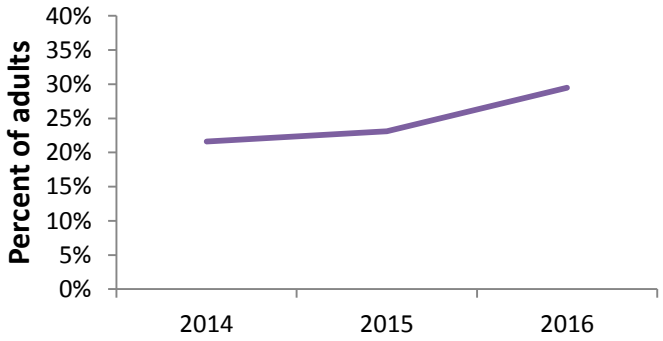


Marijuana

With the legalization of recreational marijuana in Oregon in 2014, there has been an increase in adult use and a shifting of social norms as fewer teens consider it to be harmful than in the past.[21,80] The rate of marijuana use has historically been higher in Oregon compared to the rest of the United States.[25] The CDC warns that marijuana intoxication can distort perception, impair problem solving, learning, and memory.[94] Chronic marijuana use can lead to addiction, which may interfere with family, school, work, and recreational activities. For more information about marijuana use in teens see the Infant, Child, and Adolescent Health section.

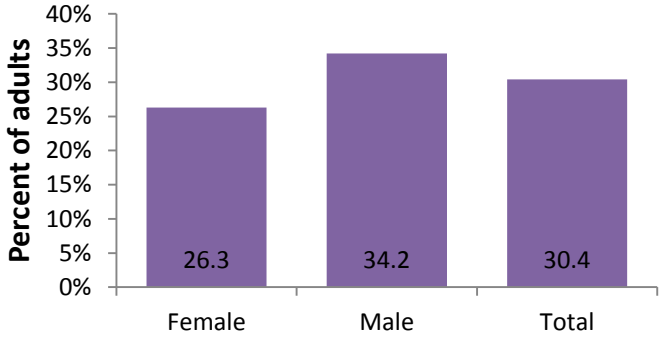
- The percentage of adults reporting marijuana use in the last month has been increasing in recent years.[21] About 3 out of 10 adults in Oregon reported using marijuana in the last month in 2016.

Percent of adults over 18 who used marijuana in last month, BRFSS, Oregon, 2014-2016



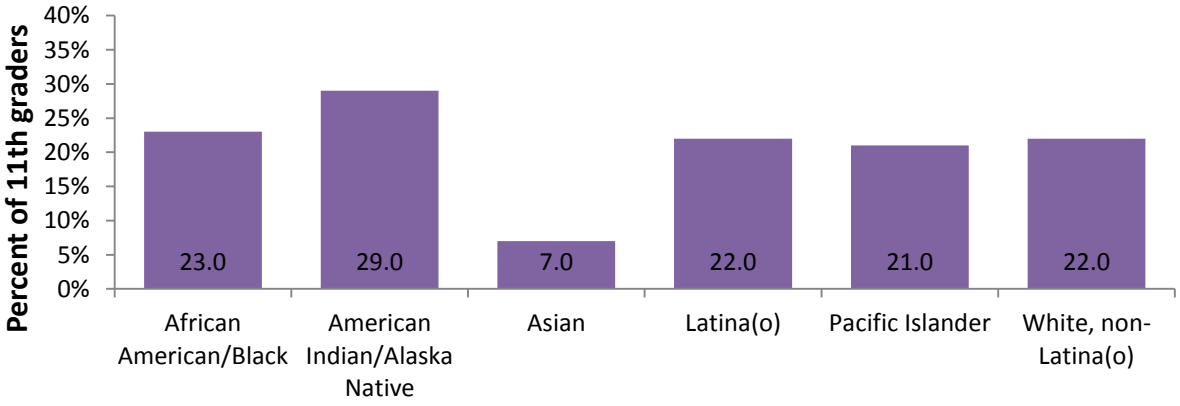
- In Oregon, a higher percentage of males reported using marijuana in the last month than females.[21]

Age-adjusted percent of adults over 18 who used marijuana in last month by sex, BRFSS, Oregon, 2016



- In Oregon, a higher percentage of 11th graders who identified as American Indian/Alaska Native were using marijuana compared to other races and ethnicities.[25]

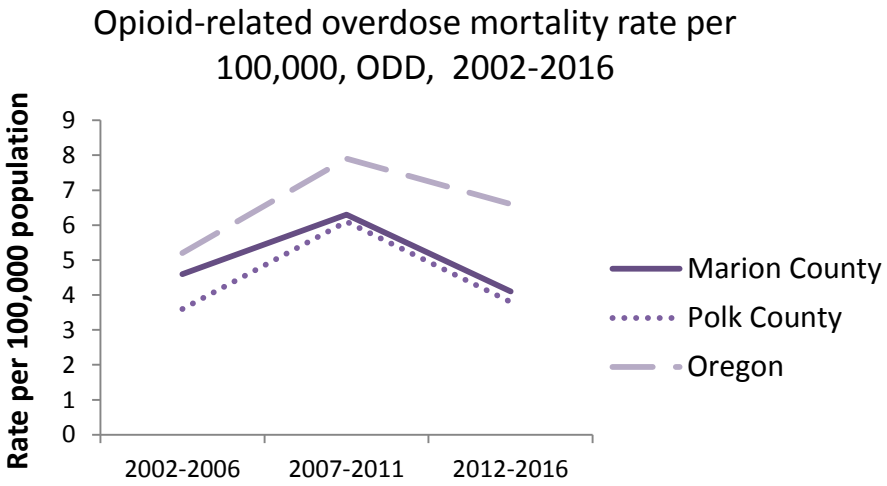
Percent of 11th graders who currently use marijuana by race and ethnicity, SWS, Oregon, 2016



Prescription and Illicit Drugs

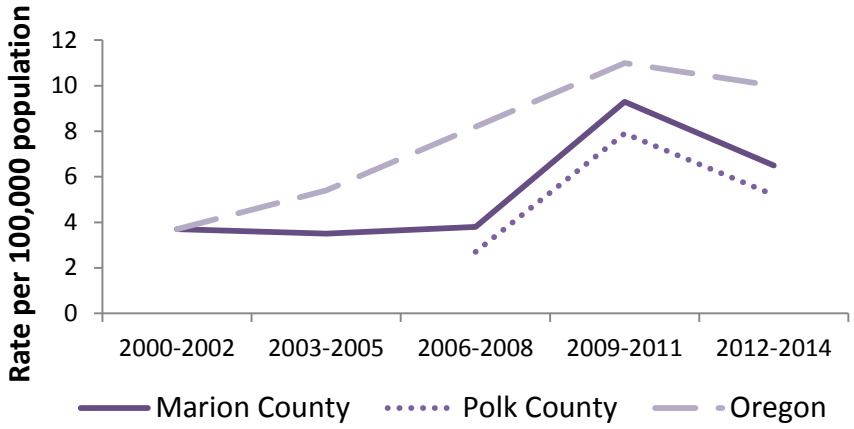
Prescription drug misuse has been a recent topic of interest as communities struggle to combat the opioid epidemic. Opioids include both prescription and illicit drugs such as heroin. Deaths related to opioid overdose steadily rose after 1999 in Oregon, peaking in 2011, and declining in recent years.[25] Opioid prescription misuse has been linked to a rise in injection drug use, which puts a user at higher risk of becoming infected with HIV or hepatitis C.[95] Misuse of prescription drugs can be combatted with controlled disposal locations and "Take Back" days, provider education around best prescribing practices, and prescription drug monitoring programs. For information about prescription and opioid use in teens see the Infant, Child, and Adolescent Health section.

- The opioid-related overdose mortality rate peaked between 2007 and 2011 and has since been decreasing in the community and the state. The community had a lower opioid-related overdose mortality rate than the state.



- The opioid-related overdose hospitalization rate peaked between 2009 and 2011 and has been decreasing in recent years in the community and the state. The community had a lower opioid-related overdose hospitalization rate than the state.

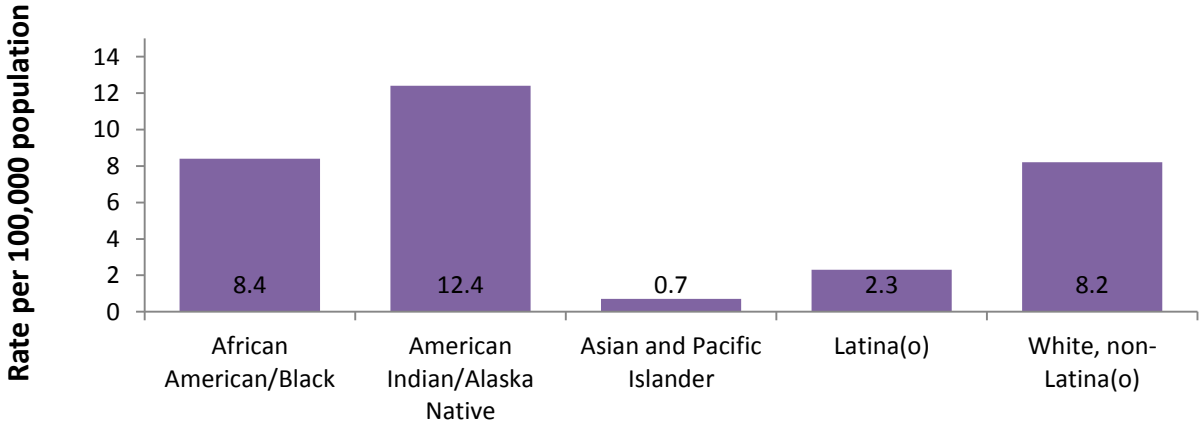
Opioid-related overdose hospitalization rate per 100,000, ODD, 2002-2016



Note: Polk data not available prior to 2006

- In Oregon, American Indian/Alaska Natives had the highest opioid overdose mortality rate, followed by African American/Blacks and White, non-Latina(o)s.

Age-adjusted opioid-related overdose mortality rate per 100,000 by race and ethnicity, Vital Statistics, 2011-2015

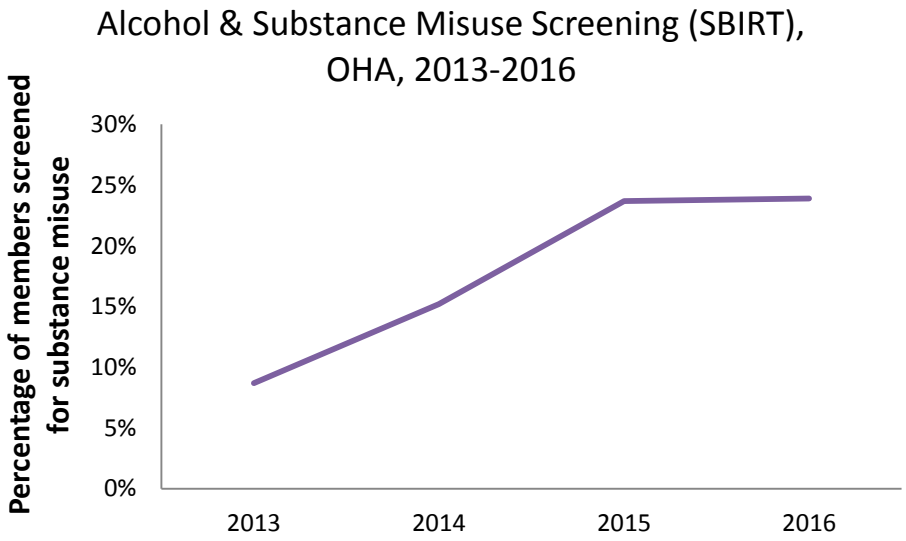


CCO Measures for Alcohol & Substance Misuse Screening and Brief Intervention (SBIRT)

Alcohol & Substance Misuse Screening

Overall the CCO has increased the percentage of members who are being screened for drug and alcohol abuse, and being provided with initial interventions when the screening is positive for misuse. The graph below illustrates the percentage of members who received screening and when positive, a brief intervention, and education, within the measurement year.

Note: WVCH CCO metrics are measured and submitted to the Oregon Health Authority (OHA) on an annual basis according to technical specifications outlined by the OHA which can be found here: **https://www.oregon.gov/OHA/HPA/ANALYTICS/Pages/CCO-Baseline-Data.aspx).**



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Railroad in Aurora, Oregon

Access to Care

Access to Care

Access to comprehensive health care services is important for the achievement of health equity and increasing the quality of health and life for everyone in a community. Health care includes both physical and behavioral health services. Accessing the health care system depends on health insurance coverage, availability of providers, and transportation to attend appointments. This section provides a brief overview of access to health care services.

This section provides a brief overview of access to health care services. A more detailed assessment is available on the Marion County Health & Human Services website at: http://www.co.marion.or.us/HLT/BoardsCoalitionsCommittees/HAB/Documents/Marion-PolkHealthCareAccessAssessment2016.pdf

Key Findings for Marion & Polk County:

- About 94% of community members had health insurance, which was similar to the state and has been increasing in recent years. Marion had a higher percent insured by Medicaid (32%) compared to Polk (26%) and the state (26%). Those who were younger, lived more rurally, or identified as Latina(o) were less likely to have insurance.
- The community, like the state, is suffering from a shortage of healthcare providers. There were fewer primary care and mental health providers relative to the population size than the state. Dentists and specialists in Polk have to serve a larger number of people than Marion and the state. Providers practicing in more rural regions have more people to serve than those practicing in urban areas.
- Just over half of adult community members received an annual checkup. About 1 out of every 5 adult community members reported that they were unable to see a provider in the last year due to cost. A higher percentage of adult community members living with disabilities were unable to see a provider due to cost.
- About 63% of adults in Marion and 73% in Polk were able to see a dentist in the last year, compared to 67% in the state. Adult community members below the Federal Poverty Level or were living with a disability were less likely to visit a dentist in the last year.

Health Insurance

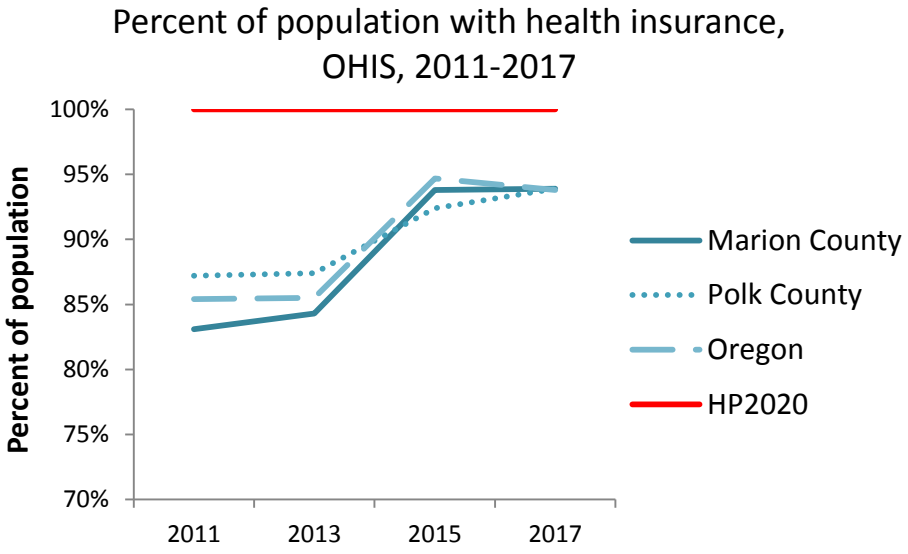
The Affordable Care Act (ACA) has expanded health insurance coverage in the community and now more people have insurance than in the past. Insurance status suggests access to a primary care physician and preventive care. However, in a local survey conducted in 2018 as part of the Community Themes & Strengths Assessment, some community members reported that the high cost of care was a substantial barrier to accessing services.

- In the community and the state, about 94% of people had health insurance.[96] Group insurance through employers and other sources was the most common type of insurance, followed by OHP (Medicaid), Medicare, and individual sources.[96] A higher percentage of community members in Marion had Medicaid as an insurance source than Polk and the state.

Health insurance coverage types and rates, OHIS, 2017			
Insurance Status	**Marion**	**Polk**	**Oregon**
Insured (%)	93.9	93.9	93.8
Uninsured (%)	6.1	6.1	6.2
Type of insurance			
Group* (%)	44.9	49.5	47.5
Individual† (%)	3.4	4.6	5.2
OHP (Medicaid)‡ (%)	31.8	26.4	26.0
Medicare (%)	13.8	13.4	15.1
No insurance (%)	6.1	6.1	6.2

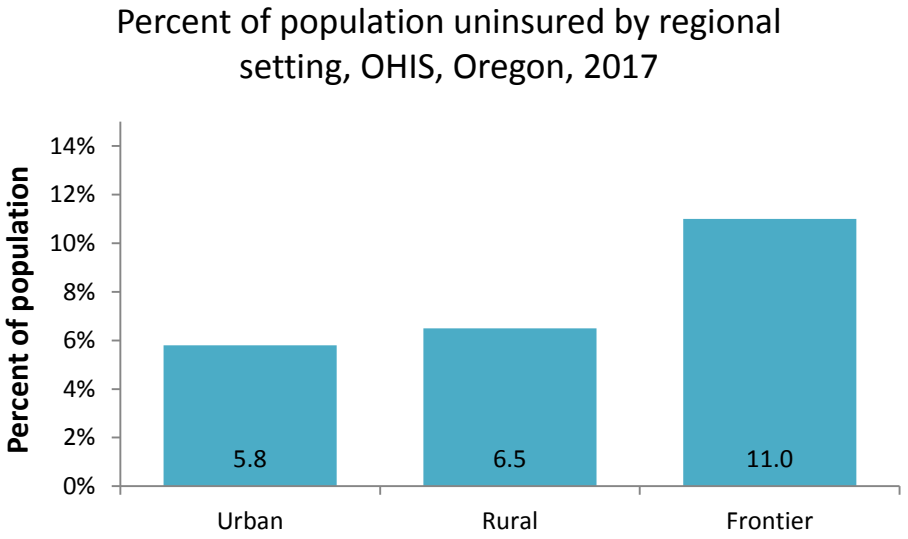
*Group coverage: obtained through someone's work, union, association or trust; Cobra or state continuation; Veteran's Affairs, Military Health, TRICARE or CHAMPUS; or a student health insurance program.
† Individual coverage: bought directly by the respondent or another person. It includes plans bough ton the insurance exchange, through a broker, or directly from an insurance provider
‡ OHP/Healthy Kids: Medicaid coverage in Oregon and includes Medicaid CCO and FFS.

- Health insurance coverage has been increasing in recent years in all regions, but has not yet met the Healthy People 2020 goal (100%).[28]

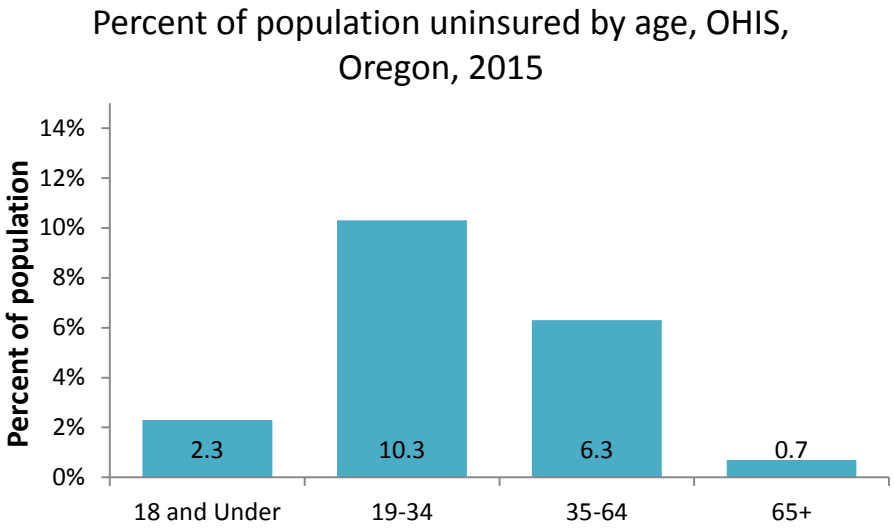


Note: Polk values before 2017 include respondents from Yamhill County.

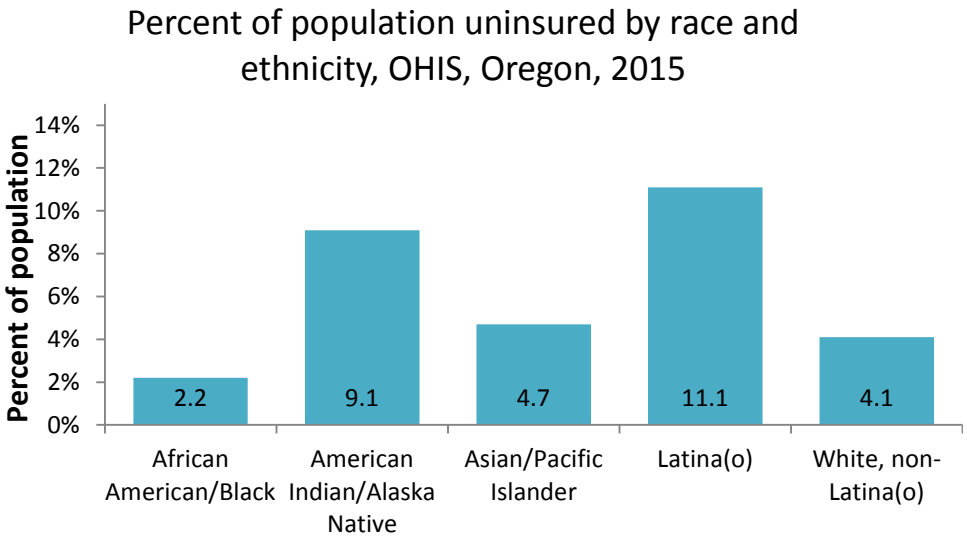
- In Oregon, a higher percentage of people living in frontier regions were uninsured compared to other regional settings.[96]



- In Oregon, those between the ages of 19 and 34 were less likely to have health insurance.[96]



- In Oregon, a higher percentage of people who identified as Latina(o) were uninsured compared to other races and ethnicities.[96]



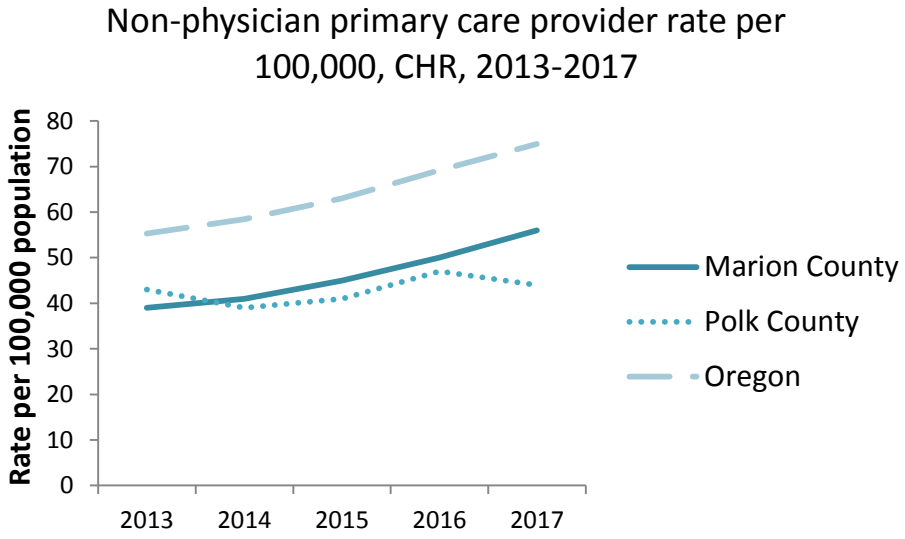
Health Care Providers

The number of providers available to serve the community is a critical component to health care access. When providers have to serve too many people, it creates gaps in care and decreases the quality of services provided. The community and Oregon is experiencing a shortage of healthcare providers across the entire spectrum, which is contributing to health disparities.[25] Access to these providers varies greatly depending on where people live, with those in rural and frontier regions having greater difficulty seeing a provider. In Oregon, the average travel time to a Patient Centered Primary Care Home (PCPCH) was 13.6 minutes. For those living in urban areas the travel time was 10 minutes, 13 minutes for rural, and 19 minutes for those living in frontier areas. Travelling to see a specialist can take even longer. A statewide study conducted in 2018 determined that the Detroit Lake area in this community had one of the greatest unmet health care needs in the state.[97] Telemedicine has the potential to increase access for those living in rural and frontier areas.

Culturally Responsive Care

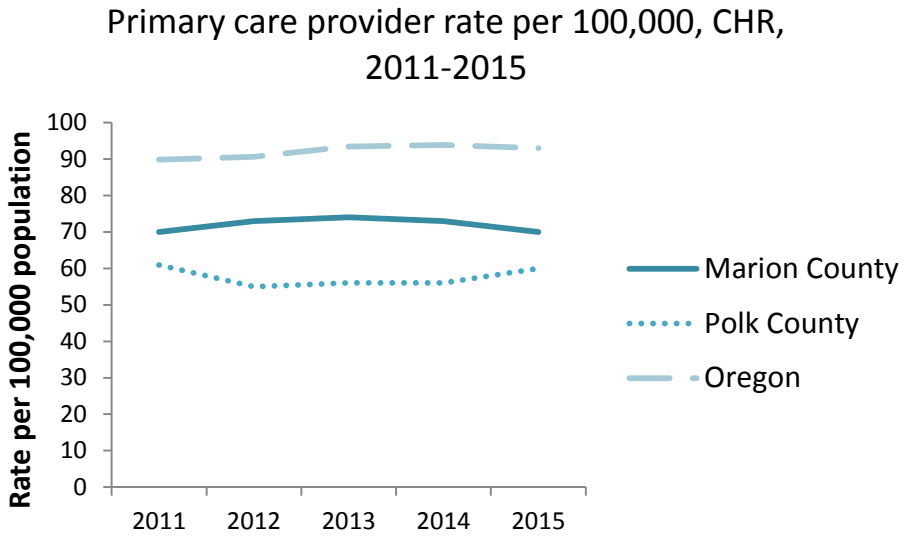
Throughout the CHA process, community members identified the need for culturally responsive, linguistically appropriate, and trauma-informed care.[98] Barriers to care are created when services are not provided in the appropriate language or do not consider the culture or past experiences of the person being served. Members from the community suggested that further diversification of the healthcare workforce and trainings would help to address these barriers.

- More non-physician providers are serving the community and the state relative to the population size in recent years.[91] The community had a lower rate of non-physician primary care providers than the state as a whole.



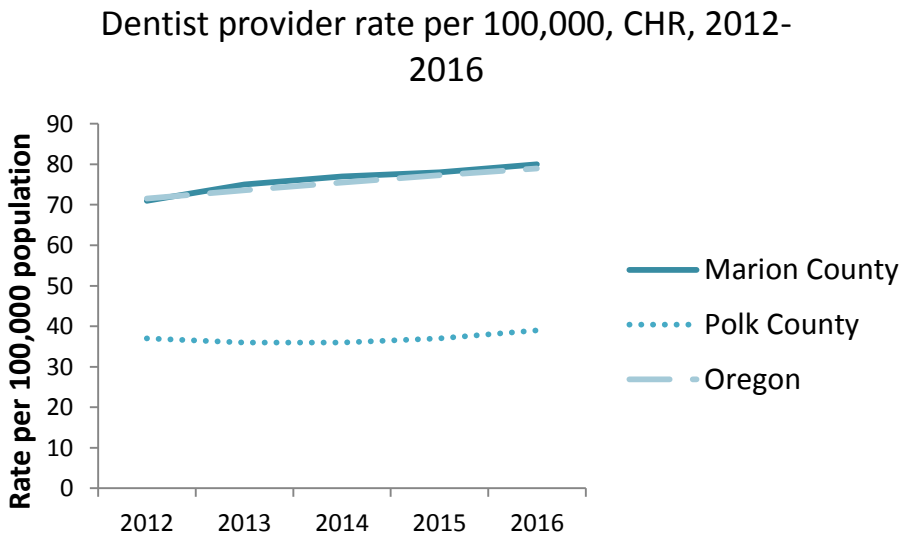
Note: Non-physician primary care providers includes nurse practitioners (NPs), physician assistants (PAs), and clinical nurse specialists.

- The number of primary care physicians relative to population size has been fairly stable in recent years both in the community and the state.[91] The community had a lower rate of primary care providers than the state.

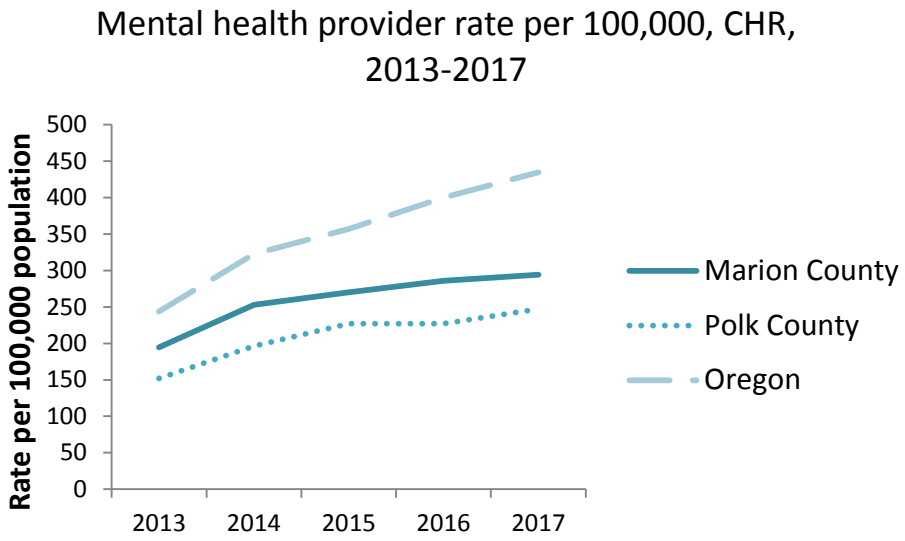


Note: Primary care providers includes physicians specializing in general practice medicine, family medicine, internal medicine, and pediatrics.

- The number of dentists serving relative to population size has been increasing in recent years in Marion and the state, but has remained stable in Polk. [91] Polk had a lower rate of dentists providing services than Marion and the state.

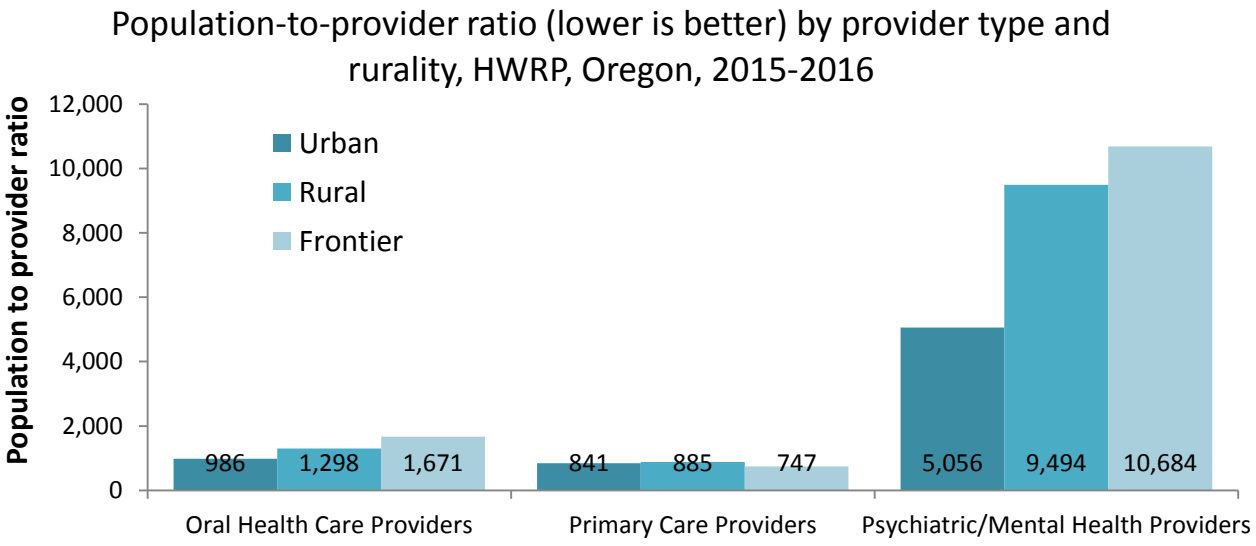


- The number of mental health providers relative to population size has been increasing in the community and the state in recent years. [91] The community had a lower rate of mental health care providers than the state as a whole.



Note: Mental health care providers include psychiatrists, psychologists, licensed social workers, counselors, marriage and family therapists, mental health providers that treat alcohol and other drug abuse, and advanced practice nurses specializing in mental health care.

- In Oregon, oral health care providers and psychiatric/mental health providers in rural and frontier areas had to serve more people than their peers who practice in urban areas. [99]



- The number of people that providers have to serve varies by the type of services that they provide and the geographical area where they practice.[99] In general, providers in Polk have to serve a larger number of people than their peers in Marion or the state.

Population to provider ratio (lower is better) by provider type and region of practice, HWRP, 2015-2016			
Provider Type	**Marion**	**Polk**	**Oregon**
Dental			
Dentists (DDS/DMD)	1,875	3,745	1,905
Dental Hygienists (RDH)	2,290	4,019	2,196
Dietician			
Licensed Dieticians (LD)	12,314	76,663	13,119
Medical			
Physicians (MD/DO)	524	1,584	428
Podiatrists (DPM)	37,438	199,325	30,097
Physician Assistants (PA)	4,453	7,215	3,370
Nursing			
Nurse Practitioner (NP)	2,390	3,132	1,915
Nurse Anesthetist (CRNA)	19,127	92,709	9,065
Clinical Nurse Specialists (CNS)	53,776	None	84,153
Registered Nurses (RN)	152	916	165
Licensed Practical Nurses (LPN)	1,079	1,967	1,548
Cert. Nursing Assistants (CNA)	200	527	344
Occupational Therapy			
Occupational Therapists (OT)	4,748	44,542	5,045
Occupational Therapy Assistants (OTA)	13,482	35,594	17,370
Pharmacy			
Pharmacists (RPH)	1,667	2,711	1,425
Cert. Pharmacy Technician (CPHT)	1,876	2,793	1,706
Behavioral/Mental Health			
Physician Assistants (PA)	None	None	445,983
Psychiatrists (MD/DO)	4,997	39,284	6,484
Nurse Practitioner (NP)	9,422	19,642	11,946
Registered Nurses (RN)	852	11,224	2,097
Licensed Social Workers*	NA	NA	889
Licensed Counselors & Therapists*	NA	NA	1,372
Licensed Psychologists*	NA	NA	2,600

Note: Patient to provider ratios are based on the estimated patient care FTE in the county, except for behavioral/mental health, which is based on counts of providers. Values greater than the county population are due to less than 1.0 FTE in the county.
* - No workforce data was collected for Qualified Mental Health Associates, Qualified Mental Health Professionals, Certified Alcohol Drug Counselors, and peer counselors. Additionally, primary care physicians who diagnose and treat behavioral/mental health disorders was not collected. NA = Not available

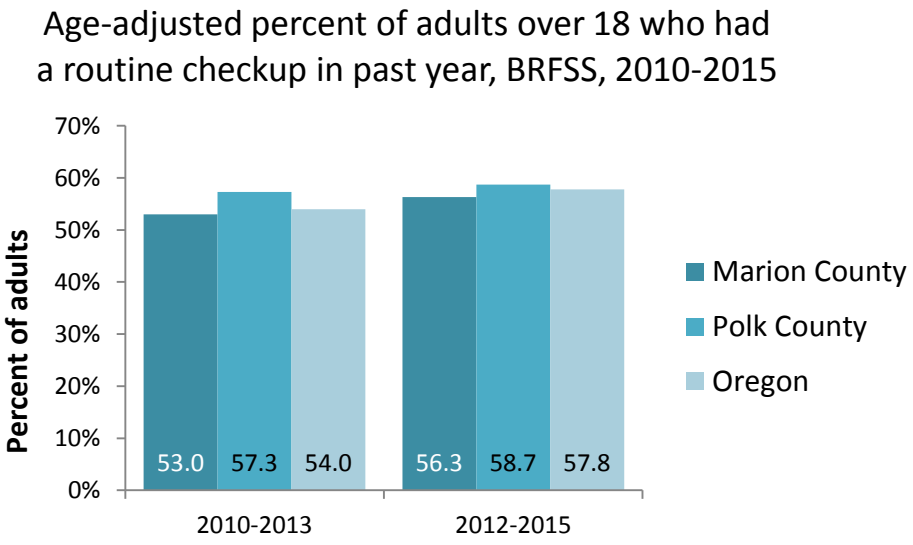
Health Literacy

Health literacy refers to the ability of someone to comprehend and use basic health information to make healthy decisions. According to a recent study, only about 12% of American adults had proficient health literacy.[25] When people can't understand health information they may misuse prescriptions, become hospitalized, or not engage in healthy behaviors. Health literacy affects everyone, but most affects people who speak a language other than English, people with lower educational achievement, older adults, people of color, people with low income, and those who experience language barriers.

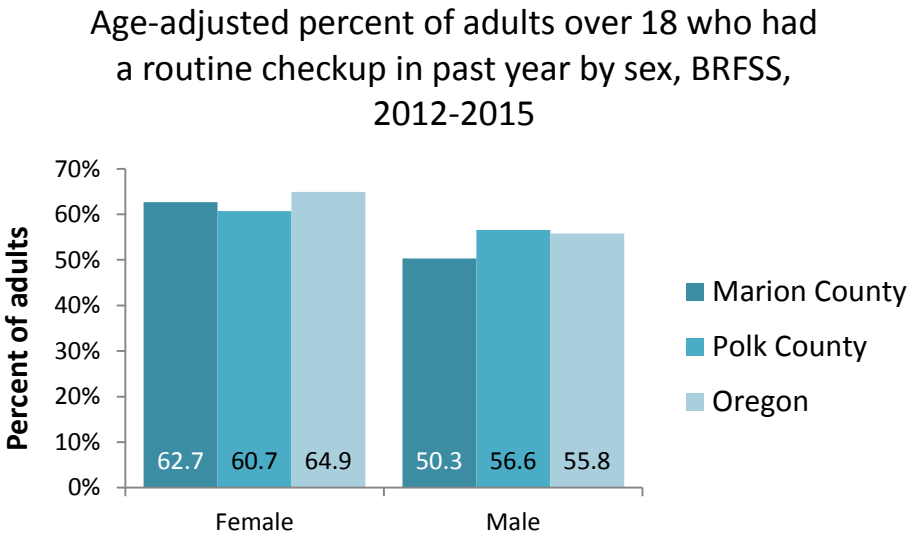
Preventive Services

Receiving the recommended health screenings, annual exams, prenatal care, immunizations, and other services help to decrease or prevent disease and other poor health outcomes from occurring. Many of these preventive services have been covered in previous sections of this report.

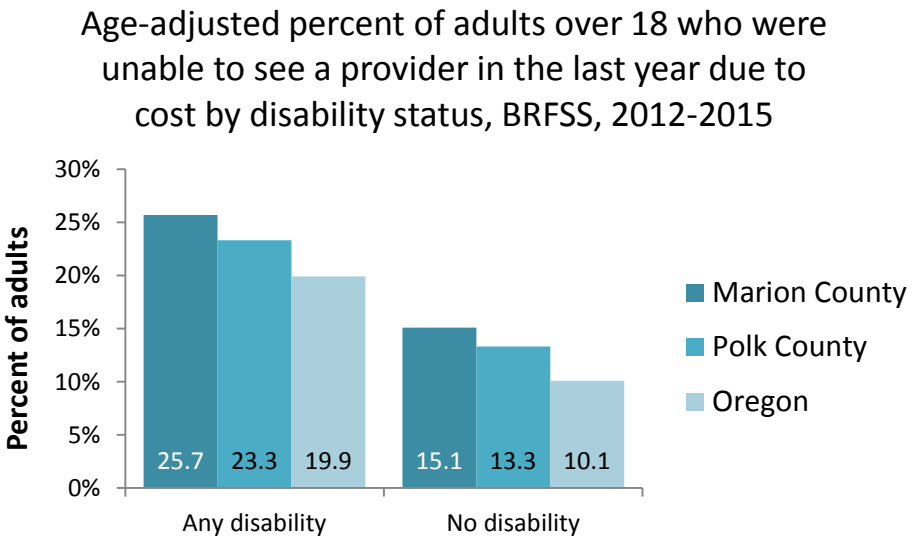
- Just over half of adult community members received an annual checkup in the last year.[22] A greater percentage of adult community members are receiving an annual checkup than in previous years. A slightly higher percentage of adults in Polk and the state are receiving an annual checkup than in Marion.



- Female adults were more likely to receive a routine checkup in the last year than adult males.[22]



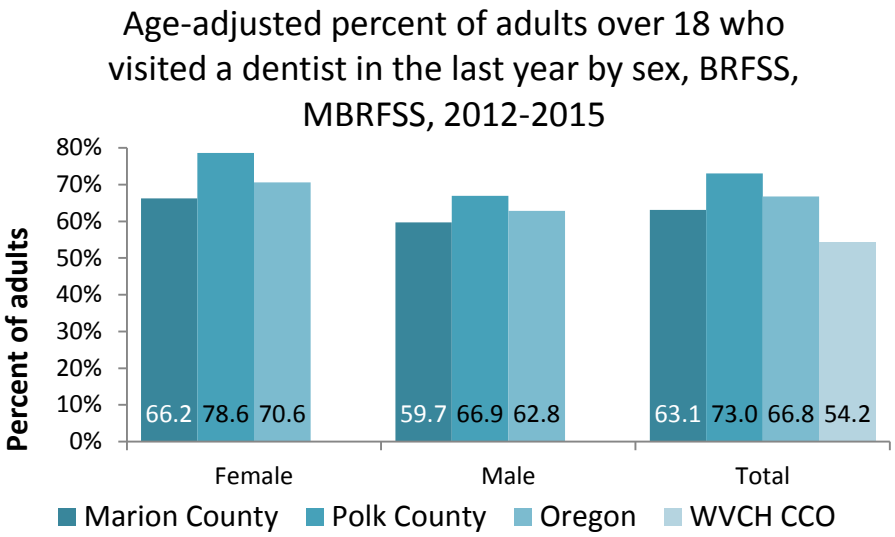
- About 1 in 5 adults in the community reported that they were unable to see a provider in the last year due to cost (not shown).[22] A higher percentage of adult community members with disabilities reported that they were unable to see a provider in the last year due to cost than adults in the community without disabilities.



Oral Health

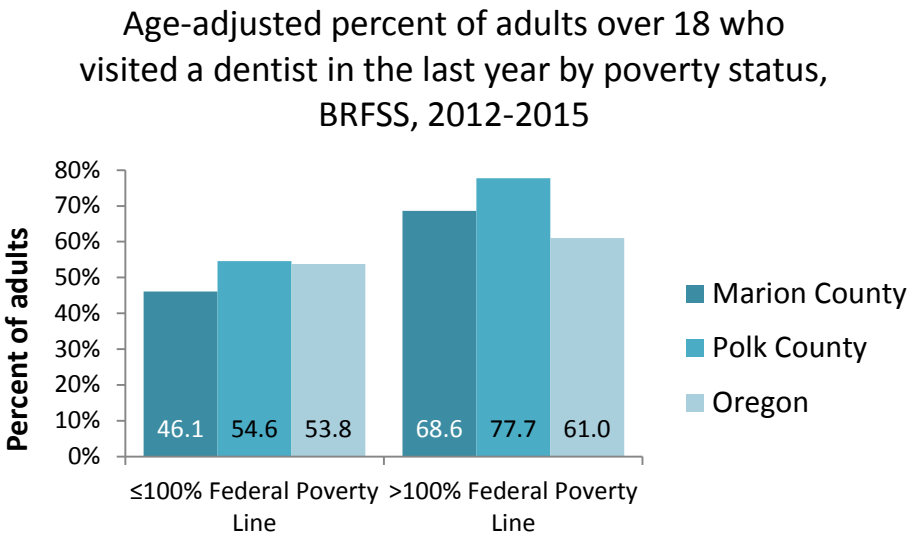
Oral health is an important component of overall health. It affects the ability to eat, speak, and show emotions. School performance and attendance along with self-esteem are influenced by oral health. Cavities, oral cancer, and gum disease are a significant source of pain and disability in America. Oral health has been associated with chronic diseases such as diabetes and heart disease. Those who use tobacco and eat or drink foods high in sugar are at greater risk of developing oral diseases. About 80% of Americans have had at least one cavity by the age of 34 and 40% of adults have felt mouth pain in the last year.[100] Every year, the nation spends about $124 billion on dental care. In Oregon, 58% of 3rd graders have had at least one cavity.[25] As with other providers, Oregon is experiencing a shortage of dental providers. Each dentist in Oregon has to serve over 2,000 people and depending on the rurality there may not be any dental providers at all.

- About 63% of adult community members in Marion and 73% of adult community members in Polk saw a dentist in the last year, which was similar to the state (67%).[22] Females were more likely to see a dentist in the last year than males. Although not directly comparable, it would appear that community members on Medicaid (WVCH CCO) were less likely to see a dentist than the community as a whole.[13]

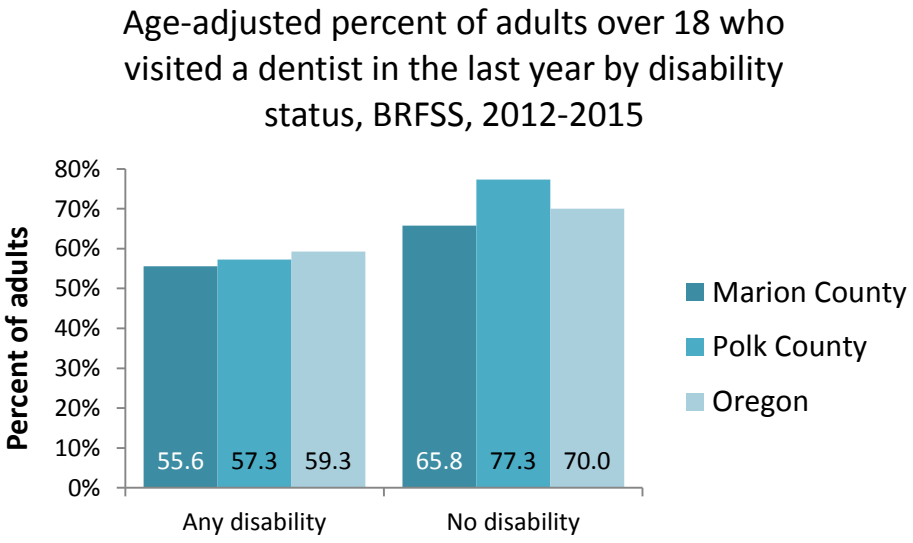


**Note: County and state estimates may not be directly comparable to Medicaid (WVCH CCO) estimates due to differences in survey methodologies and are provided as a reference point. WVCH CCO data is from 2014*.*

- Adult community members below the Federal Poverty Level were less likely to see a dentist in the last year than those above it.[22]



- Adult community members living with a disability were less likely to see a dentist in the last year than members without a disability.

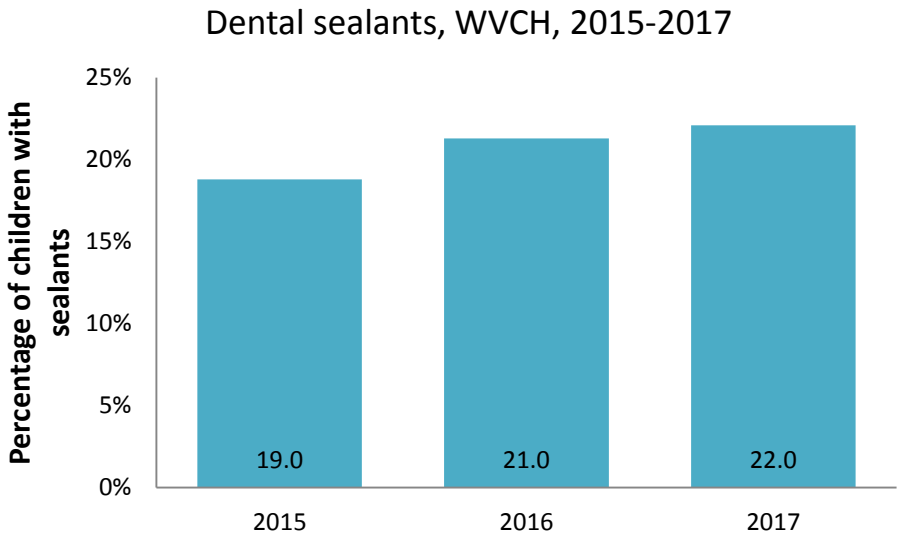


CCO Measures for Access to Care

Dental Sealants

Overall the WVCH CCO has steadily increased the percentage of child members who are receiving the key dental preventive care intervention of putting sealants on permanent molars. The graph below illustrates the percentage of eligible children who received dental sealants within the measurement year.

Note: WVCH CCO metrics are measured and submitted to the Oregon Health Authority (OHA) on an annual basis according to technical specifications outlined by the Oregon Health Authority which can be found here: https://www.oregon.gov/OHA/HPA/ANALYTICS/Pages/CCO-Baseline-Data.aspx.



Note: CCO MEASURES ARE SPECIFIC TO THE WVCH MEMBER POPULATION WITH ENROLLMENT IN THE CCO IN THE MEASUREMENT YEAR.

Clover field and bee hives near Sublimity, Oregon

Unintentional Injuries

Unintentional Injuries

Both unintentional and intentional injuries are a leading cause of death for Americans of all ages and are the top cause of death for Americans under the age of 45.[101] Injuries are the leading cause of disability at all ages, regardless of sex, race and ethnicity, or socioeconomic status. While some accidents are unavoidable, many events that result in injury, disability, or death, are predictable and preventable.

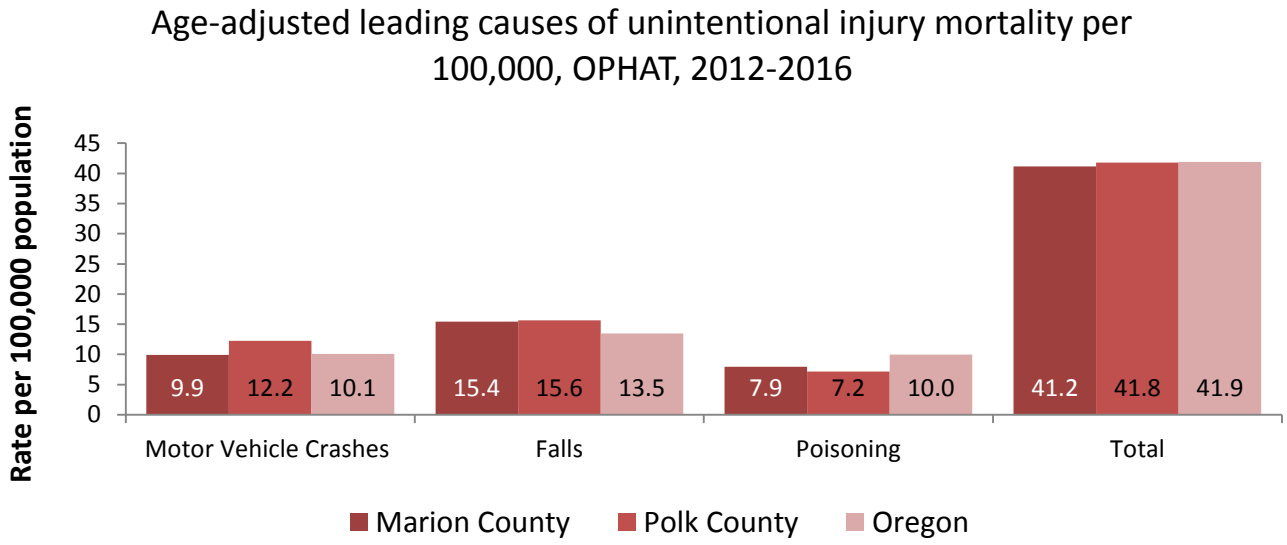
Key Findings for Marion & Polk County:

- Unintentional injuries were the third leading cause of death in the community. Motor vehicle accidents, falls, and poisonings, were the most common sources of unintentional injury death. The unintentional injury mortality rate has been increasing in the community and the state in recent years. The community has a similar unintentional mortality rate as the state, however we're not currently meeting the Healthy People 2020 goal. Preventing motor vehicle accidents and poisoning deaths would return the most years of life to the community.
    - Males died at a higher rate from unintentional injuries than females.
    - American Indian/Alaska Native and White, non-Hispanics had higher unintentional mortality rates than their peers.
- The motor vehicle mortality rate and fall injury mortality rate have been increasing in recent years and were higher in the community than the state.
- The poisoning mortality rate was lower in the community than the state.
- The firearm injury mortality rate was lower in the community than the state and varied by race and ethnicity.

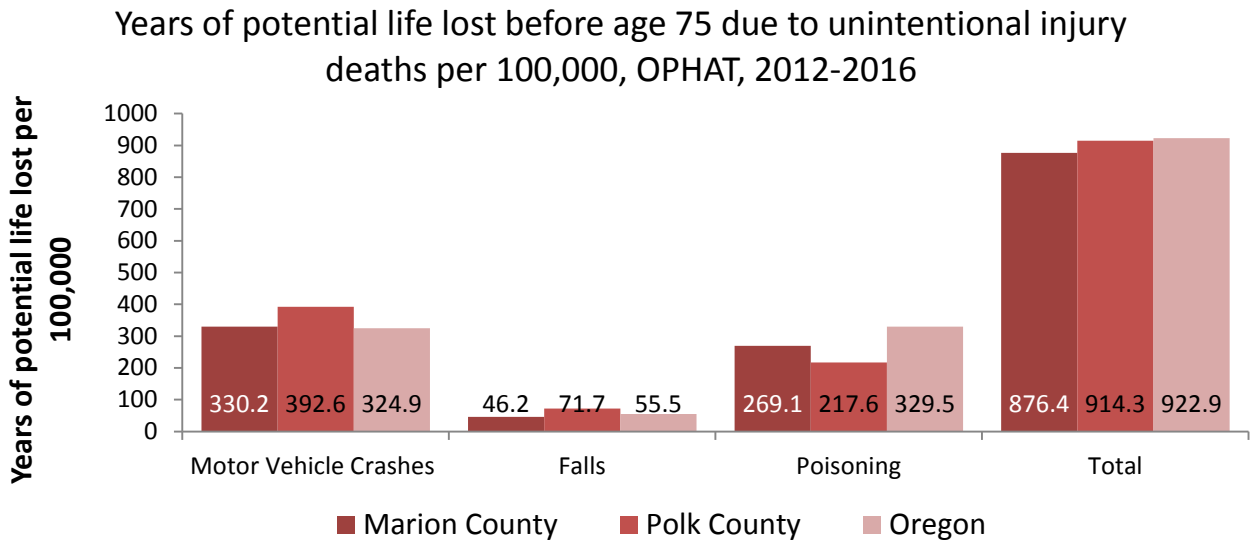
Unintentional Injury Mortality Rate

Injury mortality rates often include avoidable premature deaths such as motor vehicle deaths or workplace deaths that could have been prevented with proper seatbelt use or workplace safety. Unintentional injuries were the 3rd leading cause of death in the community in recent years and are the leading source of years of potential life lost due to early death.[22]

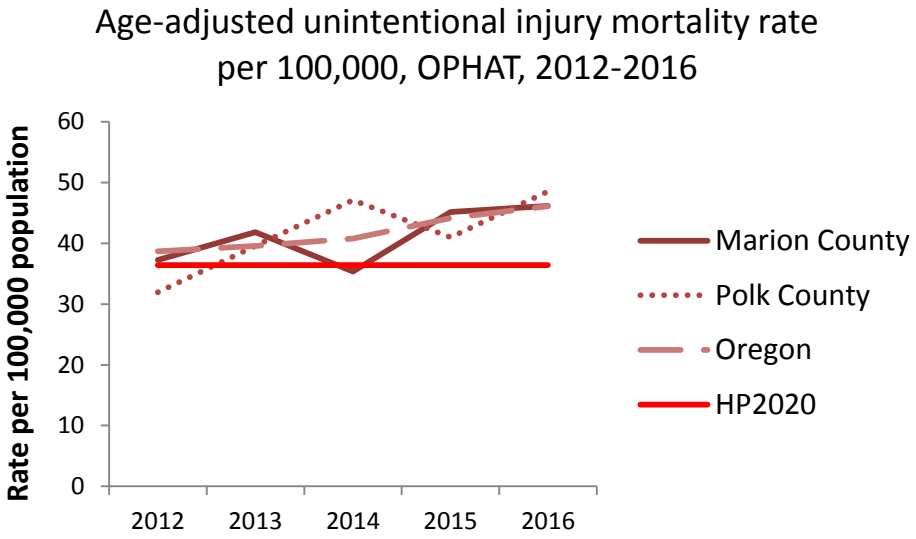
- Falls, poisonings, and motor vehicle crashes were the leading causes of unintentional injury mortality in the community.[22] The community had a similar overall unintentional injury mortality rate as the state, however death rates related to falls were higher and poisoning death rates were lower than the state. The motor vehicle fatality rate was higher in Polk than Marion and the state.



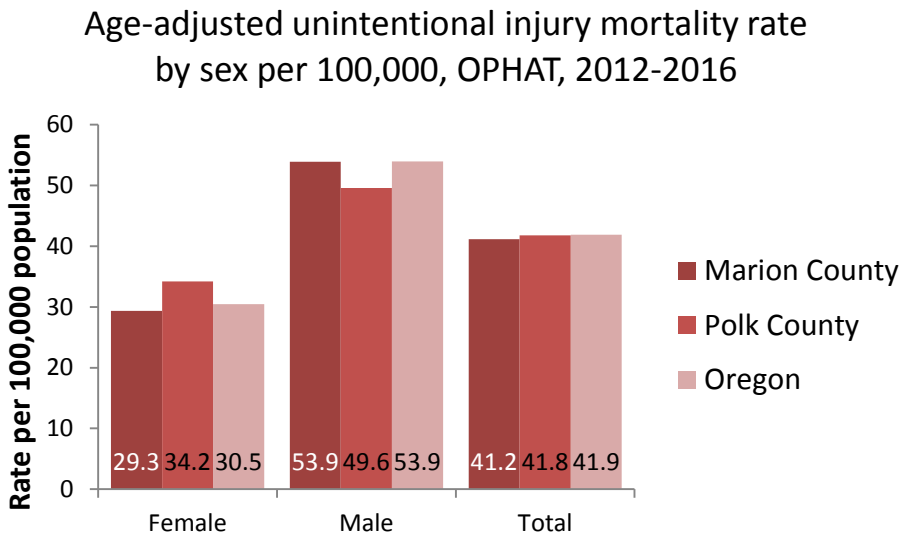
- Unintentional injuries were the leading source of years of potential life lost due to early death.[22] Every year the community loses on average about 900 years of potential life (before age 75) for every 100,000 community members due to unintentional injuries. The community is losing slightly fewer years of potential life due to unintentional injury than the state.
- Although falls were the highest source of unintentional injury death, they were the lowest in terms of potential years lost. This is due to fall deaths occurring in primarily older age groups.[22] Motor vehicle fatalities resulted in the highest loss of potential years of life (before age 75).



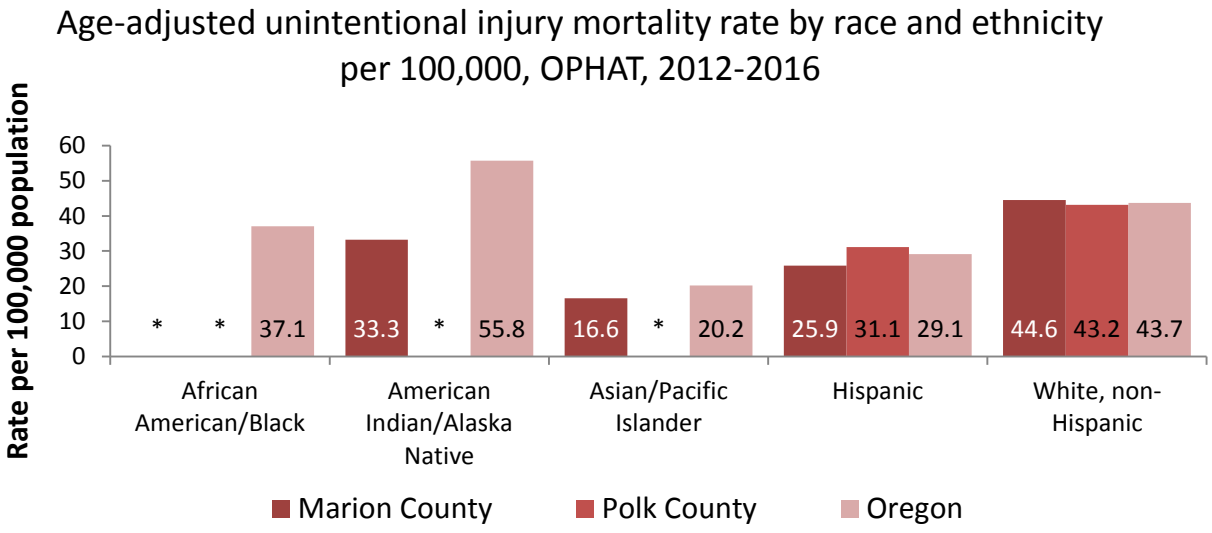
- The unintentional injury mortality rate has been increasing in recent years in the community and is not currently meeting the Healthy People 2020 goal (36.4 per 100,000).[22]



- The unintentional injury mortality rate was higher in males than females.[22] Males in Marion died at a higher rate than males in Polk, while females in Polk died at a higher rate than females in Marion and the state.



- The unintentional injury mortality rate was higher in those who identified as American Indian/Alaska Native or White, non-Hispanic in the community compared to other races/ethnicities.[22] In Oregon, those who identified as African American/Black had a higher unintentional injury mortality rate than Asian/Pacific Islanders or Hispanics.

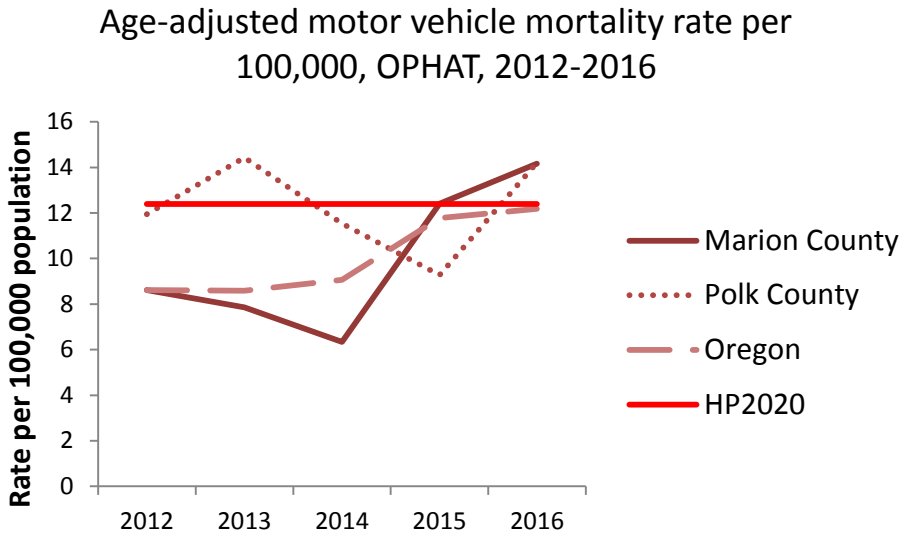


** Note: Case counts with a (*) were too small to produce reliable rates**

Motor Vehicle Crashes

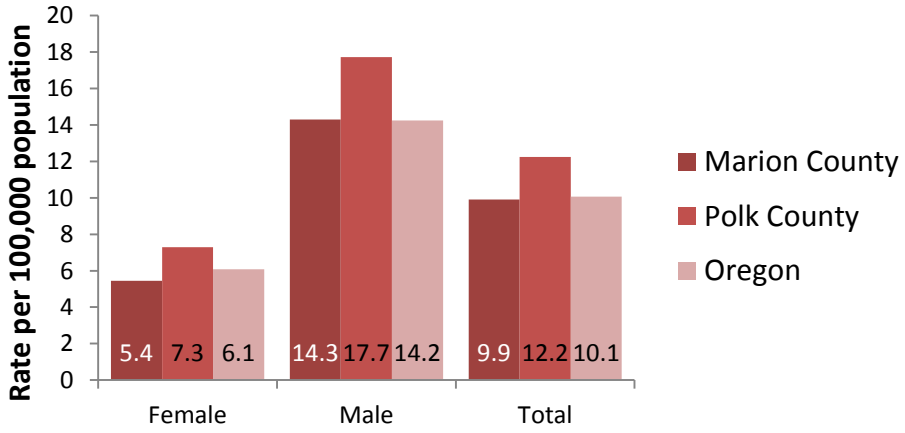
Car crashes kill more children and young adults than any other cause of death in the United States.[102] Each year, more than 32,000 people are killed and 2 million are injured from motor vehicle crashes. Roughly one in 3 motor fatalities involved drunk driving and 1 in 3 involved speeding. The motor fatality death rate in the United States is double that of similarly developed countries, which suggests that progress can be made in this area.

- Between 2012 and 2016, 33% of motor vehicle fatalities in Marion involved alcohol, compared to 29% in Polk, and 32% in the state.[91]
- The motor vehicle mortality rate has been increasing in the community and the state in recent years.[22] The community is not currently meeting the Healthy People 2020 goal for motor vehicle fatalities (12.4 per 100,000). The motor vehicle mortality rate was slightly higher in the community than the state as whole.



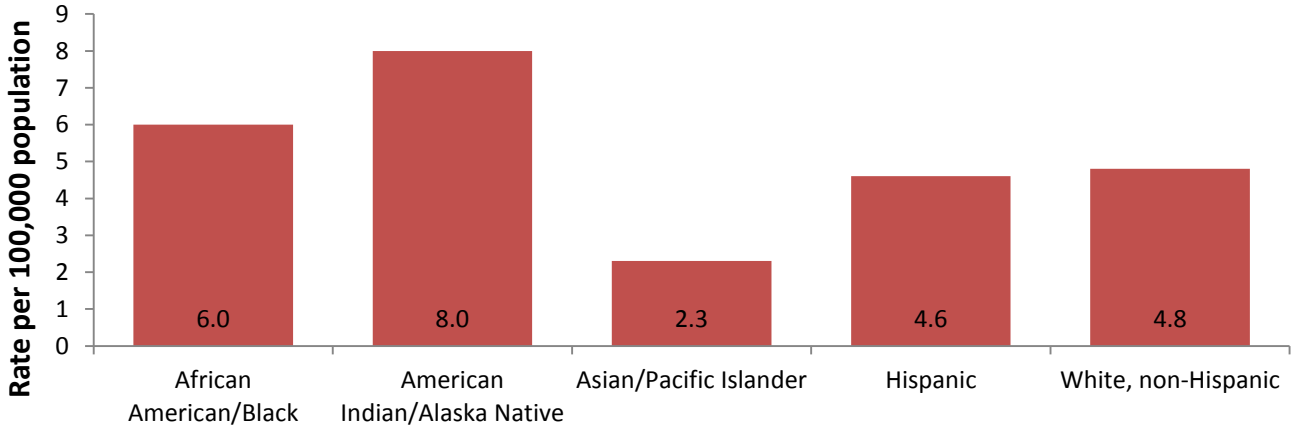
- Males had a higher motor vehicle mortality rate than females.[22] Community members in Polk had a higher motor vehicle mortality rate for both sexes compared to Marion and the state.

Age-adjusted motor vehicle mortality rate by sex per 100,000, OPHAT, 2012-2016



- In Oregon, those who identified as African American/Black or American Indian/Alaska Native had higher motor vehicle mortality rates than other races and ethnicities.[22]

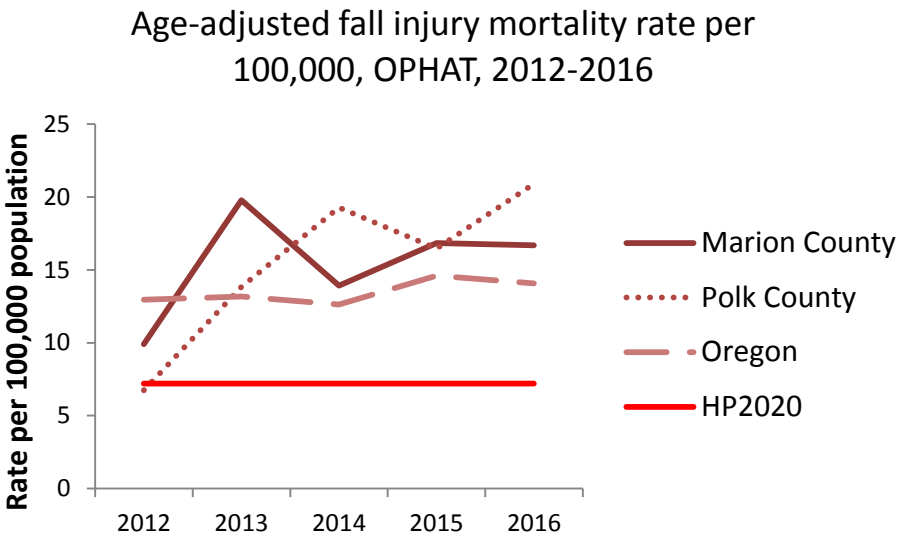
Age-adjusted motor vehicle mortality rate by race and ethnicity per 100,000, Oregon, OPHAT, 2012-2016



Falls

Among older adults, falls are the leading cause of injury related death.[103] Falls not only cause death, but they can reduce the ability for older adults to remain independent. About 1 in 4 adults over the age of 65 will fall each year. Falls are costly, averaging about $50 billion in health related expenses every year. As the population shifts to a greater proportion of older aged adults, fall mortality monitoring and prevention is becoming all the more important.

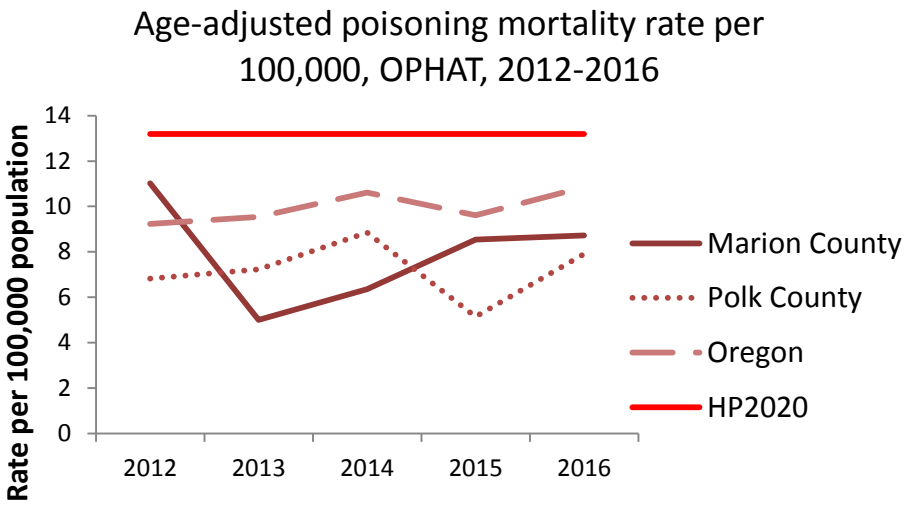
- The fall injury mortality rate has been increasing in recent years in the community and the state; neither the state nor the community is currently meeting the Healthy People 2020 goal (7.2 per 100,000).[22,28] The mortality rate due to falls was higher in the community than the state.



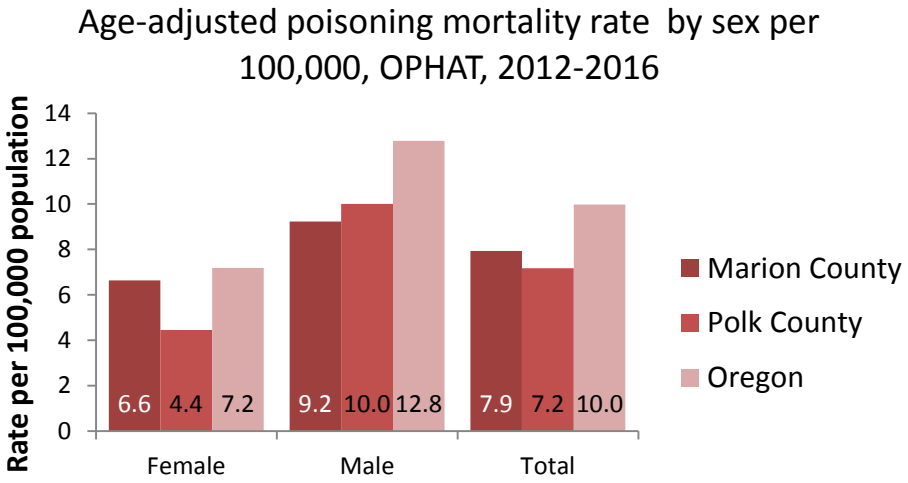
Poisoning

The poisoning mortality rate can indicate access or exposure to dangerous household chemicals, other hazardous substances, or prescription medication abuse.

- Both the community and the state are currently meeting the Healthy People 2020 goal (13.2 per 100,000) for poisoning mortality.[22,28] The poisoning mortality rate for the state as a whole was higher than in the community.



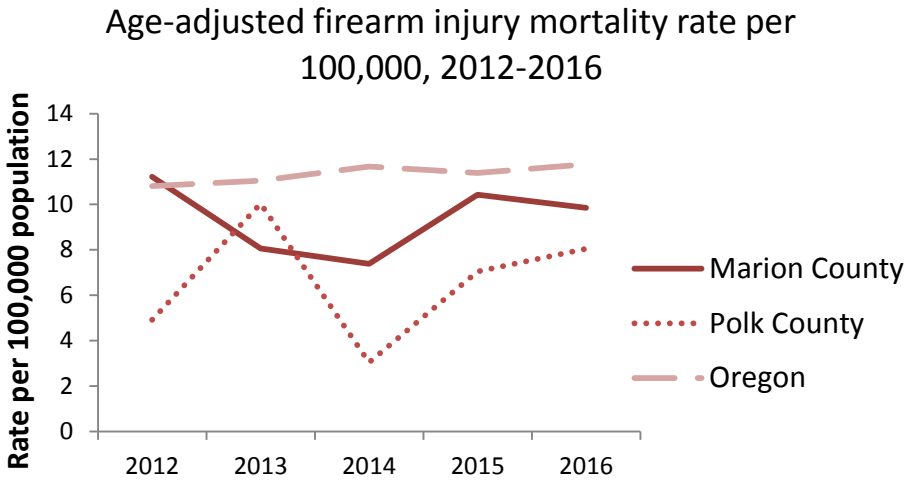
- Males die at a higher rate than females from poisoning.[22] Females in Polk had a lower poisoning mortality rate than females in Marion and the state.



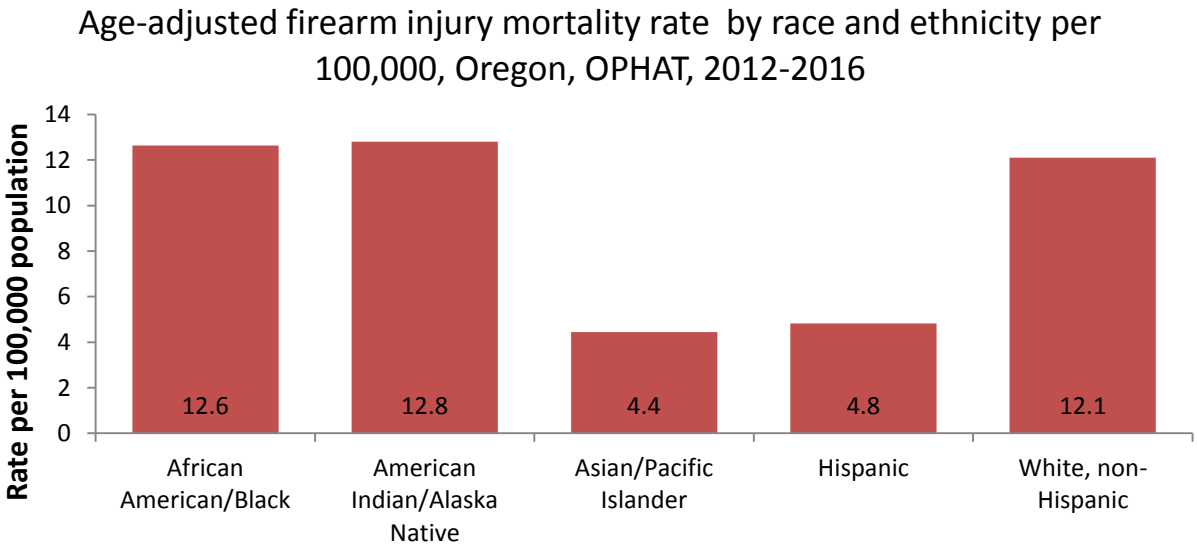
Firearms

Firearm injury and mortality is a difficult and persistent social and public health issue. Firearm injury mortality rates include deaths from accidental firearm discharge, suicide by firearm, assault by firearm, firearm discharge of undetermined intent, and legal intervention involving firearm discharge.

- The firearm injury mortality rate has been increasing slightly in the community and the state in recent years.[22] In the community, the firearm injury mortality rate was lower than the state.

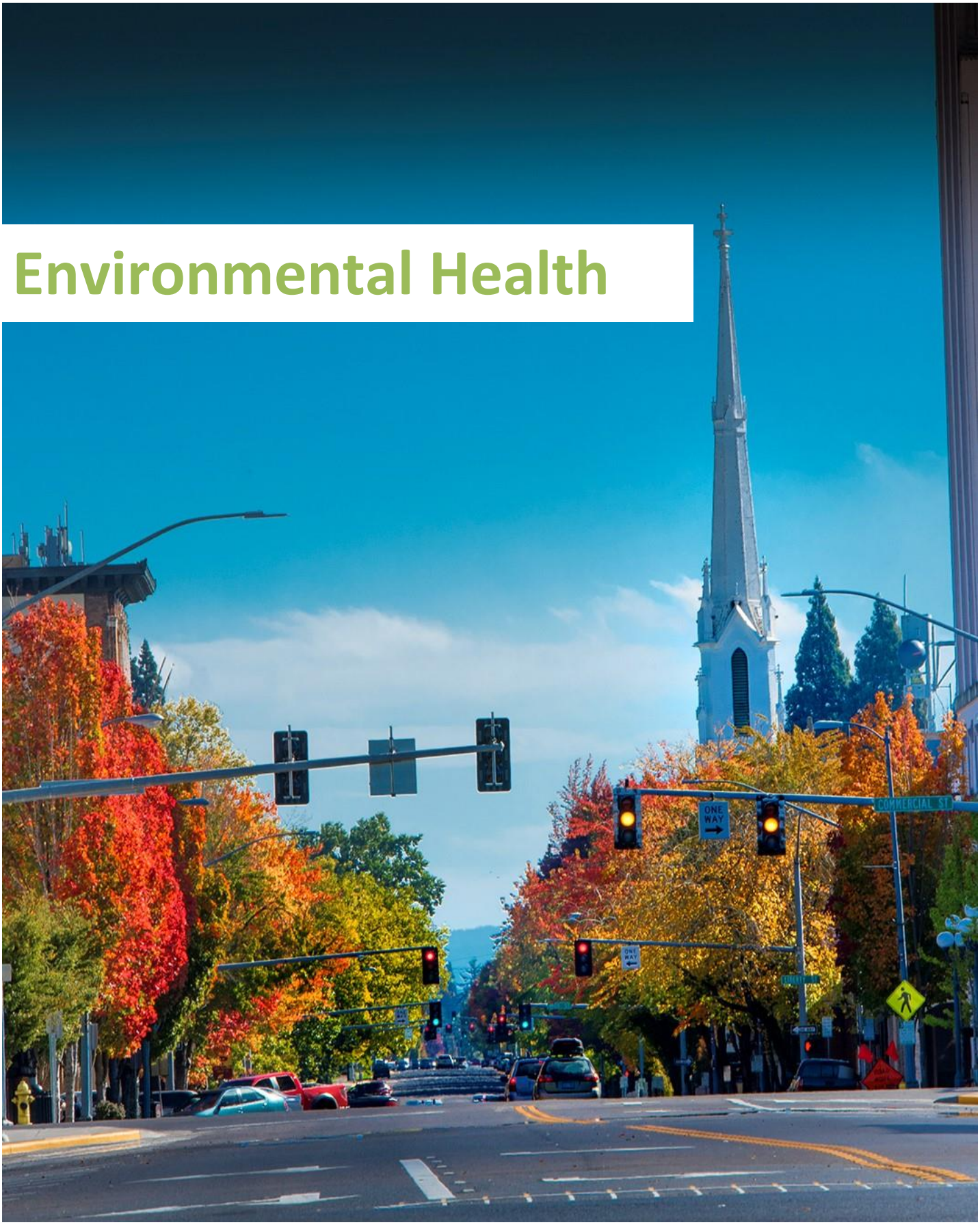


- In Oregon, those who identified as African American/Black, American Indian/Alaska Native, or White, non-Hispanic died at a higher rate a result of a firearm injury than their peers.[22]



State Street, Downtown Salem, Oregon

Environmental Health



Environmental Health

According to the World Health Organization, the environment is all of the physical, chemical, and biological factors external to a person. Environmental health consists of preventing or controlling disease, injury, and disability related to interactions between people and the environment. Human made structures that make up the built environment such as supermarkets, parks, homes, sidewalks, bike lanes, and roads, also play a role in supporting the health and quality of life of community members.

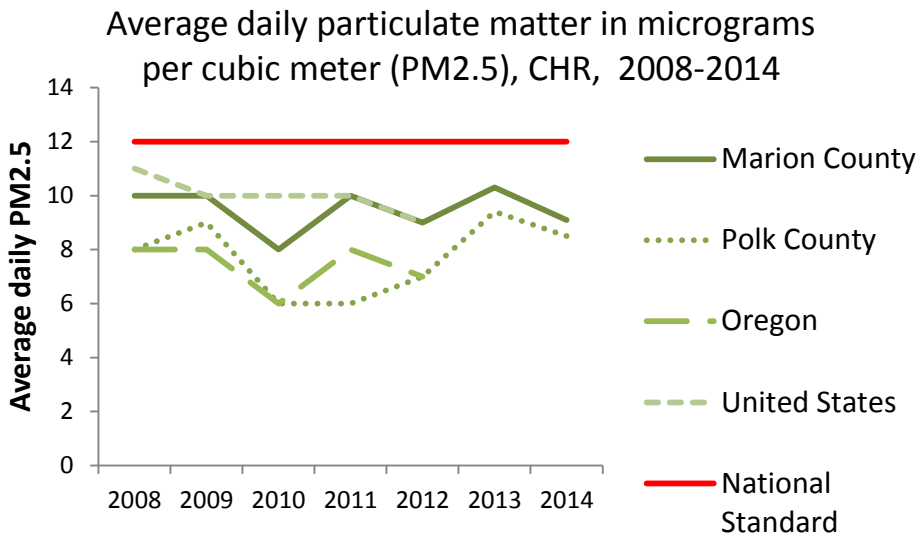
Key Findings in Marion & Polk County:

- Local air quality was meeting national standards and the Air Quality Index (AQI) was "good" for most of the days measured. Air quality has been diminishing late in the summer in recent years due to forest fires making the air unhealthy for sensitive groups.
- A lower percentage of community water systems were meeting health standards than the state as a whole and are not meeting the Environmental Protection Agency (EPA) target.
- About 1 in 5 households in the community had severe health problems due to overcrowding, high housing cost, and/or lack of plumbing or kitchen facilities.
- About 1 in 5 adult community members reported being exposed to secondhand smoke indoors for an extended period of time, which was slightly higher than the state.
- A higher percentage of community members drove to work instead of using public transportation or another means of travel compared to the state, which has remained more or less unchanged in recent years.
- The availability and affordability of healthy food in the community was low, as 41% of community members in Marion and 18% in Polk lived in a census tract designated as a food desert. These food deserts clustered around the larger cities in the community.

Air Quality

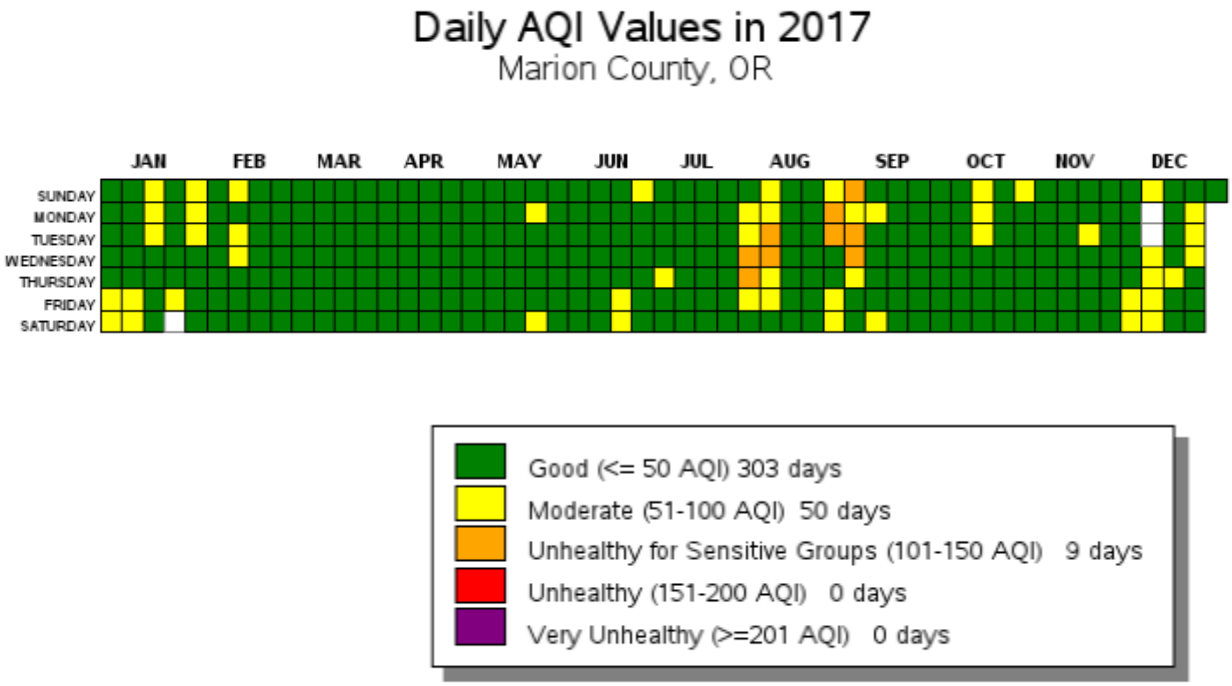
Poor air quality is associated with cancer, premature death, and long-term damage to respiratory and cardiovascular systems. Decreasing air pollution is critical to creating a healthy environment. Air pollution can be measured by the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5). Any particle of air pollutant smaller than 2.5 micrometers is capable of infiltrating airways and restricting breathing. Sources of these particles include forest fires, gases from power plants, industry, and automobiles.[104]

- In 2017, the Air Quality Index (AQI) in Marion County was good for 84% of the days that year (Data not available for Polk County or Oregon).[105]
- The average daily PM2.5 was meeting the national standard in the community when last measured in 2014.[91] Local PM2.5 was lower in Polk and Oregon compared to Marion for years when comparison data was available.



Note: Data not available for Oregon or the United States for 2013 and 2014

- The daily Air Quality Index (AQI) was “good” for the majority of days in Marion County in 2017.[105] Days where the AQI was “moderate” or “unhealthy” clustered in August and September, likely due to forest fires that were occurring at that time.



Note: Daily AQI not available for Polk County or Oregon

Water Quality

Safe high quality drinking water is essential for human health. Water systems that serve larger populations in Oregon typically meet water quality standards, however smaller systems and private wells are more susceptible to contamination.[25] In Oregon, about 1 out of every 4 people use private wells for their drinking water, which are not required to undergo regular water quality testing or treatment. The results of human activity as well as naturally occurring processes can introduce contaminates that affect drinking water quality. Contaminates can include coliform bacteria, lead, arsenic, copper, nitrates, and organic chemicals. Exposure to high levels of arsenic over time can increase the risk of developing diabetes, high blood pressure, and cancer. About 10% of all of the domestic wells tested in Oregon were above the safe drinking water standard for arsenic. Other contaminates, such as Harmful Algae Blooms, have been gaining more attention locally due to a cyanobacteria bloom in Detroit Lake in 2018, which affected several local water systems including the city of Salem.[106]

- In 2016, a lower percent of community water systems in Marion (85%) and Polk (75%) were meeting health standards than the state as a whole (89%) and the US (90%).[107] Neither the community nor the state is currently meeting the EPA target for water system health standards (92%).

Fluoride is an inexpensive and effective way to prevent tooth decay for people in every stage of life. Despite strong scientific evidence to support the safety of water fluoridation, many systems in Oregon are not fluoridated. About 80% of community members in Marion and 44% in Polk are receive drinking water that has been fluoridated.[108] The local municipal water systems are fluoridated, however some of the smaller and more rural systems are not, increasing the importance of proper oral care and regular dentist checkups for community members who live outside of the major cities.

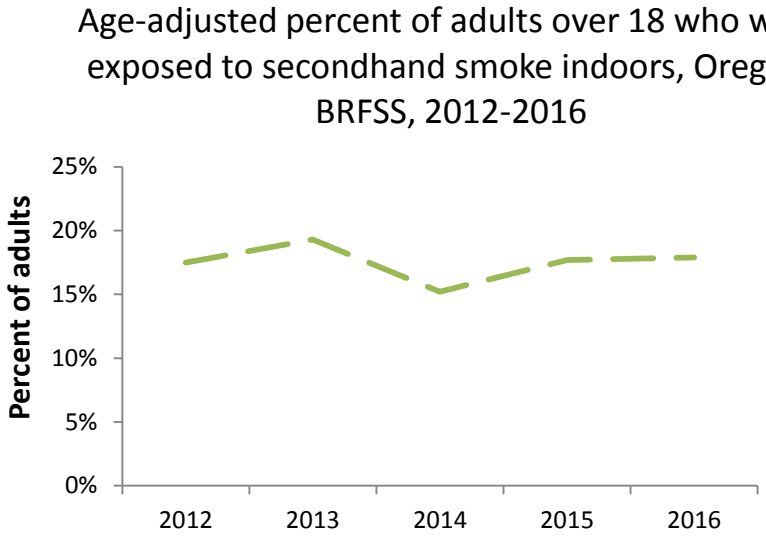
Healthy and Safe Housing

A safe and healthy home is essential for the health and well-being of community members. Many environmental hazards can make a home unhealthy including overcrowding, lack of facilities, lead, mold, radon, and secondhand smoke among others. As housing is a social determinant of health, addressing these issues along with making housing more affordable would help to improve the overall health of the community.

- Between 2012 and 2016, about 22% of households in Marion and 20% of households in Polk had severe housing-related health problems, compared to 21% for the state.[4]

  Note: severe housing related problems refer to at least one of the following: overcrowding, high housing cost, or lack of plumbing or kitchen facilities

- Between 2010 and 2013, about 22% of adults in Marion and 20% in Polk were exposed to secondhand smoke indoors, compared to 19% for the state.[22] In more recent years, about 18% of adults in Oregon reported being exposed to secondhand smoke indoors. The percentage of adults exposed to secondhand smoke indoors in Oregon has been relatively stable in recent years.



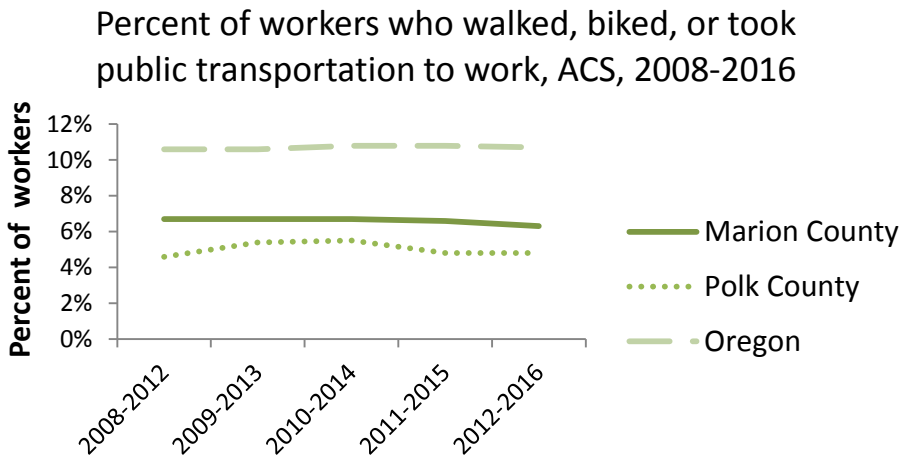
Transportation

Access to affordable and convenient transportation is critical to accomplishing tasks that support health. People living with disabilities, youth, and older adults can especially benefit from transportation, along with building an environment that makes it easy to be mobile. Transportation extends beyond vehicles and includes biking, walking, and other modes of transit, which can reduce air and noise pollution, decrease car accidents, reduce stress, and promote a healthy lifestyle.

- Between 2012 and 2016, the average commute time in the community one-way was about 23-24 minutes long, which was similar to the state.[4]
- About 3 out of 4 workers drove alone to work in the community, which was higher than the state.[4] Roughly 25% of commuters drove alone for more than 30 minutes to get to work in Marion, compared with 32% in Polk and 28% in the state.
- Community members were less likely to use a method other than driving to commute (walk, bike, or public transportation) (5-6%) than people in the state as a whole (11%).[4] Overall, the percentage of community members using a method other than driving to commute to work has been stable in recent years.[4]

Community transportation, ACS, 2012-2016			
	Marion	**Polk**	**Oregon**
Average commute time to work one-way(minutes)	23.0	24.4	23.2
Drove alone to work (%)	74.2	76.4	71.4
Drove alone with long commute*(%)	25.3	31.6	27.6
Took public transportation to work (%)	1.8	0.5	4.4
Walked, biked, or took public transportation to work (%)	6.3	4.8	10.7

** Long commute = greater than 30 minutes one-way*

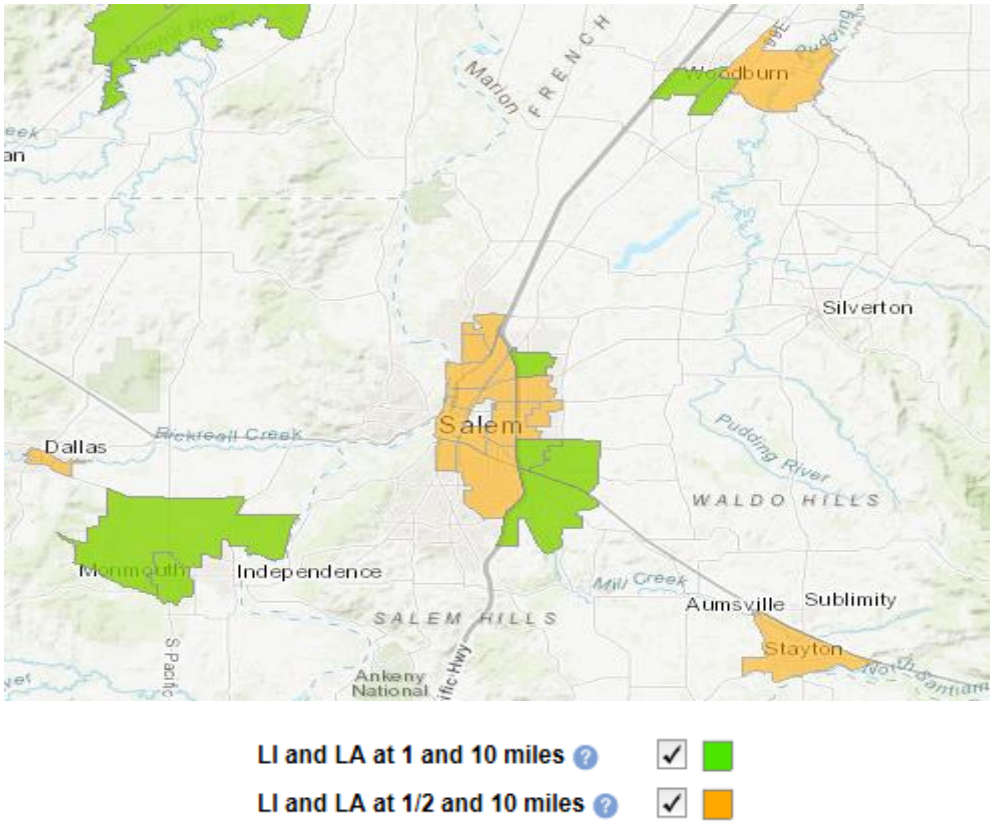


Food Environment

The food environment refers to the availability and affordability of healthy foods as supported by the built environment. Food insecurity, a related health outcome, was covered in a previous chapter (Social Determinants of Health). As food is essential, looking at where healthy foods are located, and how easy they are to access, is important in developing a healthy, well-fed community. When healthy foods are not found near where people live, then these people are said to be living in a "food desert", which increases the reliance on fast food and convenience stores.

- In 2014, there were 225 fast food restaurants in Marion and 42 in Polk, which equates to 0.7 fast food restaurants per 1,000 people and 0.5 per 1,000 people respectively. From 2009 to 2014, there was a 1.8% increase in fast food restaurants in Marion and 16.7% increase in Polk.[12]
- In 2015, 40.6% of community members in Marion and 17.9% of members in Polk lived in a census tract that was designated as a food desert.[12] Food deserts clustered around the cities of Dallas, Monmouth, Independence, Salem, Stayton, and Woodburn.

Food deserts by census tracts in Marion and Polk County, USDA, 2015



LI = low income, LA = low access (Green is worse than orange)

Note: Census tract is defined as a food desert if it is both low income and has low access to supermarkets or large grocery stores. Census tracts in Marion and Polk County not displayed on figure were not designated as food deserts.

Source: United States Department of Agriculture

https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/

Generated: October 22, 2018

Schreiner Iris Gardens, Salem, Oregon

Acknowledgements, Appendix, Glossary, & References

Acknowledgments

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Appendix A: Community Themes & Strengths Forum Themes

What in your community helps you to be healthy?

Common themes for all regions included green space like parks and hiking trails, local produce availability at farmers markets and "You Pick" opportunities, and opportunities to be physically active at gyms and in local parks.

Community health support, CTSA, 2018		
Region	**Date/Location**	**Themes**
Independence	May 23, 2018 Independence Civic Center	• Community organizations • Green space • Local produce • Opportunities to be physically active • Healthy eating
Salem	May 30, 2018 Center 50+	• Community organizations • Green space • Opportunities to be physically active • Neighborhood support • Local produce
Stayton	May 7, 2018 Foothills Church	• Green space • Good air quality • Good doctors • Community organizations • Local produce • Opportunities to be physically active • Faith based organizations • Community events
Woodburn	May 5, 2018 Chemeketa Community College	• Green space • Healthy eating • Opportunities to be physically active • Local produce • Local sports teams • Good doctors

What in your community keeps you from being healthy?

Lack of affordable housing was a common theme for all regions.

Community health obstacles, CTSA, 2018		
Region	**Date/Location**	**Themes**
Independence	May 23, 2018 Independence Civic Center	• Lack of public transportation • Lack of access to health care services • Lack of access to healthy food • Poverty • Lack of affordable housing • Lack of affordable childcare
Salem	May 30, 2018 Center 50+	• Too fast food restaurants • Lack of public transportation • Substance use • Lack of affordable housing • Lack of access to health care services • Lack of mental health care services • Stigma about mental health information
Stayton	May 7, 2018 Foothills Church	• Lack of public transportation • Lack of access to health care services • Lack of affordable housing • Stigma about using community benefits • Lack of access to healthy foods
Woodburn	May 5, 2018 Chemeketa Community College	• Lack of continuous sidewalks • Lack of civic engagement • Need for more green space • Too many fast food restaurants • Lack of affordable housing • Unhealthy school lunches

What in your community would have to change for the health of the community to improve?

Needed community health improvements, CTSA, 2018		
Region	**Date/Location**	**Themes**
Independence	May 23, 2018 Independence Civic Center	• Increased communication about available services • Increased access to public transportation • Better local education • Increased access to affordable housing • Increased community support • Increased access to healthy foods
Salem	May 30, 2018 Center 50+	• Increased access to affordable housing • Increased access to mental health services • Increased access to physical health services • More bike routes • Increased access to supportive faith based communities
Stayton	May 7, 2018 Foothills Church	• Increased access to social services • Increased access to affordable housing • Increased access to public transportation • More community inclusion • Increased communication about available services • Increased access to healthy foods • Increased community safety • More walking routes
Woodburn	May 5, 2018 Chemeketa Community College	• More opportunities for family activities • More walking routes • Limit access to junk food

		• Better maintenance of public property • Increased access to physical health services • Better local education

Glossary

Adverse Childhood Experiences (ACEs): Stressful and traumatic events occurring in childhood, including neglect, which can impact development and have lifelong consequences.

Age-Adjusted Rates: Age-adjusted rates allow you to compare event rates between two communities that have very different age distributions by standardizing both populations to the United States census population. This allows us to rule out that the difference in rates is due to age distribution in the community.

American Community Survey (ACS): Survey conducted annually by the U.S. Census Bureau, which includes demographics and other various statistics.

Behavioral Risk Factor Surveillance System (BRFSS): Random CDC phone survey that provides population estimates for various health conditions and exposures, which is weighted to reflect the population it was derived from with age-adjusted and crude rates.

Body Mass Index (BMI): Calculation that takes the mass (weight) and height of an individual into consideration. There are four BMI categories: underweight (<18.5), normal (18.5-24.9), overweight (25.0-29.9), obese (30.0<).

CCO 2.0: State initiative designed to improve upon the existing work of CCOs, which represents the next phase of health system transformation in Oregon.

Centers for Disease Control & Prevention (CDC): Federal Public Health entity, which provides guidance and data for local health departments.

Community Health Assessment (CHA): Assessment portion of the MAPP process that identifies key priority areas for the CHIP as informed by its supporting four assessments.

Community Health Improvement Plan (CHIP): Five year plan for improving the health of a community that's informed from the data and key priority areas identified by the CHA.

Community Action Agency (CAA): Community based organization that identifies need and gathers resources to address local need, including the collection of local data such as the Homeless Point in Time Count.

County Health Rankings (CHR): Robert Wood Johnson Foundation program that compares and ranks counties across a wide variety of standard health measures.

Coordinated Care Organization (CCO): Provides coordinated health care to local Medicaid population.

Crude "Unadjusted" Rates: Measures that allow us to assess the actual burden or rate of disease in a population, however these estimates should not be directly compared to other populations due to potential differences in age.

Department of Human Services (DHS): Governmental entity that collects a wide array of data and is responsible for providing various services.

Feeding America: National non-profit organization that seeks to reduce food insecurity by providing nutritional assistance and related data.

Food Insecurity: State of being without reliable access to a sufficient amount of affordable nutritious food.

Frontier: Geographic area with a population density less than 6 people per square mile.

Hanlon Method: Prioritization method used for identifying the most impactful health indicators in a community; considers magnitude, seriousness, and effectiveness of interventions.

Healthcare Cost and Utilization Project (HCUP): Healthcare database that compiles state and local healthcare access and quality measures.

Healthcare Workforce Reporting (HWRP): Collaborative effort between state and health profession licensing boards that collect and reports healthcare workforce data through licensing renewals.

Health Disparity: A measurable difference in health or opportunities between groups of people, where one group is affected more than another. These differences are preventable and tend to be experienced by socially disadvantaged populations.

Health Equity: Absence of unfair, avoidable, or remediable differences in health among social groups; is achieved when all people are able to reach their full health potential.

Healthy People 2020 (HP 2020): Healthy People provides science-based, ten year national objectives for improving the health of all Americans. These objectives are often used as benchmarks for setting goals at the local, state, and national level.

Immunization Information System (ALERT): Registry that collects and reports immunization histories to providers along with population level rates.

Incidence Rate: Describes the rate at which new illness enters the population over a specified time ((# of new cases of X)/(total population - those who cannot get disease X))

Mobilization for Action through Planning and Partnerships (MAPP): Community level strategic planning framework used to create the CHA and CHIP.

Maternity Practices in Infant Nutrition and Care (mPINC): National survey administered every two years by the CDC to hospitals that provide maternity care services.

Medicaid Behavioral Risk Factor Surveillance System (MBRFSS): Utilizes the same questions as the BRFSS, but is administered to the Medicaid population. Responses are weighted, however they are not age-adjusted, and thus caution must be used when comparing these results to those from the general population.

Mortality Rate: Describes the rate of death in a community over a specified time ((# of deaths)/(total population))

National Cancer Institute (NCI): Governmental entity responsible for conducting cancer research and maintaining registries for measuring cancer disease burden and incidence of new cases.

Opioid Data Dashboard (ODD): Interactive tool maintained by OHA that provides state and county level data involving opioid overdose hospitalizations and deaths.

Oregon Department of Education (ODE): State entity responsible for education and learning.

Oregon Health Authority (OHA): State entity that oversees the majority of health-related programs, which includes behavioral health, public health, Medicaid (OHP), and the Oregon State Hospital.

Oregon Health Insurance Survey (OHIS): Survey conducted by OHA that gathers information related to health care coverage, access to care, and utilization in the state.

Oregon Health Plan (OHP): Health insurance administered by OHA for the Medicaid population, which is coordinated locally by CCOs.

Oregon Healthy Teens (OHT): Statewide survey administered at the local level every two years in schools to assess the health of teens including sexual activity, substance use, nutrition, and other factors.

Oregon Public Health Assessment Tool (OPHAT): OHA administered online tool that is regularly updated and provides a wealth of measures and information for local health departments.

Oregon Public Health Epidemiologist User System (ORPHEUS): Joint database administered by OHA for communicable disease reporting and case investigation.

Oregon State Police (OSP): State law enforcement agency, which provides reports for criminal infractions.

Oregon Violent Death Reporting System (OVDRS): Database administered by OHA for reporting violent deaths at the state and local level.

Prevalence: Describes the burden of disease in a population by looking at the total amount of cases (new and old) occurring in a population at a specific point in time ((# of new cases + # of old cases)/(population))

Rural: Geographic area that is more than 10 miles from a population center greater than 40,000 people.

Screening, Brief Intervention, and Referral to Treatment (SBIRT): Evidence based practice used to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs.

Social Determinants of Health (SDOH): Root causes responsible for the health of a community.

Student Wellness Survey (SWS): Statewide survey administered at the local level every two years in schools to assess the health of teens including substance use and other factors.

Supplemental Nutrition Assistance Program (SNAP): Government program providing nutrition assistance to low income individuals and families that provides economic benefit to communities.

Temporary Assistance to Needy Families (TANF): Government program which provides time limited assistance to families with children when parents (or other responsible party) cannot provide enough means to meet basic needs.

United States Department of Agriculture (USDA): Federal entity responsible for developing and executing laws relating to farming, forestry, and food.

United States Small-area Life Expectancy Estimates Project (USALEEP): Joint effort by non-profit organizations to assess life expectancies at the census tract level.

Urban: Geographic area that is less than 10 miles from a population center greater than 40,000 people.

Vital Statistics (VS): State registry that maintains information for births and deaths.

Willamette Valley Community Health (WVCH): Local Coordinated Care Organization serving Medicaid enrollees in Marion and Polk counties.

Women, Infants, and Children (WIC): Federal grant to states that provides special supplemental nutrition for women, infants, and children. This program also provides health care referrals, nutrition education for low-income pregnant, breastfeeding, non-breastfeeding postpartum women, and to children up to age 5 who are at nutritional risk.

Years of Potential Life Lost (YPLL): Years of life that could have been added back to an individual and a community had premature death before a certain age (typically 75) had been prevented.

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