



# Public Health Modernization: Report to Legislative Fiscal Office

---

In fulfillment of ORS 431.139 and ORS 431.380

July 2018

# Contents



|   |    |
|---|----|
| Acknowledgments .....   | 3  |
| Executive summary .....   | 4  |
| Introduction .....  | 6  |
| 2017–19 legislative investment in public health modernization.....  | 7  |
| Amount of funds received for foundational capabilities and programs,<br>distribution of funds, and level of work funded ..... | 7  |
| Progress toward accountability metrics .....  | 10 |
| 2019–21 proposed legislative investment .....   | 13 |
| Local public health authority funding formula .....   | 13 |
| Estimate of the amount of state General Fund needed for<br>public health modernization.....                                   | 17 |
| Appendices .....  | 20 |
| Appendix A: Public health modernization milestones.....   | 20 |
| Appendix B: Public Health Accountability Metrics Report .....   | 21 |
| Appendix C: Public Health Advisory Board funding principles .....   | 63 |
| Appendix D: Funding formula description and methodology.....  | 64 |

# Acknowledgements

---



The Oregon Health Authority, Public Health Division acknowledges the tremendous work of the Public Health Advisory Board, and specifically members of the Incentives and Funding Subcommittee. PHAB's forward-thinking strategies for using public health modernization funding to achieve desired outcomes are presented throughout this report.

For questions or comments about this report, or to request this publication in another format or language, please contact the Oregon Health Authority, Office of the State Public Health Director at 971-673-1222 or [PublicHealth.Policy@state.or.us](mailto:PublicHealth.Policy@state.or.us).

Please cite this publication as follows:

Oregon Health Authority Public Health Division. Public health modernization: Report to Legislative Fiscal Office in fulfillment of ORS 431.139 and ORS 431.380. Oregon Health Authority. Portland, OR. 2018 June.

# Executive summary



Public health modernization means that every person in Oregon has access to the same basic public health protections, and that the public health system is accountable for being efficient and driven toward health outcomes. In recent years, the landscape for public health has changed dramatically as the way that we live, travel, recreate and work has created a series of new, complex public health issues. Examples include escalating opportunities for the spread of international disease outbreaks and changes in Oregon's climate that make the state more susceptible to acute and communicable disease threats. At the same time, Oregon's health system transformation has created an opportunity for the public health system to refocus on population-wide interventions to protect and improve health, working in tandem with the health system to address population health priorities.

This report fulfills public health modernization deliverables included in ORS 431.139 and 431.380. This report details the use of the existing 2017–19 legislative investment in public health modernization and current progress toward accountability metrics. It also describes the additional resources needed for public health modernization and how they would be distributed through the local public health authority funding formula in the 2019–21 biennium.

In 2017, the Oregon Health Authority (OHA) received an initial \$5 million investment to begin implementing public health modernization in three areas detailed in the 2016 report to the Legislative Fiscal Office: communicable disease control, health equity and cultural responsiveness, and assessment and epidemiology. The 2017–19 investment has provided critical funding for strengthening local capacity and establishing regional approaches for communicable disease control. State and local public health authorities will sustain and build upon the progress made in this biennium with future funding. Of this investment, OHA is using \$1.1 million to support collection of population health metrics and data to evaluate the outcomes of the 2017–19 legislative investment, and to provide support to local public health modernization grantees. Eight regions of local public health authorities are using the remaining \$3.9 million, reaching 33 of Oregon's 36 counties. They are using these funds to implement communicable disease control interventions focused on mitigating disease risks in their jurisdictions with a focus on reducing health disparities.

In 2017, the Public Health Advisory Board (PHAB) adopted a series of public health accountability measures to track progress of the public health system over time in achieving improved health for people in Oregon. The measures were first published in the baseline Public Health Accountability Metrics Report in March 2018. Moving forward, OHA will report progress toward public health accountability measures annually.

Over the course of the last several months, OHA and PHAB have worked to develop the 2019–21 local public health authority funding formula detailed in this report. The 2019–21 funding formula addresses all three legislatively required components — base, matching and incentive funds — phased in at tiers of available funding for local public health authorities.

Finally, this report includes a description of the PHAB’s recommended priorities for implementation of public health modernization in the 2019–21 biennium:

- Expanded implementation of communicable disease control
- Health equity and cultural responsiveness and
- Assessment and epidemiology interventions.

At higher funding levels, priorities would also include:

- Implementation of environmental health
- Emergency preparedness and response and
- Leadership and organizational competencies.

Given the level of work necessary to fully mitigate and protect the population from acute and communicable disease risks resulting from changes in how we live and in our environment, OHA estimates that \$47.7 million of the total estimated biennial gap of \$210 million is necessary to implement work across these six areas in the 2019–21 biennium.

# Introduction



Through legislative direction in the 2013 (HB 2348), 2015 (HB 3100) and 2017 (HB 2310) sessions, the Oregon Health Authority (OHA) and local public health authorities have been working to create a modern public health system. A modern public health system:

- Assures that basic public health protections are in place for every person in Oregon, regardless of where they live
- Is effective and efficient and
- Is accountable for improvements in health outcomes.

Over the course of the last five years, Oregon's state and local public health authorities have made tremendous strides toward achieving these aims. Notably:

- Governor Brown appointed the new Oregon Public Health Advisory Board (PHAB). PHAB became a formal committee of the Oregon Health Policy Board to assure alignment between health system and public health transformation.
- OHA and all local public health authorities completed a comprehensive public health modernization assessment in 2016. The assessment, based on the 2015 *Public Health Modernization Manual*, identified programmatic strengths and gaps across the state. It also discussed the level of resources required for state and local public health authorities to fully implement the foundational capabilities (ORS 431.131) and foundational programs (ORS 431.141).
- OHA and local public health authorities garnered an additional \$250,000 investment from the Robert Wood Johnson Foundation to accelerate public health modernization. The Coalition of Local Health Officials has managed this grant spanning from 2016 to 2018.
- The PHAB adopted accountability metrics for state and local public health authorities. Oregon is leading the nation in developing and reporting on accountability metrics for the public health system.
- The Oregon legislature demonstrated its commitment to public health modernization through a \$500,000 investment in planning during the 2015–17 biennium and a \$5 million initial investment in implementation during the 2017–19 biennium.
- Administrative rules pertaining to HB 3100 and HB 2310 became effective Jan. 1, 2018.

This report fulfills OHA's requirements as described by ORS 431.139 and ORS 431.380. This report both provides information on the use of the 2017–19 legislative investment and how to implement a 2019–21 investment to further Oregon's work to modernize its public health system.

# 2017–19 legislative investment in public health modernization



## Amount of funds received for foundational capabilities and programs, distribution of funds and level of work funded

In 2017, the Oregon legislature made an initial \$5 million investment in public health modernization. As advised by PHAB, this investment was used to begin focusing on the communicable disease control foundational program as well as the health equity and cultural responsiveness, and the assessment and epidemiology foundational capabilities. In spring 2017, the PHAB advised on how to best apply a new General Fund investment to state and local public health authorities in these three areas.

Of the \$5 million investment, \$1.1 million remained with OHA to:

- Fund a repurposed, existing position to provide technical assistance to local public health authorities and develop a comprehensive approach to OHA’s population health metrics and data collection systems
- Maintain basic population health data systems to deliver timely and accurate information for public health interventions. Specifically, this includes:
  - » Partial funding for administration of the Behavioral Risk Factor Surveillance System (BRFSS) and the Oregon Healthy Teens surveys
  - » Maintenance and interoperability functions for the ALERT Immunization Information System
  - » Maintenance of the Oregon Public Health Assessment Tool.
- Conduct an evaluation of the local public health modernization grants and reporting of the new public health accountability measures.

The remaining \$3.9 million was invested in eight regions of local public health authorities working together on communicable disease priorities with an emphasis on addressing communicable disease-related health disparities. In May 2017, the PHAB determined that at a funding level of less than \$20 million per biennium, the local public health authority funding formula would not effectively allocate resources to produce a meaningful impact. With that recommendation, OHA released a competitive request for proposals (RFP) in September 2017 that supplied funds to the eight regions covering 33 of 36 Oregon counties in a range between \$100,000 and \$700,000 for the remainder of the biennium. The RFP required local public health authorities to work with federally recognized tribes, regional health equity coalitions and other partners to address leading communicable disease issues in their jurisdiction.

## Figure 1

THE TABLE BELOW PROVIDES A BRIEF DESCRIPTION OF \$3.9 MILLION IN AWARDS THAT SPAN FROM DEC. 1, 2017, THROUGH JUNE 30, 2019.

| Regional partners  | Project description  | Award amount |
|--|--|--------------|
| Clatsop, Columbia and Tillamook counties   | <ul style="list-style-type: none"> <li>• Convene partners to assess regional data on sexually transmitted infections and develop priorities.</li> <li>• Identify vulnerable populations and develop regional strategies to address population-specific needs.</li> </ul>   | \$100,000    |
| Deschutes, Crook and Jefferson counties; St. Charles Health System; Central Oregon Health Council                        | <ul style="list-style-type: none"> <li>• Form the Central Oregon Outbreak Prevention, Surveillance and Response Team that will improve:               <ul style="list-style-type: none"> <li>» Communicable disease outbreak coordination, prevention and response in the region</li> <li>» Communicable disease surveillance practices</li> <li>» Communicable disease risk communication to health care providers, partners and the public.</li> </ul> </li> <li>• Funds will be directed to communicable disease prevention and control among vulnerable older adults living in institutional settings and young children receiving care in child care centers with high immunization exemption rates.</li> </ul> | \$500,000    |
| Douglas, Coos and Curry counties; Coquille and Cow Creek Tribes; Western Oregon Advanced Health CCO                      | <ul style="list-style-type: none"> <li>• Improve and standardize mandatory communicable disease reporting.</li> <li>• Implement strategies for improving 2-year-old immunization rates.</li> <li>• Focus on those living in high poverty communities.</li> </ul>   | \$468,323    |
| Jackson and Klamath counties; Southern Oregon Regional Health Equity Coalition; Klamath Regional Health Equity Coalition | <ul style="list-style-type: none"> <li>• Work with regional health equity coalitions and community partners to respond to and prevent sexually transmitted infections and hepatitis C, focused on reducing health disparities and building community relationships and resources.</li> <li>• Promote HPV vaccination as an asset in cancer prevention.</li> </ul>  | \$499,923    |



|   |  |                  |
|---|--|------------------|
| <p>Lane, Benton, Lincoln and Linn counties; Oregon State University</p>   | <ul style="list-style-type: none"> <li>• Establish a learning laboratory to facilitate cross-county information exchange and continuous learning.</li> <li>• Implement an evidence-based quality improvement program, AFIX, to increase immunization rates.</li> <li>• Pilot three local vaccination projects: <ul style="list-style-type: none"> <li>» Hepatitis A vaccination among unhoused people in Linn and Benton counties</li> <li>» HPV vaccination among adolescents attending school-based health centers in Lincoln County</li> <li>» Pneumococcal vaccination among hospital discharge patients in Lane County.</li> </ul> </li> <li>• Establish an Academic Health Department model with Oregon State University to extend public health capacity and support evaluation.</li> </ul> | <p>\$693,517</p> |
| <p>Marion and Polk counties; Willamette Valley Community Health CCO</p>   | <ul style="list-style-type: none"> <li>• Focus on system coordination as well as disease- and population-specific interventions to control the spread of gonorrhea and chlamydia.</li> <li>• Increase HPV immunization rates among adolescents.</li> </ul>   | <p>\$463,238</p> |
| <p>North Central Public Health District; Baker, Grant, Harney, Hood River, Lake, Malheur, Morrow, Umatilla, Union and Wheeler counties; Eastern Oregon CCO; Mid-Columbia Health Advocates</p> | <ul style="list-style-type: none"> <li>• Establish a regional epidemiology team.</li> <li>• Create regional policy for gonorrhea interventions.</li> <li>• Engage community-based organizations to decrease gonorrhea rates through shared education and targeted interventions.</li> </ul>  | <p>\$495,000</p> |

|  |   |                  |
|--|---|------------------|
| <p>Washington, Clackamas and Multnomah counties; Oregon Health Equity Alliance</p> | <ul style="list-style-type: none"> <li>• Develop an interdisciplinary and cross-jurisdictional communicable disease team. This team will focus on developing and strengthening surveillance and communications systems to facilitate the timely collection of data, create surge capacity and communicate about outbreaks.</li> <li>• With leadership and guidance from the Oregon Health Equity Alliance, this cross-jurisdictional team will develop culturally responsive strategies that: <ul style="list-style-type: none"> <li>» Identify and engage at-risk communities</li> <li>» Reduce barriers (e.g., language, stigma, access to care) to infectious disease control, prevention and response.</li> </ul> </li> <li>• Both qualitative and quantitative evaluation methods are included in the overall design. Evaluation results will guide implementation of best practices across the region focused on reducing and eliminating the spread of communicable diseases.</li> </ul> | <p>\$679,999</p> |
|--|---|------------------|

It is important to note that with a funding level of \$5 million, relative to the estimated gap needed for full implementation of communicable disease control, health equity and cultural responsiveness, and assessment and epidemiology alone per the 2016 *Public Health Modernization Assessment Report* (1), both OHA and local public health authority deliverables were focused on the one or two most critical communicable diseases and most critical state level functions to support local priorities.

The 2017–19 investment has provided critical funding for strengthening local capacity and establishing regional approaches for communicable disease control. State and local public health authorities will sustain and build upon the progress made in this biennium with future funding.

## Progress toward accountability metrics






In 2017, PHAB adopted accountability metrics for Oregon’s public health system. The framework for public health accountability metrics includes:

- Health outcome measures that reflect Oregon’s population health priorities and
- Process measures that articulate the specific work of local public health authorities to achieve changes in health outcomes.

PHAB adopted the following measures, on which progress will be reported annually :

## Figure 2

### PUBLIC HEALTH ACCOUNTABILITY AND DEVELOPMENTAL METRICS

| PART 1: ACCOUNTABILITY METRICS  |   |  |  |
|---|---|--|--|
| Health outcome measure  | Local public health process measure   |  |  |
|  <b>Communicable disease control</b>             |   |  |  |
| Percent of 2-year-olds who received recommended vaccines  | Percent of Vaccines for Children clinics that participate in the Assessment, Feedback, Incentives and eXchange (AFIX) program |  |  |
| Gonorrhea incidence rate per 100,000 population   | Percent of gonorrhea cases that had at least one contact that received treatment  | Percent of gonorrhea case reports with complete priority fields    |  |
|  <b>Prevention and health promotion</b>          |   |  |  |
| Percent of adults who smoke cigarettes  | Percent of population reached by tobacco-free county properties policies  | Percent of population reached by tobacco retail licensure policies |  |
| Prescription opioid mortality rate per 100,000 population   | Percent of top opioid prescribers enrolled in the Prescription Drug Monitoring Program (PDMP) database                        |  |  |
|  <b>Environmental health</b>                   |   |  |  |
| Percent of commuters who walk, bike or use public transportation to get to work   | Number of active transportation partner governing or leadership boards with local public health authority representation      |  |  |
| Percent of community water systems meeting health-based standards   | Percent of water systems surveys completed  | Percent of water quality alert non-responses                       | Percent of priority non-compliers resolved |
|  <b>Access to clinical preventive services</b> |   |  |  |
| Percent of women at risk of unintended pregnancy who use effective methods of contraception                                       | Annual strategic plan that identifies gaps, barriers and opportunities for improving access to effective contraceptive use    |  |  |
| PART 2: DEVELOPMENTAL METRICS   |   |  |  |
| Health outcome measure  | Local public health process measure   |  |  |
|  <b>Access to clinical preventive services</b> |   |  |  |
| Percent of children age 0-5 with any dental visit   | Not applicable  |  |  |

OHA published the baseline Public Health Accountability Metrics Report in March 2018. This report provides detailed information about Oregon’s current status on population health priorities. Some notable findings include:

- **With 89% of public water systems meeting health-based standards in 2016, the public health system is close to meeting the statewide benchmark of 92%.** Oregon’s public health system ensures clean drinking water for people across Oregon. State and local public health authorities inspect Oregon’s 3,600 public water systems and take corrective actions when public water systems do not meet standards.
- **In 2016, the rate of gonorrhea infections was considerably higher than the statewide benchmark of 72 cases per 100,000 people.** In recent years, Oregon, like much of the rest of the nation, has experienced a large increase in gonorrhea cases, with significant disparities among certain populations. State and local public health authorities identify where outbreaks are occurring and ensure proper treatment of both the individuals affected and their partners. Oregon’s public health system has already begun to improve its work on sexually transmitted infections and other communicable diseases using the 2017–19 legislative investment in public health modernization.
- **For most accountability metrics, health outcomes vary across racial and ethnic groups.** The report highlights variations across different racial and ethnic groups to better focus interventions on reducing health disparities.

Moving forward, annual reports will provide the public health system, its partners and the Legislature the information that is needed to understand where Oregon is making progress toward population health goals, and where new approaches or additional focus is needed. Oregon’s public health system has historically had many successes in improving population health. Sustaining these successes and building upon them to meet new population health challenges requires modern approaches and sufficient funding.

The full report is available in **Appendix B**.

# 2019–21 proposed legislative investment

---



## Local public health authority funding formula

The 2014 Task Force for the Future of Public Health Services (task force) envisioned an approach for funding local public health authorities designed to:

- Increase accountability for achieving population health goals
- Sustain local investment in public health and
- Ensure a sufficient state investment for foundational public health programs.

The 2015 Oregon legislature supported the task force’s vision, which was implemented through ORS 431.380. This law directs OHA to distribute state moneys for public health modernization to local public health authorities through a funding formula that includes three components:

- Base funds: Allocated to local public health authorities based on population, health status, burden of disease and ability of the local public health authority to invest in local public health
- Matching funds: Awarded for county investment in local public health services and activities above the base funding amount
- Incentive funds: Awarded for achieving accountability metrics.

## Public Health Advisory Board recommendations

The PHAB provides recommendations to OHA on the development and modification of plans to distribute funds to local public health authorities under ORS 431.380. The funding formula model recommended by PHAB is described below.

In addition to its recommendations on the funding formula required under ORS 431.380, in 2018, PHAB developed a set of funding principles that can be applied to other state and federal public health funding streams. These funding principles:

- Maximize the benefit of available resources
- Support system-wide approaches to providing foundational public health programs and
- Increase transparency and understanding about state and local public health authority roles and funding.

**Appendix C** includes PHAB’s funding principles.

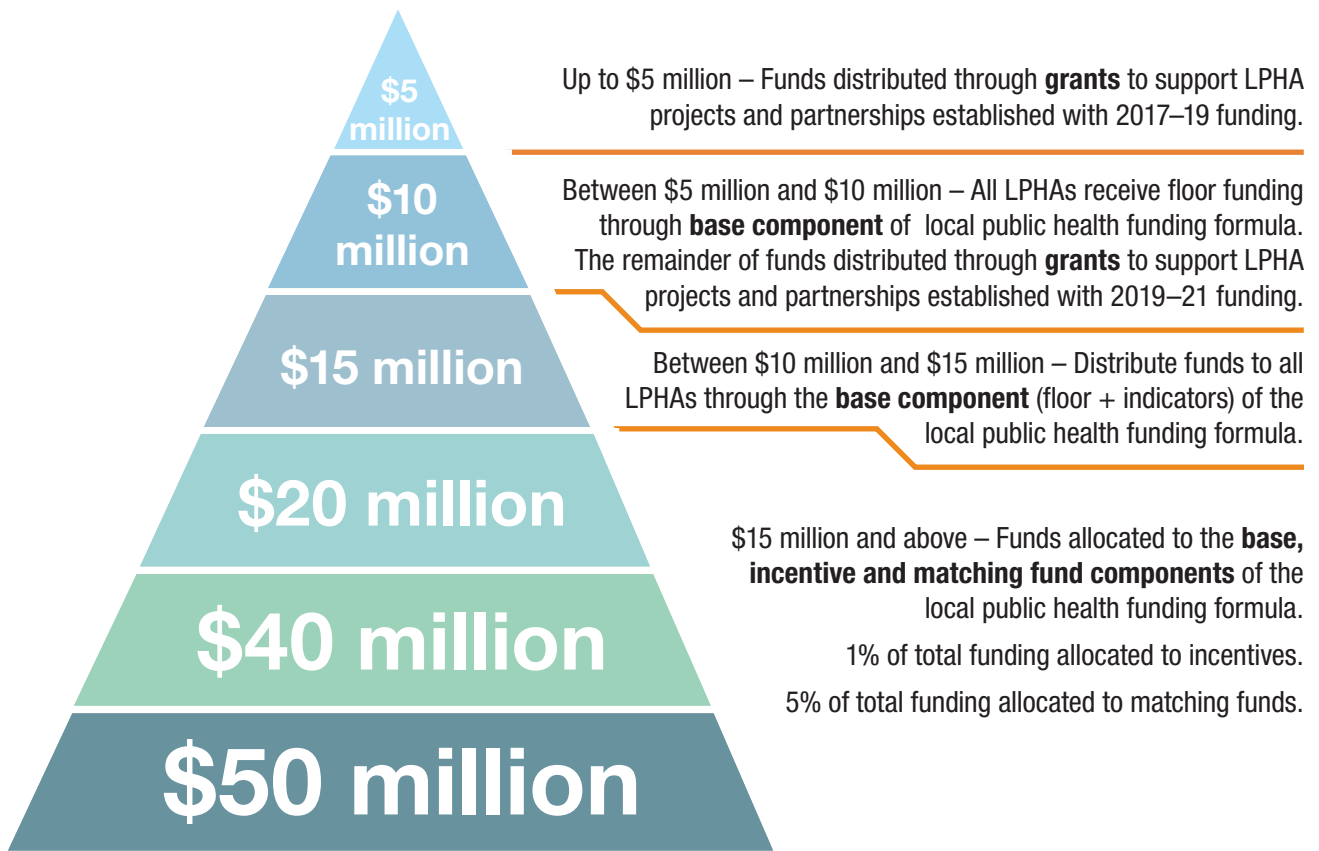
The PHAB has provided the following broad recommendations for allocating public health modernization funds to local public health authorities:

- A tiered approach should be used to allocate funds to each component of the funding formula at different funding levels. PHAB recommends that funds be distributed to all local public health authorities through the funding formula starting at the \$10 million biennial funding level for local public health authorities. At levels below this threshold, funds should be awarded through alternate mechanisms intended to support new or innovative models of public health service delivery, such as regional grants. See Figure 2 for a complete description of PHAB’s funding threshold recommendations.
- At all funding levels at or above \$10 million to local public health authorities for the biennium, extra-small and small counties should receive a proportionally larger per capita allocation, and large and extra-large counties should receive a proportionally larger dollar amount. This is consistent with the resource gaps identified in the 2016 *Public Health Modernization Assessment Report*.
- The local public health authority funding formula should be used to advance health equity by directing funds to a set of indicators that measure health outcomes and county demographics.

The funding formula model shows how state funds may be allocated through the funding formula in 2019–21. However, it is not a commitment of funding to local public health authorities. Final decisions about local public health authority funding allocations through the funding formula will be made following legislative decisions about total public health modernization funding for the 2019–21 biennium.

Figure 3

ALLOCATIONS TO FUNDING FORMULA COMPONENTS AT A RANGE OF LOCAL PUBLIC HEALTH AUTHORITY FUNDING LEVELS FOR THE 2019–21 BIENNIUM.\*



\* The funding levels in this diagram represent the public health modernization biennial allocation to local public health authorities. This allocation is a portion of total public health modernization funding for the biennium. OHA retains a portion of funds for state-level public health functions.

## The local public health authority funding formula model

Using PHAB’s recommendations for a tiered funding approach, Figure 3 provides an overview of how funds would be allocated across each component of the funding formula starting at a funding level of \$15 million to local public health authorities for the 2019–21 biennium. This is the level at which all local public health authorities would be eligible to receive base, matching and incentive funds. PHAB determined that a minimum \$15 million funding level to local public health authorities in the 2019–21 biennium would allow for meaningful implementation of the base, matching and incentive fund components of the funding formula. Each component in this model has been carefully designed to fulfill legislative intent and the original vision of the 2014 task force. See Appendix D for a complete description and methodology of each funding formula component.

**Figure 4**

**EXAMPLE OF HOW FUNDS WOULD BE DISTRIBUTED THROUGH FUNDING FORMULA COMPONENTS AT THE \$15 MILLION BIENNIAL FUNDING LEVEL FOR LOCAL PUBLIC HEALTH AUTHORITIES IN 2019–21.**





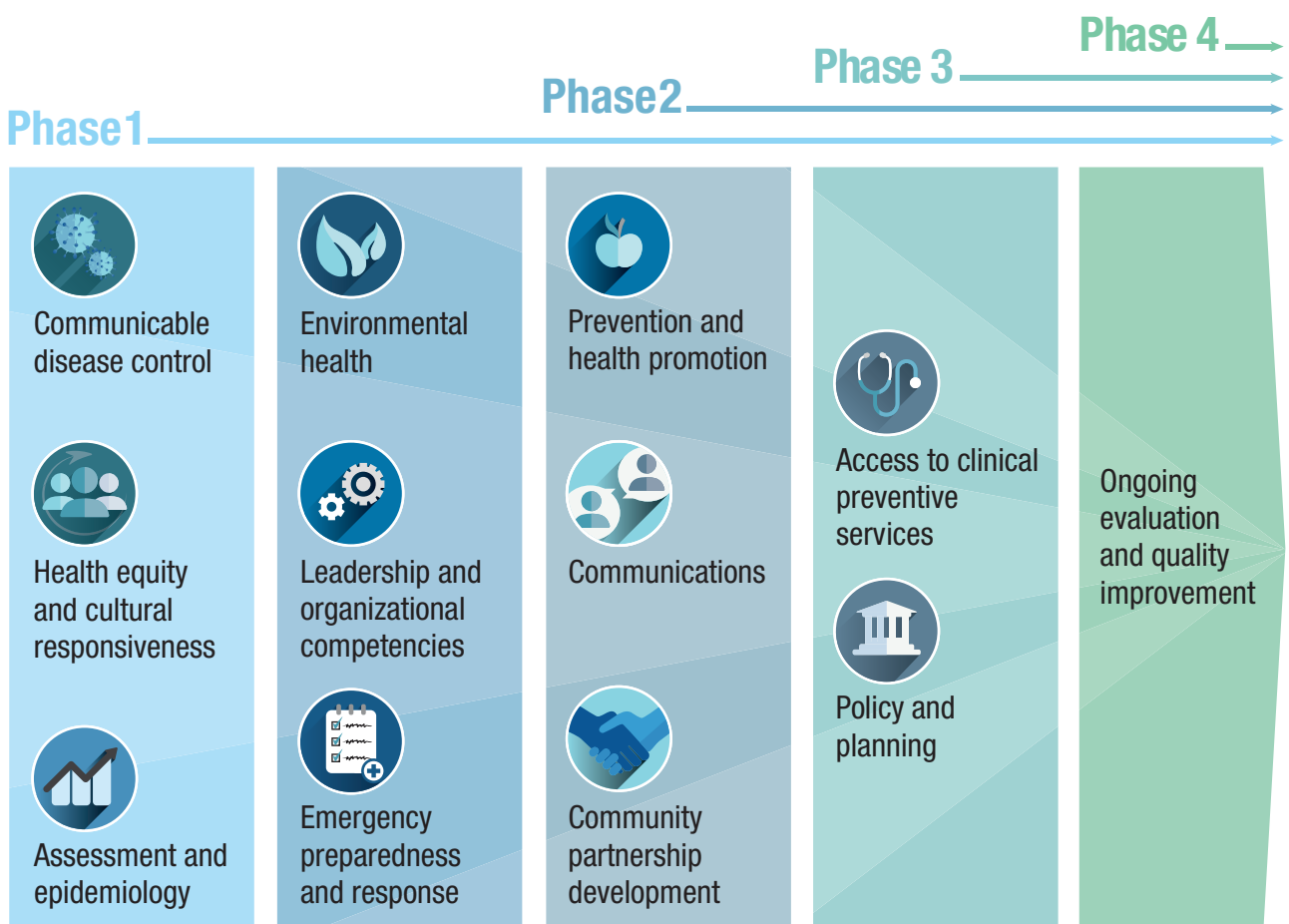
# Estimate of the amount of state General Fund needed for public health modernization

In February 2018, the PHAB provided its recommendation to OHA for implementing foundational capabilities and programs in the 2019–21 biennium. PHAB recommended that:

- The public health system continue to focus on communicable disease control, health equity and cultural responsiveness, and assessment and epidemiology and
- With additional funding, expand its focus to include environmental health, emergency preparedness and response, and leadership and organizational competencies.

These areas listed above fall under “Phase 1” for implementation of foundational capabilities and programs, as described in the December 2016 Statewide Public Health Modernization Plan. These recommendations from PHAB recognize the interconnection between human health and the environment. The way people live, work and travel have all changed the landscape of public health priorities in recent years. Environmental changes are resulting in

## Proposed phases for foundational capabilities and programs



new and changing health threats, such as emerging communicable diseases and health impacts of poor air quality due to wildfires. The public health system needs to address emerging issues with comprehensive strategies that include working with communities to prepare for emerging environmental health and communicable disease threats. The emphasis will remain on working with vulnerable communities to help them prepare for events such as wildfires, drought and emerging diseases.

The 2016 *Public Health Modernization Assessment Report* found a \$105 million annual, or \$210 million biennial gap in public health spending to fully implement all four foundational programs and seven foundational capabilities included in Oregon’s public health modernization statutes.

OHA estimates that \$47.7 million is necessary to implement the priorities included in phase 1 above as identified by PHAB for the 2019–21 biennium. These funds would be deployed at the state and local level to achieve the deliverables included in the *Public Health Modernization Manual*. The 2017–19 investment has provided critical funding for strengthening local capacity and establishing regional approaches for communicable disease control. State and local public health authorities will sustain and build upon the progress made in this biennium with an increased investment in 2019–21.

Once funding decisions by the Legislature for public health modernization in 2019–21 are determined, PHAB will continue to advise on how to allocate funds to local public health authorities. The amount of total funding to be allocated to local public health authorities will be based on legislative direction for the work to be funded in 2019–21.

# Endnote

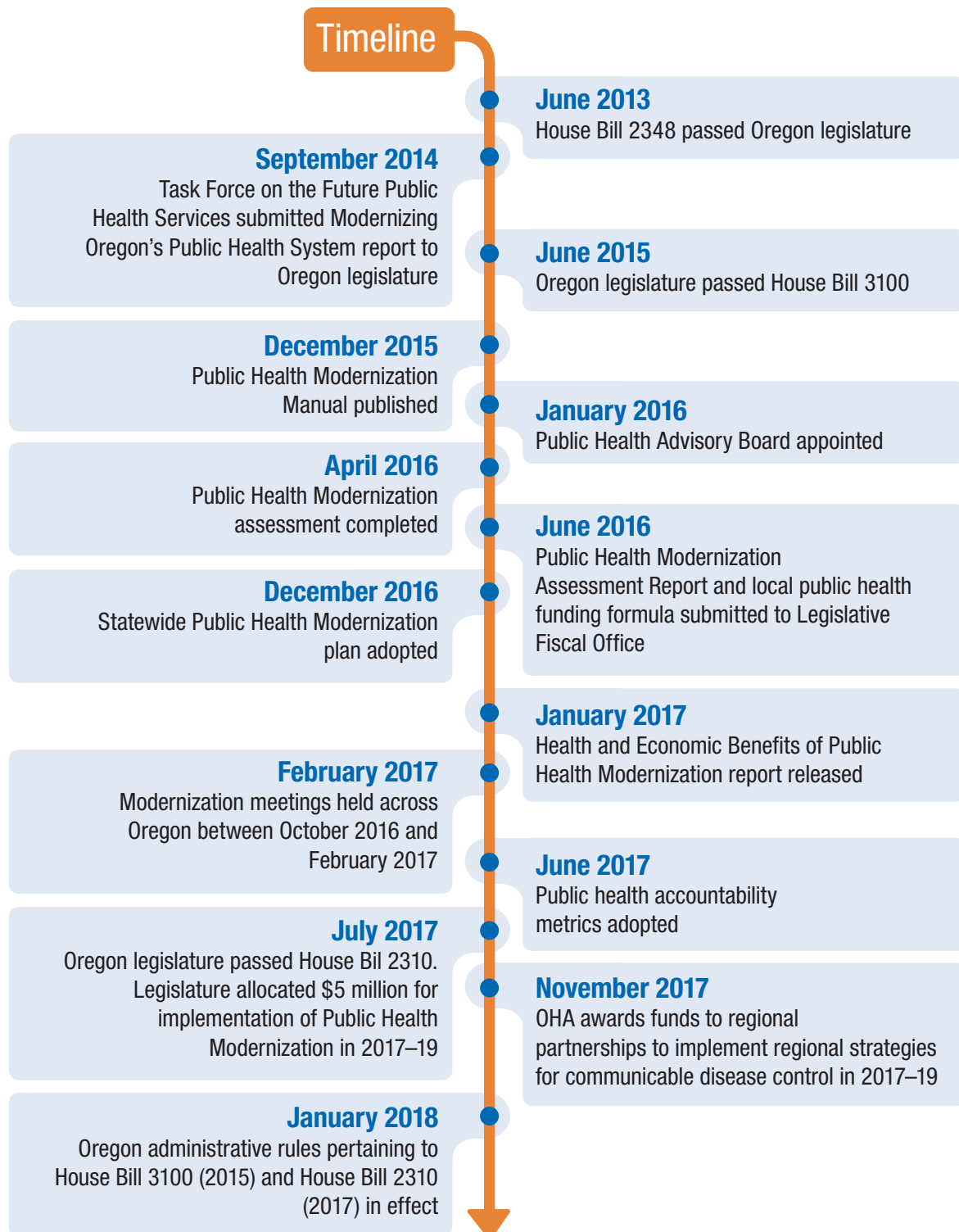
---



Berk Consulting. (2016). State of Oregon public health modernization assessment report. [cited 2018 June 6]. Available at <http://www.oregon.gov/oha/PH/ABOUT/TASKFORCE/Documents/PHModernizationFullDetailedReport.pdf>.



## Appendix A: Public health modernization milestones



# Appendix B: Public Health Accountability Metrics Report

## Public Health Accountability Metrics

Baseline Report  
March 2018



## About this Report

Welcome to Oregon Health Authority's Public Health Accountability Metrics Baseline Report.

In June 2017, Oregon's Public Health Advisory Board established a set of accountability metrics to track progress toward population health goals in a modern public health system. Public health accountability metrics will help track progress towards the modernization of Oregon's public health system, as well as help identify where change may be needed if goals aren't being met. More importantly, these metrics emphasize Oregon's population health priorities including areas where public health can work with other sectors to achieve shared goals.

For questions or comments about this report, or to request this publication in another format or language, please contact the Oregon Health Authority, Office of the State Public Health Director at:

(971) 673-1222 or  
PublicHealth.Policy@state.or.us

## Table of Contents

|  |    |
|--|----|
| Executive Summary                      | 3  |
| Introduction                           | 4  |
| Communicable Disease Control           | 8  |
| Prevention and Health Promotion        | 14 |
| Environmental Health                   | 20 |
| Access to Clinical Preventive Services | 26 |
| Technical Appendix                     | 29 |

The Oregon Health Authority, Public Health Division acknowledges the tremendous work of the Public Health Advisory Board, and specifically members of the Accountability Metrics subcommittee, to establish the first-ever set of accountability metrics for Oregon's public health system. Subcommittee members reviewed hundreds of potential measures over the course of nearly two years to arrive at a set of measures that reflect Oregon's population health priorities and the important work of the governmental public health system. Thank you!

# Executive Summary

Oregon leads the nation in tracking the efforts of the public health system to improve health outcomes. Oregon Revised Statute 431.115 requires the use of accountability metrics to incentivize the effective and equitable provision of public health services across Oregon.

The 2018 Public Health Accountability Metrics Baseline Report provides an in depth look at how Oregon's public health system is doing today on key health issues like improving childhood immunization rates, reducing tobacco use and opioid overdose, and ensuring access to clean drinking water. It is important to note that no single set of measures can capture all of the work of governmental public health, and this report provides a snapshot of how the state is performing at baseline on leading health issues. Key findings from the report include:

- **With 89% of public water systems meeting health-based standards in 2016, the public health system is close to meeting the statewide benchmark of 92%.** Oregon's public health system ensures clean drinking water for people across Oregon. State and local public health authorities inspect Oregon's 3,600 public water systems and take corrective actions when public water systems do not meet standards.
- **In 2016, the rate of gonorrhea infections was considerably higher than the statewide benchmark of 72 cases per 100,000 people.** In recent years, Oregon, like much of the rest of the nation, has experienced a large increase in gonorrhea cases, with significant disparities among certain populations. State and local public health authorities identify where outbreaks are occurring and make sure both the individual affected and their partners are properly treated. Oregon's public health system has already begun to improve its work on sexually transmitted and other communicable diseases through a new \$5M state investment in public health.
- **For most accountability metrics, health outcomes vary across racial and ethnic groups.** The report highlights variations across different racial and ethnic groups to better focus interventions on reducing the health disparities that exist in Oregon.

Moving forward, annual reports will provide the public health system and its partners and stakeholders the information that is needed to understand where Oregon is making progress toward population health goals, and where new approaches and additional focus are needed.

## Framework for Public Health Accountability Metrics

The Public Health Advisory Board adopted measures to track progress toward achieving population health goals through a modern public health system. The collection of health outcome and local public health process measures, defined below, are collectively referred to as public health accountability metrics.

**Health outcome measures** reflect population health priorities for the public health system. Making improvements on health outcome measures will require long-term focus and must include work in other sectors. More than half of the health outcome measures align with current coordinated care organization incentive measures.

**Local public health process measures** reflect the daily work of a local public health authority to make improvements in each health outcome measure.

# Introduction

## Background

Since 2013 Oregon has been working to modernize how public health is provided across the state. Public health modernization is intended to ensure the public health system operates efficiently, is aligned with health system transformation, and is set up to provide critical protections for every person in the state.

Efforts to modernize the public health system have been driven by Oregon's legislature, which has passed related laws in the last three sessions. In the 2015 and 2017 sessions, the legislature enacted laws to use public health accountability metrics to track the progress of state and local public health authorities to meet population health goals, and to use these metrics to incentivize the effective and equitable provision of public health services (Oregon Revised Statute 431.115).

## Framework for public health accountability metrics

The Public Health Advisory Board (PHAB) adopted measures to track progress toward achieving population health goals through a modern public health system. The collection of health outcome and local public health process measures, defined below, are collectively referred to as public health accountability metrics. Measures are shown in Table 1.






Health outcome measures reflect population health priorities for the public health system. Making improvements on the health outcome measures will require long-term focus and must include other sectors.

Local public health process measures reflect the core functions of a local public health authority to make improvements in each health outcome measure. Local public health process measures capture the work that each local public health authority must do in order to move the needle on the health outcome measures.

Developmental metrics reflect population health priorities but for which comprehensive public health strategies are yet to be determined. These health outcome measures will be tracked and reported but will not be incentivized.



Table 1. Public Health Accountability and Developmental Metrics

| PART 1: ACCOUNTABILITY METRICS  |   |  |  |
|---|---|--|--|
| Health Outcome Measure  | Local Public Health Process Measure   |  |  |
|  <b>Communicable Disease Control</b>             |   |  |  |
| Percent of two-year olds who received recommended vaccines  | Percent of Vaccines for Children clinics that participate in the Assessment, Feedback, Incentives and eXchange (AFIX) program |  |  |
| Gonorrhea incidence rate per 100,000 population   | Percent of gonorrhea cases that had at least one contact that received treatment  | Percent of gonorrhea case reports with complete priority fields    |  |
|  <b>Prevention and Health Promotion</b>          |   |  |  |
| Percent of adults who smoke cigarettes  | Percent of population reached by tobacco-free county properties policies  | Percent of population reached by tobacco retail licensure policies |  |
| Prescription opioid mortality rate per 100,000 population   | Percent of top opioid prescribers enrolled in the Prescription Drug Monitoring Program (PDMP) Database                        |  |  |
|  <b>Environmental Health</b>                    |   |  |  |
| Percent of commuters who walk, bike, or use public transportation to get to work  | Number of active transportation partner governing or leadership boards with local public health authority representation      |  |  |
| Percent of community water systems meeting health-based standards   | Percent of water systems surveys completed  | Percent of water quality alert responses                           | Percent of priority non-compliers resolved |
|  <b>Access to Clinical Preventive Services</b> |   |  |  |
| Percent of women at risk of unintended pregnancy who use effective methods of contraception                                       | Annual strategic plan that identifies gaps, barriers and opportunities for improving access to effective contraceptive use    |  |  |
| PART 2: DEVELOPMENTAL METRICS   |   |  |  |
| Health Outcome Measure  | Local Public Health Process Measure   |  |  |
|  <b>Access to Clinical Preventive Services</b> |   |  |  |
| Percent of children age 0-5 with any dental visit   | Not applicable  |  |  |

# Introduction

## Public health funding for accountability metrics

The Oregon Health Authority (OHA) and local public health authorities (LPHAs) are funded to implement programs for some, but not all, public health accountability metrics.

LPHAs receive funding through Oregon Health Authority through contracts for individual programs. Each page in this report for local public health process measures includes information about whether LPHAs currently receive funding to support achievement of the process measure. Moving forward state and local public health authorities will continue to look for opportunities to align existing funding with public health accountability metrics, while also seeking opportunities to increase public health funding.

## Sources for population health data

The public health system uses data from different sources to track health outcomes, including vital statistics, reportable disease surveillance, and surveys, among others. The variety of data sources, methods used to report data, and time periods for reporting present challenges to making comparisons across accountability metrics. Each accountability metric should be looked at individually, and comparisons between metrics should not be made to understand differences in population health outcomes of interest.

# Introduction

## How to use this report

This report should be used to understand our current status on population health priorities and public health interventions to make improvements. Where possible, data are reported by race/ethnicity, which help to understand the health disparities that exist in Oregon. This baseline report should not be interpreted as a report card for Oregon's public health system or any individual public health authority.

No single metric or set of metrics fully captures the important work of the governmental public health system. The PHAB selected from hundreds of potential metrics to identify those that are relevant, readily available, and capture the important work of public health modernization.

The information in this report will be used to inform public health interventions. Many public health accountability metrics align with quality metrics used by other sectors, including coordinated care organizations. Shared metrics should be used to support collaborative cross-sector approaches for improving health.

Measures in this report are reported under the public health modernization foundational program areas:



**Communicable Disease Control**



**Prevention and Health Promotion**



**Environmental Health**



**Access to Clinical Preventive Services**

## Baseline health outcome and process measures

The baseline year for data is 2016 unless otherwise specified. Benchmarks are presented for each measure. For most measures, the higher or larger the data, the more desirable relative to meeting or exceeding the benchmark. Measures where lower or smaller data points relative to the benchmark are desirable, are indicated with "lower is better" on the chart. The race categories of African American, American Indian & Alaska Native, Asian, Pacific Islander, and White do not include individuals of Hispanic ethnicity. Data for individuals of Hispanic ethnicity are presented separately. Data sources, data collection methods, measure specification, and additional technical information are described in detail in the Technical Appendix.



# Childhood Immunization

## Health Outcome Metric

### Percent of two-year olds who received recommended vaccines

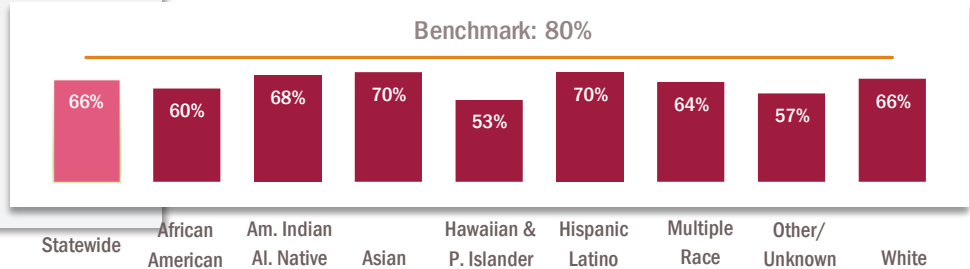
**Foundational program area:** Communicable Disease Control

**Data source:** ALERT Immunization Information System, 2016

**Benchmark source:** 80%, Oregon State Health Improvement Plan (SHIP) 2020 target

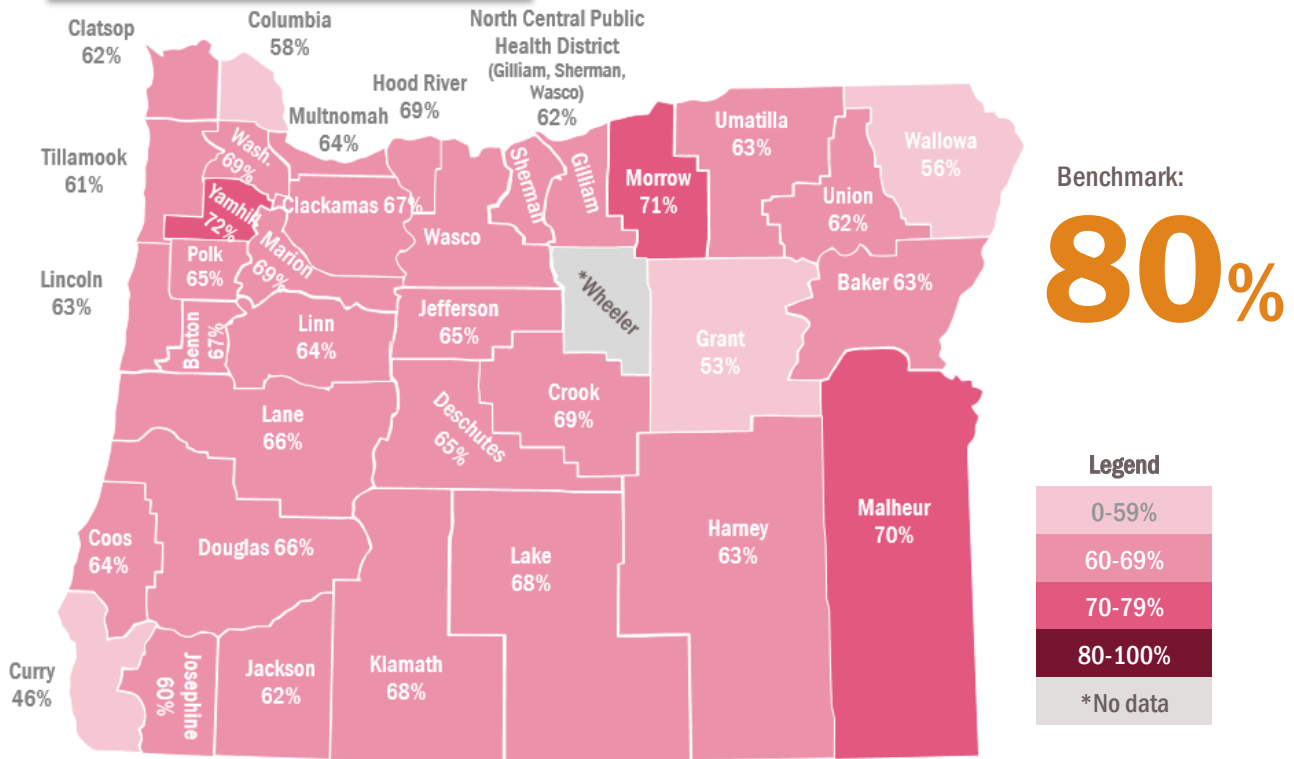
#### By race and ethnicity

Statewide 2016  
Race/ethnicity 2016



#### By county

Oregon 2016



**Notes:**

- Two-year olds are children 24 to 35 months of age residing in the county.
- The official childhood vaccination series is 4 doses of DTaP, 3 doses IPV, 1 dose MMR, 3 doses Hib, 3 doses Hep B, 1 dose Varicella, and 4 doses PCV (4:3:1:3:3:1:4 series).
- \* indicates where rates are not displayed for populations of fewer than 50 people in accordance with Oregon Health Authority, Public Health Division confidentiality policy.
- Percentage is calculated by dividing the number of children 24-35 months of age in each county who received the vaccination series (numerator) divided by number of children 24-35 months of age in each county (denominator).



# Childhood Immunization

## Local Public Health Process Measure

### Percent of Vaccines for Children clinics participating in AFIX

**Foundational program area:** Communicable Disease Control

**Data source:** Assessment, Feedback, Incentives, and eXchange (AFIX) online tool, 2017

**Benchmark source:** 25% provided by Oregon Health Authority, Public Health Division, Immunization Program

#### Local public health funding

All local public health authorities (LPHAs) receive funding to provide immunization services. Beginning in July 2018, conducting outreach to engage health care providers in AFIX is a required activity.

**Benchmark:**

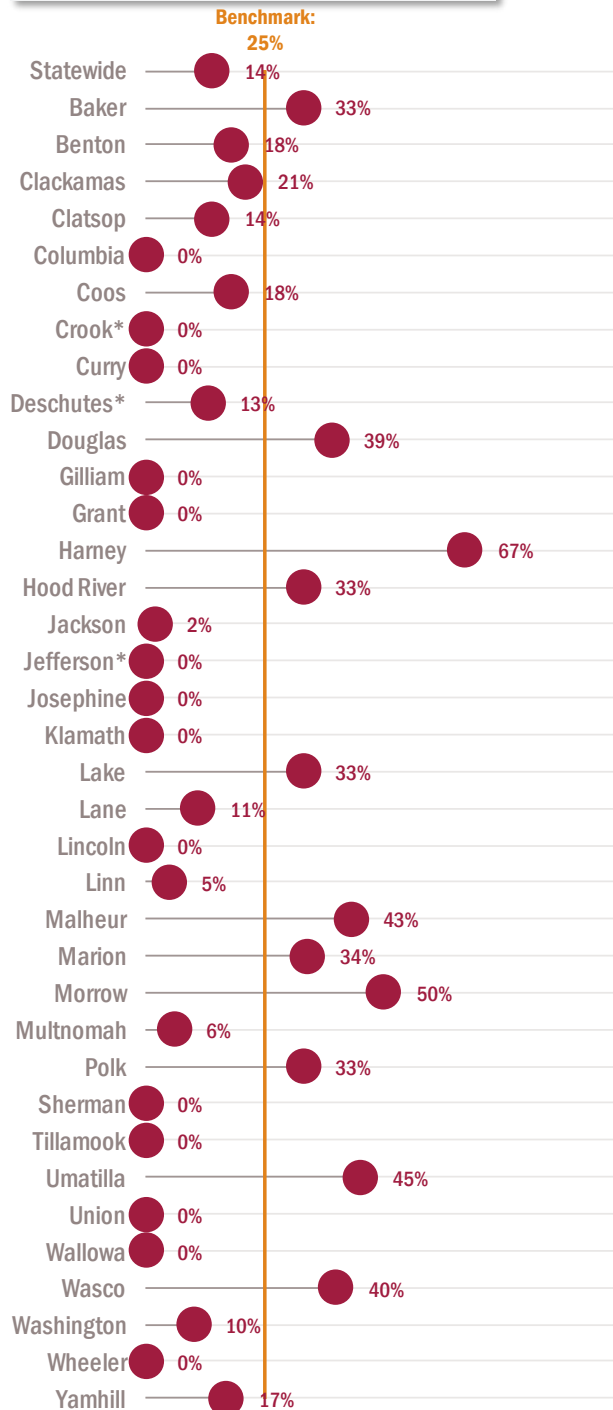
# 25%

**Notes:**

- Baseline data are 2017.
- Percentage calculated by dividing the number of clinics with any AFIX visits initiated (numerator) by the number of clinics active in Vaccines for Children (VFC) as of 12/31/17 (denominator).
- Statewide 14% is based on 79 clinics with AFIX visits divided by 569 VFC clinics.
- Numerators and denominators vary widely by county. Denominators range from 1 to 96 and numerators range from 0 to 14. For example, 50% could represent 1 clinic with an AFIX visit out of 2 VFC clinics or could represent 30 out of 60.
- \*indicates counties that completed their own AFIX visits in 2017, but these visits did not meet the CDC data reporting requirements and are not counted toward the process measure.

#### By county

2017





# Gonorrhea Rate

Health Outcome Metric

Gonorrhea incidence rate per 100,000 population

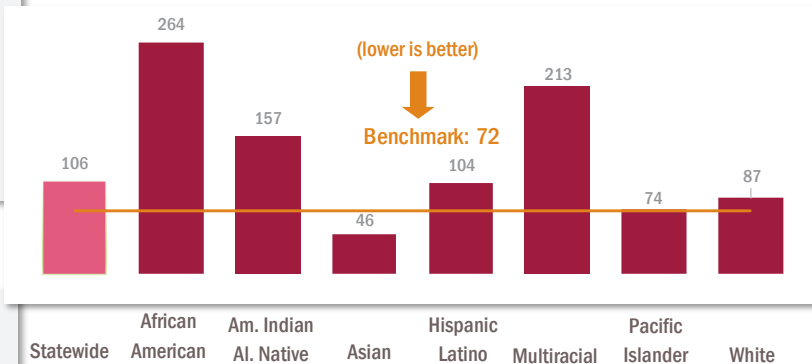
**Foundational program area:** Communicable Disease Control

**Data source:** Oregon Public Health Epi User System (Orpheus), 2016

**Benchmark source:** 72/100,000, Oregon State Health Improvement Plan (SHIP) 2020 target

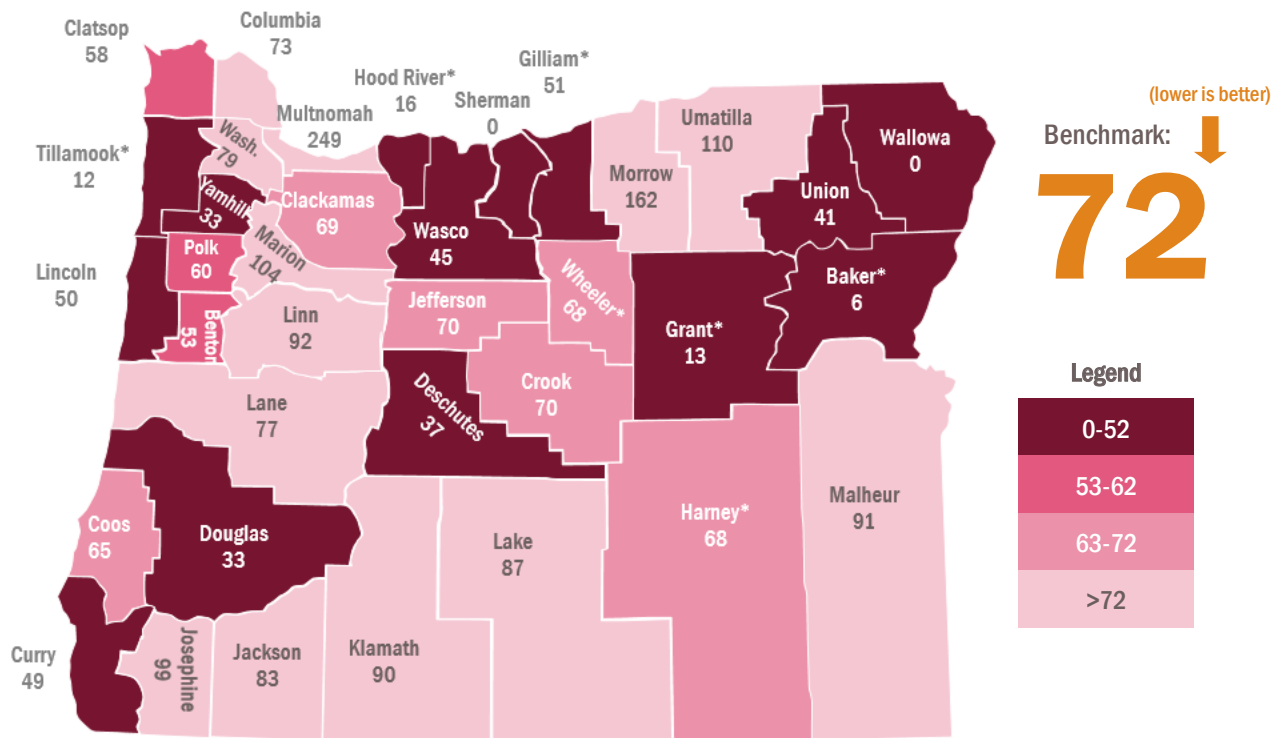
## By race and ethnicity

Statewide 2016  
Race/ethnicity 2016



## By county

Oregon 2016



**Notes:**

- Population for rates by county use PSU Certified Population Estimates 2016.
- Population for rates by race and ethnicity use US Census Bureau Population Estimates, Vintage 2016 .
- All rates shown are crude rates (not age adjusted rates) and are calculated by identifying the total number of incident cases in a specified geographic area (numerator, Orpheus case counts) and dividing by the total population for the same geographic area during calendar year (denominator) and multiplied by 100,000.



# Gonorrhea Rate

Health Outcome Measure

**Gonorrhea incidence rate per 100,000 population**

- Date extracted from Orpheus December 2017.
- Race/ethnicity data excluded 439 cases with the following categories: missing, other, refused, "refused unknown", unknown, and "unknown other".
- \* indicates rates for counties based on 5 or fewer events are considered unreliable.



# Gonorrhea Rate

## Local Public Health Process Measure

### Percent of gonorrhea cases that had at least one contact that received treatment

**Foundational program area:** Communicable Disease Control

**Data source:** Oregon Public Health Epi User System (Orpheus), 2016

**Benchmark source:** 35%, provided by Oregon Health Authority, Public Health Division, HIV, STD and Tuberculosis Section

#### Local public health funding

All local public health authorities (LPHAs) receive funding for communicable disease investigations, including those for STDs.

Beginning in January 2018 some LPHAs receive additional funding to conduct partner services for HIV and STD cases.

Benchmark:

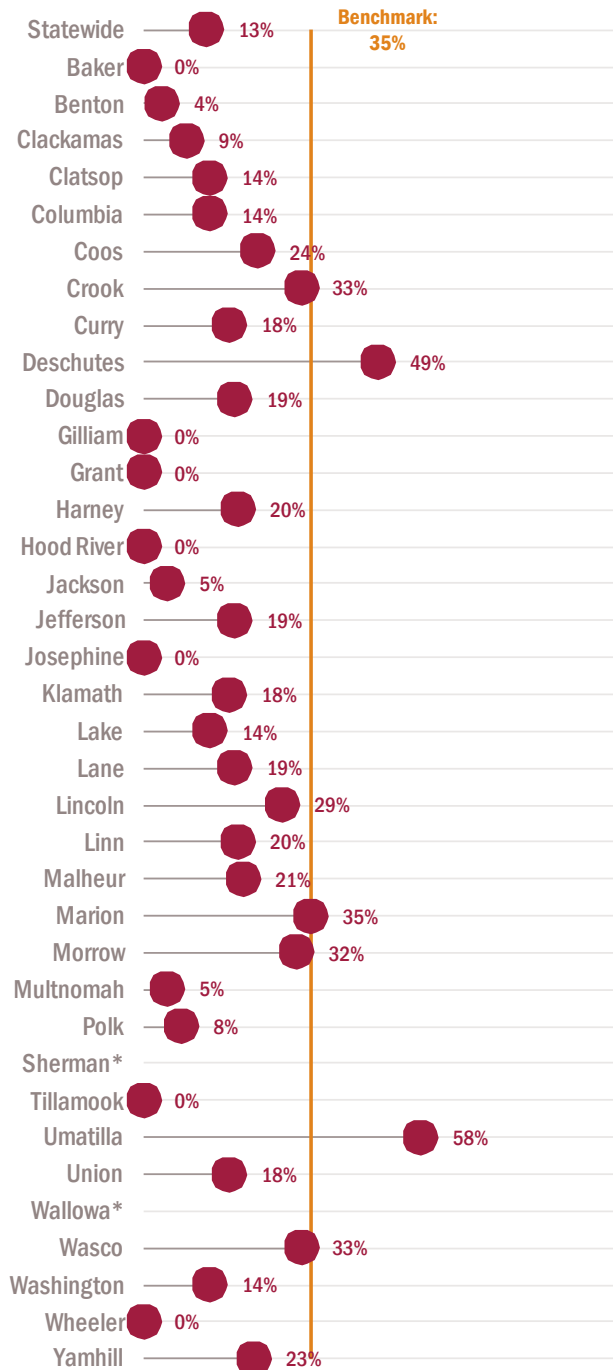
# 35%

**Notes:**

- Statewide 552 gonorrhea cases had at least one contact treated out of 4,353 total gonorrhea cases (12.7%).
- Percentages are calculated by identifying gonorrhea cases with at least one contact with treatment or Expedited Partner Therapy (EPT) documented on the contact record (numerator) and dividing by all confirmed or presumptive gonorrhea cases reported during the calendar year 2016 (denominator).
- Number of gonorrhea cases (range: 0 - 1,972) and percentages (range: 0% - 58%) vary widely by county.
- \* indicates counties that had 0 gonorrhea cases in 2016.

#### By county

Oregon 2016







# Gonorrhea Rate

## Local Public Health Process Measure

### Percent of gonorrhea case reports with complete priority fields

**Foundational program area:** Communicable Disease Control

**Data source:** Oregon Public Health Epi User System (Orpheus), 2016

**Benchmark source:** 70%, provided by Oregon Health Authority, Public Health Division, HIV, STD and Tuberculosis Section

#### Local public health funding

All local public health authorities (LPHAs) receive funding for communicable disease investigations, including those for STDs. Beginning in January 2018 some LPHAs receive additional funding to conduct partner services for HIV and STD cases.

Benchmark:

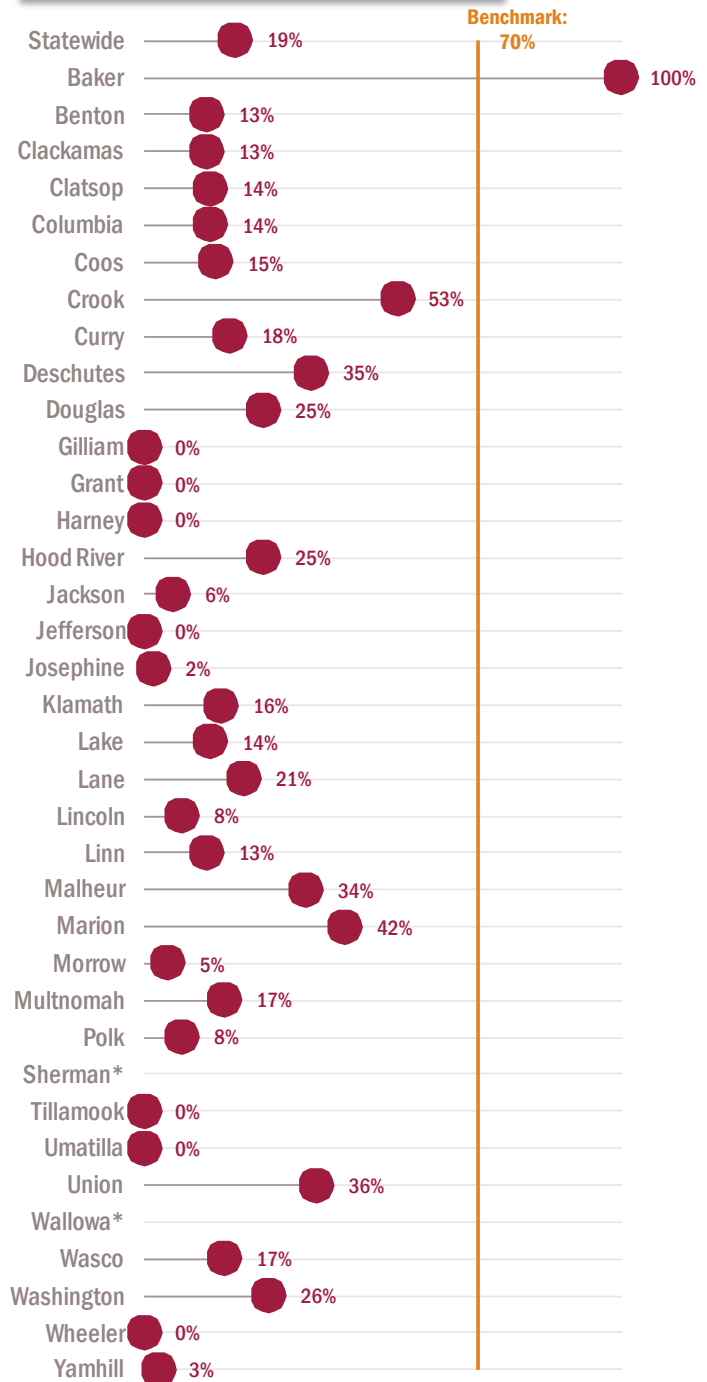
# 70%

**Notes:**

- Priority fields include race, ethnicity, gender of sex partner, pregnancy status, and HIV status/date of last HIV test. Priority fields (race, ethnicity, and pregnancy status) are considered complete if they are not unknown or refused.
- Statewide 833 gonorrhea cases had complete data for priority fields out of 4,353 total gonorrhea cases (19.1%).
- Percentages are calculated by identifying gonorrhea cases with a response for each priority field (numerator) and dividing by all confirmed or presumptive gonorrhea cases reported during the 2016 calendar year (denominator).
- Number of gonorrhea cases (range: 0 - 1,972) and percentages (range: 0% - 100%) vary widely by county.
- \* indicates counties that had 0 gonorrhea cases in 2016.

#### By county

Oregon 2016





# Adult Smoking Prevalence

Health Outcome Measure

Percent of adults who smoke cigarettes

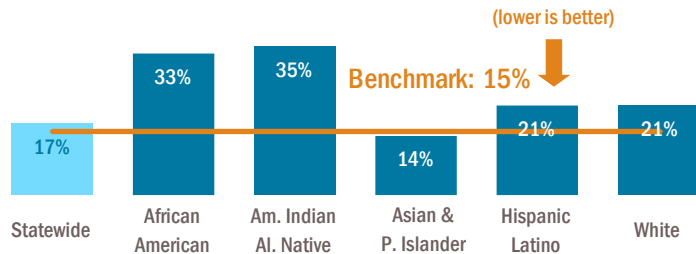
Foundational program area: Prevention and Health Promotion

Data source: Oregon Behavioral Risk Factor Surveillance System (BRFSS), 2016

Benchmark source: 15%, Oregon State Health Improvement Plan (SHIP) 2020 target

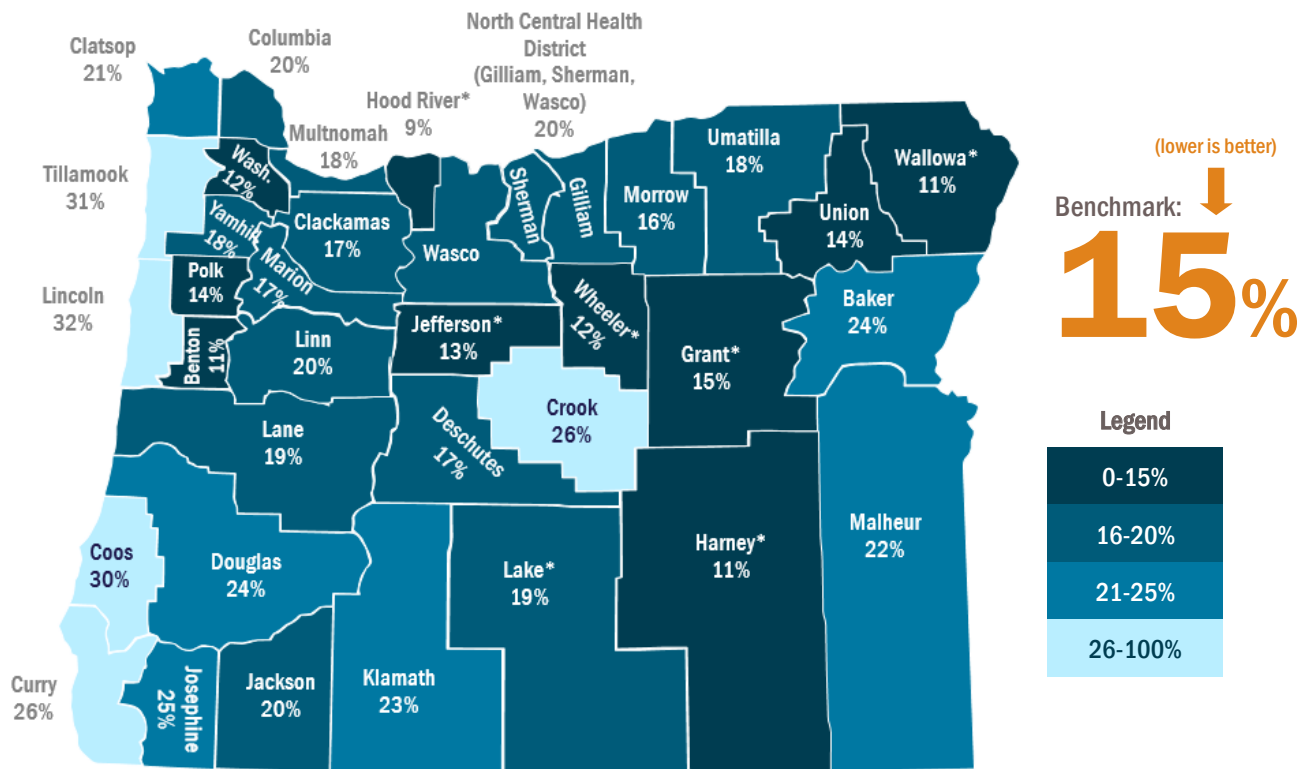
## By race and ethnicity

Statewide 2016  
Race/ethnicity 2010-2011



## By county

Oregon 2012-2015



Notes:

- Race/ethnicity data are combined for years 2010-11, the most recent year for which reporting from a race/ethnic oversample is available.
- County data are combined for years 2012-2015; statewide rate is for 2016.
- Statewide, county, and race/ethnicity rates are age adjusted.
- Survey includes only people age 18 and older. The 2016 BRFSS sample was 8,620.
- Survey responses are weighted. Refer to the Technical Appendix for details about weighting procedure.
- Confidence intervals are not shown. Refer to the Technical Appendix for additional information regarding reporting of confidence intervals.
- \* indicates county estimates with a relative standard error (RSE, a measure of reliability of an estimate)  $\geq 30$  and are considered unreliable.



# Adult Smoking Prevalence

## Local Public Health Process Measure

### Percent of population reached by tobacco-free county properties policies

Foundational program area: Prevention and Health Promotion

Data source: Tobacco-free Properties Evaluation in Counties Data Tables, 2015

Benchmark source: 100%, provided by Oregon Health Authority, Public Health Division, Health Promotion and Chronic Disease Prevention (HPCDP) Section

#### Local public health funding

All local public health authorities (LPHAs) receive funding for tobacco education and prevention, which includes creating tobacco-free environments.

Benchmark:

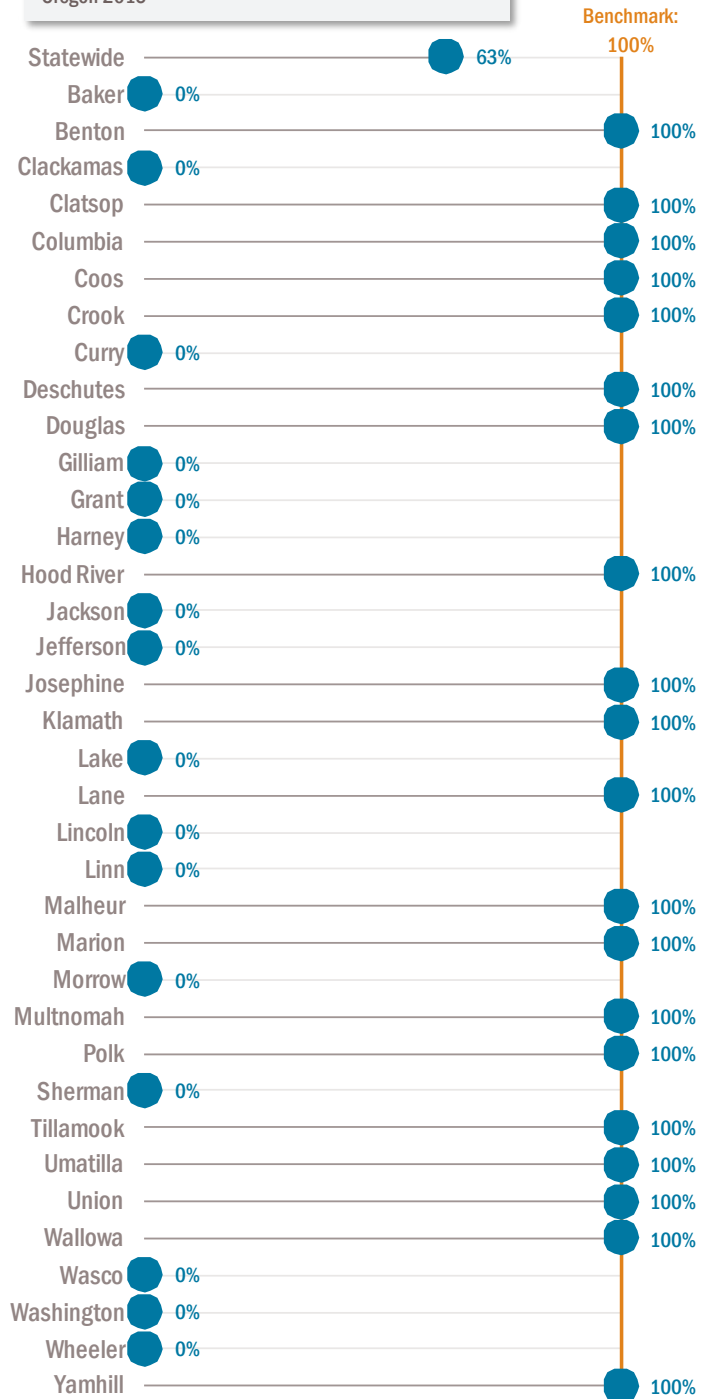
# 100%

#### Notes:

- Tobacco policies include comprehensive (all properties) and partial (some properties) tobacco-free county properties. HPCDP considers everyone (100%) in the county to be covered where tobacco-free county property policy (comprehensive or partial) is in place.
- Data include tobacco-free policies but not smoke-free policies. Data include policies for county properties but not city properties.
- Statewide percentage calculated as: (1,572,145 population covered by comprehensive policies + 967,460 population covered by partial policies) divided by 4,013,846 total 2015 population.
- Source 2015 state and county population estimates: PSU Population Research Center.

#### By county

Oregon 2015





# Adult Smoking Prevalence

## Local Public Health Process Measure

### Percent of population reached by tobacco retail licensure policies

Foundational program area: Prevention and Health Promotion

Data source: Tobacco Policy Database, 2016

Benchmark source: 100%, provided by the Oregon Health Authority, Public Health Division, Health Promotion and Chronic Disease Prevention (HPCDP) section

#### Local public health funding

All local public health authorities (LPHAs) receive funding for tobacco education and prevention, which includes creating tobacco-free environments.

Benchmark:

# 100%

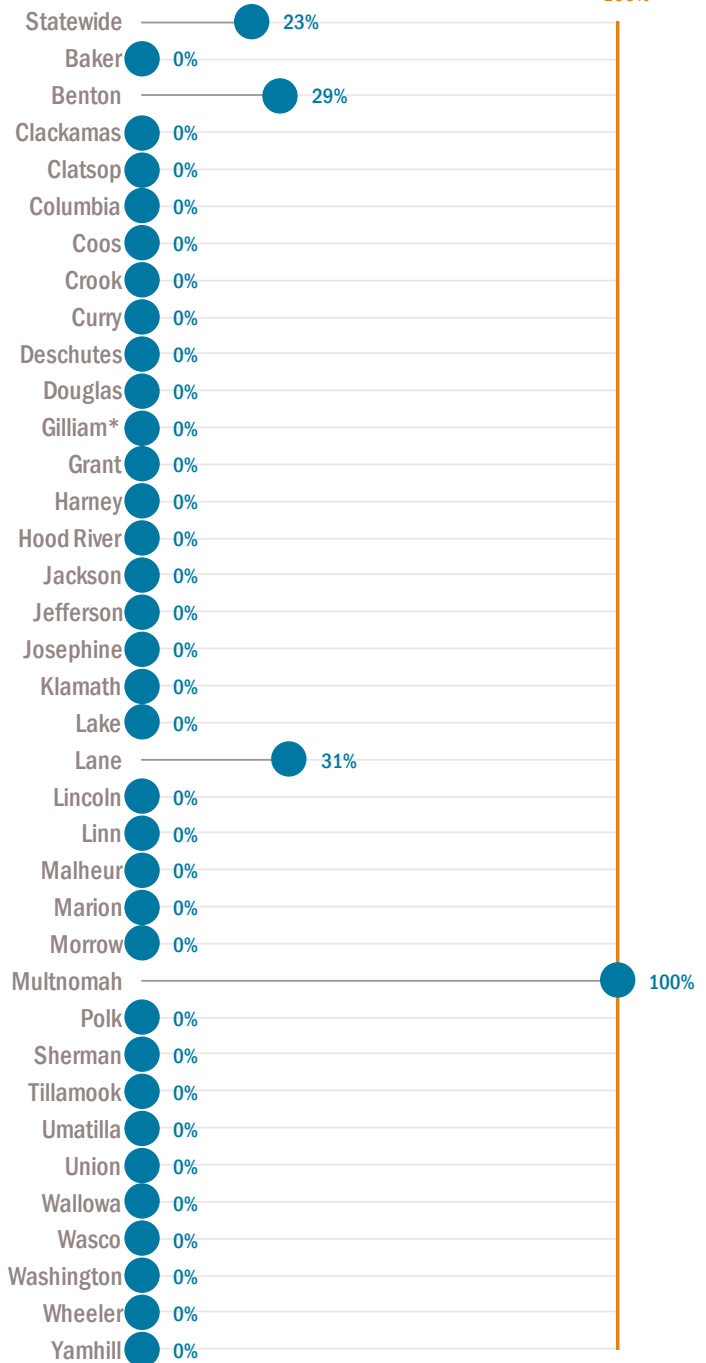
#### Notes:

- Tobacco policies include tobacco retail licensure at a point in-time assessment, October 2016.
- County percentages are calculated as the population within the jurisdiction (i.e., city, unincorporated portions of a county) within each county with a tobacco retail licensure policy (numerator) divided by total county population; statewide percentage is calculated as the sum of county numerators divided by total state population. Refer to the Technical Appendix for additional information on numerators and denominators.
- Population estimates from U.S. Census Bureau, 2016 estimate.

#### By county

Oregon 2016

Benchmark: 100%





# Prescription Opioid Mortality

Health Outcome Metric

Prescription opioid mortality rate per 100,000 population

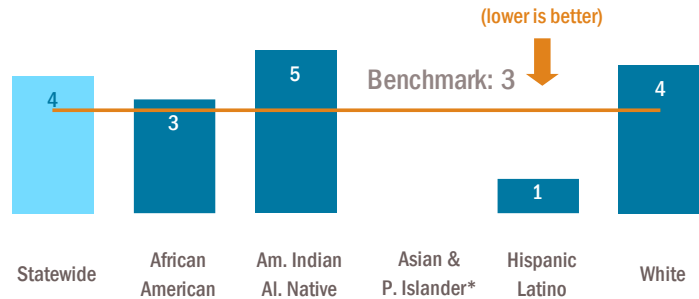
**Foundational program area:** Prevention and Health Promotion

**Data source:** Oregon Vital Events Registration System (OVERS), 2012-2016

**Benchmark source:** Less than 3/100,000 Oregon State Health Improvement Plan (SHIP) 2020 target

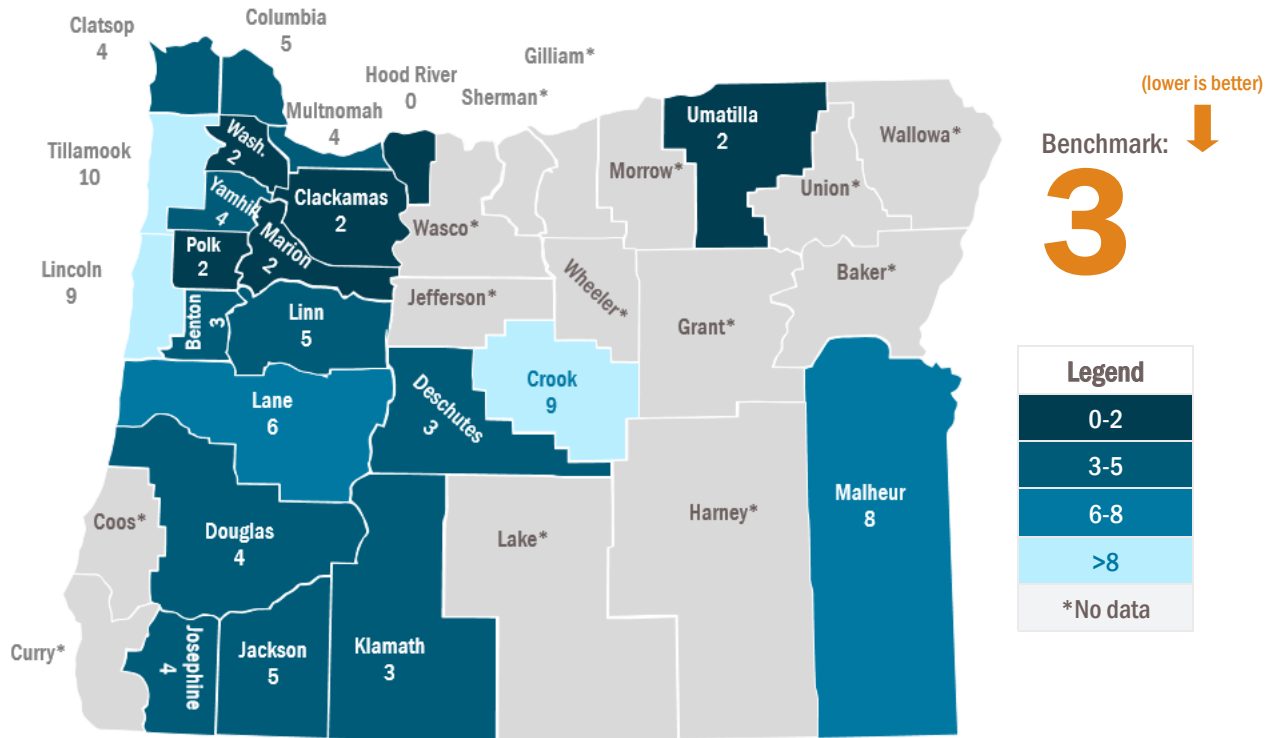
## By race and ethnicity

Statewide 2012-2016  
Race/ethnicity 2012-2016



## By county

Oregon 2012-2016



**Notes:**

- All rates are 5-year average crude rates per 100,000 for 2012-2016
- Population estimates are from the National Center for Health Statistics (NCHS) bridged-race annual population estimates
- 2014-2016 data do not include deaths from Oregon residents that occurred out of state
- \* indicates rates not displayed for groups with fewer than 5 deaths.



# Prescription Opioid Mortality

Health Outcome Metric

**Prescription opioid mortality rate per 100,000 population**

- “Pharmaceutical opioids” as a category exclude novel synthetic opioids and illicit fentanyl analogs because there is not currently a mechanism for distinguishing between prescribed synthetic opioids, including prescription fentanyl, and illicit fentanyl analogs. However, this means that deaths associated with prescription synthetic opioids, such as prescription fentanyl are also excluded (but not methadone).



# Prescription Opioid Mortality

Local Public Health Process Measure

Percent of top opioid prescribers enrolled in PDMP

**Foundational program area:** Prevention and Health Promotion

**Data source:** Oregon Prescription Drug Monitoring Program (PDMP) database, 2016

**Benchmark source:** 95%, provided by Oregon Health Authority, Public Health Division, Injury and Violence Prevention Section

## Local public health funding

Some local public health authorities (LPHAs) receive funding for prescription drug overdose prevention. These counties are required to promote prescriber enrollment in the PDMP.

**Benchmark:**

**95%**

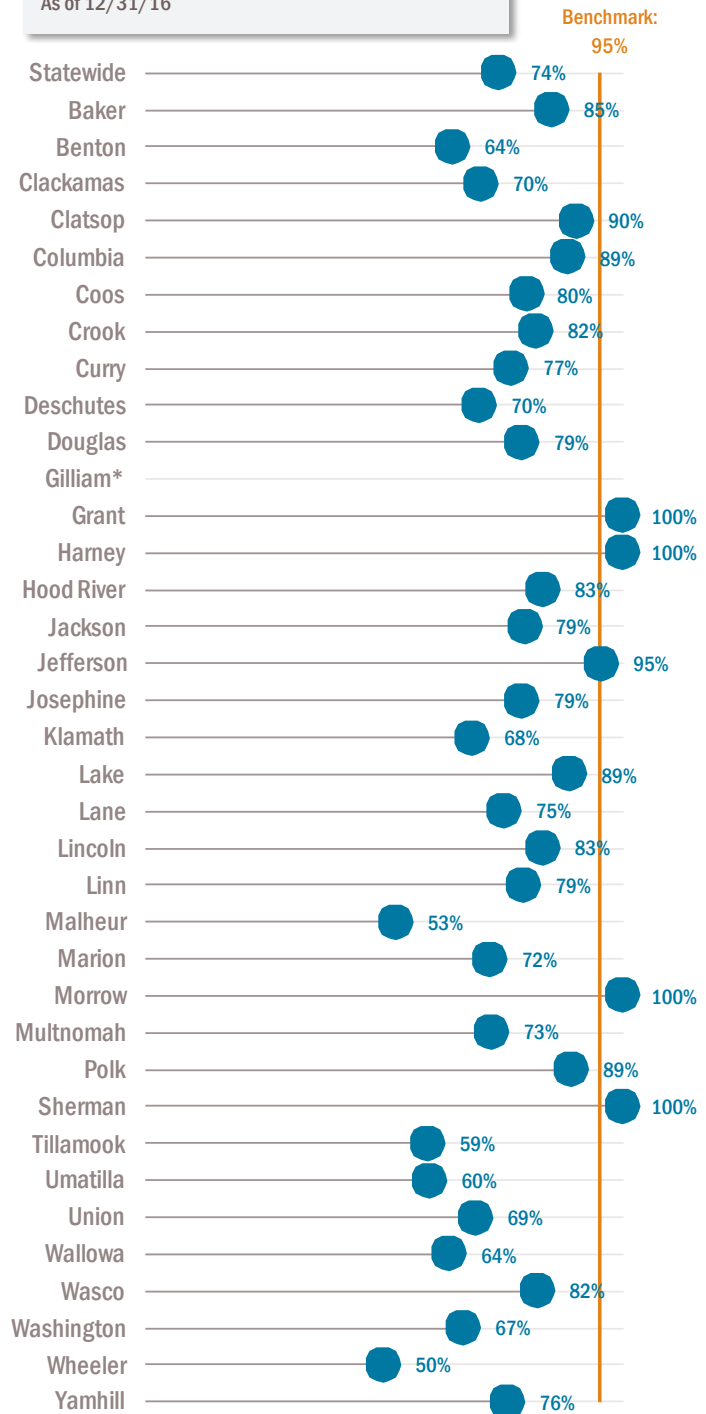
**Notes:**

- Top prescribers are defined as the top 4000 prescribers by volume; this represents approximately 20% of all prescribers in Oregon.

- \*Data not available for Gilliam County.

## By county

As of 12/31/16





# Active Transportation

## Health Outcome Metric

Percent of commuters who walk, bike, or use public transportation to get to work

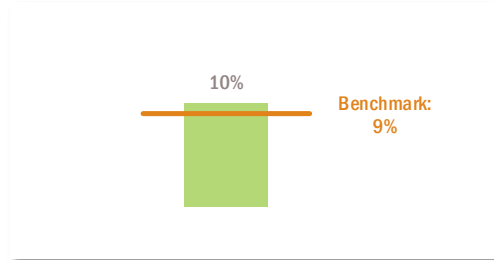
Foundational program area: Environmental Health

Data source: U.S. Census Bureau, 2016 American Community Survey (ACS) 1-Year Estimates online query system

Benchmark source: 9.2%, Healthy People 2020; sum of bike .6%, walk 3.1%, and mass transit 5.5%

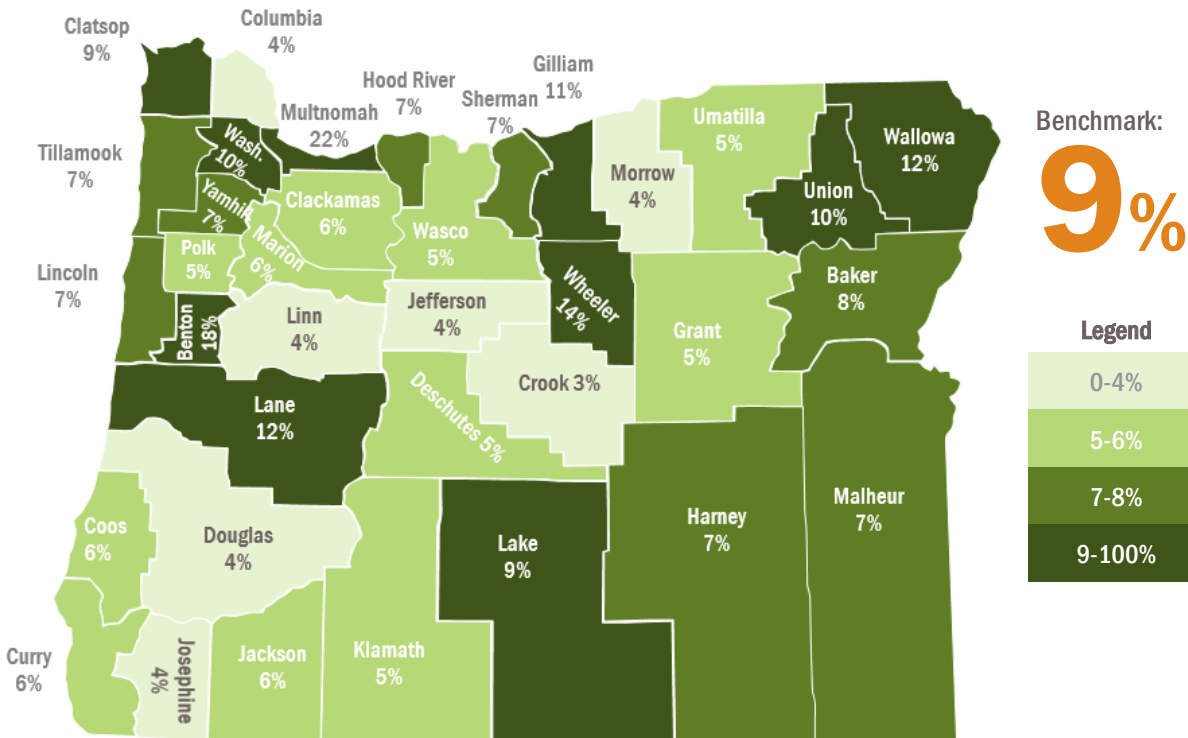
### Statewide

Oregon 2016



### By county

Oregon 2012-2016



Benchmark: **9%**

#### Legend

- 0-4%
- 5-6%
- 7-8%
- 9-100%

#### Notes:

- Data are not available by race/ethnicity for this metric from the ACS online query system.
- Statewide rate is for 2016; county rates are 2012-2016 average.
- Commuters are defined as workers age 16 and older.





# Active Transportation

## Local Public Health Process Measure

**Number of active transportation partner governing or leadership boards with local public health authority representation**

**Foundational program area:** Environmental Health

**Data source:** under development

**Benchmark source:** under development

### By county

Oregon

#### Note:

This process measure is under development.

### Local public health funding

No current state or federal funding.



# Drinking Water

## Health Outcome Metric

### Percent of community water systems meeting health-based standards

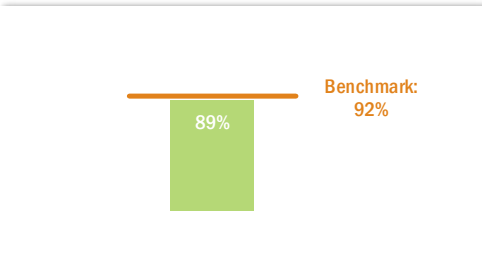
Foundational program area: Environmental Health

Data source: Safe Drinking Water Information System (SDWIS) Federal Reporting Services, the Environmental Protection Agency's (EPA) national regulatory compliance database, 2016

Benchmark source: 92%, EPA

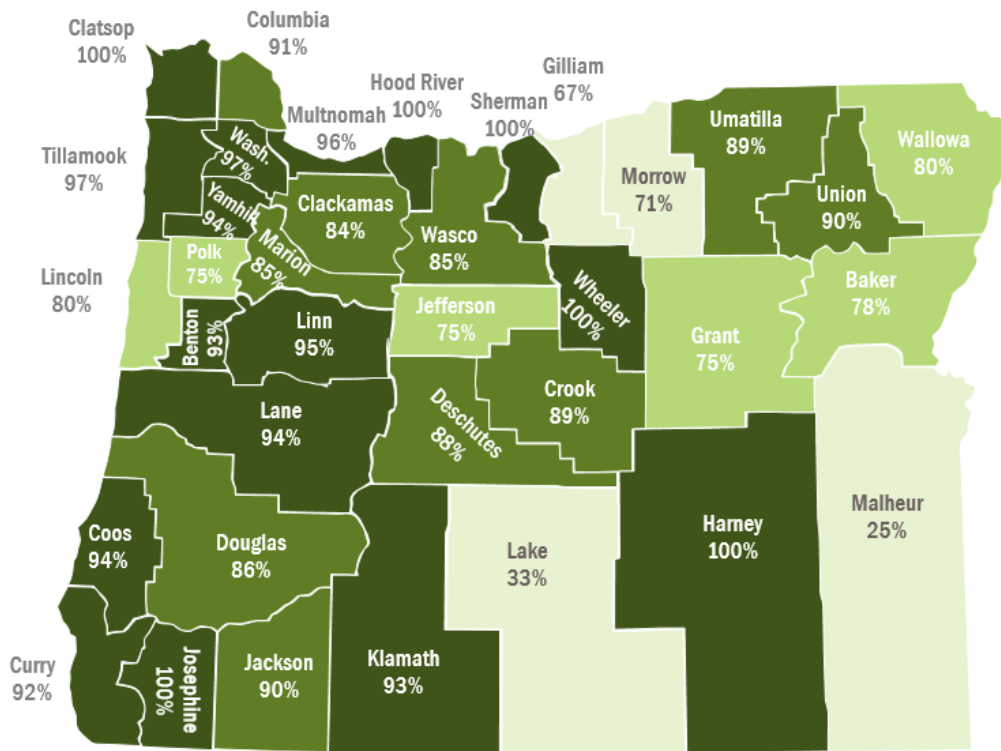
#### Statewide

Oregon 2016

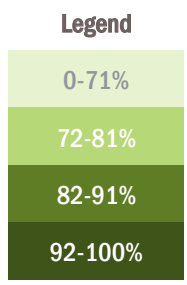


#### By county

Oregon 2016



Benchmark: **92%**



Notes:

- For 2016, there were 97 out of 891 (11%) water systems out of compliance statewide.
- Unit of analysis is water systems; race/ethnicity data do not apply.
- The number of county water systems varies widely, ranging from 3 to 81.



# Drinking Water

## Local Public Health Process Measure

### Percent of water systems surveys completed

**Foundational program area:** Environmental Health

**Data source:** Oregon Drinking Water Database, 2016

**Benchmark source:** 100%, provided by Oregon Health Authority, Public Health Division, Drinking Water Services Section

#### Local public health funding

All local public health authorities (LPHAs) receive funding for safe drinking water programs.

**Benchmark:**

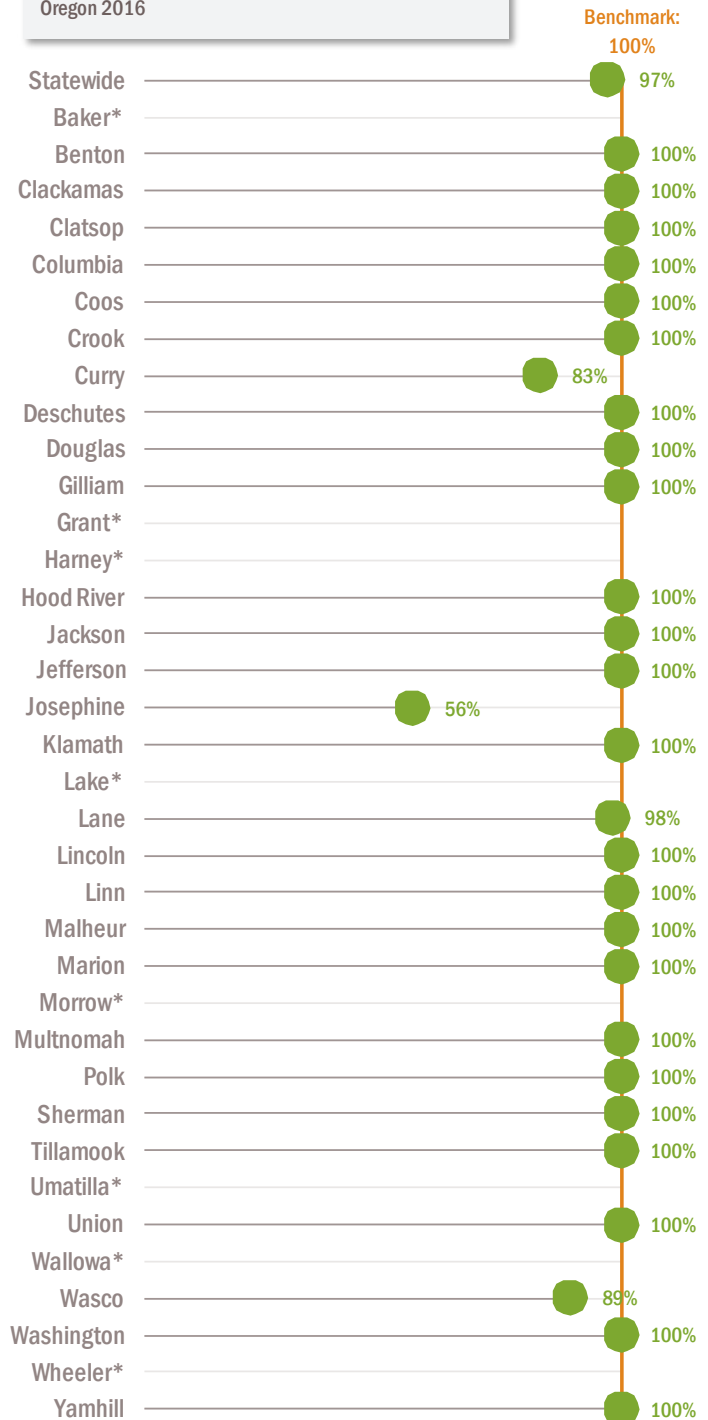
# 100%

**Notes:**

- \* Indicates counties for which no water system surveys were conducted.
- Statewide, there were 414 surveys completed out of 428 surveys due (97%) in 2016.

#### By county

Oregon 2016





# Drinking Water

## Local Public Health Process Measure Percent of water quality alert responses

Foundational program area: Environmental Health

Data source: Oregon Drinking Water Database, Water Quality Alerts, 2016

Benchmark source: 100%, provided by Oregon Health Authority, Public Health Division, Drinking Water Services Section

### Local public health funding

All local public health authorities (LPHAs) receive funding for safe drinking water programs.

Benchmark:

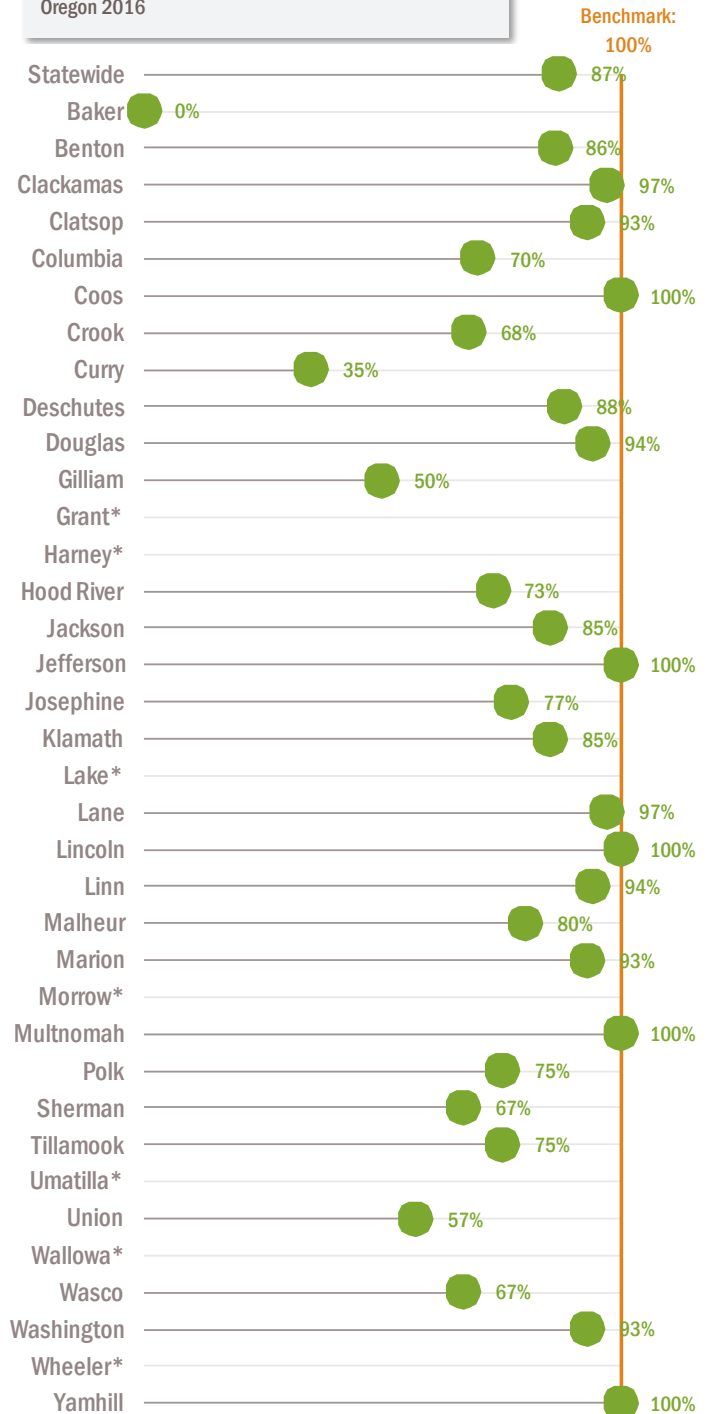
# 100%

Notes:

- Water quality alerts are generated when drinking water monitoring results indicate detection of a contaminant at a level of concern. Prompt investigation and resolution of these alerts is vital to ensuring safe drinking water.
- \* Indicates counties for which water quality alerts were not applicable.
- Statewide, there were 749 unique alert IDs with 653 responses (87%) for 2016 (as of 12/4/17).

### By county

Oregon 2016





# Drinking Water

## Local Public Health Process Measure Percent of priority non-compliers resolved

Foundational program area: Environmental Health

Data source: Oregon Drinking Water Database, 2016

Benchmark source: 100%, provided by Oregon Health Authority, Public Health Division, Drinking Water Services Section

### Local public health funding

All local public health authorities (LPHAs) receive funding for safe drinking water programs.

Benchmark:

# 100%

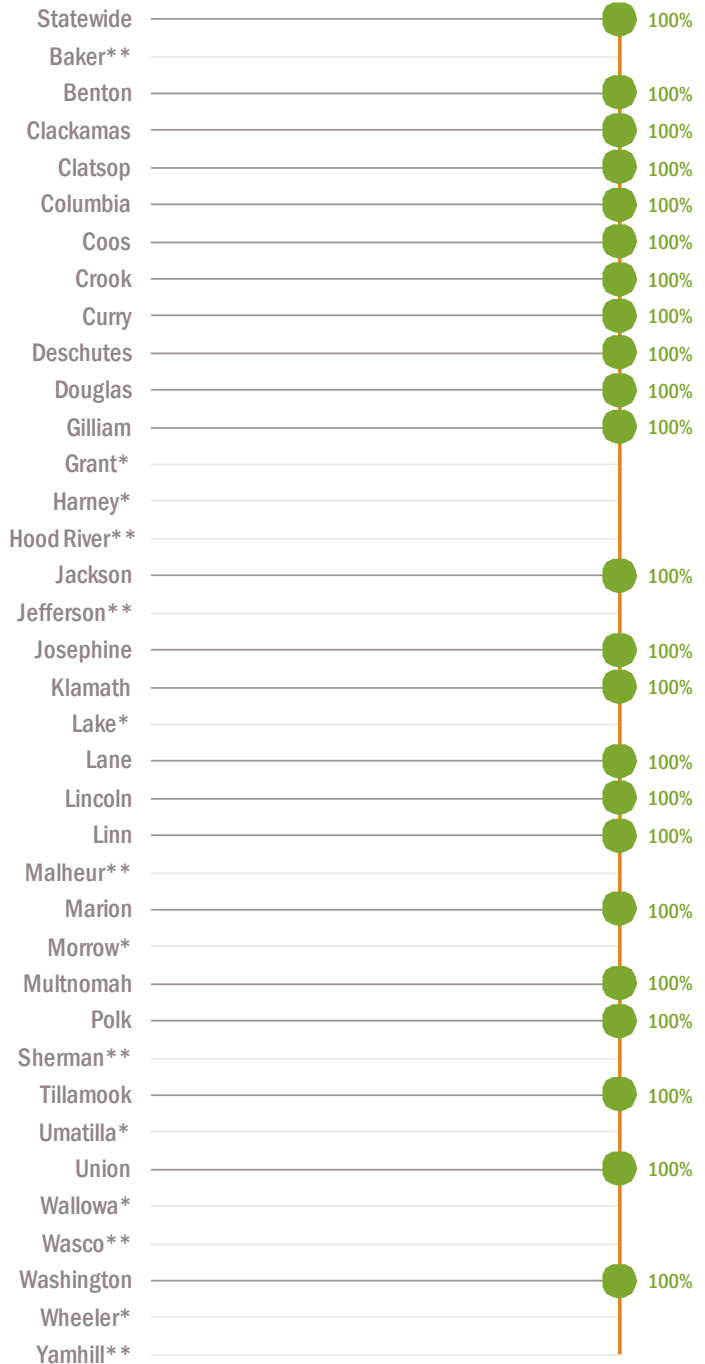
Notes:

- A priority non-complier is a water system that accumulates 11 or more points from violations. Violation points are issued for failure to meet drinking water standards.
- \* Indicates counties for which priority non-compliers (PNCs) were not applicable.
- \*\* indicates 0 PNCs.
- Statewide, 76 PNCs were identified in 2016 (range: 1 – 8). All were resolved.

### By county

Oregon 2016

Benchmark:  
100%





# Effective Contraceptive Use

Health Outcome Metric

Percent of women at risk of unintended pregnancy who use effective methods of contraception

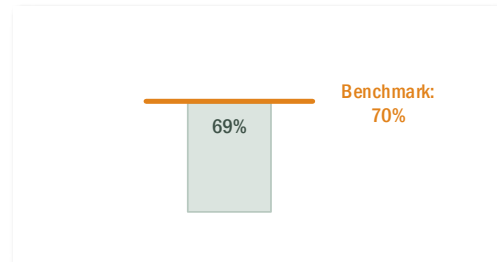
Foundational program area: Access to Clinical Preventive Services

Data source: Oregon Behavioral Risk Factor Surveillance System (BRFSS), 2016

Benchmark source: 70%, provided by Oregon Health Authority, Public Health Division, Reproductive Health Program

Statewide

Oregon 2016



Benchmark:

# 70%

Notes:

- Effectiveness is only one factor that influences contraceptive method choice. Client-centered approaches should always be used in contraception counseling to ensure that an individual's choices are respected.
- Effective methods of contraception are asked in BRFSS only of women, age 18-49, who are of reproductive age and at risk of unintended pregnancy.
- "Effective" as single-category includes most effective and moderately effective. Starting in 2014, respondents were asked about their use of contraception "the last time you had sex."
- There are no estimates by race/ethnicity or county. Refer to the Technical Appendix for additional information.
- Confidence intervals are not shown. Refer to the Technical Appendix regarding the reporting of confidence intervals.



# Effective Contraceptive Use

## Local Public Health Process Measure

**Annual strategic plan that identifies gaps, barriers and opportunities for improving access to effective contraceptive use**

Foundational program area: Access to Clinical Preventive Services

Data source: Oregon Health Authority, Public Health Division, Reproductive Health Program

Benchmark source: 100%, provided by Oregon Health Authority, Public Health Division, Reproductive Health Program

### By county

Oregon

### Note:

County data will be available in 2020.

### Local public health funding

All local public health authorities (LPHAs) receive funding for reproductive health programs.

Beginning in July 2018, LPHAs will be required to submit an annual strategic plan



# Dental Visits Children Aged 0-5

Public Health Developmental Metric

Percent of children age 0-5 with any dental visit

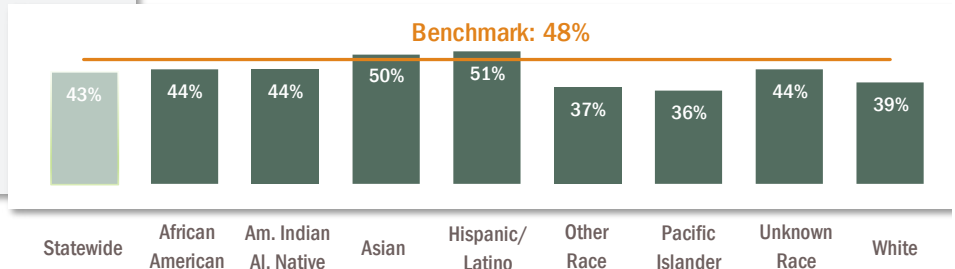
Foundational program area: Access to Clinical Preventive Services

Data source: MMIS Medicaid administrative claims data, 2016 calendar year

Benchmark source: 48%, Oregon State Health Improvement Plan (SHIP) 2020 target

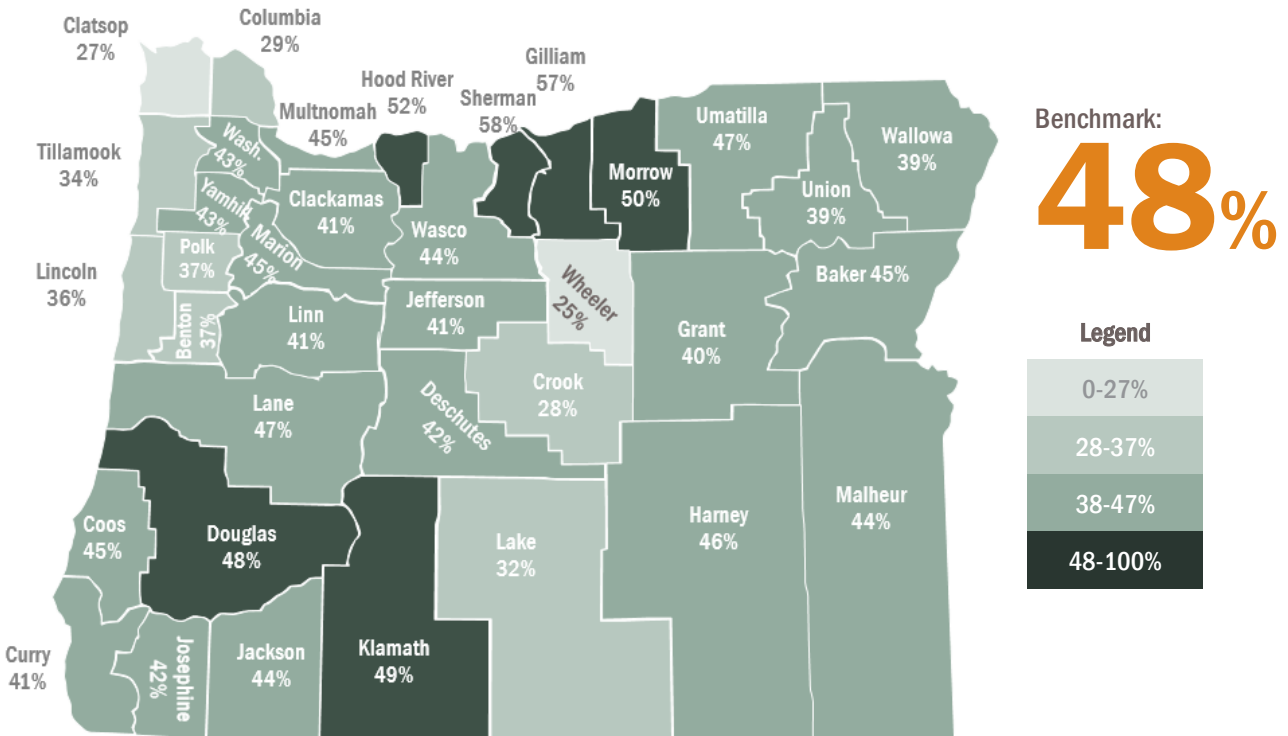
## By Race/Ethnicity

Oregon Medicaid 2016

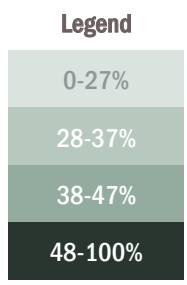


## By county

Oregon Medicaid 2016



Benchmark: **48%**



Notes:

- This measure includes any dental service by a dentist or dental hygienist. It does not include dental services provided in a medical setting.
- This metric is considered developmental.



# Technical Appendix

Data for this report were obtained from numerous public health programs and data systems, each having its own set of technical requirements and reporting conventions. Health outcome measures and local public health process measures presented in this report are consistent with how these data are reported elsewhere (e.g., Oregon Health Authority, Public Health Division reports and webpages, State Population Health Indicators).

## 95% confidence intervals

Data for adult smoking prevalence and effective contraceptive use were obtained from the Behavioral Risk Factor Surveillance System (BRFSS). Survey estimates are calculated with a margin of error or confidence interval. Confidence intervals provide a measure of how much an estimate varies due to chance. Wider intervals suggest the estimate is more unreliable and should be interpreted with caution.

95% confidence intervals are not shown in this report. Future reports that track change over time may include 95% confidence intervals so that significant differences may be determined.

## Race and ethnicity categories

Race/ethnicity categories for each metric are determined by the data collection system and associated public health program and may vary among accountability metrics. The race categories of African American, American Indian & Alaska Native, Asian, Pacific Islander, and White do not include individuals of Hispanic ethnicity. Data for individuals of Hispanic ethnicity are presented separately.

## Age-adjusted versus crude rates

Unadjusted or crude rates provide an estimate of the overall burden of disease; age-adjusted rates can be used to compare among counties for measures that are sensitive to age, such as tobacco use. Data in this report are shown as Oregon Health Authority programs typically report their data. Age-adjustment, if shown, is based on three age groups: 18-34, 35-54, and 55+ per the U.S. 2000 Census Standard Population.

## Communicable Disease Control

### Health Outcome Measure: Percent of two-year olds who received recommended vaccines

#### Data source

ALERT Immunization Information System, 2016

#### Benchmark

80%, Oregon State Health Improvement Plan (SHIP) 2020 target

### **Data collection procedure**

Data accessed online at <http://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/VACCINES/IMMUNIZATION/Pages/researchchild.aspx>.

### **Measure specification**

Percentage is calculated by dividing the number of children 24-35 months of age who received the vaccination series (numerator) divided by number of children 24-35 months of age (denominator).

### **Additional notes**

- Two year olds are children 24 to 35 months of age.
- The official childhood vaccination series is 4 doses of DTaP, 3 doses IPV, 1 dose MMR, 3 doses Hib, 3 doses Hep B, 1 dose Varicella, and 4 doses PCV (4:3:1:3:3:1:4 series).
- Rates not displayed for populations of fewer than 50 people in accordance with OHA Public Health Division confidentiality policy.
- Race/ethnicity categories provided by ALERT IIS are: African American, American Indian & Alaska Native, Asian, Hawaiian & Pacific Islander, Hispanic/Latino, Multiple Races, Other/Unknown, and White.
- Data for Gilliam, Sherman, and Wasco counties are combined. This is the North Central Public Health District.
- Oregon immunization rates measure vaccination levels among two-year-olds in a given year. Rates are based on ALERT Immunization Information System (IIS) data for all two-year-olds with an Oregon address and a post-birth immunization record. Over 95% of all childhood immunizations given in Oregon since 1999 are in ALERT and reporting levels are even higher in recent years.

## **Local Public Health Process Measure: Percent of Vaccines for Children (VFC) clinics participating in AFIX**

### **Data source**

Assessment, Feedback, Incentives, and eXchange (AFIX) online tool

### **Benchmark**

25%, provided by Oregon Health Authority, Public Health Division, Immunization Program

### **Data collection procedure**

Data accessed from AFIX online tool via secure login and provided by staff of the Oregon Immunization Program.

### **Measure specification**

Percentage is calculated by dividing the number of clinics with any AFIX visits initiated (numerator) by the number of clinics active in the Vaccines for Children Program (VFC) as of 12/31/17 (denominator).

### **Additional notes**

- Statewide, there were 79 clinics with any AFIX visit (numerator) out of 569 VFC clinics (denominator).
- Numerators and denominators vary widely by county. Denominators range from 1 to 96 and numerators range from 0 to 14. For example, 50% could represent 1 clinic with an AFIX visit out of 2 VFC clinics or could represent 30 out of 60.
- Baseline year is 2017.
- \*indicates counties that completed their own AFIX visits in 2017, but these visits did not meet the CDC data reporting requirements and are not counted toward the process measure.

## **Health Outcome Measure: Gonorrhea incident rate per 100,000**

### **Data source**

Oregon Public Health Epi User System (Orpheus), 2016

### **Benchmark**

Oregon State Health Improvement Plan (SHIP) 2020 target

### **Data collection procedure**

Data obtained online from the Oregon Public Health Assessment Tool (OPHAT). OPHAT is a web-based analytical tool for the public health community in Oregon. Use is restricted to public health professionals in state, county and tribal public health agencies or other public and non-profit agencies engaged in public health assessment work.

### **Measure specification**

All rates shown are crude rates (not age adjusted rates) and are calculated by counting the total number of incident cases in a specified geographic area (country, state, county, etc.) and dividing by the total population for the same geographic area (for a specified time period, usually a calendar year) and multiplied by 100,000 (i.e., crude rate = 100,000 X number of disease reports/ total population).

### **Additional notes**

- Rates and percentages based on 5 or fewer events are considered unreliable because of the greater influence of random variability.

## **Local Public Health Process Measure: Percent of gonorrhea cases that had at least one contact that received treatment**

### **Data source**

Orpheus

### **Benchmark**

35%, provided by Oregon Health Authority, Public Health Division, HIV, STD and Tuberculosis Section

### **Data collection procedure**

Data provided by Oregon Health Authority, Public Health Division, HIV, STD and Tuberculosis Section

**Measure specification**

Numerator: Gonorrhea cases with at least one contact with treatment or Expedited Partner Therapy (EPT) documented on the contact record (this will not count if a contact becomes a case and treatment is not added to the contact record) OR EPT =Y on the gonorrhea case.

Denominator: All Confirmed or Presumptive Gonorrhea cases reported in the designated time period with State = OR.

Note – credit goes to the county where the case lives. For example, if a case is in Jackson County and they have a contact in Deschutes County, metrics will be counted in Jackson County if they are treated.

**Additional notes**

- Statewide: 12.7% of 4,353 gonorrhea cases have at least one contact treated (range: 0-58%).
- Number of gonorrhea cases (range: 0 – 1,972) and percentages of cases that have at least one contact treated (range: 0% - 58%) vary widely by county.

**Local Public Health Process Measure: Percent of gonorrhea case reports with complete priority fields**

**Data source**

Orpheus

**Benchmark**

70%, provided by Oregon Health Authority, Public Health Division, HIV, STD and Tuberculosis Section

**Data collection procedure**

Data provided by Oregon Health Authority, Public Health Division, HIV, STD and Tuberculosis Section.

**Measure specification**

Numerator: Gonorrhea Cases with a response for each priority field

- Pregnancy Status
  - female cases 15-44 years old at time of diagnosis
  - cannot be Unknown
- HIV Status / Date of Most Recent HIV test
  - HIV case in Orpheus with HIVdxDate ≤ ReportDateLHD of Gonorrhea Case OR date of most recent HIV test completed in Risk Section of Gonorrhea Case
- Gender of Sex Partner
  - SexPtnrMal (Has this person ever had sex with a male) OR SexPtnrFem (Has this person

ever had sex with a female) must have an answer of Yes

- Race (cannot be Unknown or Refused)
- Ethnicity (cannot be Unknown or Declined)

Denominator: All Confirmed or Presumptive Gonorrhea cases reported in the designated time period with State = OR

#### **Additional notes**

- Statewide: 19.1% of 4,353 gonorrhea cases have complete data for priority variables (range: 0-100%).
- Number of gonorrhea cases (range: 0 – 1,972) and percentages of cases with complete data for priority fields (range: 0% - 100%) vary widely by county.

## **Prevention and Health Promotion**

### **Health Outcome Measure: Percent of adults who smoke cigarettes (i.e., adult smoking prevalence)**

#### **Data source**

Behavioral Risk Factor Surveillance System (BRFSS), 2016

#### **Benchmark**

15%, Oregon State Health Improvement Plan (SHIP) 2020 target

#### **Data collection procedure**

Statewide estimates, overall and by race/ethnicity categories, were obtained from OHA Public Health Division staff who maintain and report the State Population Health Indicators (<http://www.oregon.gov/oha/ph/About/Pages/HealthStatusIndicators.aspx>) . County estimates were obtained from the Oregon Public Health Assessment Tool (OPHAT). OPHAT is a web-based analytical tool for the public health community in Oregon. Use is restricted to public health professionals in state, county and tribal public health agencies or other public and non-profit agencies engaged in public health assessment work.

#### **Measure specification**

The weighted proportion of survey respondents who report that they have smoked 100 cigarettes and now smoke all days or some days (numerator) to all respondents who responded to cigarette smoking questions other than “don’t know” or refused (denominator).

#### **Additional notes**

- Race/ethnicity data are combined for years 2010-11, the most recent year for which reporting from a race/ethnic oversample is available.
- Statewide and county rates and rates by race/ethnicity are age adjusted.
- Survey includes only people age 18 and older.
- Survey responses are weighted to correct for differences in the probability of selection due to

non-response and non-coverage errors. Weights are assigned to each response to:

- Adjust variables of age, race, and gender between the sample and the entire population.
- Allow the generalization of findings to the whole population, not just those who respond to the survey.
- Allow comparability of data (to other states, to national data, etc.) according to the size of the total demographic group (age, race, and gender) in Oregon that they represent.
- Survey results are estimates of population values and always contain some error because they are based on samples. Confidence intervals are one tool for assessing the reliability, or precision, of survey estimates. This is a statistical estimate of the reliability of the rate. Rates based on small numbers have wide confidence intervals and are considered less reliable because of the greater influence of random variability. Confidence intervals are not shown in accordance with reporting conventions of the Oregon Health Authority, Public Health Division, Health Promotion Chronic Disease Prevention Section.
- Another tool for assessing reliability is the relative standard error (RSE) of an estimate. Estimates with large RSEs are considered less reliable than estimates with small RSEs. Percentages with a relative standard error (RSE) greater than or equal to 30 are unreliable, as recommended by the National Center for Health Statistics.

## **Local Public Health Process Measure: Percent of population reached by (1) tobacco-free county properties policies and (2) tobacco retail licensure policies**

### **Data source**

(1) Tobacco-free Properties Evaluation in Counties Data Tables, Oregon Health Authority, Public Health Division, Health Promotion Chronic Disease Prevention (HPCDP) Section, 2015; 2015 population estimates were obtained from the Portland State University Population Research Center.

(2) Tobacco retail licensure policy coverage point-in-time assessment, October 2016, Oregon Health Authority, Public Health Division, Health Promotion and Chronic Disease Prevention (HPCDP) Section; 2016 population estimates were obtained from the U.S. Census Bureau.

### **Benchmark**

100% for both, provided by Oregon Health Authority, Public Health Division, HPCDP Section

### **Data collection procedure**

(1) and (2) provided by Oregon Health Authority, Public Health Division, HPCDP Section.

### **Measure specification**

(1) Identification of tobacco-free policies for each county, including comprehensive (all properties) and partial (some properties) tobacco-free county properties. HPCDP considers everyone (100%) in the county to be covered where tobacco-free county property policy (comprehensive or partial) is in place. Data for this process measure include policies for tobacco-free county properties, but not smoke-free county properties. Data do not include policies for tobacco-free city properties.

(2) County percentages are the identification of the population of jurisdictions that have passed a tobacco retail licensure policy (city, unincorporated portions of a county, or entire county)

(numerator) divided by the population of the entire county (denominator). Statewide percentage is a sum of all jurisdiction numerators divided by total state population.

#### **Additional notes**

- (1) Benton County (26,125/89,385=29%), Lane County (113,880/369,519=31%), Multnomah County (799,766/799,766=100%), State (939,771/4,093,465=23%).
- (2) Statewide percentage 63.3% calculated as: (1,572,145 population covered by comprehensive policies + 967,460 population covered by partial policies) divided by 4,013,846 total 2015 population.
- Charts for (1) and (2) are shown separately. If (1) and (2) were combined, Benton, Lane and Multnomah counties would continue to show 100% because they also have tobacco-free county properties.

## **Health Outcome Metric: Prescription opioid mortality rate per 100,000**

#### **Data source**

Oregon Vital Events Registration System (OVERS) accessed from online Opioid Data Dashboard <http://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/SUBSTANCEUSE/OPIOIDS/Pages/data.aspx>

#### **Benchmark**

Less than 3/100,000. Oregon State Health Improvement Plan (SHIP) 2020 target

#### **Data collection procedure**

Data obtained directly from the Opioid Data Dashboard.

#### **Measure specification**

All rates shown are crude rates and are calculated by counting the total number of events (i.e., deaths) in a specified geographic area (state, county) and dividing by the total population for the same geographic area (for a specified time period, usually a calendar year) and multiplied by 100,000 (i.e., crude rate = 100,000 X number of events/total population).

#### **Additional notes**

- All rates are 5-year average crude rates per 100,000 for 2012-2016.
- Population estimates are from the National Center for Health Statistics (NCHS) bridged-race annual population estimates.
- 2014-2016 data do not include deaths from Oregon residents that occurred out of state.
- Rates not displayed for groups with fewer than 5 deaths.
- The Public Health Advisory Board approved the Accountability Metric, "Prescription opioid mortality rate." Data obtained from the Opioid Data Dashboard are categorized as "Pharmaceutical Opioids."
- "Pharmaceutical opioids" as a category exclude novel synthetic opioids and illicit fentanyl analogs because there is not currently a mechanism for distinguishing between prescribed synthetic opioids, including prescription fentanyl, and illicit fentanyl analogs. However, this

means that deaths associated with prescription synthetic opioids, such as prescription fentanyl are also excluded (but not methadone).

## Local Public Health Process Measure: Percent of top opioid prescribers enrolled in the Prescription Drug Monitoring Program (PDMP)

### Data source

Oregon Prescription Drug Monitoring Program database, 2016. Accessed online at: <http://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/SUBSTANCEUSE/OPIOIDS/Pages/data.aspx>

### Benchmark

95%, provided by Oregon Health Authority, Public Health Division, Injury and Violence Prevention Section

### Data collection procedure

County data were obtained directly from online Opioid Data Dashboard. Statewide percentage was obtained from Oregon Health Authority, Public Health Division, Injury and Violence Prevention Section.

### Measure specification

Top prescribers enrolled (numerator) divided by top prescribers, by county and statewide.

### Additional notes

- Top prescribers are defined as the top 4000 prescribers by volume; this represents approximately 20% of all prescribers in Oregon.
- Data not available for Gilliam County.
- Data provided in the PDMP online dashboard are quarterly, not annual. The measure combines being a top prescriber in a time period and whether or not that person is enrolled in the PDMP at the end of that time period. It is problematic to retrospectively calculate for the whole year because of churn in both the top prescriber list and in PDMP enrollment; accounts are deactivated and reactivated frequently. While recalculating the top prescribers for the whole year is possible, determining retrospectively whether they were enrolled for the whole year (or were enrolled on a certain date) is difficult. The Oregon Health Authority, Public Health Division, Injury and Violence Prevention Section recommends using Q4 2016 as a baseline which shows PDMP enrollment as of 12/31/16.

## Environmental Health

### Health Outcome Measure: Percent of commuters who walk, ride bicycles, or use public transportation to get to work

#### Data source

U.S. Census Bureau, 2016 American Community Survey (ACS) 1-Year and 5-years estimates online



query system, accessed at <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t#acsST>

**Benchmark**

9.2%, Healthy People 2020. This represents the sum of mutually exclusive categories: bike .6%, walk 3.1%, and mass transit 5.5%

**Data collection procedure**

Data were obtained directly from the ACS online query and downloaded as Excel file.

**Measure specification**

Selection of “Means of Transportation to Work” from online query, specifying geographic location (state or counties). Add together categories “Walked,” “Bicycle,” and “Public transportation (exclude taxicab).” The percentages are mutually exclusive and were added together.

**Additional notes**

- Data are available only by total and by gender and not by race/ethnicity for commuters who walk, bike, or use public transit from the ACS online query system.
- Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. Margins of error are not shown in the charts.
- County data are 5-year average estimates 2012-2016.

**Local Public Health Process Measure: Number of active transportation partner governing or leadership boards with LPHA representation**

**Data source**

TBD

**Benchmark**

TBD

**Data collection procedure**

TBD

**Measure specification**

TBD

**Additional notes**

TBD

**Health Outcome Measure: Percent of community water systems meeting health-based standards**

**Data source**

Safe Drinking Water Information System (SDWIS) Federal Reporting Services, the Environmental

Protection Agency's (EPA) national regulatory compliance database

**Benchmark**

EPA standard is 92%

**Data collection procedure**

Data provided by Oregon Health Authority, Public Health Division, Drinking Water Services Section.

**Measure specification**

Numerator: number of (county, state) water systems on Government Performance and Results Act (GPRA) list, indicating non-compliance. Denominator: Number of water systems (county, state).

**Additional notes**

- The EPA database includes information on the nation's 160,000 public water systems and violations of drinking water regulations. The database contains aggregated information on water systems; violations reported by violation type and by contaminant/rule, and GPRA data.
- Unit of analysis is water systems; race/ethnicity data do not apply.
- For 2016, there were 98 out of 891 water systems out of compliance (11%).
- The number of county water systems ranges from 3 to 81.

**Local Public Health Process Measure: Percent of water systems surveys completed**

**Data source**

Oregon Drinking Water Database, Water Quality Alerts, 2016. Accessed online at: <https://yourwater.oregon.gov/alertscounty.php>

**Benchmark**

100%, provided by Oregon Health Authority, Public Health Division, Drinking Water Services Section

**Data collection procedure**

Selection criteria for online data query:

Regulating Agency: County

County: All Counties and each County

Year Due: 2016

Survey List Options: "All Systems on Due List"

**Measure specification**

Numerator: water systems surveys completed in the calendar year. Denominator: water system surveys due in calendar year.

**Additional notes**

- Inactive and non-EPA (state regulated) systems excluded.
- 8 counties had no water systems surveys in 2016.
- Statewide, there were 414 completed surveys in 2016 for 428 due (97%).

## Local Public Health Process Measure: Percent of water quality alert responses

### Data source

Oregon Drinking Water Database, Water Quality Alerts, 2016. Accessed online at: <https://yourwater.oregon.gov/alertscounty.php> (12/4/17)

### Benchmark

100%, provided by Oregon Health Authority, Public Health Division, Drinking Water Services Section

### Data collection procedure

Online query on “Water Quality Alerts” page. Query performed 12/4/17.

Regulating Agency: County

County: All Counties

Alert Type: “All alert types”

Date Range: 1/1/2016 to 12/31/2016

Other options: [show non-alerts (sodium, coliform source and special samples), show non-EPA (state regulated) systems, show inactive systems] not selected

Steps:

1. Download query results to Excel spreadsheet.
2. Sort by Alert ID, then by County. Purpose: to identify unique alert IDs for which a contact report date is available.

*Example 1*, there are 2 unique alert IDs for Bethany Elementary School water system in Marion County, one of which does not have a contact report date. This would be counted as 1 non-responded alert.

*Example 2*, there are 2 unique alert IDs for Sherman County School water system, both of which do not have contact report dates. These are counted as 2 non-responded alerts.

*Example 3*, there is one unique alert ID and no contact report dates for all 4 lines shown. This would be counted as 1 non-responded alert.

3. Non-responded alerts (i.e., no alert report date for a unique alert ID) were summed for each county.
4. All unique alert IDs were summed for each county. This is the denominator.
5. Calculation of numerator, the unique alert IDs responded to – was performed by subtracting the total in step 3 from the total in step 4 (for each county).
6. The process measure, % of water quality alert responses, was calculated by dividing the numerator in step 5 by the denominator in step 4.

### Measure specification

Numerator: count of water quality alerts responded to. Denominator: unique alert IDs.

### Additional notes

- Water quality alerts are generated when drinking water monitoring results indicate detection of a contaminant at a level of concern. Prompt investigation and resolution of these alerts is vital to ensuring safe drinking water.
- There were 7 counties for which quality alerts were not applicable: Grant, Harney, Lake, Morrow, Umatilla, Wallowa, and Wheeler.

- Statewide, there were 749 unique alert IDs with 653 responses (87%) for 2016 (as of 12/4/17).

## Local Public Health Process Measure: Percent of priority non-compliers (PNCs) resolved

### Data source

Oregon Drinking Water Database, Priority Non-Compliers, 2016. Accessed at <https://yourwater.oregon.gov/reports/county-pncs.php>

### Benchmark

100%, provided by Oregon Health Authority, Public Health Division, Drinking Water Services Section

### Data collection procedure

Online query on “County Review - PNCs” page

Select the county to review: each available county selected from the drop down list

Date range: from 1/1/2016 to 12/31/2016

### Measure specification

Numerator: count of resolved PNCs. Denominator: all PNCs.

### Additional notes

- A priority non-complier is a water system that accumulates 11 or more points from violations. Violation points are issued for failure to meet drinking water standards.
- There were 7 counties for which PNCs were not applicable: Grant, Harney, Lake, Morrow, Umatilla, Wallowa, and Wheeler.
- 7 counties had no PNCs during the period (online query revealed a blank listing): Baker, Hood River, Jefferson, Malheur, Sherman, Wasco, and Yamhill.
- Statewide, 76 PNCs were identified in 2016 (range: 1 – 8). All were resolved.

## Access to Clinical Preventive Services

### Health Outcome Measure: Percent of women at risk for unintended pregnancy who use effective methods of contraception

#### Data source

Behavioral Risk Factor Surveillance System, 2016

#### Benchmark

70%, provided by Oregon Health Authority, Public Health Division, Reproductive Health Program

#### Data collection procedure

Data provided by Oregon Health Authority, Public Health Division, Reproductive Health Program.

#### Measure specification

"Effective" as single-category includes most effective and moderately effective (IF used every time,

2010-2013). Effectiveness is asked on the survey with 5 response categories: Most effective (implant, IUD, female and male sterilization); Moderately effective (pill, patch, ring, or shot) (IF used "every time you have sex", 2010-2013); Moderately effective but inconsistent use (2010-2013 only; includes pill, patch, ring, or shot IF used "sometimes" or "most of the time"); Less effective (cap/sponge/diaphragm (BRFSS groups these together), condoms, spermicide, withdrawal); No method.

Definition of Reproductive-age women at risk of unintended pregnancy:

Age: 18-44 (2010-2013), 18-49 (2014-2016)

Not currently pregnant

Have not had a hysterectomy

Not currently abstinent

Have an opposite-sex partner

Not "too old" or told by a healthcare worker they cannot get pregnant

Not trying to get pregnant or "don't care if get pregnant" (2010-2013) or "don't mind if get pregnant" (2014)

\*\*Exclude any without known contraceptive use status (such as those who ended the survey early)

Definition of most effective methods: IUD, implant, female sterilization or vasectomy

Definition of moderately effective methods: Pill, patch, ring, or shot, IF used "every time you have sex" (2010-13); pill, patch, ring, or shot (2014-16)

#### **Additional notes**

- Effectiveness is only one factor that influences contraceptive method choice. Client-centered approaches should always be used in contraception counseling to ensure that an individual's choices are respected.
- The Oregon coordinated care organization benchmark of 50% is not applicable because it counts only permanent and long-acting contraceptives when a medical claim is submitted with a diagnosis code indicating use of those methods.
- The 2014 BRFSS module was modified from 2010-2013. Starting in 2014, respondents were asked about their use of contraception "the last time you had sex," rather than currently. Also, the upper age limit of reproductive-age women increased from 44 to 49 in 2014.
- There are no estimates by race/ethnicity or by county. Because of small numbers, four or five years of combined data are required for reporting. Four (or five) years of combined data, 2014 - 2017 (2018) for race/ethnicity and county estimates will be examined according to data suppression rules after the 2017 (2018) BRFSS data become available. Data prior to 2014 cannot be combined with later years because of the change to the wording of the BRFSS question (described above).
- Survey results are estimates of population values and always contain some error because they are based on samples. Confidence intervals are one tool for assessing the reliability, or precision, of survey estimates. Confidence intervals are not shown.

## **Local Public Health Process Measure: Annual strategic plan that identifies gaps, barriers and opportunities for improving access to effective contraceptive use**

### **Data source**

Oregon Health Authority, Public Health Division, Reproductive Health Program

### **Benchmark**

100%, provided by Oregon Health Authority, Public Health Division, Reproductive Health Program

### **Data collection procedure**

TBD

### **Measure specification**

TBD

### **Additional notes**

TBD

## **Developmental Metric: Percent of children age 0-5 with any dental visits**

### **Data source**

Medicaid administrative claims data

### **Benchmark**

47.8%, State Health Improvement Plan (SHIP) 2020 target

### **Data collection procedure**

Data provided by Oregon Health Authority, Public Health Division, Oral Health Program.

### **Measure specification**

Numerator: Number of clients who received any dental service under the supervision of a dentist or dental hygienist in the measurement year. Denominator: Number of clients who have continuous enrollment for 12 months in a coordinated care organization.

### **Additional notes**

- This metric is considered developmental and will be tracked and reported.
- This measure includes any dental service by a dentist or dental hygienist. It does not include dental services provided in a medical setting.
- There is no local public health process measure associated with this developmental metric.

# Appendix C: Public Health Advisory Board funding principles

## Public Health Advisory Board

### Funding principles for state and local public health authorities

Feb. 15, 2018

The Public Health Advisory Board recognizes that funding for foundational capabilities and programs is limited, but innovations can maximize the benefit of available resources. These funding principles are designed to apply to the public health system, which means state and local public health authorities in Oregon. These funding principles can be applied to increases or decreases in public health funding.

### Public health system approach to foundational programs

1. Ensure that public health services are available to every person in Oregon, whether they are provided by an individual local public health authority, through cross-jurisdictional sharing arrangements and/or by the Oregon Health Authority.
2. Align funding with burden of disease, risk, and state and community health assessment and plan priorities while minimizing the impact to public health infrastructure when resources are redirected.
3. Use funding to advance health equity in Oregon, which may include directing funds to areas of the state experiencing a disproportionate burden of disease or where health disparities exist.
4. Use funding to incentivize changes to the public health system intended to increase efficiency and improve health outcomes, which may include cross-jurisdictional sharing.
5. Align public health work and funding to coordinate resources with health care, education and other sectors to achieve health outcomes.

### Transparency across the public health system

6. Acknowledge how the public health system works to achieve outcomes, and direct funding to close the identified gaps across the system in all governmental public health authorities.
7. Improve transparency about funded work across the public health system and scale work to available funding.

## Appendix D: Funding formula description and methodology

This appendix provides additional detail and describes the methodology for each of the funding formula components. An example of the funding formula model at the \$15 million biennial funding level for LPHAs is available at the end of this section.

### The base component

- Includes a floor payment for each county and additional allocations through the indicator pool.

### Floor payments

- Floor payments are based on five tiers of county size bands. At the \$10 million level, floor payments range from \$30,000 to \$90,000 and total \$1.845 million.
  - » Floor payments increase proportionally at funding levels above \$10 million (remaining at 18.45% of total base component funds).
  - » Floor payments are intended to ensure stable funding for a basic level of public health staffing and operations.

| Total funds  | Range of floor payments* | Floor payment total | Indicator pool total |
|--------------|--------------------------|---------------------|----------------------|
| \$10 million | \$30,000–90,000          | \$1,845,000         | \$8,155,000          |
| \$15 million | \$45,000–135,000         | \$2,767,500         | \$11,332,500         |
| \$20 million | \$60,000–180,000         | \$3,690,000         | \$15,110,000         |

- All remaining base component funding is distributed through the indicator pool.

### Indicator pool

Every county receives additional allocations through the indicator pool based on the county's ranking on a set of health and demographic indicators.† A description of each indicator, measure and data source follows. Each of the health and demographic indicators receives an equal percentage of available indicator pool dollars.

\* In the future PHAB may consider whether to establish a cap for the maximum dollar amount going to base component floor payments.

† Indicators include health status, burden of disease, racial and ethnic diversity, poverty, educational attainment, population density, limited English proficiency and rurality.



|                                    | Measure  | Indicator required by statute? | Data source   | Percent allocation |
|------------------------------------|--|--------------------------------|---|--------------------|
| <b>Burden of disease</b>           | Premature death: Leading causes of years of potential life lost before age 75.                     | Yes                            | Oregon death certificate data   | 16.67%%            |
| <b>Health status</b>               | Quality of life: Good or excellent health.   | Yes                            | Behavioral Risk Factor Surveillance System                                  | 16.67%             |
| <b>Racial and ethnic diversity</b> | Percent of population not categorized as “White alone”.  | No                             | U.S. Census Bureau, American Community Survey population five-year estimate | 16.67%             |
| <b>Poverty*</b>                    | Percent of population living below 150% of the federal poverty level in the past 12 months.        | No                             | U.S. Census Bureau, American Community Survey population five-year estimate | 8.33%              |
| <b>Education*</b>                  | Percent of population age 25 years and over with less than a high school graduate education level. | No                             | U.S. Census Bureau, American Community Survey population five-year estimate | 8.33%              |
| <b>Limited English proficiency</b> | Percent of population age 5 years and over that speaks English less than “very well”.              | No                             | U.S. Census Bureau, American Community Survey population five-year estimate | 16.67%             |
| <b>Rurality New for 2019-21</b>    | Percent of population living in a rural area   | No                             | U.S. Census Bureau Population estimates                                     | 16.67%             |
| <b>Total</b>                       |  |                                |   | 100%               |

\* PHAB recommended including two measures under one indicator for socioeconomic status.

## Methodology

**Base funding** = floor payment + indicator pool payment

**Floor payment** = based on county size band

**Indicator pool payment** = all remaining base component funds

**Indicator pool payment** = (LPHA weight/sum of all LPHA weights)

\* Total indicator pool

**LPHA weight** = LPHA population \* LPHA indicator percentage

## The matching funds component

- Matching funds will be awarded for sustained or increased county general fund investments over time.
- Five percent of funds will be allocated to matching funds at or above the \$15 million level. (At the \$15 million level, \$750,000 would be allocated to matching funds.)
- Of the total funds allocated to matching funds, 50% will be awarded for sustained county general fund investments, and 50% will be awarded for increased county investment.
  - » Maintenance payment: Awarded to counties that demonstrate sustained county general fund investment. Available funds awarded equally to all qualifying counties.
  - » Additional allocation: Awarded to counties that demonstrate increased county general fund investment. Allocations for increased investment are determined based on the available pool, percent funding increase and county population.

| Total funds  | Total matching funds | Maintenance payments | Additional allocation |
|--------------|----------------------|----------------------|-----------------------|
| \$10 million | \$0                  | \$0                  | \$0                   |
| \$15 million | \$750,000            | \$375,000            | \$375,000             |
| \$20 million | \$1,000,000          | \$500,000            | \$500,000             |

## Methodology

Compares county general fund investment over two years.\*

\* If funding for matching funds is available in 2019–21, OHA may recommend an initial matching funds award based on one year of county general fund data.

**Matching funds** = maintenance payment for sustained investment + additional allocation for increased investment

**Maintenance payment** = All counties eligible to receive the same floor payment.

**Additional allocation** = Based on percent county funding increase, county population and total funds available to counties with funding increases

**Additional allocation** = (LPHA weight/sum of all LPHA weights) \* total available pool for counties with funding increases

**LPHA weight** = LPHA population \* percent county funding increase

## The incentive funds component

Structure for public health accountability metrics

- Public health accountability metrics are comprised of the set of health outcomes measures and local public health process measures that have been adopted by PHAB.
- Public health accountability metrics will become incentivized when there is base funding going out to LPHAs through the funding formula for a foundational program. For example, if 2019–21 public health modernization funds are directed to communicable disease control, the public health accountability metrics for communicable disease control will be incentivized.
- Incentive funds will be awarded based on performance on the local public health process measures.
- Performance includes meeting a benchmark or improvement target.
- PHAB is responsible for establishing benchmarks and improvement targets.
- Public health accountability metrics will be collected and reported on annually.

### Incentive funds

- Each county that achieves an accountability metric will receive an incentive fund floor payment and an additional allocation.
  - » All qualifying counties receive the same floor payment. Twenty percent of incentive funds will go to floor payments, with a minimum threshold of \$1,000.
  - » Additional allocations are proportionally distributed to qualifying counties based on county population.
- One percent of funds will be allocated to incentive funds at or above the \$15 million level. (At the \$15 million, \$150,000 would be allocated to incentive funds.)

» Available funds will be split across incentivized accountability metrics.

\* PHAB recommended including two measures under one indicator for socioeconomic status.

| Total funds  | Total incentive funds | Floor payment (20%)  | Additional Allocation (80%) |
|--------------|-----------------------|--|-----------------------------|
| \$10 million | \$0                   | \$0  | \$0                         |
| \$15 million | \$150,000             | \$30,000 (minimum payment to qualifying counties is \$1,000) | \$120,000                   |
| \$20 million | \$200,000             | \$40,000   | \$160,000                   |

### Methodology

**Incentive funds** = These are floor payment plus additional allocation based on county population.

**Floor payment** = All qualifying counties receive the same floor payment.

**Additional allocation** = All qualifying counties receive proportion of remaining incentive funds based on county population.

**LOCAL PUBLIC HEALTH FUNDING FORMULA MODEL — \$15 MILLION EXAMPLE**

Total biennial funds available to LPHAs: \$15 million

Base component: \$14.1 million

Matching funds component: \$750,000

Incentive funds component: \$150,000

Local public health funding formula model: At the \$15 million level, the majority of funds are allocated to the base component of the funding formula, with 5% allocated to matching funds and 1% allocated to incentive funds. The data for matching and incentive funds are not based on actual LPHA data and are included for demonstration purposes only.

| County Group            | Population <sup>1</sup> | Base component      |                                |                            |                                 |                                  |                       |                        |   |                   |                   | Matching and Incentive fund components |                     |                          |                     | Total county allocation |                     |                          |                     | Avg Award Per Capita |
|-------------------------|-------------------------|---------------------|--------------------------------|----------------------------|---------------------------------|----------------------------------|-----------------------|------------------------|---|-------------------|-------------------|--|---------------------|--------------------------|---------------------|-------------------------|---------------------|--------------------------|---------------------|----------------------|
|                         |                         | Floor               | Burden of Disease <sup>2</sup> | Health Status <sup>3</sup> | Race/<br>Ethnicity <sup>4</sup> | Poverty 150%<br>FPL <sup>5</sup> | Rurality <sup>6</sup> | Education <sup>1</sup> | Limited English<br>Proficiency <sup>7</sup> | Matching Funds    | Incentives        | Total Award                            | Award<br>Percentage | % of Total<br>Population | Award Per<br>Capita | Total Award             | Award<br>Percentage | % of Total<br>Population | Award Per<br>Capita |                      |
| Wheeler                 | 1,480                   | \$ 45,000           | \$ 666                         | \$ 1,237                   | \$ 1,237                        | \$ 433                           | \$ 3,614              | \$ 282                 | \$ 11                                       | \$ 10,555         | \$ 1,041          | \$ 63,005                              | 0.4%                | 0.4%                     | \$ 42.57            | \$ 63,005               | 0.4%                | 0.4%                     | \$ 42.57            |                      |
| Wallowa                 | 7,195                   | \$ 45,000           | \$ 3,920                       | \$ 2,409                   | \$ 440                          | \$ 1,998                         | \$ 17,568             | \$ 1,110               | \$ 440                                      | \$ 1,198          | \$ 1,198          | \$ 74,212                              | 0.5%                | 0.5%                     | \$ 10.31            | \$ 74,212               | 0.5%                | 0.5%                     | \$ 10.31            |                      |
| Harney                  | 7,360                   | \$ 45,000           | \$ 5,546                       | \$ 5,329                   | \$ 1,866                        | \$ 1,908                         | \$ 7,961              | \$ 1,736               | \$ 956                                      | \$ 11,103         | \$ 1,203          | \$ 82,607                              | 0.6%                | 0.6%                     | \$ 11.22            | \$ 82,607               | 0.6%                | 0.6%                     | \$ 11.22            |                      |
| Grant                   | 7,415                   | \$ 45,000           | \$ 3,415                       | \$ 3,714                   | \$ 1,175                        | \$ 1,922                         | \$ 18,105             | \$ 1,749               | \$ 453                                      | \$ 11,108         | \$ 1,204          | \$ 87,844                              | 0.6%                | 0.6%                     | \$ 11.85            | \$ 87,844               | 0.6%                | 0.6%                     | \$ 11.85            |                      |
| Lake                    | 8,120                   | \$ 45,000           | \$ 4,851                       | \$ 2,940                   | \$ 2,315                        | \$ 2,440                         | \$ 12,550             | \$ 2,965               | \$ 1,550                                    | \$ 11,174         | \$ 1,224          | \$ 87,008                              | 0.6%                | 0.6%                     | \$ 10.72            | \$ 87,008               | 0.6%                | 0.6%                     | \$ 10.72            |                      |
| Morrow                  | 11,890                  | \$ 45,000           | \$ 5,468                       | \$ 8,059                   | \$ 9,135                        | \$ 2,847                         | \$ 13,325             | \$ 6,714               | \$ 14,530                                   | \$ 11,525         | \$ 1,327          | \$ 117,931                             | 0.8%                | 0.3%                     | \$ 9.92             | \$ 117,931              | 0.8%                | 0.3%                     | \$ 9.92             |                      |
| Baker                   | 16,750                  | \$ 45,000           | \$ 9,605                       | \$ 6,064                   | \$ 2,853                        | \$ 4,146                         | \$ 16,768             | \$ 3,647               | \$ 1,182                                    | \$ 11,978         | \$ 1,461          | \$ 102,802                             | 0.7%                | 0.7%                     | \$ 6.14             | \$ 102,802              | 0.7%                | 0.7%                     | \$ 6.14             |                      |
| Crook                   | 22,105                  | \$ 67,500           | \$ 12,407                      | \$ 14,321                  | \$ 4,990                        | \$ 6,066                         | \$ 25,907             | \$ 6,216               | \$ 1,182                                    | \$ 12,478         | \$ 1,609          | \$ 152,675                             | 1.0%                | 1.0%                     | \$ 6.91             | \$ 152,675              | 1.0%                | 1.0%                     | \$ 6.91             |                      |
| Curry                   | 22,805                  | \$ 67,500           | \$ 17,601                      | \$ 14,712                  | \$ 5,735                        | \$ 6,655                         | \$ 21,549             | \$ 5,327               | \$ 2,090                                    | \$ 12,543         | \$ 1,628          | \$ 194,351                             | 1.0%                | 1.0%                     | \$ 6.77             | \$ 194,351              | 1.0%                | 1.0%                     | \$ 6.77             |                      |
| Jefferson               | 23,190                  | \$ 67,500           | \$ 15,014                      | \$ 11,931                  | \$ 18,323                       | \$ 6,655                         | \$ 35,728             | \$ 8,678               | \$ 8,148                                    | \$ 12,579         | \$ 1,638          | \$ 186,194                             | 1.2%                | 1.2%                     | \$ 8.03             | \$ 186,194              | 1.2%                | 1.2%                     | \$ 8.03             |                      |
| Hood River              | 25,145                  | \$ 67,500           | \$ 9,074                       | \$ 13,552                  | \$ 17,676                       | \$ 5,570                         | \$ 32,048             | \$ 11,234              | \$ 27,848                                   | \$ 12,761         | \$ 1,692          | \$ 198,956                             | 1.3%                | 1.3%                     | \$ 7.91             | \$ 198,956              | 1.3%                | 1.3%                     | \$ 7.91             |                      |
| Tillamook               | 26,175                  | \$ 67,500           | \$ 14,966                      | \$ 13,823                  | \$ 7,723                        | \$ 6,432                         | \$ 44,482             | \$ 6,055               | \$ 4,798                                    | \$ 12,857         | \$ 1,721          | \$ 180,356                             | 1.2%                | 1.2%                     | \$ 6.89             | \$ 180,356              | 1.2%                | 1.2%                     | \$ 6.89             |                      |
| Union                   | 26,900                  | \$ 67,500           | \$ 13,877                      | \$ 10,544                  | \$ 5,487                        | \$ 7,985                         | \$ 27,652             | \$ 4,514               | \$ 2,876                                    | \$ 12,741         | \$ 1,741          | \$ 155,101                             | 1.0%                | 1.0%                     | \$ 5.77             | \$ 155,101              | 1.0%                | 1.0%                     | \$ 5.77             |                      |
| Gilliam, Sherman, Wasco | 30,895                  | \$ 157,500          | \$ 17,967                      | \$ 13,203                  | \$ 13,822                       | \$ 7,204                         | \$ 31,306             | \$ 9,424               | \$ 13,099                                   | \$ 14,279         | \$ 1,511          | \$ 301,506                             | 2.0%                | 2.0%                     | \$ 9.76             | \$ 301,506              | 2.0%                | 2.0%                     | \$ 9.76             |                      |
| Malheur                 | 31,845                  | \$ 67,500           | \$ 16,371                      | \$ 24,878                  | \$ 23,963                       | \$ 11,024                        | \$ 37,633             | \$ 14,372              | \$ 22,377                                   | \$ 15,510         | \$ 1,717          | \$ 233,380                             | 1.6%                | 1.6%                     | \$ 7.33             | \$ 233,380              | 1.6%                | 1.6%                     | \$ 7.33             |                      |
| Clatsop                 | 38,820                  | \$ 67,500           | \$ 23,260                      | \$ 16,379                  | \$ 10,608                       | \$ 9,017                         | \$ 36,966             | \$ 7,131               | \$ 8,591                                    | \$ 12,510         | \$ 1,717          | \$ 195,565                             | 1.3%                | 1.3%                     | \$ 5.04             | \$ 195,565              | 1.3%                | 1.3%                     | \$ 5.04             |                      |
| Lincoln                 | 47,960                  | \$ 67,500           | \$ 33,412                      | \$ 26,893                  | \$ 16,240                       | \$ 12,904                        | \$ 44,030             | \$ 11,638              | \$ 11,356                                   | \$ 14,337         | \$ 1,717          | \$ 241,182                             | 1.6%                | 1.6%                     | \$ 5.03             | \$ 241,182              | 1.6%                | 1.6%                     | \$ 5.03             |                      |
| Columbia                | 51,345                  | \$ 67,500           | \$ 26,206                      | \$ 26,975                  | \$ 10,778                       | \$ 10,775                        | \$ 54,660             | \$ 11,179              | \$ 5,490                                    | \$ 15,937         | \$ 1,717          | \$ 231,179                             | 1.5%                | 1.5%                     | \$ 4.50             | \$ 231,179              | 1.5%                | 1.5%                     | \$ 4.50             |                      |
| Coos                    | 63,310                  | \$ 67,500           | \$ 43,024                      | \$ 37,914                  | \$ 18,053                       | \$ 18,169                        | \$ 59,359             | \$ 15,937              | \$ 7,253                                    | \$ 20,782         | \$ 2,061          | \$ 286,272                             | 1.9%                | 1.9%                     | \$ 4.52             | \$ 286,272              | 1.9%                | 1.9%                     | \$ 4.52             |                      |
| Klamath                 | 67,690                  | \$ 67,500           | \$ 44,392                      | \$ 39,615                  | \$ 27,747                       | \$ 19,730                        | \$ 62,144             | \$ 19,035              | \$ 15,510                                   | \$ 22,377         | \$ 1,717          | \$ 315,264                             | 2.1%                | 2.1%                     | \$ 4.66             | \$ 315,264              | 2.1%                | 2.1%                     | \$ 4.66             |                      |
| Umatilla                | 80,500                  | \$ 90,000           | \$ 38,594                      | \$ 48,208                  | \$ 51,967                       | \$ 21,514                        | \$ 57,197             | \$ 31,766              | \$ 63,943                                   | \$ 32,216         | \$ 4,414          | \$ 424,328                             | 2.8%                | 2.8%                     | \$ 5.27             | \$ 424,328              | 2.8%                | 2.8%                     | \$ 5.27             |                      |
| Polk                    | 81,000                  | \$ 90,000           | \$ 33,809                      | \$ 31,971                  | \$ 33,202                       | \$ 27,452                        | \$ 39,357             | \$ 16,533              | \$ 27,221                                   | \$ 3,230          | \$ 3,230          | \$ 310,944                             | 2.1%                | 2.1%                     | \$ 3.84             | \$ 310,944              | 2.1%                | 2.1%                     | \$ 3.84             |                      |
| Josephine               | 85,650                  | \$ 90,000           | \$ 58,876                      | \$ 44,531                  | \$ 20,862                       | \$ 27,423                        | \$ 94,108             | \$ 21,755              | \$ 7,850                                    | \$ 3,358          | \$ 3,358          | \$ 387,165                             | 2.6%                | 2.6%                     | \$ 4.52             | \$ 387,165              | 2.6%                | 2.6%                     | \$ 4.52             |                      |
| Benton                  | 92,575                  | \$ 90,000           | \$ 28,614                      | \$ 35,783                  | \$ 33,364                       | \$ 25,156                        | \$ 42,495             | \$ 10,497              | \$ 27,576                                   | \$ 3,548          | \$ 3,548          | \$ 316,082                             | 2.1%                | 2.2%                     | \$ 3.41             | \$ 316,082              | 2.1%                | 2.2%                     | \$ 3.41             |                      |
| Yamhill                 | 106,300                 | \$ 90,000           | \$ 44,457                      | \$ 55,267                  | \$ 46,310                       | \$ 23,547                        | \$ 58,658             | \$ 28,929              | \$ 43,842                                   | \$ 20,327         | \$ 3,926          | \$ 415,264                             | 2.8%                | 2.8%                     | \$ 3.91             | \$ 415,264              | 2.8%                | 2.8%                     | \$ 3.91             |                      |
| Douglas                 | 111,180                 | \$ 90,000           | \$ 76,920                      | \$ 70,818                  | \$ 24,658                       | \$ 28,816                        | \$ 111,843            | \$ 27,483              | \$ 10,190                                   | \$ 20,782         | \$ 4,061          | \$ 465,572                             | 3.1%                | 3.1%                     | \$ 4.19             | \$ 465,572              | 3.1%                | 3.1%                     | \$ 4.19             |                      |
| Linn                    | 124,010                 | \$ 90,000           | \$ 63,597                      | \$ 63,800                  | \$ 34,134                       | \$ 31,808                        | \$ 95,682             | \$ 28,968              | \$ 19,890                                   | \$ 21,979         | \$ 4,414          | \$ 454,271                             | 3.0%                | 3.0%                     | \$ 3.66             | \$ 454,271              | 3.0%                | 3.0%                     | \$ 3.66             |                      |
| Deschutes               | 182,930                 | \$ 112,500          | \$ 71,610                      | \$ 56,766                  | \$ 43,831                       | \$ 37,241                        | \$ 123,276            | \$ 29,040              | \$ 27,944                                   | \$ 27,472         | \$ 6,036          | \$ 535,717                             | 3.6%                | 3.6%                     | \$ 4.4%             | \$ 535,717              | 3.6%                | 3.6%                     | \$ 4.4%             |                      |
| Jackson                 | 216,900                 | \$ 112,500          | \$ 115,010                     | \$ 108,637                 | \$ 76,453                       | \$ 56,995                        | \$ 106,449            | \$ 54,601              | \$ 57,982                                   | \$ 30,639         | \$ 6,971          | \$ 726,237                             | 4.8%                | 4.8%                     | \$ 3.35             | \$ 726,237              | 4.8%                | 4.8%                     | \$ 3.35             |                      |
| Marion                  | 339,200                 | \$ 112,500          | \$ 150,805                     | \$ 180,972                 | \$ 222,330                      | \$ 90,045                        | \$ 108,495            | \$ 114,620             | \$ 10,338                                   | \$ 42,041         | \$ 11,202         | \$ 1,306,764                           | 8.7%                | 8.2%                     | \$ 3.85             | \$ 1,306,764            | 8.7%                | 8.2%                     | \$ 3.85             |                      |
| Lane                    | 370,600                 | \$ 112,500          | \$ 178,303                     | \$ 162,417                 | \$ 124,024                      | \$ 101,372                       | \$ 158,354            | \$ 74,802              | \$ 79,256                                   | \$ 44,969         | \$ 11,202         | \$ 1,047,199                           | 7.0%                | 7.0%                     | \$ 2.83             | \$ 1,047,199            | 7.0%                | 7.0%                     | \$ 2.83             |                      |
| Clackamas               | 413,000                 | \$ 135,000          | \$ 164,469                     | \$ 137,396                 | \$ 56,300                       | \$ 56,300                        | \$ 182,521            | \$ 62,754              | \$ 138,794                                  | \$ 48,922         | \$ 12,369         | \$ 1,103,785                           | 7.4%                | 10.0%                    | \$ 2.67             | \$ 1,103,785            | 7.4%                | 10.0%                    | \$ 2.67             |                      |
| Washington              | 595,860                 | \$ 135,000          | \$ 184,123                     | \$ 215,723                 | \$ 381,120                      | \$ 98,862                        | \$ 81,474             | \$ 124,322             | \$ 432,349                                  | \$ 65,971         | \$ 17,403         | \$ 1,736,347                           | 11.6%               | 14.4%                    | \$ 2.91             | \$ 1,736,347            | 11.6%               | 14.4%                    | \$ 2.91             |                      |
| Multnomah               | 803,000                 | \$ 135,000          | \$ 358,519                     | \$ 354,104                 | \$ 459,545                      | \$ 185,080                       | \$ 25,488             | \$ 169,362             | \$ 527,450                                  | \$ 85,283         | \$ 23,002         | \$ 2,322,937                           | 15.5%               | 19.4%                    | \$ 2.89             | \$ 2,322,937            | 15.5%               | 19.4%                    | \$ 2.89             |                      |
| <b>Total</b>            | <b>4,141,100</b>        | <b>\$ 2,767,500</b> | <b>\$ 1,888,750</b>            | <b>\$ 1,888,750</b>        | <b>\$ 944,375</b>               | <b>\$ 1,888,750</b>              | <b>\$ 1,888,750</b>   | <b>\$ 944,375</b>      | <b>\$ 1,888,750</b>                         | <b>\$ 750,000</b> | <b>\$ 150,000</b> | <b>\$ 15,000,000</b>                   | <b>100.0%</b>       | <b>100.0%</b>            | <b>\$ 3.62</b>      | <b>\$ 15,000,000</b>    | <b>100.0%</b>       | <b>100.0%</b>            | <b>\$ 3.62</b>      |                      |

<sup>1</sup> Source: American Community Survey population 5-year estimate, 2012-2016.

<sup>2</sup> Source: Premature death: Leading causes of years of potential life lost before age 75. Oregon death certificate data, 2012-2016.

<sup>3</sup> Source: Quality of life: Good or excellent health, 2012-2015.

<sup>4</sup> Source: Portland State University Certified Population estimate July 1, 2017

<sup>5</sup> Source: U.S. Census Bureau, Population estimates, 2010





PUBLIC HEALTH DIVISION

[healthoregon.org/modernization](http://healthoregon.org/modernization)

Phone: 971-673-1222

This document can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request this publication in another format or language, contact Public Health Division at 971-673-1222 or 711 for TTY, or email [publichealth.policy@state.or.us](mailto:publichealth.policy@state.or.us).