Statewide Modernization Plan
DRAFT
December 8, 2016

Table of contents

Appendices

Executive summary

Background

The need for a modern public health system

Oregon is a leader in its approach to health system transformation, which aims to provide better health and better care at a lower cost. Health system transformation and other factors have changed the landscape for public health in Oregon:

- As Oregon's health system transformation has allowed for greater access to health care, the role of governmental public health to provide safety net clinical services has changed. Governmental public health no longer needs to provide safety net clinical services in all areas of the state. This increases capacity for public health to focus on implementing policies so every individual has access to high quality and culturally appropriate health care.
- A growth in the volume of new and emerging health threats has exposed the need for a governmental public health system that can systematically collect and report on population health risks and health disparities; implement needed policy changes to improve health and protect the population from harms; and leverage partnerships across the health system to ensure maximum efficiency and effectiveness of services delivered. There are many recent examples of how demands for governmental public health services have changed over time: the response to the international Zika virus outbreak; preparation for a possible Cascadia Subduction Zone earthquake; and the need to address environmental threats to human health.

A modern public health system in Oregon is nimble, ready to respond and able to tackle the issues that impact health outside the doctor's office.

The public health modernization framework

Through House Bill 3100 (2015), a new framework for state and local health departments was adopted for every community across Oregon. The public health modernization framework depicts the core services that must be available to ensure critical protections for every individual in Oregon.

Oregon's modernized public health system is built upon seven foundational capabilities and four foundational programs. These foundational capabilities and programs encompass the core public health system functions that must be in place in all areas of the state, and for every person in Oregon. Foundational capabilities are the knowledge, skills and abilities needed to successfully implement foundational programs.

Foundational capabilities are:

- Leadership and organizational competencies
- Health equity and cultural responsiveness
- Community partnership development

- Assessment and epidemiology
- Policy and planning
- Communications
- Emergency preparedness and response

Foundational programs include topic- and disease-specific work to improve health outcomes, such as a decrease in the prevalence of a particular disease or health risk behavior. Foundational programs are:

- Communicable disease control
- Environmental health
- Prevention and health promotion
- Access to clinical preventive services

This framework also acknowledges the need for each community to identify the additional programs that are necessary to address priorities within their communities.

Implementation of public health modernization will be somewhat flexible and consider the existing strengths and needs of different public health authorities. Movement towards achieving a common set of health outcomes will be the focus for Oregon's public health system over the next three to five biennia.

Successful implementation of public health modernization will require deliberate and sustainable changes over the next three to five biennia. By scaling up public health

modernization over the next several years, Oregon's governmental public health system will be able to:

- Improve the capacity of the governmental public health workforce to take on new community health challenges.
- Engage community members in creating a public health system that meets their needs.
- Identify and implement new ways of delivering public health services that are more effective and efficient.
- Develop partnerships with traditional and non-traditional partners in order to improve the delivery of public health services.
- Move from an activity-based public health system to one to one that is outcomes-driven.

Key findings from public health modernization assessment

In 2016, state and local public health authorities completed an assessment of the existing public health system, as required under House Bill 3100. This assessment was intended to answer two questions: To what extent is the existing system able to meet the requirements of a modern public health system? What resources are needed to fully implement public health modernization?

The assessment found gaps between our current public health system and a fully modernized system that meets the health protection, prevention and promotion needs of Oregonians in every part of the state. The assessment identified that, in more than one third of Oregon communities – home for more than 1.3 million people - foundational public health programs are limited or minimal. In these areas, the public health system may not be adequately able to respond to an emerging communicable disease or environmental health threat, run programs to reduce the impact of chronic diseases and injuries or ensure that every person in the community receives high quality health care.

Overall, there are gaps in all state and local public health authorities. These gaps are not uniform and do not appear in the same foundational capability or program in each public health authority. Some governmental public health authorities have larger gaps than others. However, there are gaps across governmental public health authorities of all sizes.

Similarly, there is not one foundational capability or program that is implemented across every public health authority. However, there are some foundational programs and capabilities with a higher concentration of limited and minimal implementation. The least implemented area is health equity and cultural responsiveness.

The assessment found system-wide barriers and challenges to implementing the public health modernization model. Local public health authorities frequently cited lack of access to timely, accurate and relevant data as a barrier to running effective programs and ensuring that programmatic and funding decisions are driven by data. Local public health authorities also frequently cited a need for access to epidemiologic and communications expertise.

The public health modernization assessment found that an additional $105M is needed annually to fully implement a modernized public health system, which represents a 50% increase over current spending levels. This is a planning-level estimate that will be refined over time as the system changes and efficiencies are gained. However, we know that upgrading the system to fully implement foundational programs and capabilities requires significant, sustainable funding over current funding levels.

The full public health modernization assessment report is available at: healthoregon.org/modernization.

The statewide modernization plan

The statewide modernization plan was developed by the Public Health Advisory Board (PHAB), Oregon Health Authority Public Health Division (Public Health Division) and local public health authorities (LPHAs). This plan is based upon findings from the 2016 public health modernization assessment and our collective understanding of the public health landscape in Oregon. This plan encompasses our long-term strategies for modernizing Oregon's public health system and our immediate work for the next biennium. It represents our best thinking to date and will likely evolve over time. As required in House Bill 3100, this plan will be periodically updated.

Refer to the Roadmap for Modernizing Oregon's Public Health System in this document for Oregon's key priorities and strategies for building a modern public health system over the coming years.

Investments in public health modernization planning to date

Public health modernization planning
Oregon Health Authority received $500,000 from the Oregon legislature for the 2015-17 biennium for public health modernization planning. This investment has been used for the following activities:

- **Develop and publish the Public Health Modernization Manual.** This manual defines the core functions and roles for Oregon's public health system; it is the guide for our day-to-day work. *(completed, December 2015)*
- **Complete a system-wide public health modernization assessment.** Findings from this assessment are the backbone of the implementation strategy for the coming years. *(completed, June 2016)*
- **Work with Oregon's federally recognized tribes to understand how tribal public health services and state/local public health services can be aligned** around the public health modernization framework. Moving forward, better alignment between tribal public health and state/local public health will ensure that every person in Oregon has access to the same essential public health services. *(in progress, to be completed by June 2017)*

21st Century public health

Oregon was one of three states to receive a Robert Wood Johnson Foundational grant administered through the Public Health National Center for Innovations. Oregon received a two-year grant totaling $250,000 in March 2016 to advance public health modernization. The Coalition of Local Health Officials (CLHO) is the fiscal agent for the grant, with the Public Health Division serving as co-principal investigator. These grant funds are supporting the following activities:

- **Convene 10 meetings across Oregon** to engage local communities, health and education stakeholders and local elected officials in strategies to advance a modern public health system. *(October 2016-January 2017)*
- **Provide technical assistance to local public health authorities** to explore and adopt cross jurisdictional collaborations and submit local modernization plans. (October 2016-February 2018)

The national perspective

As Oregon's governmental public health system evolves in response to a changing health environment, several national initiatives are also redefining the role of state and local public health. These initiatives, including Foundational Public Health Services and Public Health 3.0, outline the essential functions of the public health system and set forth a pathway for public health systems to meet these functions. Oregon is on the forefront of this work. Even as we modernize Oregon's public health system, we are informing national conversations and providing valuable information for other states that will follow in our path.

Roadmap for modernizing Oregon's public health system

This set of essential priorities and strategies is Oregon's roadmap to modernizing its public health system and meeting the requirements established in House Bill 3100 (2015). When comprehensively implemented, Oregon will have a modern public health system in 6-10 years that will protect and improve the health of every person in Oregon.

Vision: Public health modernization means every person in Oregon receives essential public health preventive services critical to their health and the health of future generations. These include protection from communicable disease and environmental risks, health promotion, prevention of diseases and injury, and responding to new threats to health.

Goal: By 2023 all people in Oregon will be protected by an efficient and effective state and local public health system that provides essential public health services to all.

Priority 1 - Improve the public health system's capacity to provide foundational public health services for every person in Oregon

Strategy 1: Develop and implement a plan to phase in core public health functions, as described in the *Public Health Modernization Manual*, over the next 3 to 5 biennia. This roadmap serves as the initial plan.

Strategy 2: Increase and use available funding to support implementation.

Strategy 3: Apply a health equity and cultural responsiveness lens through all phases of implementation.

Strategy 4: Work with Oregon's federally recognized tribes to align tribal public health services and Oregon's state and local public health system.

Strategy 5: Incentivize cross-jurisdictional collaborations (county-county/ state-county) through the local public health funding formula and/or planning grants

Strategy 6: Establish a process to award state matching funds for county investments in foundational programs and capabilities through the local public health funding formula.

Strategy 7: Ensure all local public health authorities submit a comprehensive modernization plan by 2023.

Priority 2 – Align and coordinate public health and early learning, CCOs, hospitals and other health partners for collective impact on health improvements

Strategy 8: Establish new and innovative collaborative service delivery models with health care partners; scale and spread promising and best practices and effective models throughout the state.

Strategy 9: Provide public health expertise and serve as the convener to support and promote evidenced-based prevention interventions across the health care and early learning sectors.

Strategy 10: Align public health priorities with relevant statewide health priorities outlined in Oregon's *Action Plan for Health*.

Strategy 11: Adopt shared metrics and incentives with the early learning and health care delivery systems for collective impact.

Priority 3 – Demonstrate progress toward improved health outcomes through accountability metrics and ongoing evaluation

Strategy 12: Establish accountability metrics and incentives for population health outcomes.

Strategy 13: Use the local public health funding formula to award performance-based payments to local public health authorities that achieve benchmarks or improvement targets for accountability metrics.

Strategy 14: Evaluate and report on the effectiveness and population health impact of new and existing service delivery models.

The following sections describe the major bodies of work that state and local public health authorities are undertaking to implement the strategies of the public health modernization roadmap.

Requirements to implement the public health modernization public roadmap

The following sections describe the major bodies of work that will occur to implement the strategies laid out in the public health modernization roadmap. State and local public health authorities, under the guidance of the Public Health Advisory Board, have made significant progress in many of these areas, while in others preliminary work has begun. Each section includes a description of next steps and anticipated timelines.

Increasing capacity for foundational programs and capabilities, and required resources

Scaling up foundational programs and capabilities

The Public Health Advisory Board, Public Health Division and LPHAs used findings from the public health modernization assessment to develop a plan to scale up capacity to fulfill the core system functions for each foundational program and capability over the course of three biennia.[1]

The following criteria were used to select initial priorities:

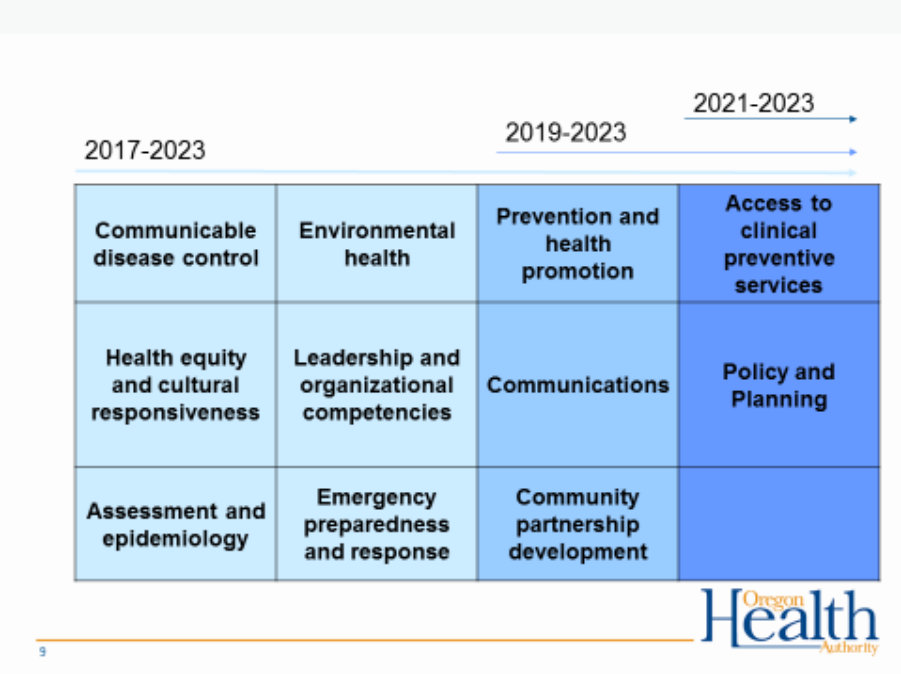
1. Population health impact: the degree to which meaningful improvements in health can be expected

2. Service dependencies: the degree to which OHA is dependent on local public health authorities to implement a specific function and vice versa.

3. Equity: the degree to which underserved areas or populations of the state can gain access to a public health program.

4. Population coverage: the percent of the population expected to benefit from full implementation of a foundational capability or program.

[1] Additional information about the rationale for implementing public health modernization in waves of foundational capabilities and programs simultaneously across the entire system is provided in Appendix B.



Initial priorities focus on:

- Aligning work to respond to emerging and ongoing communicable disease and environmental health threats. This work falls under the areas of communicable disease control, environmental health and emergency preparedness.
- Increasing capacity to meet core public health functions for health equity and cultural responsiveness.
- Addressing barriers identified in the public health modernization assessment around data needs and capacity to engage local communities and partners in developing the local public health system. These fall under the areas of leadership and organizational competencies, and assessment and epidemiology.

A significant and sustained investment is essential to fully meet the core system functions for each foundational capability and program as described in the *Public Health Modernization Manual.* This plan to achieve full implementation of foundational programs and capabilities over three biennia assumes that additional funding is scaled up as well. Implementation can be accelerated or slowed to match the level of funding available. However, we will continue to face challenges to improve population health if public health and prevention are not adequately funded.

Resource gaps identified in the public health modernization assessment

The public health modernization assessment looked at current (FY 2015) spending on foundational programs and capabilities and the additional spending that would be needed to reach full implementation.

The additional spending figures are planning level estimates and will change over time as the public health system gains efficiencies. As the system is today, an additional $105 million, or $26.81 per capita, would be needed annually on top of current spending to support a modern public health system.

Current spending and additional resources needed for foundational capabilities and programs[1]				Per capita[2] additional increment of cost
	current spending	additional increment of cost	total estimated cost of full implementation	
foundational programs	**$ 129,616,000**	**$ 55,098,000**	**$ 184,714,000**	**$ 14.13**
environmental public health	$ 45,214,000	$ 14,433,000	$ 59,647,000	$ 3.70
prevention and health promotion	$ 40,908,000	$ 17,443,000	$ 58,351,000	$ 4.47
communicable disease control	$ 25,404,000	$ 12,918,000	$ 38,322,000	$ 3.31
access to clinical preventive services	$ 18,090,000	$ 10,304,000	$ 28,394,000	$ 2.64
foundational capabilities	**$ 79,602,000**	**$ 49,464,000**	**$ 129,068,000**	**$ 12.68**
leadership and org. competencies	$ 34,959,000	$ 12,901,000	$ 47,860,000	$ 3.31
assessment and epidemiology	$ 17,504,000	$ 14,479,000	$ 31,984,000	$ 3.71
emergency preparedness and response	$ 8,966,000	$ 3,247,000	$ 12,214,000	$ 0.83
community partnership development	$ 5,974,000	$ 3,967,000	$ 9,941,000	$ 1.02
policy and planning	$ 4,415,000	$ 5,202,000	$ 9,617,000	$ 1.33
health equity and cultural responsiveness	$ 4,411,000	$ 4,985,000	$ 9,396,000	$ 1.28
communications	$ 3,373,000	$ 4,683,000	$ 8,056,000	$ 1.20
total	**$ 209,218,000**	**$ 104,562,000**	**$ 313,782,000**	**$ 26.81**

Although increased funding is essential, state and local public health authorities have identified opportunities to apply the modernization framework to our most urgent health priorities. We are beginning to demonstrate the positive impacts of changing how we approach these priorities by applying foundational capabilities. We will continue to build upon opportunities to apply the public health modernization framework through comprehensive approaches, enhanced partnerships and ongoing evaluation. We will continue to capitalize on these opportunities even as we work to secure sustainable funding at the level identified in the public health modernization manual.

Contracting mechanism and scope of work development

Work is underway to develop a new contracting mechanism for new moneys made available for public health modernization. State and federal funds are currently distributed to LPHAs through Program Elements, which are deliverables-based contracts. The Public Health Division is developing a performance-based contracting model whereby each LPHA will be contractually obligated to develop a strategy and plan for achieving a set of health outcomes. However, each LPHA will have the flexibility to design its own strategy, thereby accounting for local needs, assets and priorities.

State and local public health authorities, under the guidance of the Public Health Advisory Board, will develop a scope of work that aligns with public health modernization funds available for 2017-19.

Key activities for developing an implementation plan for 2017:

- Identify existing funding and resources to support the public health modernization implementation plan in the 2017-19 biennium – Q1-Q2 2017
- Work with the Public Health Advisory Board to scale activities to match funding and other resources – Q1-Q2 2017
- Identify areas where the modernization framework has been effectively implemented and identify opportunities to expand implementation system-wide – Q1-Q2 2017
- Develop a scope of work and contracting process for local public health authorities that receive funding to implement the public health modernization model – Q2 2017

Health equity

In Oregon, certain communities experience a disproportionate burden of death, disease and injury. The Public Health Division and Public Health Advisory Board define health equity as the absence of unfair, avoidable, or remediable difference in health among social groups.

> Health equity implies that health should not be compromised or disadvantaged because of an individual or population group's race, ethnicity, disability, gender, income, sexual orientation, neighborhood, or other social condition.
>
> Achieving health equity requires the equitable distribution of resources and power for health and the elimination of gaps in health outcomes between different social groups.
>
> Health equity also requires that public health professionals look for solutions outside of the health care system, such as in the transportation or housing sectors and through the distribution of power and resources, to improve health with communities. *(PHD draft definition shared with PHAB, Oct 2016).*

The core system functions to reduce and eliminate health disparities are outlined in the *Public Health Modernization Manual*.

The public health modernization assessment found that health equity and cultural responsiveness is the least implemented foundational capability or program. In fact, more than half of Oregon communities are served by a public health authority that has minimal or limited capacity to provide the core functions outlined in the *Public Health Modernization Manual*.

State and local public health authorities have been investigating opportunities to build a framework for and enhance capacity for health equity and cultural responsiveness activities.

The Public Health Advisory Board is committed to using its role as an oversight body to build a public health system that is equipped to advance health equity and reduce or eliminate health disparities. The Public Health Advisory Board is developing a health equity review policy and procedure the Board will use with every deliverable or decision. The Board is equally committed to evaluating the impact of decisions to ensure they make a meaningful improvement for communities experiencing disparities.

The Public Health Division has formed a health equity committee to develop priorities and a work plan aligned with the core system functions outlined in the *Public Health Modernization Manual*. This initial work of the Public Health Division may become the backbone of a system-wide approach toward achieving health equity.

Some **local public health authorities** have policies and plans in place to improve health equity in their communities and are actively working with their communities to implement those plans. For example, Multnomah County Health Department has developed a comprehensive health equity lens that informs planning, decision-making and resource allocation. The

Multnomah County Equity and Empowerment Lens is a resource for other agencies seeking to develop an equity approach. And Crook County Health Department has invested in ongoing training for its staff in an effort to integrate achieving health equity into all activities of the health department.

In 2017 state and local health authorities and the Public Health Advisory Board will focus on aligning and coordinating work happening across the system to develop a system-wide strategy. This strategy will build on existing resources to make progress toward meeting the core system functions for health equity and cultural responsiveness. Initial work may include workforce development and recruitment, engaging communities disproportionately impacted by health disparities, and working with organizations that serve these communities to develop shared priorities. Oregon Health Authority's Office of Equity and Inclusion is a resource and partner in this work.

The public health system currently lacks the ability to collect timely and relevant data on health disparities for local communities; with sufficient resources, collecting the data needed to drive decision-making will be a top priority. Similarly, with funding the public health system will conduct a comprehensive health equity assessment to identify current assets and barriers for achieving health equity.

Key activities to improve health equity

- Develop a public health system strategy to advance health equity based on the *Public Health Modernization Manual's* core system functions– Q2 2017
- Align public health system approach with Oregon Health Authority, Office of Equity and Inclusion, regional health equity coalitions and community organizations that represent or serve populations disproportionately impacted by health disparities – ongoing
- Review and update strategies in the State Health Improvement Plan intended to reduce and eliminate health disparities – Q3 2017
- Establish accountability metrics for health equity. Q2 2017
- Develop framework for conducting statewide and local health equity assessments and using information from these assessments to develop an action plan Q2 2017
- Develop framework for enhancing data collection to ensure granular community-level data are available to drive agency and system decision-making – Q2 2017

Approach for working with Oregon's federally recognized tribes

While the public health modernization legislation addresses state and local governmental public health, public health modernization creates an opportunity to transform Oregon's entire governmental public health system, including tribal public health. In order to identify if there are aspects of public health modernization that can be used to assist tribes in meeting their health goals, the Public Health Division held a Tribal Consultation with Oregon's nine-federally recognized tribes in June 2016.

Since the Tribal Consultation, the Public Health Division has held individual meetings with 4 tribal health administrators. These meetings have provided an opportunity for each tribe to inform the Public Health Division if and how they would like to engage in building a modern public health system.

Some tribes have expressed interest in completing a modified version of the public health modernization assessment. The assessments will give tribal health authorities a deeper understanding of areas where they are already providing core functions of a modern public health system and will highlight opportunities for tribal public health to work closely with local public health to provide essential public health services.

Add local examples of tribes' roles to provide foundational public health services in the community

Key activities for aligning tribal public health services and state and local public health

- Upon request, assist tribes to complete a public health modernization assessment – by Q2 2017
- Facilitate opportunities for local planning designed to increase alignment between tribal and local public health services – ongoing

Cross-jurisdictional sharing and state/local service delivery models

Current cross jurisdictional sharing in Oregon

Nationally, local governments and public health agencies are increasingly adopting cross-jurisdictional sharing arrangements to improve the efficiency and effectiveness of the local public health system. Cross jurisdictional sharing can present opportunities to improve or expand services while making better use of resources. [2]

In 2016 the Coalition of Local Health Officials (CLHO) deployed a survey that asked LPHAs to provide detail on the types of collaboration, shared services, and other partnerships that allow them to deliver essential public health services. Most LPHAs reported some level of collaboration and sharing with other jurisdictions. Some of the most commonly cited partnerships include:

- **Community health assessments**. Cross-jurisdictional partnering for community health assessments occurs in many regions of the state. These efforts also include partnerships with Coordinated Care Organizations (CCOs), early learning hubs, local hospitals, and other community organizations.

- **Communicable disease surveillance and sharing**. Some of these partnerships include formal agreements to share access to Orpheus, an electronic disease surveillance system, for case investigation and follow up.

- **Environmental health sharing**. Several rural jurisdictions share environmental health staff to ensure that mandated restaurant, water, and other inspections are carried out as required.

- **Technical assistance and other support**. LPHAs offer varying levels of assistance to each other on a regular basis, including general programmatic or operational advice, resource sharing, partnering for staff training, or job shadowing for new staff.

- **Emergency preparedness**. Regions throughout the state partner to hold preparedness exercises and to ensure that critical resources will be available in the event of a large-scale bioterrorism event or natural disaster.

Future Sharing in Oregon

[2] Public Health Activities and Services Tracking (Sept 2016). Cross-jurisdictional sharing in local public health systems: implications for costs, impact and management capacity. Available at: http://phastdata.org/sites/phastdata.org/files/DIRECTIVE_researchbrief.pdf

The CLHO survey asked LPHAs to identify opportunities for future shared services that could potentially create efficiencies and improve effectiveness across jurisdictions. Some of the most commonly cited potential future shared services include:

- **Assessment and epidemiology**. Several LPHAs identified a regional approach to data collection and analysis as the most efficient and effective method of fulfilling the elements listed in the new modernization framework.

- **Prescription drug overdose prevention grant**. Six regions throughout the state will be collaborating on prevention efforts related to prescription drug and heroin overdose.

- **Environmental health**. Shared environmental health specialists to prevent, assess, and address emerging environmental public health issues.

- **Emergency preparedness.** Regional efforts to ensure that communities are prepared and able to respond to and recover from public health threats and emergencies.

There is great potential for future cross-jurisdictional sharing that moves LPHAs towards formalized arrangements. What those arrangements look like will be designed by LPHAs and local governing bodies; it could be shared capacity with joint oversight or full consolidation of local public health agencies.

From October 2016 through January 2017, ten meetings will take place across Oregon to discuss opportunities and barriers to cross-jurisdictional sharing.

Multnomah, Clackamas and Washington Counties conceptualized and developed the Tri-County Health Officer program which began in 2006 out of acute need and formally launched in 2008. This model provides a dedicated health officer for each county to focus on consultations for individual public health situations such as tuberculosis cases, consultation with public health programs such as environmental health, and agency-level consultation and leadership related to existing and emerging community-level public health issues. As a multi-county program, this model also supports a regional approach to development of consistent and up-to-date policies, procedures and risk communication. The central structure allows for 24/7 coverage with both a primary and back-up health officer for expert management of urgent public health issues whenever they arise. The team structure also allows for shared coverage and communication around regional and statewide bodies such as the Regional Disaster Preparedness Organization, the CleanerAir Oregon Task Force, the OHA Public Health Advisory Board, the Immunization Program Advisory Team, and the OHA School Immunization Law Advisory Committee. Since the Tricounty Health Officer Program covers three contiguous counties, it can easily serve as a convening group for regional issues such as the Ebola Response and the Opioid Safety.

State and local service delivery models

The *Public Health Modernization Manual* demonstrates how the distinct yet complementary roles for state and local public health are each essential to fulfill the core system functions. The following are two examples:

- The Public Health Division has core responsibilities for maintaining statewide data systems that are accessible and interoperable to the extent possible with local data systems and to conduct statewide analysis on data collected. The Public Health Division also fields statewide surveys of health behaviors in order to monitor trends in health harming or health promoting behaviors. LPHAs report data to these statewide systems and may field surveys locally in order to understand the health behaviors in their communities. LPHAs use statewide data to develop community health improvement plans, evaluate the impact of local interventions and to inform decision-making and resource allocation.
- The Public Health Division works with statewide partners and other areas within the Oregon Health Authority to set statewide policy. LPHAs work with local partners to implement statewide policies or set local policies that are tailored to their community. Local policy often sets the stage for state policy. State and local public health authorities must work closely on policy initiatives to ensure consistent and mutually supporting approaches.

The public health system will continue to identify areas of inter-reliance and prioritize efforts to ensure that both state and local public health authorities are able to fulfill their core functions so the system can perform at its highest level. This requires a coordinated and strategic approach. As stated previously, insufficient access to timely, accurate and relevant population health data was identified as a barrier for LPHAs to fulfill core functions in most foundational capability and program areas. Therefore, state and local public health authorities will need to work closely to prioritize enhanced statewide data collection to support local functions.

Finally, the Public Health Division and individual LPHAs, may form relationships, similar to cross jurisdictional sharing, whereby the state would conduct some functions for the LPHA, as indicated by gaps and available resources.

Key activities to expand cross jurisdictional sharing and new state/local service delivery models:

- Hold statewide modernization meetings across the state to discuss opportunities for sharing functions and services across county lines – Q4 2016-Q1 2017
- Develop or use existing resources to support the adoption of cross jurisdictional sharing agreements – Q1 2017-Q1-2018
- Develop opportunities to share innovative models or promising new approaches for sharing functions and services – pending
- Establish an accountability metric for increased use of formal sharing agreements – Q1 2017
- Conduct ongoing evaluation of cross jurisdictional sharing – ongoing

Approach for building collaborations across sectors

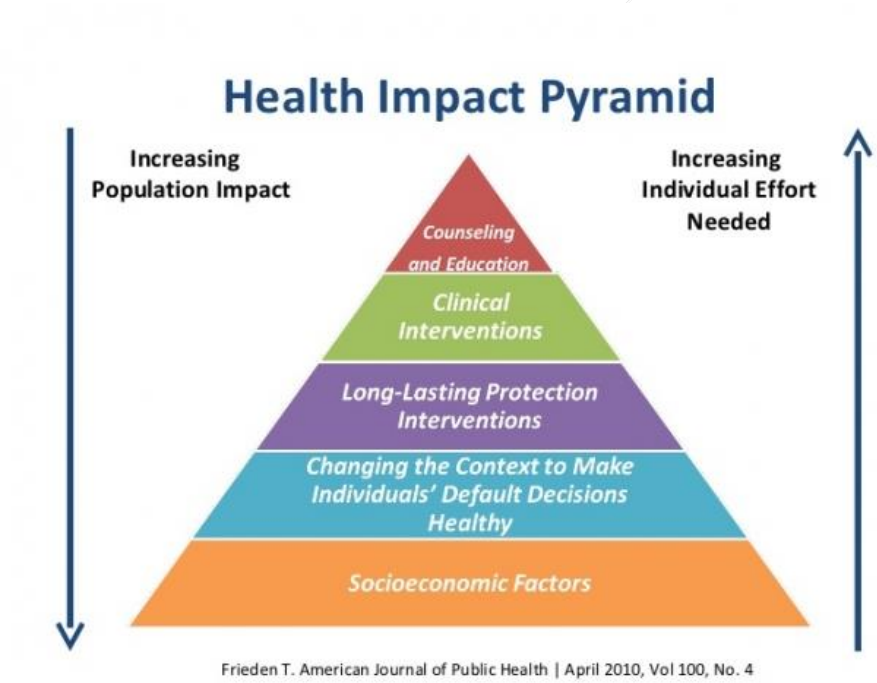
The public health system serves a critical function in a transformed health system. Its focus on upstream prevention and creating healthy communities through policy, system and environmental changes directly complement clinical health care.

Oregon's *Action Plan for Health* describes Oregon's approach to improving health for all Oregonians. This plan specifically identifies public health and prevention as essential components of a transformed health system. The public health system will continue to align with relevant sections in the *Action Plan for Health* as the system modernizes.

The health impact pyramid

The health impact pyramid demonstrates the spectrum of interventions can be applied to health priorities. The tiers at the top of the pyramid most often occur within the health care system, whereas the lower tiers rely on the expertise and strategies of the public health system.

Public health modernization requires the public health system to focus on these lower tiers of the pyramid while acting as conveners with local stakeholders to ensure interventions at the top of the tier are also available to all community members. In addition to convening stakeholders, public health authorities provide technical assistance and promote best and evidence-based practices for improving population health. These core functions for public health set the stage for collective impact and improved health for community priorities.



New examples of innovative cross sector partnerships between public health, CCO(s) and others, where each are working to achieve shared outcomes, are common. Innovative funding models allow public health to fulfill its functions for prevention and for reaching underserved communities.

Local example: Coos County Preconception Health

The Coos County CHIP coalition is a community-wide collaborative of local public health, the CCO and other community partners. One goal of the CHIP is to increase the timeliness of prenatal care, and the Coos County CHIP coalition identified One Key Question as a key strategy to meet this goal. This project is piloted both at the primary care provider practices and across public health programs. Because this program shows improvement in early access to prenatal care and uptake of long acting reversible contraceptive methods, the CCO has adopted the project as one of its required performance improvement projects that could have a significant impact on the CCO's ability to achieve incentive measure benchmarks.

Local example: Central Oregon Health Council (placeholder)

System example: SRCH grants (placeholder)

Key activities for building collaborations across sectors:

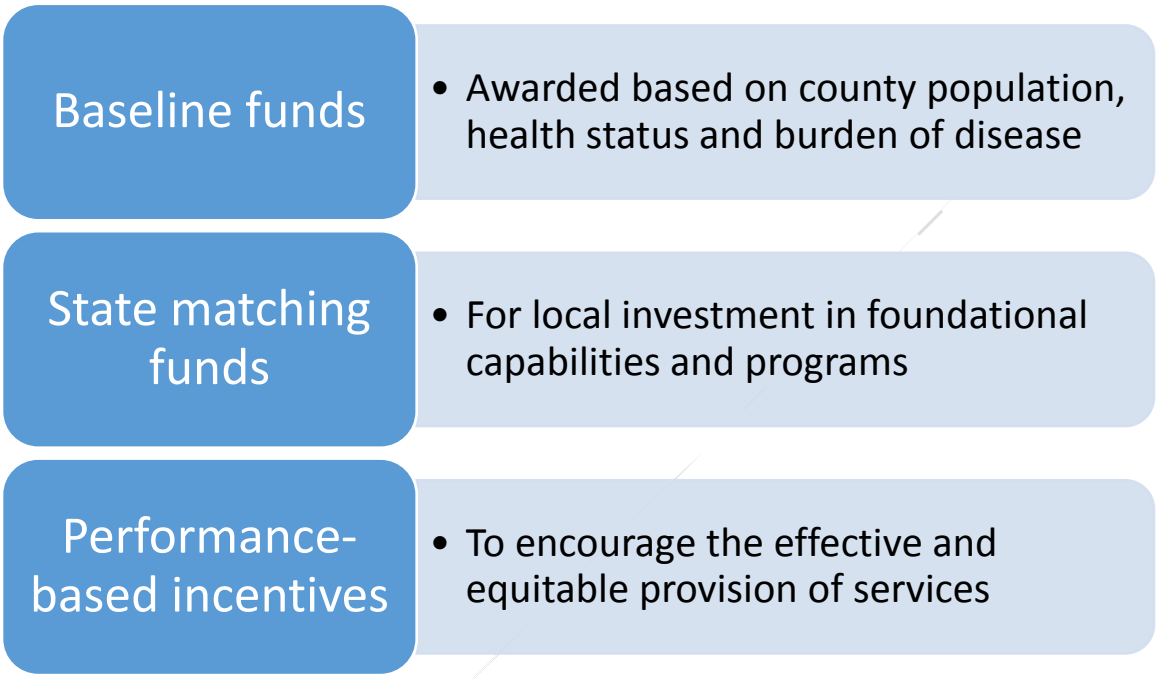
- Provide learning opportunities for health care partners – including CCOs -, early learning and public health to learn about innovative collaborations or emerging best practices to achieve shared goals –2017
- Continue to identify opportunities to work across health sectors to implement proven public health strategies to improve health and reduce costs - ongoing
- Expand opportunities and incentives for shared community or regional health improvement plans across local public health authorities, CCOs and nonprofit hospitals - ongoing
- Establish accountability metrics for formal collaborations between public health authorities, CCOs and early learning – Q2 2017
- Explore areas where the public health system can align with statewide health priorities outlined in Oregon's Action Plan for Health - 2017

Local public health authority funding formula

Legislative requirements

HB 3100, Section 28 requires Oregon Health Authority to submit a funding formula to Legislative Fiscal Office by June 30 of every even numbered year.

The local public health funding formula is comprised of three components, listed below. This funding formula is intended to provide for the equitable distribution of monies made available to fund implementation of foundational capabilities and programs.



Baseline funds. This component awards funding to LPHAs based on their county population, health status and burden of disease. Counties with a larger population will receive a larger portion of the pool of available funding. Similarly, counties with a greater burden of disease or worse health status will receive a proportionally larger portion of the pool of available funding.

State matching funds for county investments. This component awards state matching funds for local public health authority investment in foundational programs and capabilities.

Performance-based incentives. This component uses performance-based incentives to encourage the effective and equitable provision of public health services by local public health authorities.

Oregon Health Authority submitted an initial framework for the funding formula to Legislative Fiscal Office on June 30, 2016. The funding formula described below was built from this framework. This funding formula will continued to be developed over the coming months and will be finalized at the conclusion of the 2017 legislative session.

The Public Health Advisory Board has formed an Incentives and Funding subcommittee that meets monthly to develop the funding formula.

Guiding principles

The Incentives and Funding subcommittee has applied the following guiding principles to decisions made about the funding formula:

- The funding formula should advance equity in Oregon, both in terms of health equity and building an equitable public health system.
- The funding formula should be designed to drive changes to the public health system intended to increase efficiencies and effectiveness.
- Decisions made about the funding formula will be compared with findings from the public health modernization assessment to ensure funds will adequately address current gaps in implementation of foundational programs.

Funding formula recommendations

The Incentives and Funding subcommittee makes the following recommendations:

1. All monies made available for implementing foundational capabilities and programs in the 2017-19 should be directed to the baseline component of the funding formula. Monies will be used to fill critical gaps that result from the historical un- or under-funding for foundational public health work. Payments to local public health authorities for the other two components of the funding formula (state matching funds and performance-based incentives) will be incorporated into the funding formula in future biennia.
2. This funding formula dictates how funds will be distributed to local public health authorities and does not inform how funds are split between state and local public health authorities. OHA and the Public Health Advisory Board intend for the majority of funds to be distributed to local public health authorities to address gaps and priorities locally. Dollars that remain with OHA Public Health Division will be specifically used to address statewide needs that are necessary to support local improvements, and to monitor implementation and accountability.
3. The funding formula must provide for the equitable distribution of moneys. This means that some counties may receive proportionally more or less than an “equal” share based on need. While extra small and small counties will receive a proportionally larger per capita payment, extra-large and large counties will receive a proportionally larger total dollar amount of funding. This is consistent with the financial resource gaps identified in the public health modernization assessment.
4. The subcommittee recommends adding three additional indicators to the baseline funds component of the funding formula: racial/ethnic diversity, poverty and limited English proficiency. These indicators may be linked to poorer health outcomes and also indicate increased demand for LPHA resources.

5. The subcommittee recommends incorporating a floor, or base, payment per county into the funding formula. This floor payment is intended to ensure that each LPHA has resources needed to implement the modernization framework and drive toward greater efficiencies and improved health outcomes. The subcommittee recommends using a tiered floor amount, based on county population.
6. The subcommittee recommends allocating all remaining funds across the five indicators included in the baseline funds component. The subcommittee recommends weighting all indicators equally initially.
7. The subcommittee will revisit all decisions made about the funding formula at the conclusion of the 2017 legislative session.

See Appendix C for funding formula example and methodology.

Key activities to complete the funding formula

- Finalize funding formula indicators and data sources – Q2 2017
- Develop method to collect standardized information on county expenditures for foundational capabilities and programs; establish method to validate information – Q3 2017
- Develop funding formula components for state matching funds and performance-based incentives

Accountability metrics

In 2014, the Task Force on the Future of Public Health Services called for a set of state and local metrics to track improvements and changes to the public health system. These metrics would be established and monitored by the Public Health Advisory Board.

House Bill 3100 requires the use of incentive payments as a component of the local public health funding formula to encourage the effective and equitable provision of public health services. Through this requirement, LPHAs will be eligible to receive performance-based incentive payments for achieving a set of accountability metrics.

The Public Health Advisory Board IS well underway to establishing a comprehensive set of accountability metrics that will monitor improvements across Oregon's public health system for all foundational capabilities and programs. A subset of these metrics will be selected as performance-based incentive measures for LPHAs. LPHAs will be eligible to receive incentive payments no sooner than the 2019-21 biennium. [3]

The Public Health Advisory Board Accountability Metrics subcommittee

The Public Health Advisory Board formed a subcommittee to develop a set of accountability metrics that will demonstrate progress toward achieving improved health and system outcomes. This Accountability Metrics subcommittee has met monthly since June 2016.

Key activities to date

The PHAB Accountability Metrics subcommittee has completed the following key activities:

- Developed criteria for measure selection
- Reviewed existing state measure sets to identify areas for alignment
- Identified measures for five foundational capabilities and programs

Measure selection criteria

The subcommittee applied the following criteria to proposed measures to determine whether each would be an appropriate measure of a modernized public health system:

Must pass criteria	Additional criteria to be considered
a. Promotes health equity	f. Consumer engagement
b. Respectful of local priorities	g. Relevance
c. Transformative potential	h. Attainability

[3] The Public Health Advisory Board's Incentives and Funding subcommittee has recommended that all monies made available to implement foundational capabilities and programs in the 2017-19 biennium be directed toward base funding for local public health authorities. This will allow LPHAs to develop capacity and make changes to their current operating structure before being eligible to receive incentive payments. Also, this will allow time to set up data collection and reporting systems and collect baseline data.

d. Consistency with state and national quality measures, with room for innovation	i. Accuracy
e. Feasibility of measurement	j. Reasonable accountability
	k. Range/diversity of measures

The subcommittee is developing a recommended measure set that balances the following:

- Process and outcome measures
- Measures that monitor our current, core work and aspirational measures that we will work toward
- Measures that monitor the progress of the entire public health system and measures of LPHAs that will be used to award performance-based incentive payments

The final set of recommended accountability metrics will require all state and local public health authorities to work toward a common set of accountability metrics. LPHAs may select additional metrics that align with local priorities identified in the community health improvement plan.

Next steps for establishing and implementing accountability metrics

The PHAB Accountability Metrics committee will continue to meet in 2017. Key activities to be completed include:

Identify and recommend accountability metrics for all foundational capabilities and programs[4]	Q2 2017
Solicit input through a survey of stakeholders on recommended measures	Q2 2017
Work jointly with the PHAB Incentives and Funding subcommittee to develop a structure for local public health performance-based incentives through the funding formula	Q1 2017
Develop process for collecting and reporting on metrics annually. This includes developing or modifying existing data collection methods	Q2 2017
Collect baseline data on accountability metrics; set statewide benchmark and LPHA improvement targets	Q3 2017
Issue annual accountability report	Q4 2017, and annually thereafter
Review and make changes to measures and targets	Q1 2018, and biennually thereafter

[4] An initial set of accountability metrics for communicable disease, environmental health, emergency preparedness, health equity and public health system change are available and included in the following pages

Recommended accountability metrics for 2017-19	
Communicable disease control	**Increase capacity to respond to epidemiological changes and communicable disease threats** - Documented provision of timely and relevant epidemiological information to community members - Evidence that outbreak summaries have been made available to community members **Demonstrate public health expertise by providing health education resources and technical assistance for vaccine-preventable diseases, health care-associated infections, antibiotic resistance and related issues.** **Increase partner notification for HIV, syphilis and gonorrhea** - Number of sexually transmitted infection (STI) contacts followed by the public health authority in the past 12 months - Number of FTE trained and employed to conduct STI case management including: client interviewing, partner notification and referral, untreated patient referral, education, and consultation for individuals diagnosed with an STI **Convene health care, early learning and other partners to develop state and community strategies to improve childhood and adolescent immunization rates** - Documented state and local plans to improve childhood immunization rates that include ongoing evaluation and reporting
Environmental health	**Demonstrate public health expertise by providing timely, accurate and culturally appropriate technical assistance to partners and the community on environmental health hazards.** - Documented assessments of environmental health hazards and protection recommendations - Documented health analyses prepared for other organizations **Demonstrate public health expertise to address challenges in health resulting from changes to the built and natural environment** - Documentation of reports on projected changes in health resulting from changes to the built or natural environment - Documentation of trained state and local public health staff in health impact assessments **Demonstrate local planning for environmental health and environmentally-related disease**

	- Evidence that state and local community health assessments include data and information on environmental health and environmentally-related diseases - Evidence that state and community health improvement plans include strategies to address environmental health threats and reduce environmentally-related diseases
Emergency preparedness	**Increase state and local capacity to respond during an event** - Evidence of training for all state and local staff that would be called upon to assist during an event - Evidence of current emergency preparedness plans in all state and local jurisdictions that meet established state and federal guidelines **Increase community engagement in emergency preparedness activities** - Evidence of community engagement strategy in emergency preparedness plans - Documented evaluation of community needs and engagement efforts in situational assessments and after-action plans
Health equity	**Reduce health disparities by ensuring that measure sets for all 2017-19 priority areas include a focus on achieving health equity.** **Increase capacity for state and local public health authorities for advancing health equity. This will be measured by:** - Evidence of increased workforce recruitment from communities adversely impacted by health disparities *(NACCHO measure)* - Increased percent of state and local public health authorities with policies for training, engagement and recruitment *(Public Health Modernization Manual)* - Increased percent of state and local public health authorities with health equity fully integrated into strategic plan and SHIP/CHIP *(Public Health Modernization Manual)*
Public health system change	**Increase public health leadership, expertise and involvement in state and local policy that may affect health. This will be measured by:** - Prepared issue briefs and recommendations for policymakers *(NACCHO measure)* - Technical assistance provided to legislative, regulatory or advocacy groups *(NACCHO measure)* - Evidence of Health in all Policies

	Increase the efficiency and effectiveness of the public health system through cross jurisdictional sharing. This will be measured by: - Increased percent of LPHAs with MOUS or contracts with other LPHAs or the Public Health Division for cross jurisdictional sharing **Increase the impact of health interventions by forming cross-sector partnerships and collaborations. This will be measured by:** - Increased percent of state and local public health authorities with MOUs, contracts or shared work plans in place with health care and early learning providers, CCOs and other community partners - Evidence of evaluation of shared projects or initiatives

The Health and Economic Benefits of Public Health Modernization

In 2016 the Public Health Division contracted with Program Design and Evaluation Services to conduct an evaluation of the anticipated outcomes of a modern public health system. This report estimates the cost of health care and poor health outcomes of some of the most common and unhealthful public health conditions: tobacco use, foodborne illness, physical inactivity and unintended pregnancy, as well as the cost of medical care and pool health outcomes due to health disparities.

The *Health and Economic Benefits of Public Health Modernization* report showed the economic burden of population health conditions far exceeds an additional investment to close the gap in foundational public health services associated with those conditions. Investment in evidence-based prevention interventions offers the best opportunity for achieving this benefit.

- Tobacco is Oregon's leading cause of preventable death and costs Oregon $2.5 billion in medical expenditure and lost productivity every year: evidence shows that for every dollar spent on science-based tobacco prevention programs, $4 are saved in medical costs in Oregon.
- Oregon's medical costs related to physical inactivity are estimated at $1.3 billion a year. If physical inactivity is reduced by 1/8 of one percent via proven public health programs, it would offset an investment of $1.6 million in physical activity programs.
- Foodborne illness sickens one in six people a year, and costs Oregon $229 million a year. Lowering the cost of foodborne illness by two percent, a modest improvement, would fully cover the investment in identifying and preventing foodborne illness.
- Oregon's total cost of health care, illness and death from health disparities is estimated at $1.1 billion. Reducing this burden by .4 percent through proven public health practices would offset increased spending

The *Health and Economic Benefits of Public Health Modernization* report is part of a growing body of evidence suggesting that upstream investment in the public health system of community organizations, health care providers, public health departments and the public can promote longer, more productive lives for all people in Oregon. Since Oregon is among the first wave of states to modernize its public health system, we can continue to add to this growing body of knowledge for how funding foundational public health and building a coordinated health system grounded in prevention can lead to improved health and reduced spending.

Key activities for ongoing evaluation

- Conduct ongoing evaluation of public health modernization, including
    - The impact of funding for prevention and other upstream interventions on health outcomes and spending
    - The impact of system change on effectiveness and efficiency of service delivery
    - Changes to public health system capacity for foundational capabilities and programs

Local comprehensive modernization plans

House Bill 3100 (2015) requires all local public health authorities to submit a local modernization plan by 2023 and allows Oregon Health Authority to set a schedule for local plans to be submitted.

These local comprehensive modernization plans will describe the LPHA's strategy for ensuring that the core roles and functions for each foundational program and capability are available for every person residing in the jurisdiction. Because the public health modernization assessments for each LPHA showed unique assets and gaps, each comprehensive modernization plan will be uniquely tailored to address those gaps, building upon existing assets.

Comprehensive modernization plans will describe the structure for how public health services will be provided, which may include cross jurisdictional sharing, developing agreements with health care organizations, and more. These plans will also specify the strategies the LPHA will employ to meet accountability metrics and demonstrate improved health outcomes.

As previously described, Oregon was one of three states to receive a grant through the Robert Wood Johnson Foundation to progress toward modernizing the public health system. The Coalition of Local Health Officials (CLHO) is the grant recipient of Oregon. CLHO is using grant funds to support the following activities for developing comprehensive local modernization plans.

- Hold 10 meetings across Oregon engaging local communities, health and education stakeholders, and local elected officials in moving forward public health modernization
- Develop a step-by-step roadmap for modernizing Oregon's public health system
- Create a set of tools to navigate and overcome barriers to implementing public health modernization
- Develop a comprehensive local modernization plan template

The Public Health Division, under the guidance of the Public Health Advisory Board, will develop criteria for comprehensive modernization plans. The Public Health Division is responsible for reviewing and approving plans, once submitted.

Key activities to develop local comprehensive modernization plans

- Develop a schedule for local public health authorities to submit local comprehensive modernization plans – Q1 2018
- Develop criteria for reviewing and approving local comprehensive modernization plans – Q1 2018

Timeline of implementation activities (this section is still under development)

This section provides a comprehensive list of key activities for all components of public health modernization described previously.

Activity	Responsible agency(ies)	Completed by:
Identify existing financial resources to support the public health modernization implementation plan in the 2017-19 biennium	State and local public health authorities	Q2 2017
Work with the Public Health Advisory Board to scale activities to match financial resources	State and local public health authorities, Public Health Advisory Board	Q2 2017
Identify areas where the modernization framework has been effectively implemented and identify opportunities to expand implementation system-wide	State and local public health authorities	Q2 2017
If funds are available, develop a scope of work and contracting process for local public health authorities that receive funding	State Public Health Division	Q2 2017
Develop a public health system strategy to advancing health equity	State and local public health authorities, Public Health Advisory Board	Q2 2017
Review and update strategies in the State Health Improvement Plan intended to reduce and eliminate health disparities	Public Health Division	Q3 2017
Align and integrate public health system approach with Oregon Health Authority, Office of Equity and Inclusion, regional health equity coalitions and community organizations that represent or serve populations disproportionately impacted by health disparities	State and local public health authorities	Ongoing
Establish accountability metrics to demonstrate that all public health authorities have internal policies for advancing health equity. These policies may include workforce recruitment and development and engaging affected community members in agency decision-making	Public Health Advisory Board	Q2 2017

Conduct statewide and local health equity assessments; use information from these assessments to develop an action plan	State and local public health authorities	Pending available funding
Enhance data collection to ensure granular community-level data are available to drive agency and system decision-making	Public Health Division	Pending available funding
Upon request, assist tribes to complete a public health modernization assessment	Public Health Division	Q2 2017
Facilitate opportunities for local planning designed to increase alignment between tribal and local public health services	State and local public health authorities	ongoing
Hold statewide modernization meetings across the state to discuss opportunities for sharing functions and services across county lines	CLHO and LPHAs	Q4 2016-Q1 2017
Develop or use existing resources to support the adoption of cross jurisdictional sharing agreements	CLHO	Q1 2017-Q1 2018
Develop opportunities to share innovative models or promising new approaches for sharing functions and services	State and local public health authorities	pending
Establish an accountability metric for increased use of formal sharing agreements	Public Health Advisory Board	Q1 2016
Conduct ongoing evaluation of cross jurisdictional sharing	State and local public health authorities	ongoing
Finalize funding formula indicators and data sources	Public Health Advisory Board	Q2 2017
Develop a standardized method and timeline for collecting information on county expenditures for foundational programs and capabilities, including a process for validation,	State and local public health authorities	Q3 2017
Develop funding formula components for state matching funds and performance-based payments.	Public Health Advisory Board	Q2 2017

Develop a template for the local comprehensive modernization plan.	CLHO	Q1 2018
Develop a schedule for local public health authorities to submit local comprehensive modernization plans	Public Health Division	Q1 2018
Develop criteria for reviewing and approving local comprehensive modernization plans	Public Health Division	Q1 2018
Provide learning opportunities for health care partners – including CCOs -, early learning and public health to learn about innovative collaborations or emerging best practices to achieve shared goals	State and local public health authorities	2017
Expand opportunities and incentives for shared community or regional health improvement plans across local public health authorities, CCOs and nonprofit hospitals	State and local public health authorities	ongoing
Establish accountability metrics for formal collaborations between public health authorities, CCOs and early learning	Public Health Advisory Board	Q2 2017
Explore areas where the public health system can align with statewide health priorities outlined in *Oregon's Action Plan for Health*	Public Health Division	Q2 2017
Continue to demonstrate the health and economic value of collaborations between public health, CCOs, early learning and hospitals	State and local public health authorities	Ongoing
Continue to identify opportunities to work across health sectors to implement proven public health strategies to improve health and reduce costs	State and local public health authorities	Ongoing
Build public health's capacity to serve as convener and public health expert within their community in all decision-making that may impact health	State and local public health authorities	ongoing

Identify and recommend accountability metrics for all foundational capabilities and programs	Public Health Advisory Board	Q2 2017
Solicit input on accountability metrics through a survey of stakeholders on recommended measures	Public Health Advisory Board	Q2 2017
Develop process for collecting and reporting on metrics annually. This includes developing or modifying existing data collection methods	State and local public health authorities	Q2 2017
Collect baseline data on accountability metrics; set statewide benchmark and LPHA improvement targets	Public Health Division and Public Health Advisory Board	Q3 2017
Issue annual accountability report	Public Health Division	Q4 2017, and annually thereafter
Review and make changes to measures and targets	Public Health Advisory Board	Q1 2018, and annually thereafter

Monitoring and accountability

Accountability – for ensuring an efficient and effective public health system and for achieving improved health outcomes – is a central tenet of public health modernization. The public health system has in place a number of mechanisms to ensure system-wide accountability.

The Public Health Advisory Board

The Public Health Advisory Board (PHAB) is established by House Bill 3100 (2015), Sections 5-7 as a body that reports to the Oregon Health Policy Board. The purpose of the PHAB is to be the accountable body for governmental public health in Oregon. This includes oversight of public health modernization, development and implementation of accountability measures for state and local health authorities and development of a funding formula that builds an equitable governmental public health system.

PHAB meets monthly and convenes subcommittees as needed.

Accountability metrics

Accountability metrics will function both as an assurance that state and local public health authorities are providing foundational public health services to all people in Oregon, and as an incentive to encourage LPHAs to transform the local public health service delivery model to best provide foundational capabilities and programs to community members.

Data on accountability metrics will be collected and reported on annually.

As with the statewide performance measures established under HB 3650 (2011), a set of accountability metrics will be used to monitor the progress of the entire public health system toward increased efficiencies and improved health outcomes. As with Coordinated care Organizations, a subset of these metrics will be used to monitor progress of each LPHA. Each LPHA will be eligible to receive incentive payments based on achievement of accountability metrics.

The Public Health Division is an active partner with LPHAs to support achievement of incentive measures. In this capacity, Public Health Division will do the following:

- Provide accurate and timely population health data;
- Convene learning opportunities to discuss best practices and innovation that can be spread across local public health jurisdictions;
- Provide technical assistance

CLHO will also actively support LPHAs to achieve incentive measures through convening learning opportunities and providing technical assistance.

Evaluation of implementation

The Public Health Division will explore opportunities for initial and ongoing evaluation of implementation of public health modernization.

State and local public health authorities will update the public health modernization assessment during the 2019-21 biennium. This update will demonstrate changes in the public health system, including whether we have increased capacity and expertise in communities across Oregon, and any changes to the financial resources needed to implement the public health modernization model.

Annual work plans and progress reports

As part of the contracting process with LPHAs to receive public health modernization funding through OHA, each LPHA will submit an annual work plan. Progress reports will also be submitted annually.

Appendix A: Progress to date

Define foundational capability and programs – completed, December 2015
The Public Health Modernization Manual outlines the core functions of the governmental public health system and articulates the separate but mutually-supportive roles for state and local public health authorities.

Establish the Public Health Advisory Board – completed, January 2016
The Public Health Advisory Board has oversight for Oregon's governmental public health system and reports to the Oregon Health Policy Board. The Board has established two subcommittees: the Incentives and Funding Subcommittee, which is charged with informing the development of an equitable funding formula for local public health authorities; and the Accountability Metrics Subcommittee, which is leading the development of quality measures to track the progress of state and local public health authorities in meeting population health goals over time.

Conduct statewide public health modernization assessment – completed, April 2016
Each state and local public health authority completed a comprehensive public health modernization assessment between January and April 2016.

Publish the Public Health Modernization Assessment Report – completed, June 2016
The findings from each state and local public health authority's modernization assessment was compiled into a summary report. The findings from this assessment were used to identify the timing and sequence of work over future biennia to fully modernize Oregon's governmental public health system.

Develop public health modernization funding formula – initial draft completed, December 2016
The Public Health Advisory Board developed the initial funding formula for the distribution of funds to local public health authorities as outlined in House Bill 3100, Section 28. Based on available funds, the formula may be updated in July 2017.

Expanded statewide public health modernization plan – completed, December 2016
The statewide public health modernization plan is included in this document.

Establish metrics to ensure accountability and improved health outcomes - measure selection to be completed in July 2017
The Public Health Advisory Board has developed an initial list of accountability metrics for state and local public health authorities, as well as measure selection criteria. Accountability measures will be finalized by March 2017.

Conduct Tribal Consultations in order to identify their interest in engaging in Public Health Modernization - ongoing: The Oregon Health Authority is conducting tribal consultations with Oregon tribes interested in pursuing opportunities for public health modernization.[5]

[5] Tribes, as sovereign nations, define their own service populations and are not obligated by state statute to provide public health services. Historically, tribes have not been funded for public health. Under HB 3100, the

public health system (state and local government) is required to meet certain standards of capacity and expertise related to the public health foundational capabilities and programs. Given tribal sovereignty, the state is not and cannot mandate tribes to act. Thus, the public health modernization requirements outlined in HB 3100 apply only to the state and county public health system. Tribes are not required to complete the modernization assessment and are not required to demonstrate sufficient capacity on the public health foundational capabilities and programs. However, tribes are committed to promoting and protecting the health and well-being of members and all people residing within their self-defined service populations. Therefore, as local public health authorities begin to develop their plans to build capacity and expertise to fulfill the requirements of Modernization, it may be helpful for local public health authorities, in collaboration with OHA, to participate in consultation with tribes regarding any potential impact upon tribes and to gauge tribes' interest in engaging in capacity building related to modernization of their individual public health efforts and determine what assistance can be provided. In order to initiate a potential tribal consultation process related to public health modernization, OHA participated in the SB770 Tribal Consultation meeting on June 20, 2016. During this meeting, a brief presentation and discussion of public health modernization was presented to tribes, opportunities for questions and answered were provided and a process outlined for initiating consultation with interested tribes.

Appendix B: Scaling up public health modernization over the next three biennia (this section may be deleted)		
Biennium	**Foundational capabilities and programs**	**Key actions**
2017-2019	• Communicable disease control • Environmental health • Emergency preparedness • Health equity and cultural responsiveness • Assessment and epidemiology • Leadership and organizational competencies	• Develop initial public health modernization plans, addressing the priorities listed to the left. • Ensure sufficient funding to support priorities. • Identify effective and efficient public health governance structures. • Finalize accountability measures for state and local public health authorities. • Distribute available funding to local public health authorities using the funding formula required in House Bill 3100. • Report on baseline accountability metrics. • Collect and report on year one accountability metrics.
2019-2021	• Prevention and health promotion • Communications • Community partnership development • *Continue and expand on work on the foundational capabilities and programs implemented in 2017-2019*	• Utilize established criteria to identify additional priority areas for 2019-2021. • Ensure funding is available to support additional priorities. • Identify effective and efficient public health governance structures. • Collect and report on year two and year three accountability metrics. • Update the public health modernization assessment.
2021-2023	• Access to clinical preventive services • Policy and planning • *Continue and expand on work on the foundational capabilities and programs implemented in 2017-2021*	• Utilize established criteria to identify additional priority areas for 2021-23. • Ensure sufficient funding to support additional priorities. • Collect and report on year four and year five accountability metrics. • Ensure all local public health authorities have submitted a local modernization plan.
2023 and beyond	• *Continue the foundational capabilities and programs implemented in 2017-2023*	• Collect and report on accountability metrics.

		• Update the public health modernization assessment.

Appendix C: Rationale for system approach to implementing foundational capabilities and programs

HB 3100 described waves of implementation across local public health authorities, whereby an initial group of LPHAs would adopt the complete modernization framework in the 2017-19 biennia, additional LPHAs would adopt the framework in 2019-21, and all LPHAs would move toward the modernization framework by 2023 (with the submission of comprehensive modernization plans). This implementation plan was recommended by the Future of Public Health Services Task Force and is based on the idea that modernization could begin as a pilot that would expand across the system over subsequent biennia.

The public health modernization assessment showed risks of following this implementation model due to:

- Risk of creating a two-tiered system as some LPHAs provide service and receive funding under the modernization model while most continue to provide services and receive funding under the existing model
- Potential to further increase health inequities, where individuals living in a "modernized" area of the state would receive a higher level of service than those living in other areas of the state.

The assessment did indicate there could be challenges to implementing by foundational capability or program across the entire state because currently gaps in capacity vary across LPHAs, and gaps exist in different areas for each LPHA. This challenge will be addressed by building a system that requires system-wide focus on a set of foundational capabilities and programs but allows for local flexibility to determine the best way to meet the unique needs of the local community. We will "rise all boats" while narrowing the largest implementation gaps that exist today.

An implementation strategy focused on a rolling out a prioritize set of functional capabilities and programs is critical for other reasons. Focusing resources on a handful of counties will reduce opportunities for innovation across county lines, but spreading resources across the system will drive all areas of the public health system toward innovation. Also, many of the health issues we face in public health – like disease outbreaks or natural disasters - cross county lines. Counties need to be equally equipped to address these issues. Finally, the public health system is poised to move forward in unison. Conversations about how we could do our work differently have already begun, and changes are being made. We need to encourage and sustain these conversations rather than build a system where most counties will need to wait years to receive resources to do this work.

Appendix D: Local public health funding formula model

Local public health funding formula model: This model includes a base/floor payment for each county. Awards for each indicator (burden of disease, health status, race/ethnicity, poverty, income inequality, education and limited English proficiency) are tied to each county's ranking on the indicator and the county population. This funding formula example assumes a $10 million investment. This is an example only.

County Group	Population[1]	Floor	County Population	Burden of Disease[2]	Health Status[3]	Race/Ethnicity[1]	Poverty[4]	Income Inequality[4]	Education[4]	Limited English Proficiency[4]	Matching Funds[5]	Incentives[6]	Total Award	Award Percentage	% of Total Population	Award Per Capita	Avg Award Per Capita	Avg Award/Popl	
County 33	1,445	$ 30,000	$ -	$ 568	$ -	$ 171	$ 214	$ 199	$ 198	$ 67	$ -	$ -	$ 31,418	0.3%	0.0%	$ 21.74			county size bands
County 31	7,100	$ 30,000	$ -	$ 3,353	$ 1,067	$ 592	$ 798	$ 906	$ 630	$ 235	$ -	$ -	$ 37,581	0.4%	0.2%	$ 5.29			extra small
County 12	7,295	$ 30,000	$ -	$ 4,652	$ 4,422	$ 1,078	$ 1,248	$ 933	$ 1,157	$ 270	$ -	$ -	$ 43,759	0.4%	0.2%	$ 6.00			small
County 11	7,430	$ 30,000	$ -	$ 2,787	$ 1,657	$ 806	$ 929	$ 986	$ 1,154	$ 286	$ -	$ -	$ 38,605	0.4%	0.2%	$ 5.20			medium
County 18	8,010	$ 30,000	$ -	$ 3,992	$ 2,039	$ 1,993	$ 1,155	$ 1,117	$ 1,493	$ 1,033	$ -	$ -	$ 42,823	0.4%	0.2%	$ 5.35			large
County 24	11,630	$ 30,000	$ -	$ 4,539	$ 7,642	$ 12,890	$ 1,819	$ 1,408	$ 3,535	$ 10,291	$ -	$ -	$ 72,124	0.7%	0.3%	$ 6.20			extra large
County 1	16,425	$ 30,000	$ -	$ 8,673	$ 6,412	$ 2,007	$ 2,439	$ 2,270	$ 2,155	$ 1,038	$ -	$ -	$ 54,993	0.5%	0.4%	$ 3.35	$ 7.59	$ 5.42	
County 7	21,085	$ 45,000	$ -	$ 9,707	$ 7,873	$ 5,124	$ 3,552	$ 2,679	$ 4,129	$ 2,713	$ -	$ -	$ 80,776	0.8%	0.5%	$ 3.83			
County 15	22,445	$ 45,000	$ -	$ 13,862	$ 11,266	$ 14,596	$ 3,792	$ 2,871	$ 4,513	$ 9,583	$ -	$ -	$ 105,483	1.1%	0.6%	$ 4.70			
County 8	22,470	$ 45,000	$ -	$ 15,280	$ 13,784	$ 4,519	$ 2,798	$ 2,838	$ 2,657	$ 1,551	$ -	$ -	$ 88,428	0.9%	0.6%	$ 3.94			
County 13	24,245	$ 45,000	$ -	$ 7,658	$ 8,465	$ 24,510	$ 3,077	$ 2,996	$ 5,536	$ 27,291	$ -	$ -	$ 124,533	1.2%	0.6%	$ 5.14			
County 28	25,690	$ 45,000	$ -	$ 12,659	$ 11,337	$ 8,275	$ 3,670	$ 3,241	$ 3,464	$ 5,651	$ -	$ -	$ 93,296	0.9%	0.6%	$ 3.63			
County 30	26,625	$ 45,000	$ -	$ 11,545	$ 10,781	$ 3,760	$ 4,057	$ 3,751	$ 3,135	$ 3,931	$ -	$ -	$ 85,960	0.9%	0.7%	$ 3.23			
County 26	30,135	$ 105,000	$ -	$ 15,489	$ 16,075	$ 14,911	$ 4,009	$ 3,859	$ 5,398	$ 14,857	$ -	$ -	$ 179,597	1.8%	0.8%	$ 5.96			
County 22	31,480	$ 45,000	$ -	$ 13,844	$ 20,228	$ 34,104	$ 7,241	$ 4,378	$ 8,036	$ 21,200	$ -	$ -	$ 154,030	1.5%	0.8%	$ 4.89			
County 4	37,750	$ 45,000	$ -	$ 20,438	$ 15,927	$ 9,976	$ 4,824	$ 4,937	$ 4,418	$ 7,412	$ -	$ -	$ 112,932	1.1%	0.9%	$ 2.99			
County 20	47,225	$ 45,000	$ -	$ 28,909	$ 21,871	$ 13,019	$ 6,547	$ 6,173	$ 7,036	$ 9,491	$ -	$ -	$ 138,047	1.4%	1.2%	$ 2.92			
County 5	50,390	$ 45,000	$ -	$ 23,353	$ 25,658	$ 7,405	$ 5,368	$ 6,423	$ 6,705	$ 3,682	$ -	$ -	$ 123,595	1.2%	1.3%	$ 2.45			
County 6	62,990	$ 45,000	$ -	$ 38,344	$ 27,492	$ 12,038	$ 9,188	$ 8,872	$ 9,210	$ 5,416	$ -	$ -	$ 155,559	1.6%	1.6%	$ 2.47			
County 17	67,110	$ 45,000	$ -	$ 39,167	$ 38,077	$ 25,122	$ 10,108	$ 8,840	$ 10,868	$ 15,280	$ -	$ -	$ 192,462	1.9%	1.7%	$ 2.87	$ 3.77	$ 3.48	
County 27	78,570	$ 60,000	$ -	$ 28,270	$ 29,148	$ 33,073	$ 10,845	$ 9,964	$ 9,603	$ 22,998	$ -	$ -	$ 203,903	2.0%	2.0%	$ 2.60			
County 29	79,155	$ 60,000	$ -	$ 35,353	$ 42,033	$ 65,744	$ 10,956	$ 9,981	$ 16,943	$ 41,455	$ -	$ -	$ 282,464	2.8%	2.0%	$ 3.57			
County 16	83,720	$ 60,000	$ -	$ 48,681	$ 35,322	$ 18,691	$ 13,348	$ 12,026	$ 12,186	$ 6,366	$ -	$ -	$ 206,620	2.1%	2.1%	$ 2.47			
County 2	90,005	$ 60,000	$ -	$ 24,940	$ 32,736	$ 20,226	$ 16,526	$ 13,182	$ 6,259	$ 19,428	$ -	$ -	$ 193,296	1.9%	2.2%	$ 2.15			
County 34	103,630	$ 60,000	$ -	$ 38,754	$ 36,686	$ 52,654	$ 14,027	$ 13,183	$ 17,664	$ 44,178	$ -	$ -	$ 277,145	2.8%	2.6%	$ 2.67			
County 10	109,910	$ 60,000	$ -	$ 63,924	$ 64,760	$ 18,241	$ 17,519	$ 14,049	$ 16,768	$ 7,203	$ -	$ -	$ 262,463	2.6%	2.7%	$ 2.39			
County 21	120,860	$ 60,000	$ -	$ 53,922	$ 54,801	$ 32,735	$ 19,087	$ 14,860	$ 16,223	$ 19,677	$ -	$ -	$ 271,306	2.7%	3.0%	$ 2.24	$ 2.58	$ 2.55	
County 9	170,740	$ 75,000	$ -	$ 61,851	$ 40,572	$ 43,408	$ 20,770	$ 23,990	$ 15,616	$ 29,362	$ -	$ -	$ 310,569	3.1%	4.3%	$ 1.82			
County 14	210,975	$ 75,000	$ -	$ 96,357	$ 96,173	$ 80,527	$ 30,421	$ 28,751	$ 30,375	$ 50,295	$ -	$ -	$ 487,898	4.9%	5.3%	$ 2.31			
County 23	329,770	$ 75,000	$ -	$ 132,122	$ 170,316	$ 275,697	$ 50,951	$ 42,639	$ 69,632	$ 238,020	$ -	$ -	$ 1,054,378	10.5%	8.2%	$ 3.20			
County 19	362,150	$ 75,000	$ -	$ 153,750	$ 144,889	$ 95,062	$ 59,765	$ 51,060	$ 41,532	$ 71,544	$ -	$ -	$ 692,602	6.9%	9.0%	$ 1.91	$ 2.31	$ 2.37	
County 3	397,385	$ 90,000	$ -	$ 137,903	$ 139,715	$ 106,736	$ 31,389	$ 52,954	$ 36,593	$ 116,185	$ -	$ -	$ 711,474	7.1%	9.9%	$ 1.79			
County 32	570,510	$ 90,000	$ -	$ 161,260	$ 182,600	$ 305,107	$ 54,658	$ 73,784	$ 69,197	$ 357,130	$ -	$ -	$ 1,293,735	12.9%	14.2%	$ 2.27			
County 25	777,490	$ 90,000	$ -	$ 315,095	$ 309,174	$ 286,202	$ 116,573	$ 113,565	$ 99,652	$ 465,885	$ -	$ -	$ 1,796,146	18.0%	19.4%	$ 2.31	$ 2.12	$ 2.18	
Total	**4,013,845**	**$ 1,845,000**	**$ -**	**$ 1,631,000**	**$ 1,631,000**	**$ 1,631,000**	**$ 543,667**	**$ 543,667**	**$ 543,667**	**$ 1,631,000**	**$ -**	**$ -**	**$ 10,000,000**	**100.0%**	**100.0%**	**$ 2.49**			

[1] Source: Portland State University Certified Population estimate July 1, 2015

[2] Source: Oregon State Health Profile. Premature death, 2010-14. Oregon death certificate data.

[3] Source: Oregon State Health Profile. Good or excellent health, 2010-2013. BRFSS

[4] Source: American Community Survey population 5-year estimate, 2012

[5] Limitations exist for calculating current county contributions for public health. An updated process will be developed to address these limitations. Matching funds will be awarded based on actual, not projected expenditures, and will be limited to county contributions that supoprt public health modernization. Given the change in process, matching funds will not be awarded until 2019.

[6] The Accountability Metrics subcommittee will define a set of accountability metrics. Following selection of accountability metrics, baseline data will be collected. Funds will not be awarded for achievement of accountability metrics until 2019.