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Public Health Modernization

Capacity and Cost Assessment Report

Prepared by Rede Group

Acknowledgments

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Rede Group acknowledges the pivotal role and guidance of the Local Public Health Authority (LPHA) Capacity and Cost Assessment (CCA) Technical Workgroup. Composed of LPHA and Coalition of Local Health Officials (CLHO) representatives, the Workgroup informed the CCA process, made decisions on how the CCA would be completed, and informed other LPHA administrators about completing the Assessment tool. Rede Group and OHA want to thank this Workgroup for their efforts and contributions.

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Acknowledgments

Everyone has a right to know about and use OHA programs and services.

OHA provides free help, and some examples of this help include:

- Sign language and spoken language interpreters
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- Braille
- Large print
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Terminology

Acronyms

Acronym	Definition
CBO	Community-Based Organization
CCA	Capacity and Cost Assessment
CCO	Coordinated Care Organization
CLHO	Oregon Coalition of Local Health Officials
FC	Foundational Capabilities
FP	Foundational Programs
FY	Fiscal Year
LPHA	Local Public Health Authority
OHA	Oregon Health Authority
OHA-PHD	Oregon Health Authority - Public Health Division
ORS	Oregon Revised Statute
PHAB	National Public Health Accreditation Board

Executive Summary

Capacity and Cost Assessment (CCA) Process Overview

The 2024 Public Health Modernization Capacity and Cost Assessment (CCA) Report explores Oregon's progress in modernizing its public health system. Public health modernization ensures a minimum package of governmental public health programs and workforce capabilities are present in every community that support communicable disease control, environmental health, prevention and health promotion, and access to clinical preventive services. Public health modernization also aims to ensure equitable health outcomes for all 4.2 million people living in Oregon. Oregon first completed a Capacity and Cost Assessment in 2016. Based on this assessment and limited initial funding for modernization at the time, Oregon's Public Health Advisory Board developed a phased approach to modernization that prioritized investment in the communicable disease control and environmental health programs.

Building on the 2016 assessment, the 2024 assessment data were collected using a standardized Excel tool, modified to align with Oregon public health modernization. The assessment examined the capacity and funding of Oregon's public health infrastructure, focusing on fiscal year 2023 (FY23). Data collected and analyzed also included estimates of the additional investments needed for full and comprehensive implementation of Oregon's public health modernization framework. This framework is established and guided by statutory requirements outlined in Oregon Revised Statute (ORS) 431.131[1] and ORS 431.141,[2] which define the foundational capabilities and programs necessary for a modern public health system in Oregon. This report includes data from 30 of Oregon's 33 LPHAs, covering 94% of the state's population, as well as from the Oregon Health Authority-Public Health Division (OHA-PHD).

Key Findings

Implementation

- Among foundational programs, communicable disease control was reported to have the highest level of implementation, and prevention and health promotion had the lowest. This likely reflects the prioritization of communicable disease control and environmental health for the first phase of modernization funding, and the increased focus on access to clinical preventive services during the COVID-19 pandemic response.
- Among foundational capabilities, communication was reported to have the highest level of implementation, and policy and planning had the lowest.
- Health equity and cultural responsiveness had the second lowest level of implementation of foundational capabilities. Although the governmental public health system has invested heavily in the health equity and cultural responsiveness capability, the low implementation level may reflect a more

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[1]*ORS 431.131 – Foundational capabilities,* OregonLaws. Retrieved February 26, 2025.
[2]*ORS 431.141 – Foundational programs*. OregonLaws. Retrieved February 26, 2025.

nuanced understanding of what is required to advance health equity and partner with community organizations and members to address unfair barriers to health and well-being, compared to when the first assessment was completed in 2016.

● While LPHAs and OHA-PHD provide many aspects of foundational programs and capabilities, no foundational capability or program is significantly implemented across all LPHAs and OHA-PHD. All LPHAs and OHA-PHD reported minimal or limited implementation in at least one foundational capability or program that can be considered for targeted investments of future funding.

FY23 Implementation level overview by size band
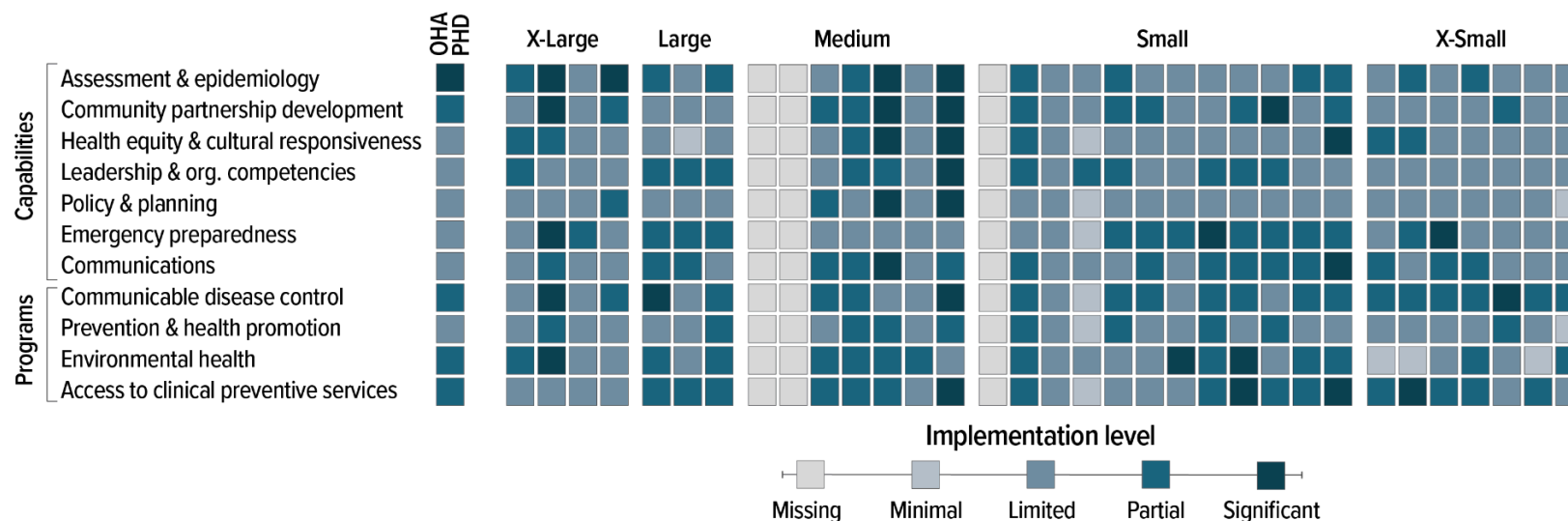
Cost

- Oregon's governmental public health system spends an estimated $602 million annually on foundational public health capabilities and programs. The estimated gap in funding needed to fully implement the foundational capabilities and programs is $262 million annually. Oregon's public health system spends an estimated $234 million annually on additional important programs (i.e., programs that are unique to individual community needs). The estimated gap to fully implement additional important programs is $43 million annually.

- The COVID-19 pandemic created a severe disruption in governmental public health, and the effects of the pandemic were seen in this assessment; one foundational program—communicable disease control—and two foundational capabilities—assessment and epidemiology, and emergency preparedness and response—received significant additional federal funds in the study year 2023 and the impact of those extra funds influenced the data in this report. It is possible that if these funds had not been present, the gap in needed funding for these areas would have been greater.

Estimated annual foundational public health and additional important programs spending, gap, and total implementation*
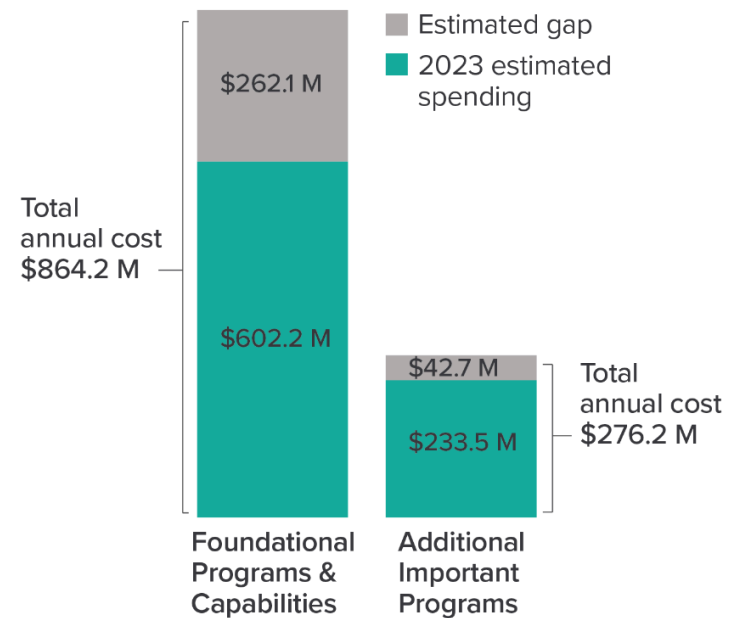
Estimates include specified COVID-19 adjustments (see detailed explanations in Appendix A)

- The findings in this report, including funding needed to fully implement Oregon's public health modernization framework, are rooted in Oregon's existing decentralized service delivery model. This model emphasizes the government's primary role in public health services and values jurisdictional autonomy. Different public health delivery models (i.e., centralized or regional) or a greater emphasis on cross-sector partnerships can alter the estimate of resources needed.

Sharing

- LPHAs and OHA-PHD work through strategic partnerships with other governmental and private sector organizations. The assessment collected information from LPHAs about services provided through partnerships or "shared services." The level of sharing work with partners and other agencies varied based on the foundational capability or program, with wider variability in foundational capabilities. Not surprisingly, LPHAs were less likely to report sharing responsibilities for the foundational capabilities of leadership and organizational competencies, community partnership development, and policy and planning, and were more likely to report sharing for assessment and epidemiology, emergency preparedness and response, and communications. The four foundational programs were all reported to have a nearly equal balance of sharing and not sharing, with environmental health seeing the most sharing.

Assessment Process

- This voluntary assessment was completed by 91% of Oregon's LPHAs and OHA-PHD. The assessment process required LPHAs and OHA-PHD to provide detailed information about spending, future cost estimates, and current workforce practice. Although this is the second time Oregon has completed a public health modernization assessment, the vast majority of individual staff who completed the assessment did not participate in the 2016 assessment.

- This process surfaced systemwide tension or confusion about where direct health and social services fit in the public health modernization framework. Despite some LPHA and OHA-PHD staff viewing the services as core to their public health responsibilities, these services were counted in the assessment as additional important programs that fell outside of foundational capabilities (ORS 431.131) and foundational programs (ORS 431.141) as they are outlined in Oregon statutes and the Oregon Public Health Modernization Manual.[3]

Recommendations

1. **Increase Public Health Resources for Foundational Capabilities and Programs.** Every person in Oregon must have access to these critical public health services, regardless of where they live. This mandate, grounded in Oregon Statute,[4] must remain a critical focus moving forward into the next decade.
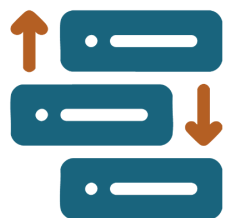
2. **Leverage Data to Guide Public Health Improvement Efforts.** Use the data in this report to prioritize foundational capabilities and programs for focused improvement:
   a. Oregon's Public Health Advisory Board should use these results for future planning and priority setting.
   b. LPHAs should use these results to develop their local public health modernization plans that are a statutorily required[5] deliverable to OHA-PHD by the end of 2025.

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[3] Oregon Health Authority. (2017). *Public Health Modernization Manual.*
[4] Oregon Revised Statute 431.131 and 431.141
[5] *Oregon Revised Statute 431.413(C)*

c. OHA-PHD should use these findings to drive organizational changes that recognize and enhance the interconnections between foundational capabilities and programs. This will ensure foundational capabilities are implemented in a way that sustains the effectiveness of significantly implemented programs, while also strengthening those with lower implementation, such as prevention and health promotion initiatives.

3. **Enhance Expertise and Capacity for Effective Public Health Implementation.** Recognize the need to expand both expertise (knowledge, skills, education, and experience) and capacity (staff and other resources, materials, and supplies to implement the role, capability, or program). Expertise and capacity were rated consistently, either high or low, meaning that both need to be improved for changes in implementation to occur. Improving expertise will take time, and funding alone will not be sufficient to improve implementation.

4. **Foster Collaborative Responsibility for Public Health Success.** Consider ways that these data can explain and support improvement in sharing responsibility among LPHAs, OHA-PHD, and other public and private health and social services organizations. Collaboration and sharing responsibilities are essential to the success of public health modernization, and this report can help planners tune into areas for further exploration.

Capacity and Cost Assessment

Purpose & Background

Public Health Modernization

A strong public health system is critical for all 4.2 million[6] people in Oregon to achieve optimal health and well-being. Since 2013, Oregon has been modernizing its governmental public health system to ensure public health works for everyone. Public health modernization ensures core governmental functions for improving population health within the four foundational program areas of communicable disease control, environmental health, prevention and health promotion, and access to clinical preventive services.

In 2024, Oregon conducted its second public health modernization assessment to better understand its current spending and capacity towards public health modernization and determine the needed investments to fully implement Oregon's statutorily outlined foundational capabilities (ORS 431.131) and programs (ORS 431.141).

This report summarizes the process, methods, and results of the 2024 public health modernization assessment.

Purpose

This report is intended to support public health to:
- Identify capacity and resource gaps and estimate the cost for assuring foundational capabilities and programs are available in every jurisdiction/community.
- Inform priorities for the next steps in public health modernization.

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[6] U.S. Census Bureau. (n.d.). *U.S. Census Bureau quickfacts: Oregon*. Retrieved February 26, 2025.

- Evaluate whether or not the current distribution of public health funding within the public health system is optimal for delivering foundational capabilities and programs and, if not, consider options to shift resources within the public health system to address unmet needs related to low implementation levels.
- Identify opportunities to share resources and/or services across agencies to create efficiencies.
- Educate on needed resources to fully implement foundational capabilities and programs.

Background

Oregon's Public Health System

Oregon's governmental public health system consists of OHA-PHD, 33 LPHAs (Figure 2), and nine Federally-Recognized Tribes. Roles for OHA-PHD and LPHAs are outlined in the Oregon Public Health Modernization Manual. See [Appendix B](#).

Community-based organizations (CBO) also receive modernization funding through a competitive grant opportunity administered by OHA-PHD to support culturally-specific public health services in communities (Figure 1).

Figure 1. Public health partners receiving modernization funding

This assessment and report only covers the OHA-PHD and LPHAs and thus does not present a full picture of the current capacity and future needs of the entire public health system. Estimates for funding CBOs

are included in the OHA-PHD estimate of needed resources, but the estimate does not include funding for Tribes. OHA-PHD will continue to work with Tribes through a formal process each biennium to determine their allocation of public health modernization investments.

Figure 2. 33 Local Public Health Authorities in Oregon

There are 33 LPHAs in Oregon currently. North Central Public Health District includes Wasco and Sherman County. OHA-PHD ensures delivery of basic public health services in two Oregon Counties (Curry and Wallowa).
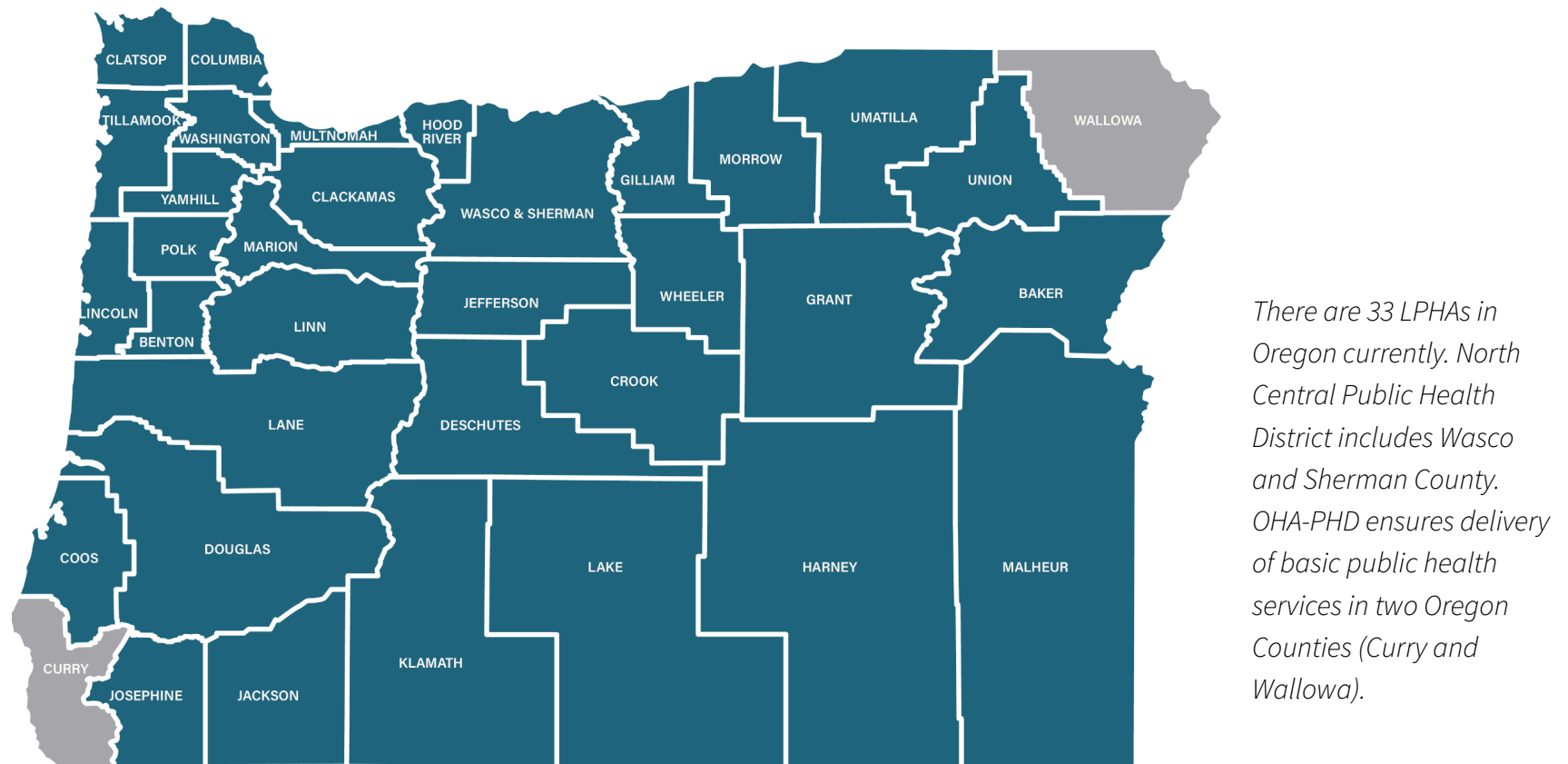
Overview of Public Health Modernization

Established by the Oregon State Legislature in 2015, Oregon's public health modernization framework aims to create a public health system that provides essential capabilities and programs to everyone in Oregon regardless of where they live. This includes foundational programs, which focus on key areas like disease prevention, health promotion, and environmental health, and foundational capabilities, which encompass the core skills and resources that make up the infrastructure for high-quality public health agencies. Additionally, the framework allows for community-specific programming tailored to local needs, called 'additional important programs'. In Oregon, the public health modernization framework comprises seven foundational capabilities and four foundational programs, as illustrated in Figure 3.

Public health modernization enhances equity, improves health outcomes, and strengthens public health infrastructure throughout Oregon, ensuring that every community has access to vital public health resources. This effort prioritizes collaboration, data-driven decision-making, and responsiveness to emerging health challenges.

Figure 3. Modernized framework for governmental public health services

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

3 Additional important programs

2 Foundational programs

1 Foundational capabilities

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

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

Public Health Modernization

Foundational programs and capabilities are present at every health department.

Assessment Design

Public Health Modernization Capacity and Cost Assessments

This assessment represents another critical step in Oregon's public health modernization journey. Oregon published its first Public Health Modernization Assessment Report in 2016. Like the 2024 assessment, the 2016 public health modernization assessment gathered detailed information about all foundational capabilities and programs from Oregon's public health agencies. Since 2016, many other states have conducted similar assessments. In March of 2023, the National Public Health Accreditation Board (PHAB) published a Foundational Public Health Services Capacity and Cost Assessment tool for use by local public health agencies.

The PHAB Center for Innovation, in collaboration with the University of Minnesota Center for Public Health Systems, developed the Foundational Public Health Services Capacity and Cost Assessment tool to support health departments and public health systems in understanding their capacity and resources (existing and needed).[7] Rede worked with the LPHA CCA Technical Work Group and OHA-PHD to adapt PHAB's tool to closely align with Oregon's Public Health Modernization Manual. Oregon's assessment tool consisted of an Excel workbook with detailed questions about four categories: 1) current spending, 2) cross-jurisdictional sharing, 3) current capacity for and expertise in each foundational capability and program role, and 4) estimated needed resources to fully implement each foundational capability and program. See Appendix C for more information.

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[7] Public Health Accreditation Board. (2023, July). *Foundational public health services capacity and cost assessment*.

Data Collection

LPHA

Rede administered the LPHA CCA tool in May 2024 and collected assessment data until September 2024. LPHAs utilized detailed internal financial and staffing information to input data about current spending (based on FY23) and estimates for full implementation spending. This includes delineating each staff position, salary, and benefits and inputting information about all direct contracts, other operating expenditures, pass-throughs and transfers, and capital expenditures. LPHAs allocated spending (including spending on Full-time Equivalent) across the foundational capabilities and programs, and additional important programs. Additionally, the CCA tool required LPHAs to self-assess their expertise and capacity for all foundational capabilities and programs as outlined in the Public Health Modernization Manual. Lastly, LPHAs provided categorical information about shared service arrangements for each foundational capability, program, and role.

OHA-PHD

Rede administered the OHA-PHD assessment in two phases. Phase one (May - July 2024) included 2023 spending estimates (drawn from financial records) and capacity and expertise self-assessment data. In phase two (August - September 2024), OHA-PHD created estimates for resources needed to fully implement the state health department roles in Oregon's public health modernization framework. To manage data input across such a large agency, assessments were administered simultaneously to four existing functional units within OHA-PHD—the Office of the State Health Director, the Center for Prevention and Health Promotion, the Center for Health Protection, and the Center for Public Health Practice. These sub-units also created spending estimates for foundational capabilities and programs. OHA-PHD created cross-programmatic teams to self-assess OHA-PHD's expertise (i.e., knowledge, skills, education, and experience) and capacity

(i.e., staff and/or other resources, materials, and supplies) for each program and capability. These cross-program interdisciplinary teams also developed cost estimates for fully implementing foundational capabilities.

Note: Appendix D details training and technical assistance provided to LPHAs and OHA-PHD for completing the assessment.

Cross-Cutting Capabilities

Differentiating between foundational capabilities and programs was necessary for creating unduplicated cost estimates. In this assessment, foundational capabilities that happen as a part of a foundational program were counted in that program, *not* in the foundational capability category. For example, assessment and epidemiology work (a foundational capability) related to commercial tobacco prevention would be allocated to the foundational program of prevention and health promotion. While this categorization supports reliable data collection consistent with the national standard, this method can produce data that, at first glance, underrepresent effort and need for foundational capabilities. Since foundational capabilities are cross-cutting and are part of developing the infrastructure necessary for the programs, it is important to understand that the categorical information, reported under the foundational capability, is not whole.

Calculating Implementation Levels

In this report, "implementation level" is a combined expertise and capacity variable describing the degree to which foundational capabilities and programs were implemented or provided in a jurisdiction in the study year of 2023. LPHAs and OHA-PHD self-assessed their expertise and capacity for each foundational capability and program role using the rating scale below (Figure 4). Implementation levels were calculated by adding expertise and capacity scores.

Figure 4. Expertise and capacity rating scale

Expertise		Capacity
(knowledge, skills, education, and experience related to the role, capability, or program)		*(staff and/or other resources, materials, and supplies to implement the role, capability, or program)*
Absent: No or basic awareness of the expertise, but limited ability to apply it.	1	**Absent:** Staff time and other resources are not present or are largely unavailable.
Basic: Knowledge of the expertise and can apply it at a basic level.	2	**Minimal:** some staff time and/or other resources are present to complete basic functions.
Proficient: Expertise is available and can be applied adeptly.	3	**Moderate:** Most staff time and other resources are present to partially implement most functions.
Expert: Expertise is routinely applied and those with the expertise can build it within others.	4	**Full:** Sufficient staff time and other resources are present to fully implement all functions.

Comparison to 2016 Data

The assessment design does not support comparisons to previous public health modernization reports. As noted previously (see page 20), this is the second time that Oregon's LPHAs and OHA-PHD completed an assessment of current capacity and cost needs to modernize Oregon's governmental public health system. While the assessment tools used for both assessments were very similar, they were not the same, making comparisons between 2016 and 2024 invalid. Critically, the rating scale used for self-assessment of expertise and capacity in the 2024 assessment tool differs from the rating scale in the 2016 assessment. Moreover, the passage of time and the occurrence of specific societal events between 2016 and 2024 may have resulted in a more nuanced understanding of what is required to advance health equity and partner with community organizations and members to address unfair barriers to health and well-being. This

must be considered when comparing the findings, as public health and social factors have changed significantly since 2016, specifically:

1. The global COVID-19 pandemic and ensuing public health response may have reshaped the public health system's understanding of its ability to provide foundational capabilities and programs. A public health emergency on the scale of COVID-19 was, at best, a theoretical construct in 2016. Experience with the pandemic response and recovery may have shifted responses to expertise and capacity questions in the assessment. What might have been seen as "Expert" and "Full" in 2016 may not have been rated the same in 2024 based on experiencing frontline work in a global pandemic.

2. Between 2020 and 2021, the United States experienced a "public reckoning with its history of racial injustice."[8] While Oregon's public health system focused on improving its ability to deliver equitable, culturally responsive services for *many* years before 2020,[9] shifts in social context brought about by the events of 2020 may have affected self-assessment scores for foundational capabilities and programs, especially related to health equity and cultural responsiveness and community partnership development. For these reasons, direct comparisons to the 2016 data are not recommended and not included in this report.

Note: Appendix E details steps to validate data, including mechanisms embedded in the CCA tool and Rede's process to validate data submitted by LPHAs and OHA-PHD.

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[8] Quarcoo, A., & Husakovic, M. (2021). *Racial reckoning in the United States: Expanding and innovating on the global transitional justice experience*. Carnegie Endowment for International Peace.
[9] Oregon Health Authority. (2017). *Public Health Modernization Manual.*

Limitations

Self-Reported Data

The data in this report are self-reported, which can be influenced by various factors, such as time, context, emotions, motivation, and social norms. In addition, answering these questions required applied knowledge of complex public health concepts, including a basic understanding of Oregon's public health modernization framework. Inevitably, participants' knowledge varied, which may have affected the data quality and results.

COVID-19

The assessment design includes closely examining the most recently closed fiscal year (FY) to understand spending patterns. However, because 2023 was a pandemic/pandemic recovery year, the amount of money spent at LPHAs and OHA-PHD may have been inflated due to unprecedented federal spending for pandemic response and recovery. OHA-PHD adjusted expenditure estimates for COVID-19 spending, and LPHAs accounted for COVID-19 staff in the study year. While efforts were made to remove COVID-19-related spending from cost estimates, it may not have been fully excluded. Additionally, the increased capacity provided by COVID-19 funding may have influenced staff self-assessments of current implementation levels. This is particularly relevant when evaluating spending, implementation levels, and resource gaps in communicable disease control, assessment and epidemiology, and emergency preparedness and response. It is possible that if these funds had not been present, the gap in needed funding for these areas would have been greater. These one-time resources and related capacity across certain foundational programs and capabilities will eventually leave the public health system.

Background of Participating LPHAs & OHA-PHD

Response Rate

LPHA

For the 2024 assessment, a technical workgroup, comprised of five LPHAs, a representative from CLHO, a representative from national PHAB, and OHA-PHD staff, made decisions about modifications to the national assessment tool mentioned on page 20. Of Oregon's 33 LPHAs, 30 participated in the 2024 assessment, see Figure 5. The counties depicted in gray, either did not participate in the assessment (Douglas, Jefferson, and Josephine), or could not participate because there was no LPHA in that county (Curry and Wallowa).

OHA-PHD

OHA-PHD participated in this assessment on the same timeline as LPHAs and assessed their cost and capacity in the same way as LPHAs.

Figure 5. Participating LPHAs

Population Covered by Submitted Assessments

LPHA

Rede analyzed the responses of LPHAs by the percent of the state population they were providing services to in Oregon. The LPHAs in the data set serve 94% of the Oregon population, achieving a robust and representative sample. The LPHAs not included in the data set represent one small and two medium-sized counties (see Figures 6 & 7). Rede analyzed implementation data by county size bands, and the analysis revealed no statistically significant relationship between county size and implementation level. Therefore, detailed results by size band are not reported.

Note: Appendix F details steps for methodology, including a data analysis plan for calculating implementation level, cost, and sharing for LPHAs and OHA-PHD

Figure 6: Oregon LPHA size bands
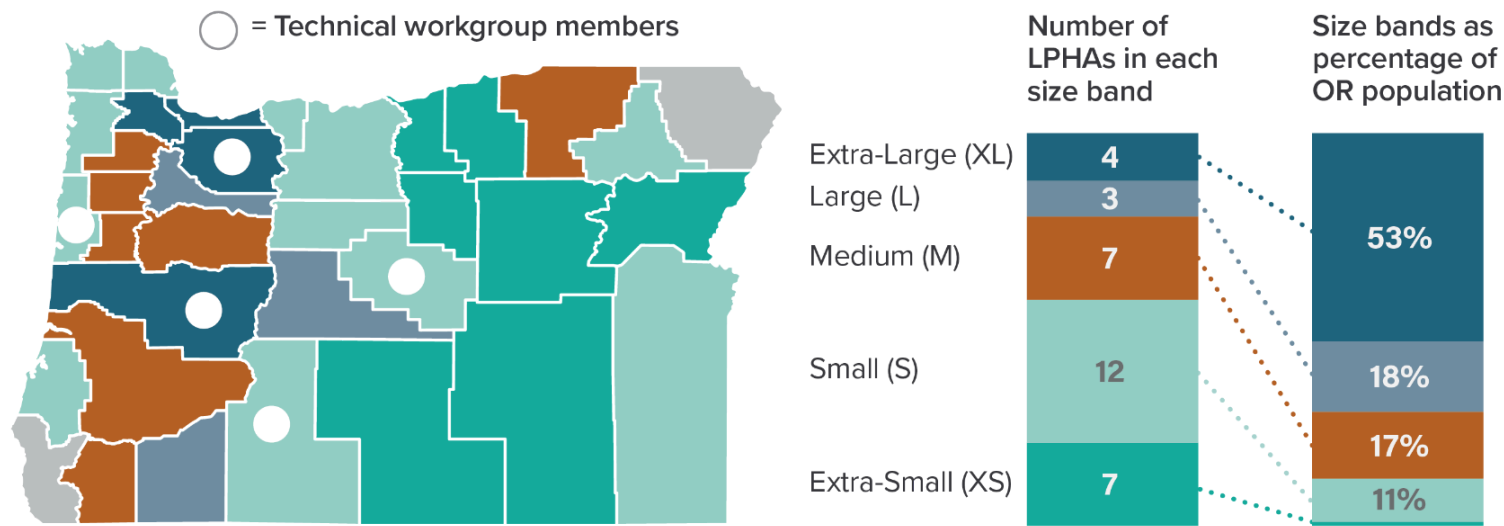
Figure 7. LPHAs included in the data set by size band

Size band (SB)	Population Size	Number of LPHAs*	Number of LPHAs in data set
Extra-Small (XS)	Below 20,000	7	7
Small (S)	20,000 -74,999	12	11
Medium (M)	75,000 - 149,000	7	5
Large (L)	150,000 - 375,000	3	3
Extra-Large (XL)	Over 375,000	4	4

Note: Two counties, Curry and Wallowa, do not have an LPHA and are not included in this table; Sherman and Wasco counties make up the North Central Public Health District, which is the only two-county local health department in Oregon; Douglas, Jefferson, and Josephine are not included in the data set.

How to Read the Figures in this Report

Figure 8 is a demonstration chart to orient readers of this report to the bar charts used throughout. The implementation level figures use a rating scale ranging from minimal to significant. The overall rating for the foundational capability or program is the top-most bar (capitalized), with the roles following in the bars below. On many charts, OHA-PHD data are included for a systemwide view. Shared services figures use the same style of chart, with response options that range from no sharing (on the left of the dotted line) to providing/receiving services (on the right). In some figures, the data are only provided at the foundational capability or program level, not at the role level. Additionally, for all charts, a row does not equal 100% due to missing data.

Figure 8. How to read bar charts
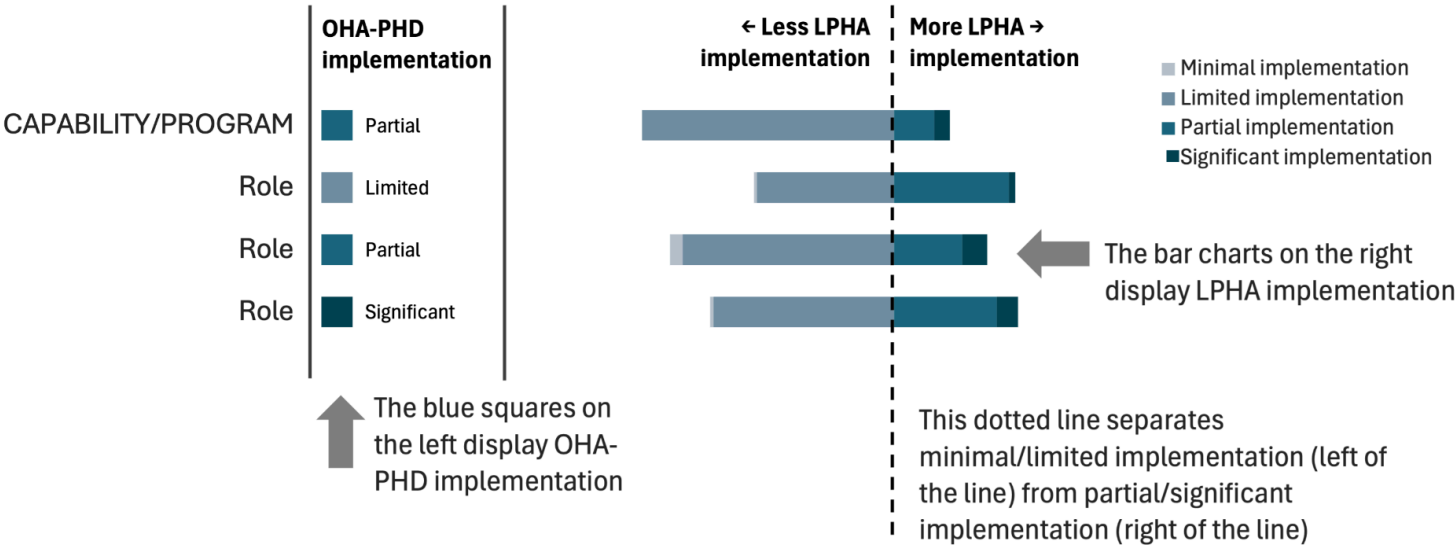
Findings

Implementation of Foundational Capabilities and Programs: Overview

"Implementation levels" are a combined measure of self-assessed capacity and expertise used to describe the degree to which foundational capabilities and programs are available within a jurisdiction.

Figure 9 shows the implementation level, by size band, for OHA-PHD and LPHAs for all foundational capabilities and programs. Three LPHAs (Douglas, Jefferson, and Josephine) did not submit assessments, which are represented by columns of light gray boxes in the figure. Implementation of foundational capabilities and programs varied across the LPHAs and OHA-PHD. Still, no foundational capability or program is significantly implemented across all LPHAs and OHA-PHD, meaning there are coverage gaps. All LPHAs and OHA-PHD reported minimal or limited implementation in at least one foundational capability or program.

Figure 9. FY23 Implementation level overview by size band
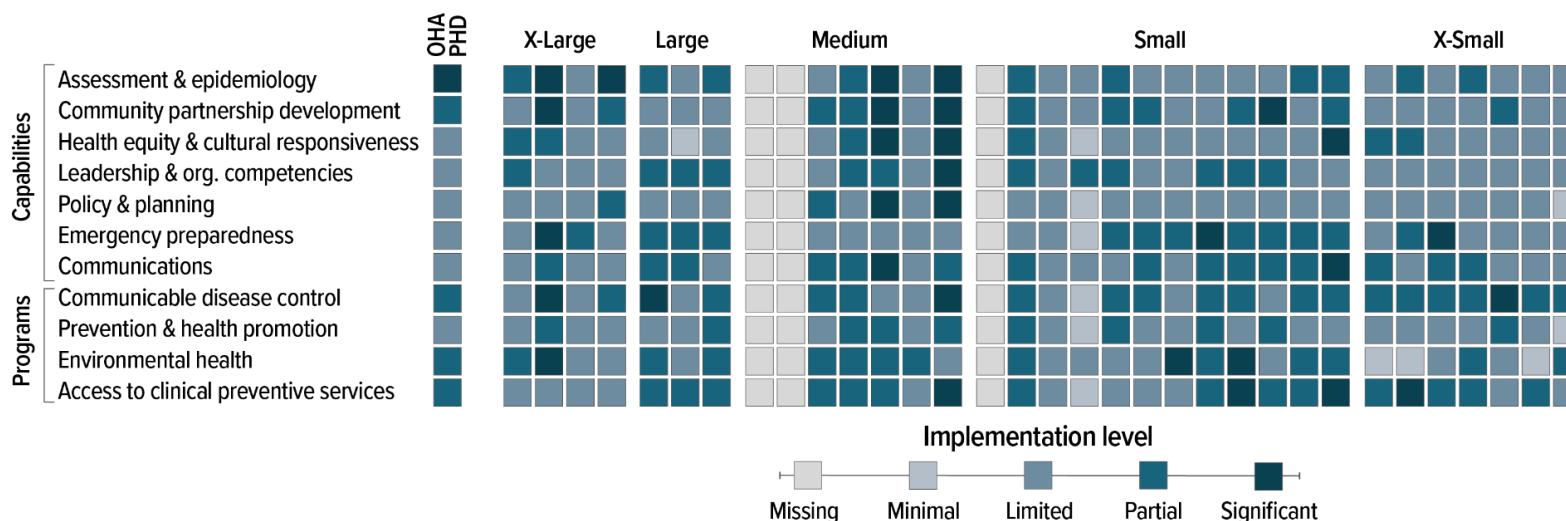
Figure 10 illustrates implementation levels for each foundational capability and program ordered from the highest to lowest level of implementation for LPHAs. Implementation levels varied by foundational capabilities and programs. In 2023, communicable disease control had the highest level of implementation followed by access to clinical preventive services and environmental health for LPHAs. Communicable disease control and environmental health were the foundational programs that were prioritized for Phase 1 funding by Oregon's Public Health Advisory Board, and a focus on access to clinical preventive services became important during the COVID-19 emergency response. Policy and planning, health equity and cultural responsiveness, and leadership and organizational competencies had the lowest levels of implementation, among the foundational capabilities for LPHAs.

For the detailed implementation data, see Appendix G.

Figure 10. Implementation level across all foundational capabilities and programs (LPHA N=30)

	OHA-PHD Implementation	← Less LPHA Implementation / More LPHA → Implementation
FOUNDATIONAL PROGRAMS		
Communicable disease	Partial	3% 24% · 52% 12%
Clinical preventive services	Partial	3% 33% · 42% 12%
Environmental health	Partial	9% 33% · 39% 9%
Prevention & health promotion	Limited	6% 55% · 30%
FOUNDATIONAL CAPABILITIES		
Communications	Limited	39% · 45% 6%
Emergency preparedness	Limited	3% 42% · 36% 9%
Assessment & epidemiology	Significant	48% · 30% 12%
Community partnerships	Partial	52% · 27% 12%
Organizational competencies	Limited	52% · 36% 3%
Health equity	Limited	6% 58% · 18% 9%
Policy & planning	Limited	6% 73% · 6% 6%

Legend:
- Minimal
- Limited
- Partial
- Significant

Does not total 100% due to missing data.

Current Spending and Cost to Fully Implement Foundational Capabilities and Programs: Overview

The assessment tool is designed to estimate the cost of fully implementing the Oregon public health modernization framework by comparing a study year (in this case, FY23) with an estimate for resources needed to implement foundational capabilities and programs fully for one year. All LPHA and OHA-PHD estimates were combined to arrive at an estimate for local and state governmental public health. Spending, full implementation estimates, and resource gaps were calculated for each foundational capability and program, as well as for additional important programs. LPHA cost data are based on a per capita estimate to account for the three LPHAs that did not submit their assessment and the two counties that do not have an LPHA.

Figure 11 shows that in 2023, LPHAs and OHA-PHD spent an estimated $600 million on foundational capabilities and programs. OHA-PHD adjusted expenditure estimates for COVID-19 spending, and LPHAs accounted for COVID-19 staff in FY 23. While efforts were made to remove COVID-19-related spending from cost estimates, it may not have been fully excluded. This is particularly relevant when evaluating spending and resource gaps in communicable disease control, assessment and epidemiology, and emergency preparedness and response. It is possible that if these funds had not been present, the gap in needed funding for these areas would have been greater. These one-time resources and related capacity across certain foundational programs and capabilities will eventually leave the public health system.

Oregon's gap in necessary resources to fully implement foundational capabilities and programs is $262 million annually.

OHA-PHD's contribution to the gap estimate includes grant funds for CBOs, which are administered by OHA-PHD. The estimated gap in grant funding to CBOs was based on two factors: 1) current funding to

CBOs addressing only two of the four foundational programs in the modernization framework; and 2) known gaps in funding to CBOs that serve rural and frontier communities and certain population groups. The gap estimate does not include funding for nine Federally-Recognized Tribes in Oregon. OHA-PHD will continue to work with Tribes through a formal process each biennium to determine their allocation of public health modernization investments.

Figure 11. Combined OHA-PHD and LPHA estimated annual foundational public health and additional important programs spending, gap, and total implementation* (LPHA N=30)
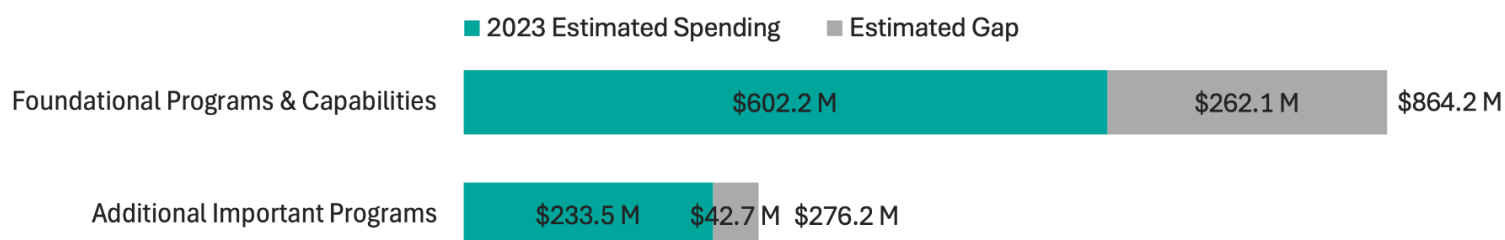
Estimates include specified COVID-19 adjustments (see detailed explanations in Appendix A)

Figure 12 displays the FY23 annual spending, gap, and total annual implementation costs needed by OHA-PHD and LPHAs (combined) to implement foundational capabilities and programs.

For foundational programs, the highest spending was allocated to communicable disease control at $125.9 million, followed closely by prevention and health promotion at $125.7 million. The third-highest spending was access to clinical preventive services, receiving $80.4 million. Environmental health received the lowest funding in the foundational programs at $71 million. This was slightly less than the highest spending in foundational capabilities, assessment and epidemiology, at $73.6 million. The next highest spending in capabilities was leadership and organizational competencies at $44.1 million,

followed by emergency preparedness and response at $30.7 million. The lowest spending in capabilities were community partnership development at $25.6 million, policy and planning at $12.1 million, health equity and cultural responsiveness at $9 million, and communications at $4.1 million. The gap in spending between the largest and smallest allocations within foundational capabilities was more pronounced than that of the programs, with assessment and epidemiology outspending communications by more than $69.5 million ($73.6 million vs. $4.1 million).

For foundational programs, prevention and health promotion has the largest estimated resource gap at $63.3 million annually, followed by environmental health ($47.3 million), access to clinical preventive services ($18.2 million), and communicable disease control ($9.7 million). Costing estimates show that foundational programs with the highest need for resources are those that have not been funded through State General Fund investments in public health modernization.

For foundational capabilities, leadership and organizational competencies has the largest estimated resource gap at $31.8 million annually, followed by assessment and epidemiology ($23.2 million), health equity and cultural responsiveness ($18.3 million), community partnership development ($17.5 million), emergency preparedness and response ($14.6 million), communications ($11.3 million), and policy and planning ($6.8 million). The gap estimate for leadership and organizational competencies reflects needed investments in human resources, information technology, performance management systems, and financial management to ensure efficient, effective, and transparent agency operations.

Assessment and epidemiology had the highest current spending across all capabilities, which likely reflects investments in this capability during the COVID-19 pandemic response that were needed to fulfill public health's core role of monitoring population health and investigating health hazards. Despite

having the highest current spending, assessment and epidemiology had the second-highest estimate of needed resources.

While the governmental public health system has invested heavily in the health equity and cultural responsiveness and community partnership development capabilities – including allocating a portion of public health modernization funding to CBOs – these capabilities had the third and fourth highest estimated resource needs, respectively. These higher estimates of needed resources may reflect a more nuanced understanding of what is required to advance health equity and partner with community organizations and members to address unfair barriers to health and well-being, compared to when the first assessment was completed in 2016.

Lower estimated resource gaps for the communications and policy and planning foundational capabilities may have been driven by staffing, contracts, and other expenditures that contribute to these capabilities being captured in foundational programs.

For the detailed costing data, see Appendix H.

Figure 12. Combined OHA-PHD and LPHA estimated annual spending, gap in resources, and total implementation cost by FC and FP ordered by gap in resources (LPHA N=30)

FOUNDATIONAL PROGRAMS

- Prevention & health promotion: FY23 Foundational Spending Estimate $125.7 M | Estimated Gap $63.3 M | Total $189 M
- Environmental health: $71 M | $47.3 M | $118.4 M
- Clinical preventive services: $80.4 M | $18.2 M | $98.6 M
- Communicable disease: $125.9 M | $9.7 M | $135.6 M

FOUNDATIONAL CAPABILITIES

- Organizational competencies: $44.1 M | $31.8 M | $75.9 M
- Assessment & epidemiology: $73.6 M | $23.2 M | $96.8 M
- Health equity: $9 M | $18.3 M | $27.3 M
- Community Partnerships: $25.6 M | $17.5 M | $43 M
- Emergency preparedness & response: $30.7 M | $14.6 M | $45.3 M
- Communications: $4.1 M | $11.3 M | $15.4 M
- Policy & planning: $12.1 M | $6.8 M | $18.9 M

Note: Estimates include specified COVID-19 adjustments (see detailed explanations in Appendix A)

Labor Costs

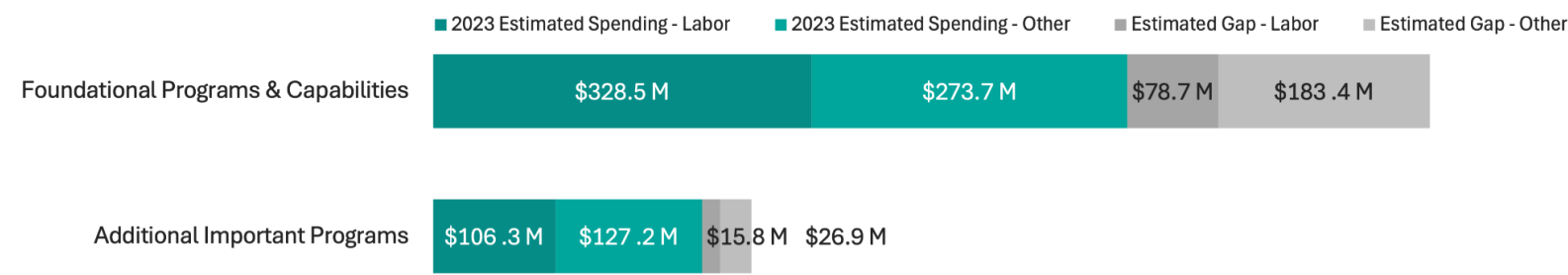Oregon's public health workforce is essential to implementing public health modernization and serves a critical role in protecting community health. The assessment collected information about LPHA and OHA-PHD labor expenditures and estimates for public health labor costs to fully implement foundational capabilities and programs.[10] Figure 13 displays the 2023 estimated spending and the resource gap for foundational capabilities and programs and additional important programs. This figure highlights that labor accounts for a notable portion of the 2023 spending with $328.5 million (55% of total spending) for foundational programs and capabilities and $106.3 million for additional important programs. The labor resource gap was $78.7 million (30% of the total gap) for foundational capabilities and programs and $15.8 million for additional important programs.

Figure 13: Estimated labor expenditures and labor resource gap

	2023 Estimated Spending - Labor	2023 Estimated Spending - Other	Estimated Gap - Labor	Estimated Gap - Other
Foundational Programs & Capabilities	$328.5 M	$273.7 M	$78.7 M	$183.4 M
Additional Important Programs	$106.3 M	$127.2 M	$15.8 M	$26.9 M

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[10] While Fiscal Year (FY) 2023 data were used for the majority of the assessment, using FY 2023 for OHA-PHD staffing costs significantly underestimates current spending given numerous position vacancies during the COVID-19 pandemic response. Instead, FY 2024 budgeted amounts for OHA-PHD staffing were used to more accurately reflect the staffing costs if all positions for which the agency has position authority were filled.

Although the American Rescue Plan Act of 2021 provided funding to support workforce needs during the COVID-19 pandemic, these investments are leaving the system and research suggests that health departments were still not able to recruit enough workers even with the influx of one-time resources.[11] Furthermore, a January 2025 review of public health workforce gaps from the United States Government Accountability Office described persistent challenges to recruiting and retaining a workforce that is ready to meet the needs of communities. Challenges include restrictions on public health funding for specific time frames or activities that make it difficult to use resources for hiring; market competition from other employers that offer higher pay, better job security, and more flexibility; and high workloads and stress experienced by public health workers. These challenges are even more pronounced in rural areas, and with specialized occupations like epidemiology and nursing or certain skills like informatics.[12]

[11] Yeager, V. A., & Krasna, H. (2024). When money is not enough: Reimagining public health requires systematic solutions to hiring barriers. *Health Affairs (Project Hope), 43*(6), 840–845. https://doi.org/10.1377/hlthaff.2024.00020

[12] United States Government Accountability Office. (2025, January 29). *Public Health Preparedness: HHS and jurisdictions have taken some steps to address challenging workforce gaps*. https://files.gao.gov/reports/GAO-25-107002/index.html

LPHA Shared Services for Fulfilling the Roles of The Foundational Capabilities and Programs: Overview

This section of the assessment examines the capacity and need of LPHAs to share resources, data, and collaborate with community entities to improve public health in their communities. OHA-PHD did not complete the sharing section, and all data presented here are based on LPHA assessments.

The public health modernization framework recognizes that while LPHAs are responsible for ensuring that the foundational program services are available, public health is a network that shares services and responsibilities, working alongside a range of community partners, including hospital networks, neighboring LPHAs, state governmental social services and public health agencies, local CBOs, and more. In the CCA, LPHAs reported if they provided services in another jurisdiction in addition to their own and if they received services in their jurisdiction from a partner or other agency.

An example of providing services in another jurisdiction might involve an Environmental Health department within one LPHA holding a contract with neighboring counties to deliver certain environmental health services region-wide. Reporting on receiving services would include other LPHAs indicating such partnerships. Receiving services could also involve support from OHA-PHD for communicable disease control within an LPHA's jurisdiction, or partnerships with Coordinated Care Organizations (CCOs) to conduct a community health assessment and develop a community health improvement plan, as part of fulfilling the assessment and epidemiology capability.

The response options for reported sharing were:

"No"
- **Receiving:** This response indicates the LPHA is not receiving services from other agencies or partners to fulfill the roles of the programs or capabilities in their jurisdiction.
- **Providing:** This response indicates the LPHA is not providing services to another LPHA to fulfill the roles of the programs or capabilities in another jurisdiction.

"Partially"
- **Receiving:** This response indicates the LPHA is aware of some services performed by another agency in their jurisdiction; this agency is doing so without active communication or formal partnership.
- **Providing:** This response indicates the LPHA is performing some work in another jurisdiction; this agency is doing so without active communication or formal partnership.

"Collaboratively"
- **Receiving:** This response indicates the LPHA is engaged in an active partnership to receive services from another agency to fulfill the roles of the capabilities and programs.
- **Providing:** This response indicates the LPHA is actively partnering with another LPHA to provide them with services to fulfill their programs and capabilities.

"Completely"
- **Receiving:** This response indicates that the LPHA is not fulfilling any of the roles of a capability or program in their jurisdiction but instead receiving all those services from other agencies.
- **Providing:** This response indicates that the LPHA fulfills all the roles of a capability or program for another jurisdiction.

However, some LPHA roles specifically involve coordination and communication with OHA-PHD, and by reporting their completion of these roles, LPHAs may have indicated they were completing the coordination task without recognizing it as part of a shared responsibility. These factors may have led to an underreporting of collaborative efforts, interactions, and shared responsibilities between LPHAs and OHA-PHD, potentially underestimating the extent of their partnerships in fulfilling public health capabilities and programs within their jurisdictions.

In the data below, across all foundational capabilities and programs, the ratio of receiving versus providing services remains fairly consistent across LPHAs, with far more LPHAs reporting receiving services.

Figure 14 illustrates the percentage of LPHAs that received services from other agencies, categorized into foundational capabilities and foundational programs. The assessment and epidemiology capability had the highest percentage of LPHAs receiving services, at 57%. These services were provided primarily by other LPHAs, local hospital networks, CCOs, and support from OHA-PHD. The next highest percentage of receiving services was seen in the environmental health foundational program, with 54% of LPHAs receiving services, primarily from municipal and state entities, such as city planning and land development departments. The level of sharing roles and responsibilities with partners and other agencies varied based on the foundational capability or program, with wider variability in foundational capabilities as these involve more internal organization-specific duties, such as leadership and organizational competencies, community partnership development, and policy and planning. Meanwhile, foundational programs consistently saw more sharing as LPHAs engaged with partners to accomplish programmatic goals together.

Figure 14. Percent of LPHAs who received foundational capabilities and programs from another agency (N=30)
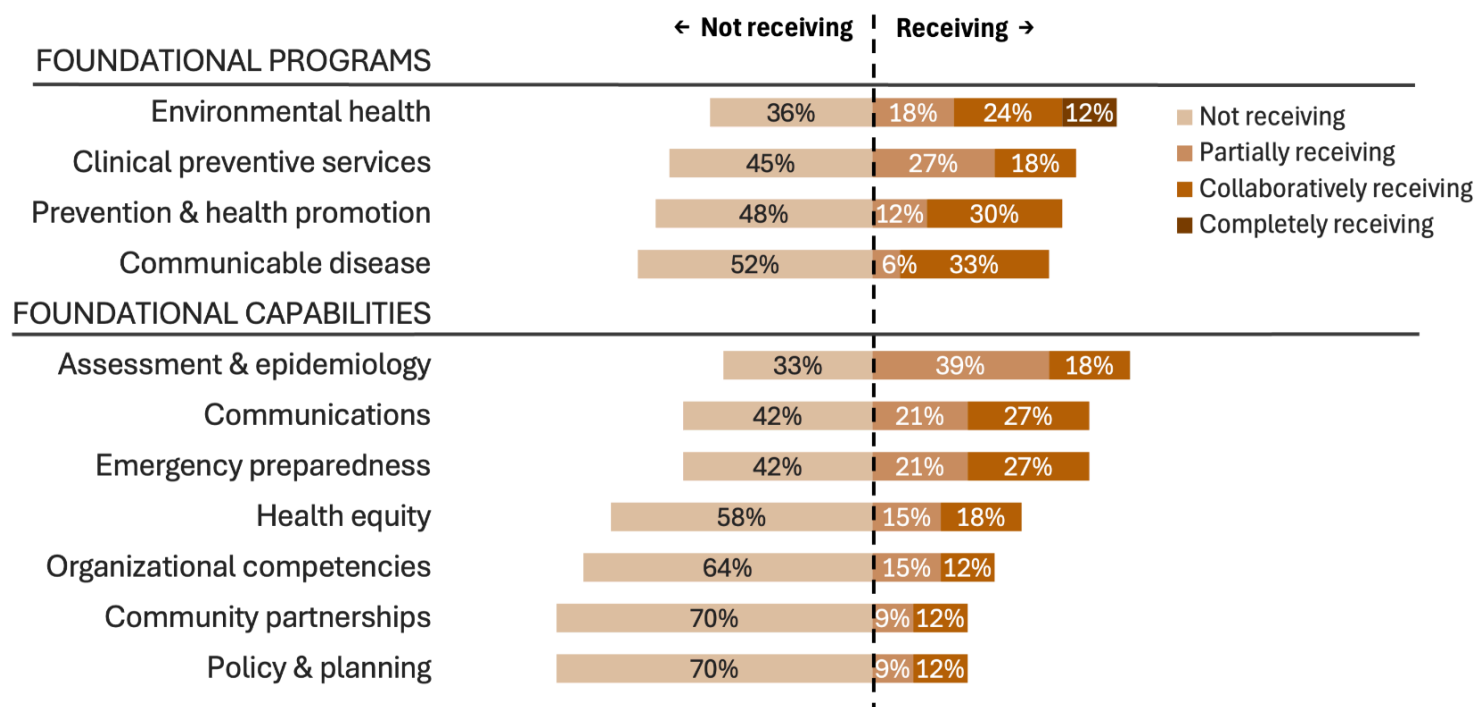
Figure 15 displays the percentage of LPHAs who provided services to another agency for both foundational capabilities and programs. Overall, very few LPHAs provided services to other agencies. The assessment and epidemiology capability had the highest proportion (18%) of LPHAs providing services to other agencies. The next highest was the community partnership development capability and the environmental health program, both at 9%. LPHAs primarily reported providing services to neighboring small and extra small LPHAs.

Figure 15. Percent of LPHAs who provided foundational capabilities and programs to another agency (N=30)
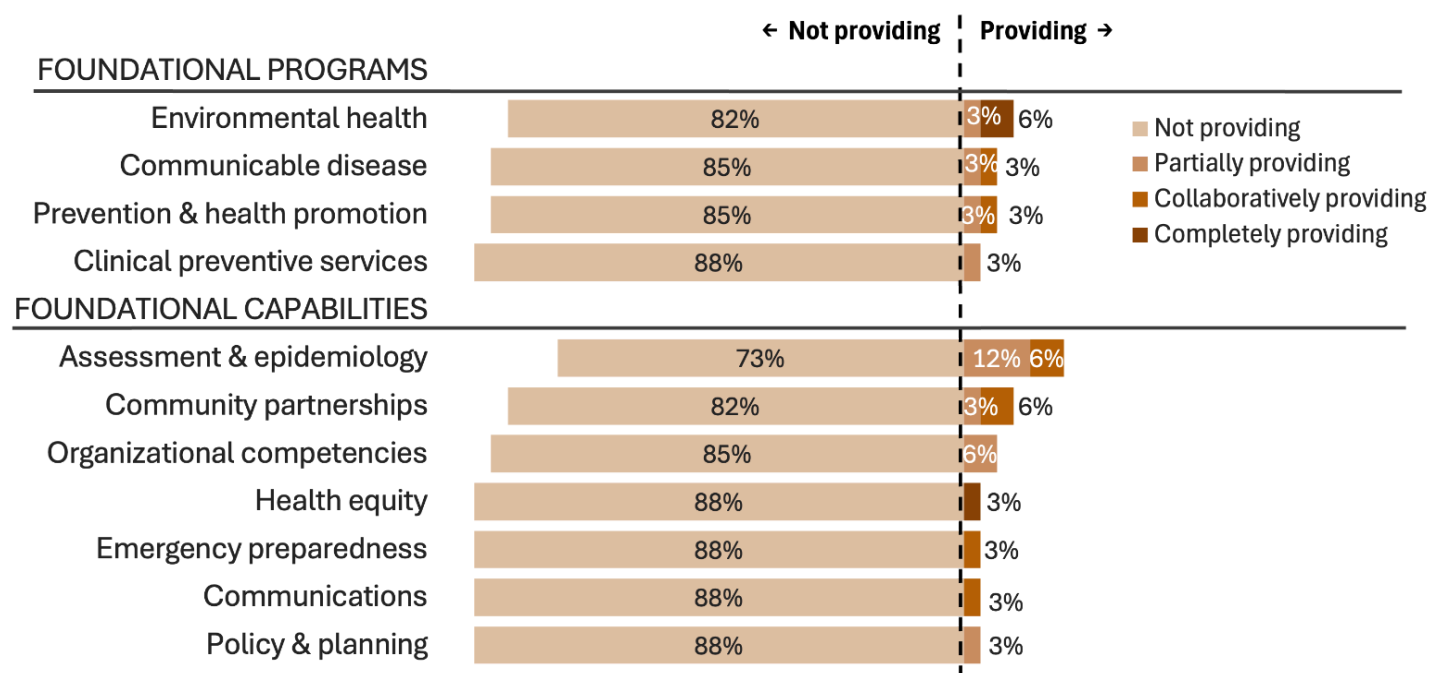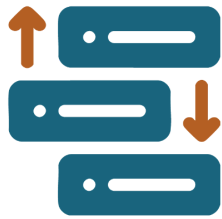
FOUNDATIONAL PROGRAMS

	← Not providing	Providing →
Environmental health	82%	3% 6%
Communicable disease	85%	3% 3%
Prevention & health promotion	85%	3% 3%
Clinical preventive services	88%	3%

FOUNDATIONAL CAPABILITIES

	← Not providing	Providing →
Assessment & epidemiology	73%	12% 6%
Community partnerships	82%	3% 6%
Organizational competencies	85%	6%
Health equity	88%	3%
Emergency preparedness	88%	3%
Communications	88%	3%
Policy & planning	88%	3%

Legend:
- Not providing
- Partially providing
- Collaboratively providing
- Completely providing

Recommendations

1. **Increase Public Health Resources for Foundational Capabilities and Programs.** Every person in Oregon must have access to these critical public health services, regardless of where they live. This mandate, grounded in Oregon Statute,[13] must remain a critical focus moving forward into the next decade.

2. **Leverage Data to Guide Public Health Improvement Efforts.** Use the data in this report to prioritize foundational capabilities and programs for focused improvement:

   a. Oregon's Public Health Advisory Board should use these results for future planning and priority setting.

   b. LPHAs should use these results to develop their local public health modernization plans that are a statutorily required[14] deliverable to OHA-PHD by the end of 2025.

   c. OHA-PHD should use these findings to drive organizational changes that recognize and enhance the interconnections between foundational capabilities and programs. This will ensure foundational capabilities are implemented in a way that sustains the effectiveness of significantly implemented programs, while also strengthening those with lower implementation, such as prevention and health promotion initiatives.

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[13] Oregon Revised Statute 431.131 and 431.141
[14] *Oregon Revised Statute 431.413(C)*

3. **Enhance Expertise and Capacity for Effective Public Health Implementation.** Recognize the need to expand both expertise (knowledge, skills, education, and experience) and capacity (staff and other resources, materials, and supplies to implement the role, capability, or program). Expertise and capacity were rated consistently, either high or low, meaning that both need to be improved for changes in implementation to occur. Improving expertise will take time, and funding alone will not be sufficient to improve implementation.

4. **Foster Collaborative Responsibility for Public Health Success.** Consider ways that these data can explain and support improvement in sharing responsibility among LPHAs, OHA-PHD, and other public and private health and social services organizations. Collaboration and sharing responsibilities are essential to the success of public health modernization, and this report can help planners tune into areas for further exploration.

Appendices

Appendix A: COVID-19 and LPHA Adjustments

COVID-19 Adjustments

LPHA data

Positions indicating COVID-19 recovery and response in the Current Labor sheet were copied and moved to a COVID Labor tab in the dataset. The total labor amount was then multiplied by the FTE allocated across foundational capabilities, programs, and additional important programs for each position to determine the spending amount for each category. Finally, the FY 2023 spending for each COVID-19 position was summed by foundational capability, program, and additional important programs, and these amounts were subtracted from the FY 2023 total. The same process was applied to FTE.

OHA-PHD data

- The first adjustment was in FY23 Labor. Positions indicating COVID-19 recovery and response were removed from the assessments. Dollar amounts for salary and benefits, and FTE were removed from the positions list as well.
- The second adjustment included removing spending amounts for items labeled as COVID-19 or SAR COV from the total cost, along with their equivalent amounts from foundational capability, program, and additional important program allocations. This adjustment was made in the FY23 Current Spending sheets for each of the four OHA-PHD Centers.

OHA-PHD also reviewed the costing data with the program managers and made adjustments to their respective assessments, such as removing line items that were COVID spending, reallocated amounts across foundational capabilities and programs, and corrected allocations across foundational capabilities and programs for line items in FY 23 Current Spending and Full Implementation.

Appendix B: Public Health System Overview

The state public health department provides funding and technical assistance to local public health authorities. State public health:

- Collects public health survey data and compiles other key data sets;
- Prepares and releases reports and statistics used by local public health authorities and their partners for community health assessments, community health improvement plans and program planning;
- Develops state policies using feedback and experience from local public health authorities;
- Regulates health care facilities, tanning beds and certain other public facilities;
- Operates the state public health laboratory;
- Coordinates communication with federal public health partners, including the Centers for Disease Control and Prevention (CDC).

The local public health authorities are responsible for public health functions within their local jurisdictions. Local public health:

- Investigates disease outbreaks and coordinates with PHD to staff outbreak investigations;
- Enforces laws, such as the Indoor Clean Air Act and Immunization of School Children;
- Issues licenses and inspects establishments including restaurants, pools, and lodging facilities;
- Develops robust partnerships with the communities they serve and responds to community needs.

The combined set of functions completed by state and local public health authorities comprise the work of Oregon's public health system. (Public Health Modernization Manual; pg 8)

Appendix C: [Operational Definitions](#)

Appendix D: Technical Assistance and Training

LPHA

Capacity and Cost Assessments are intricate processes that demand significant staff time to complete. To facilitate this effort, customized technical assistance (TA) and training were made available to all 33 LPHAs.

To kick off the assessment process, Rede Group hosted a live one-hour webinar on May 14, 2024. This session introduced Rede Group as the technical assistance resource and data analyst, explained the concept of the Capacity and Cost Assessment, and provided a walkthrough of the assessment tool. Participants were also introduced to the TA website and the various options for support, along with a timeline for assessment completion, analysis, and reporting. The webinar was recorded and made accessible to all LPHAs.

An essential component of the TA included CCA resources hosted on a Rede-managed website. This site featured an Instructional Guide, topic-specific guidance (including instructions for the Public Health Workforce Calculator), a dynamic Questions & Answers document addressing common inquiries from LPHAs throughout the assessment period, and four pre-recorded how-to webinars that complemented the recording of the kickoff session. These resources were available to LPHAs throughout their three-month assessment period.

For live assistance, Rede offered weekly office hours via Zoom, providing a virtual space for LPHAs to ask questions as needed. The schedule for these office hours, along with the access link, was posted on the Rede-hosted website. Additional support included optional, by-request one-on-one virtual meetings, or phone calls, between Rede and LPHAs, as well as email communications.

OHA-PHD

Rede provided an Instructional Guide and ongoing questions and answers specifically for the PHD portion of the assessment. Training and technical assistance to OHA-PHD occurred through weekly office hour sessions with PHD Program Support Managers during phase 1 and all staff involved in assessment in phase 2. Rede also conducted webinar training sessions for PHD staff at the beginning of each phase.

Appendix E: Validating Assessment Data

The assessment tool was based on a national Public Health Accreditation Board (PHAB) tool and featured several built-in data validation functions, including data flags in cells to inform OHA-PHD and LPHAs if data entered appeared to be incomplete, mismatched, lower than expected, or higher than expected. Another embedded data validation tool was PHAB's Public Health Workforce Calculator. This calculator supported LPHAs in assessing their needs to fully implement modernization in ways that were consistent with national estimates and their peers in Oregon. In addition, data accuracy tools included formulas built into the tool to automatically populate cells where data were repeated in the CCA tool.

LPHA

Data were validated in two ways; mechanisms embedded within the CCA tool and Rede's validation process once LPHAs submitted their assessments.

With guidance from an LPHA technical workgroup, Rede modified the tool to fit the Oregon Public Health Modernization framework and added other formulas and data flags to assist with these built-in validation functions.

Rede's validation process focused on inter-rater reliability. Rede developed a data validation form that Rede reviewers used to systematically review all assessments. Each assessment was reviewed at least twice. All 30 LPHAs that submitted an assessment received a validation email informing them of what the validation check found, explained why and how it was an issue, provided guidance on recommended adjustments, and offered TA. As assessments were resubmitted, they were validated again until determined to be complete by Rede. Data validation was conducted between July and October 2024. Rede confirmed 30 LPHA assessments as complete and were included in the data set.

OHA-PHD

Rede conducted a midpoint audit with OHA-PHD data in May 2024 and issued guidance to course-correct issues with interpreting instructions for cost allocation and other minor issues.

Rede was tasked with combining assessments from four organizational units within OHA-PHD, reviewing data, and detailing data quality issues with the OHA-PHD project team. The OHA project team worked at OHA-PHD to respond to questions and correct data.

Non-response bias

Implementation level analysis

Rede sought a full census of assessments from LPHAs, and worked closely with OHA and the LPHA Technical Workgroup to troubleshoot and mitigate any missing LPHAs. If the sample size is less than 100%, the LPHA CCA Technical Workgroup asserts there must be representation from each size band, as well as assessments from the three largest LPHAs in the state (Clackamas, Multnomah, and Washington).

Rede did not receive a census of assessments. One LPHA declined to complete the assessment, one LPHA was non-responsive, and one LPHA was not able to complete the assessment in time. The missing LPHAs are Douglas (medium size band), Jefferson (small size band), and Josephine (medium size band).

Costing analysis

Due to three missing LPHAs, and two counties without PH authority, fiscal data was converted to a per capita amount to estimate the costs to fully implement the public health modernization framework for local governmental public health statewide.

Appendix F: Detailed Data Analysis

Data was analyzed by the variables described in this section, and was conducted by Rede between September and December 2024.

Note about terminology: In the assessment, the wording "Additional Programs" was used to denote those services and programs that are provided in certain jurisdictions depending on community context, but are not expected to be provided as a component of Public Health Modernization foundational programs. These services will be referred to as "Additional Important Services" in all reporting to denote the criticality of these public health services, even if they are not Foundational Services under Oregon's Public Health Modernization framework.

Implementation Level Analysis

Implementation Level is a combined expertise and capacity variable describing[15] the degree to which foundational public health services (FPHS) were implemented or provided in a jurisdiction in the study year, 2023. There is no national standard for calculating implementation levels. For this analysis an Implementation Level was calculated using data from the Self-Assessment worksheet for OHA-PHD and each LPHA for each of the foundational capabilities (FCs), foundational programs (FPs), and roles. Rede relied on submitted assessments for these results and did not estimate the Implementation Level for any LPHAs that did not submit an assessment.

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[15] This method of calculating an implementation descriptor is based on Oregon's 2016 PHM Assessment. The task of assessing the implementation of foundational capabilities and programs in any jurisdiction is complex. The method used by Oregon in 2016, and later adopted by the National Public Health Accreditation Board Center for Innovation, simplifies the task, making it feasible for most jurisdictions to complete, creates a comparable measure across jurisdictions, and supports inter-rater reliability through controlling the range of options and clearly defining categories. Between 2016 and 2024, the number of categories for rating expertise and capacity changed from 5 to 4.

Implementation level descriptions

- **Significant Implementation:** Expert knowledge, skills, etc. and sufficient staff time and other resources for services.
- **Partial Implementation:** Proficient knowledge, skills, etc. and moderate staff time and other resources for services.
- **Limited Implementation:** Basic knowledge, skills, etc. and minimal staff time and other resources for services.
- **Minimal Implementation:** Very little to no knowledge, skills, etc. and very little or no staff time and other resources for services.

Creating an Implementation level metric

Combining expertise and capacity into one variable presents limitations, such as over or under reporting either one of the variables. For example, if a jurisdiction reported "expert" for expertise and "absent" for capacity on a service, the calculated level of implementation would be "limited implementation", but that categorization may suppress the fact that there is no capacity for that service. Additionally, there are other factors that influence whether a service is implemented beyond expertise and capacity (as they are defined in the assessment) that were not captured in the assessment, such as the political environment, funding restrictions, priorities of the jurisdiction, and major systems disruptions.

To align with how Oregon calculated the level of implementation for the 2016 report, we created a combined variable by adding expertise and capacity scores to arrive at an implementation level. However, because the assessment scale changed from having 5 options on the 2016 assessment tool (Figures 1 and 2) to 4 options in the FY2023 CCA (Figures 3 and 4), it will not be a direct comparison. Note: Figures 1, 2, and 4 below will not be data visualizations in the report.
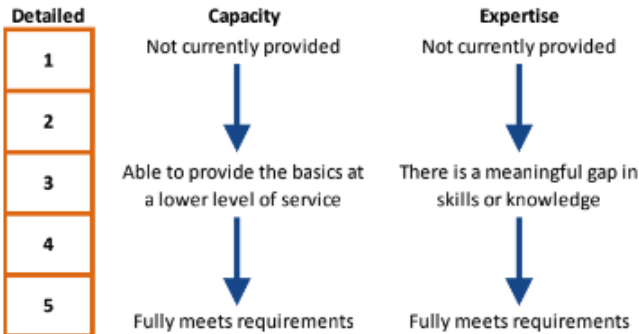
Figure 1: 2016 Scale

Detailed	Capacity	Expertise
1	Not currently provided	Not currently provided
2		
3	Able to provide the basics at a lower level of service	There is a meaningful gap in skills or knowledge
4		
5	Fully meets requirements	Fully meets requirements

Figure 2: 2016 Implementation Level

LPHAs BY LEVEL OF IMPLEMENTATION

Significant — Partial — Limited — Minimal

Low Expertise   Low Capacity
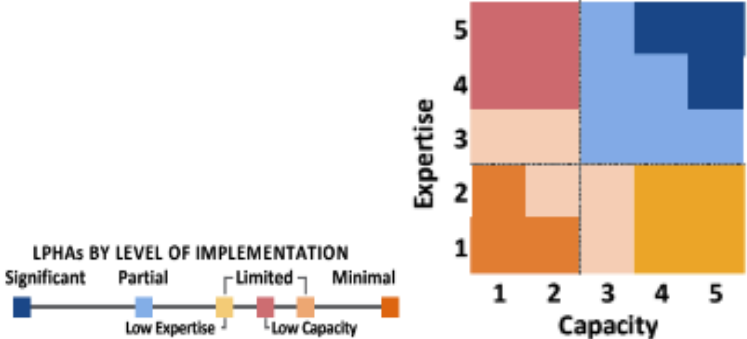
Figure 3: 2024 Scale

Expertise *(knowledge, skills, education, and experience related to the role, capability, or program)*		Capacity *(staff and/or other resources, materials, and supplies to implement the role, capability, or program)*
Absent: No or basic awareness of the expertise, but limited ability to apply it.	1	**Absent:** Staff time and other resources are not present or are largely unavailable.
Basic: Knowledge of the expertise and can apply it at a basic level.	2	**Minimal:** some staff time and/or other resources are present to complete basic functions.
Proficient: Expertise is available and can be applied adeptly.	3	**Moderate:** Most staff time and other resources are present to partially implement most functions.
Expert: Expertise is routinely applied and those with the expertise can build it within others.	4	**Full:** Sufficient staff time and other resources are present to fully implement all functions.

Figure 4: 2024 Implementation level
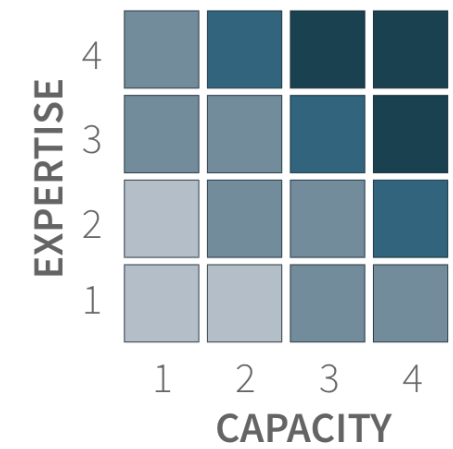
The table below shows how the expertise and capacity values will be combined to create an implementation score and level, using the scale from Figure 3 and the framework from Figure 4.

Expertise	Expertise (numeric)	Capacity	Capacity (numeric)	Implementation Score (numeric)	Implementation Level	Additional categorization (2016)
Absent	1	Absent	1	2	Minimal	
Absent	1	Minimal	2	3	Minimal	
Absent	1	Moderate	3	4	Limited	
Absent	1	Full	4	5	Limited	Limited - Low Expertise
Basic	2	Absent	1	3	Minimal	
Basic	2	Minimal	2	4	Limited	
Basic	2	Moderate	3	5	Limited	
Basic	2	Full	4	6	Partial	
Proficient	3	Absent	1	4	Limited	

Proficient	3	Minimal	2	5	Limited	
Proficient	3	Moderate	3	6	Partial	
Proficient	3	Full	4	7	Significant	
Expert	4	Absent	1	5	Limited	Limited - Low Capacity
Expert	4	Minimal	2	6	Partial	
Expert	4	Moderate	3	7	Significant	
Expert	4	Full	4	8	Significant	

The 2016 report included two additional categories, "Limited- Low Expertise" and "Limited - Low Capacity," as noted above, to address scores that were high in capacity and low in expertise and vice versa (see Figure 4 and Column 7 on the table above). Due to the smaller scale of response options (4 instead of 5, see Figure 3) in the FY2023 CCA, we propose not using the additional categorizations. However, in reporting, data on where there are capabilities and/or programs (if any) with high capacity/low expertise or low capacity/high expertise will be noted to support a better understanding of the gaps.

Cost Analysis

Spending, cost, and gap analysis calculations

The cost analysis was conducted in 2 ways:
- All jurisdictions (LPHAs & OHA-PHD combined)
- By foundational capabilities and programs, including additional important programs

Spending

Rede used LPHA reported spending amounts for FY2023 to calculate per capita amounts to describe the estimated spending for all LPHAs in Oregon. Care was taken to ensure that spending amounts reported in LPHA and OHA-PHD assessments were discrete and not duplicative, including removing dollars provided to

LPHAs from the OHA-PHD estimates. FY2023 COVID-19 labor costs were removed from the total spending amounts throughout these findings.

Cost for full implementation

Rede used the reported estimated full implementation amount to calculate per capita amounts. Care was taken to ensure that cost estimates reported by LPHAs and OHA-PHD were discrete and not duplicative, including removing dollars provided to LPHAs from the OHA-PHD estimates.

Gap

The gap for full implementation is the estimated additional amount needed in order to fully implement the FCs, FPs, and additional important programs. It was calculated by subtracting FY2023 per capita spending from the full implementation per capita estimates.

Calculating at the FC or FP level

Based on the total FY2023 spending and total estimate for full implementation from the submitted assessments, we calculated the percent of total spending and total estimate for implementation for each FC and FP and applied those percentages to the total per capita costs.

Sharing Analysis (LPHA)

Two types of sharing were assessed: how much another agency provides services in the respondent's jurisdiction and how much the respondent provides services in another jurisdiction. LPHAs were asked to select their answer from a drop-down list. Sharing levels were categorized as listed below. Analysis for jurisdictional sharing is descriptive; no calculated variable was generated. Analysis of jurisdictional sharing relies on and is limited by the number of submitted assessments. Missing LPHA data was not included in figures. Note: OHA-PHD did not complete the jurisdictional sharing questions.

Sharing levels

Sharing within my jurisdiction

- No sharing
- Another agency partially delivers
- Another agency completely delivers
- Collaboratively deliver service

Sharing in another jurisdiction

- No sharing
- Partially delivered for another agency
- Completely delivered for another agency
- Delivered collaboratively

Appendix G: Capacity and Cost Assessment: Detailed Findings

Foundational Programs

Communicable Disease Control

Vision: Ensure everyone in Oregon is protected from communicable disease threats.[16]

Roles:

- Communicable disease surveillance
- Communicable disease investigation
- Communicable disease intervention and control
- Communicable disease response evaluation

Implementation

Figure 1 displays the OHA-PHD level of implementation and percent of LPHAs at each implementation level for communicable disease control roles. For LPHAs, communicable disease investigation was the role with the highest level of implementation at 69%. OHA-PHD reported limited implementation for this role. Communicable disease response evaluation had the lowest implementation level at 45% for LPHAs, with OHA-PHD reporting partial implementation for this role.

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[16] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 65)

Figure 1. Implementation level of communicable disease control (LPHA N=30)
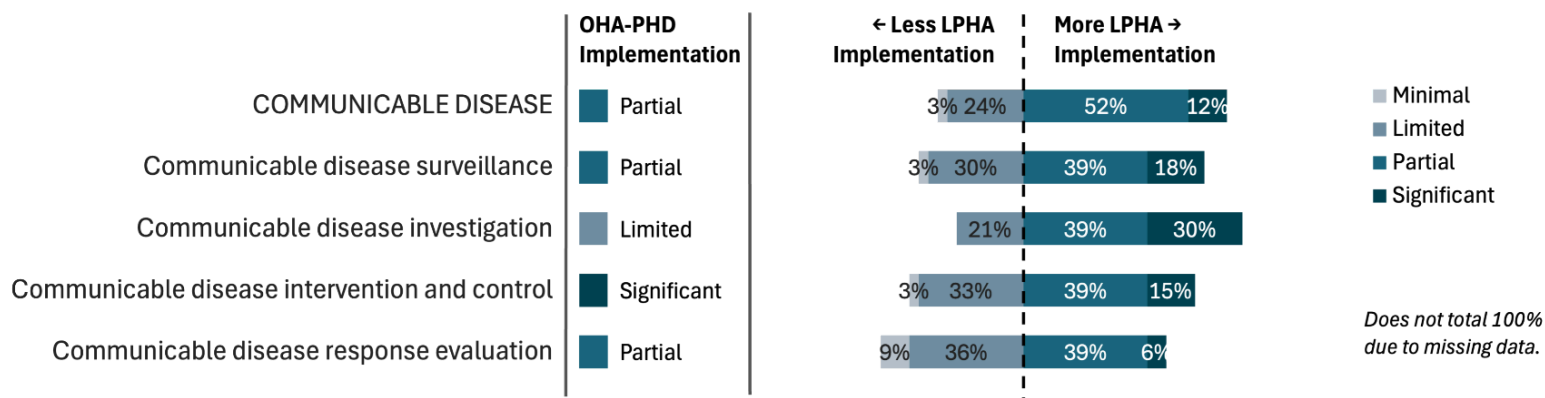
Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $125.9 million on communicable disease control. An estimated additional $9.7 million is needed to achieve full implementation of this foundational program, bringing the total cost to $135.6 million. For comparison to other foundational capabilities and programs, see Figure 12 in the full report.

Sharing details

Figure 2 displays the percentage of LPHAs sharing communicable disease control work with other agencies. Over one-third (39%, n=13) of LPHAs reported receiving communicable disease control work from other agencies, either partially (6%) or collaboratively (33%) to fulfill the roles of this program in their jurisdictions. The partners listed were varied and included other LPHAs, hospitals, CBOs, and tribal agencies. A small number of LPHAs (6%, n=2) reported providing communicable disease control services to another LPHA.

Figure 2. Communicable disease sharing (N=30)
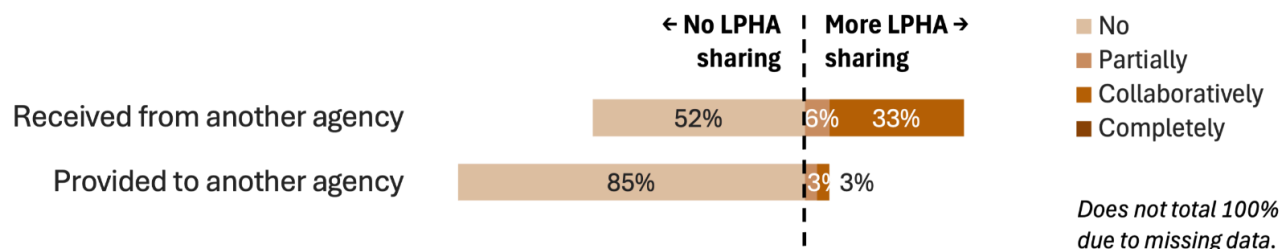
Prevention & Health Promotion

Vision: The public health system prevents and reduces harms from chronic diseases and injuries through policy change, enhanced community systems, and improved health equity to support the health and development of people in Oregon across the lifespan.[17]

Roles:
- Collect, standardize, analyze, coordinate, use, and disseminate data
- Provide timely, relevant, and accurate information about social, emotional, and physical health and safety
- Convene stakeholders, engage statewide organizations and partners, and cultivate leadership and vision for prevention and health promotion policies, programs, and strategies
- Develop a prioritized plan to address health needs using policy, systems, and environmental change strategies
- Implement local policies, programs, and strategies to improve social, emotional, and physical health and safety at the level supported by existing funding

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[17] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 73)

Implementation

Figure 3 displays the OHA-PHD level of implementation and the percentage of LPHAs at each implementation level for prevention and health promotion roles. For LPHAs, all roles within this foundational program have nearly the same level of implementation and OHA-PHD reported limited implementation for all roles.

Figure 3. Implementation level of prevention & health promotion (LPHA N=30)

	OHA-PHD Implementation	← Less LPHA Implementation	More LPHA → Implementation
PREVENTION & HEALTH PROMOTION	Limited	6% 55%	30%
Collect, analyze, and use data	Limited	6% 58%	24% 3%
Provide timely, relevant and accurate information	Limited	6% 48%	33% 3%
Prevention & health promotion partnerships	Limited	6% 52%	27% 6%
Prevention & health promotion planning	Limited	6% 52%	33%
Prevention & health policies	Limited	6% 55%	30%

Minimal
Limited
Partial
Significant

Does not total 100% due to missing data.

## Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $125.7 million on prevention and health promotion. An estimated additional $63.3 million is needed to achieve full implementation of this foundational program, bringing the total cost to $189 million. For comparison to other foundational capabilities and programs, see Figure 12 in the full report.

Sharing details

Figure 4 displays the percentage of LPHAs sharing prevention and health promotion work with other agencies. Of the LPHAs, 42% (n=14) engaged other agencies to receive support fulfilling this program's roles in their jurisdiction (12% partially and 30% collaboratively), while 48% (n=16) reported managing all responsibilities without assistance from other agencies, leading to a near-even distribution between those utilizing outside LPHA resources and those operating without external support. The list of partners that LPHAs indicated that they received support from was the longest of all the capabilities and programs, including schools and universities, clinics and hospitals, city and county agencies, but primarily CBOs. The difference was greater with providing services to other agencies, with only 6% (n=2) of LPHAs providing services to support the program roles for other LPHAs, partially 3% and collaboratively 3%.

Figure 4. Prevention & health promotion sharing (N=30)
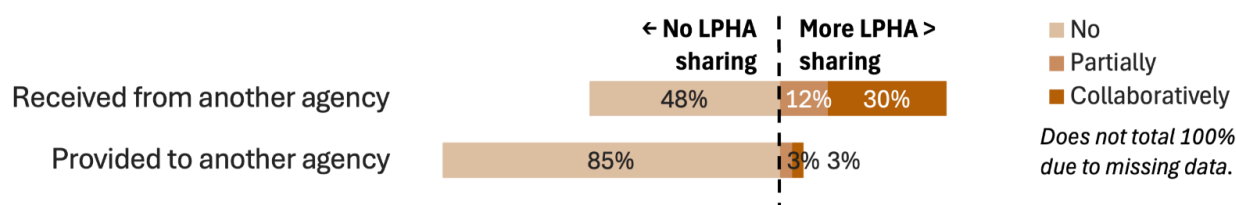
Environmental Health

Vision: Environmental health works to prevent disease and injury, eliminate the disparate impact of environmental health risks and threats on population subgroups, and create health-supportive environments where everyone in Oregon can thrive.[18]

Roles:

[18] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 82)

- Identify and prevent environmental hazards
- Conduct mandated inspections
- Promote land use planning

Implementation

Figure 5 displays the OHA-PHD level of implementation and the percentage of LPHAs at each implementation level for environmental health roles. For LPHAs, the highest level of implementation was reported in the environmental health inspections role at 69%. Similarly, OHA-PHD also reported significant implementation for this role. Both LPHA and OHA-PHD reported the lowest implementation in land use planning (21% and limited, respectively), which involves promoting sustainable development in built and natural environments.

Figure 5. Implementation level of environmental health (LPHA N=30)
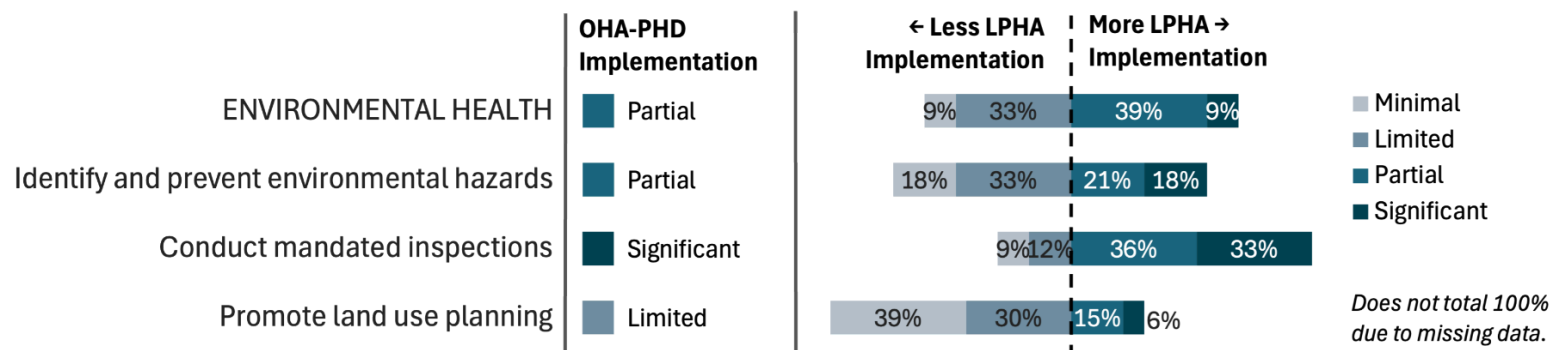
Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $71 million on environmental health. An estimated additional $47.3 million is needed to achieve full implementation of this foundational program, bringing the total to $118.4 million. For comparison to other foundational capabilities and programs, see Figure 12 in the full report.

Sharing details

Figure 6 displays the percentage of LPHAs sharing environmental health work with other agencies. Many, 54% (n=18), LPHAs reported receiving services from another agency to help fulfill this program's roles in their own jurisdictions, ranging from 18% partially, 24% collaboratively, and 12% completely relying on that external support. Partners included state, county, and city agencies (such as land development and planning departments), OHA-PHD, and neighboring LPHAs. Some reported not receiving any services from other entities at all, at 36% (n=12). The majority of LPHAs did not provide environmental health services to any other agency, 82% (n=27). Only 9% reported providing services.

Figure 6. Environmental health sharing (N=30)
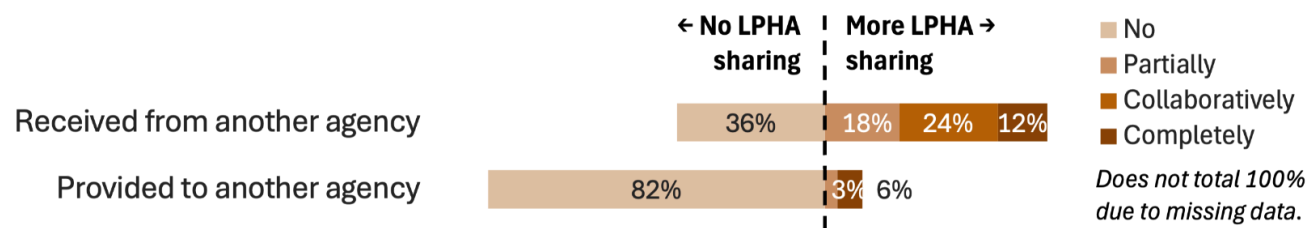
Access to Clinical Preventive Services

Vision: Ensure people in Oregon receive recommended clinical preventive services that are cost-effective.[19]

Roles:

- Ensure access to cost-effective clinical care
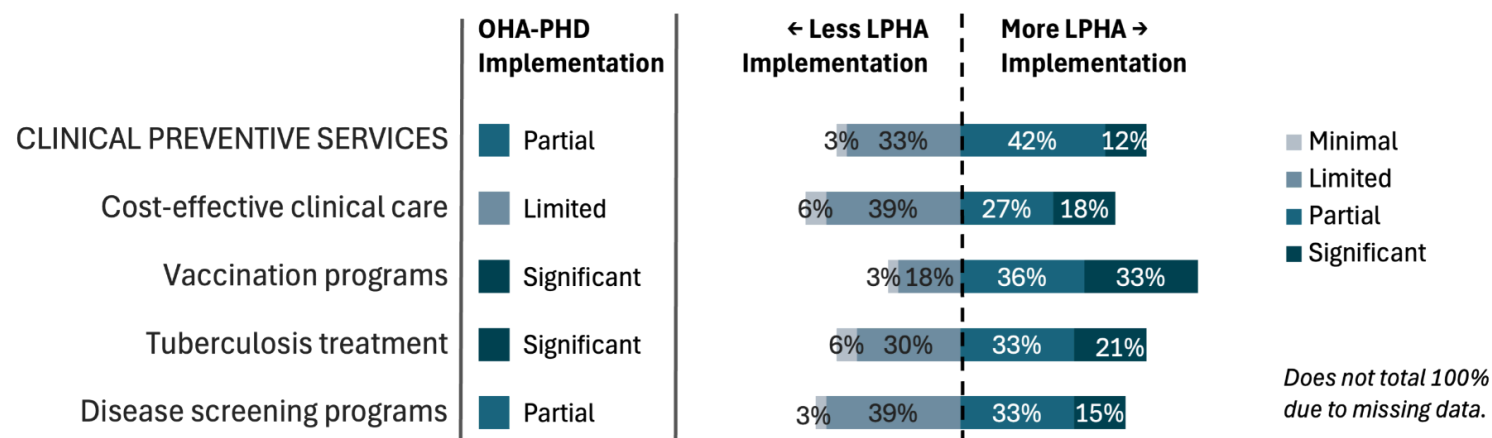- Ensure access to effective vaccination programs

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[19] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 90)

- Ensure access to effective tuberculosis treatment programs
- Ensure access to effective preventable disease screening programs

Implementation

Figure 7 displays the OHA-PHD level of implementation and the percentage of LPHAs at each implementation level for access to clinical preventive services roles. For LPHAs, vaccination program was the role with the highest level of implementation at 69%. Cost-effective clinical care was the role with the lowest implementation level for LPHAs at 45% and was similarly reported as limited by OHA-PHD.

Figure 7. Implementation level of access to clinical preventive services (LPHA N=30)

	OHA-PHD Implementation	← Less LPHA Implementation	More LPHA → Implementation
CLINICAL PREVENTIVE SERVICES	Partial	3% 33%	42% 12%
Cost-effective clinical care	Limited	6% 39%	27% 18%
Vaccination programs	Significant	3% 18%	36% 33%
Tuberculosis treatment	Significant	6% 30%	33% 21%
Disease screening programs	Partial	3% 39%	33% 15%

Legend: Minimal, Limited, Partial, Significant

Does not total 100% due to missing data.

## Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $80.4 million on access to clinical preventive services. An estimated additional $18.2 million is needed to achieve full implementation of this foundational program, bringing the total cost to $98.6 million. For comparison to other foundational capabilities and programs, see Figure 12 in the full report.

Sharing details

Figure 8 displays the percentage of LPHAs sharing access to clinical preventive services work with other agencies. Just as many LPHAs reported receiving services from other agencies as not, both at 45% (n=15). Partners listed for those receiving support were mostly hospitals, with some clinical-focused CBOs. Providing services to another agency saw a larger difference with 88% (n=29) of LPHAs reporting not providing services to another agency at all and only 3% of LPHAs reported partially providing services to help fulfill this program's roles for another agency.

Figure 8. Access to clinical preventive services sharing (N=30)
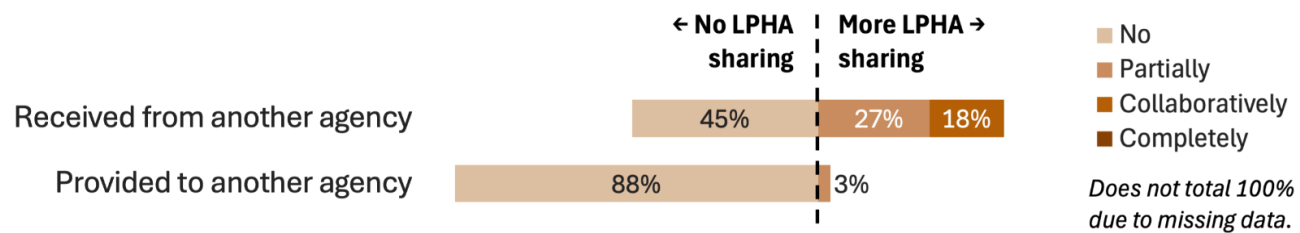
Foundational Capabilities

Assessment + Epidemiology

Vision: Apply the principles and skilled practice of epidemiology, laboratory investigation, and program evaluation to support planning, policy, and decision-making for Oregon's governmental public health system.[20]

Roles:

- Data collection and electronic information systems
- Data access, analysis, and use
- Respond to data requests and translate data for the intended audience
- Conduct and use basic community and statewide health assessments
- Infectious disease-related assessment

Implementation

Figure 9 displays the OHA-PHD level of implementation and the percentage of LPHAs at each implementation level for assessment and epidemiology roles. For LPHAs, infectious disease assessments was the role with the highest level of implementation at 48%. The role of data requests had the lowest implementation level for LPHAs at 61%, but was reported as significant by OHA-PHD.

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[20] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 32)

Figure 9. Implementation level of assessment & epidemiology (LPHA N=30)
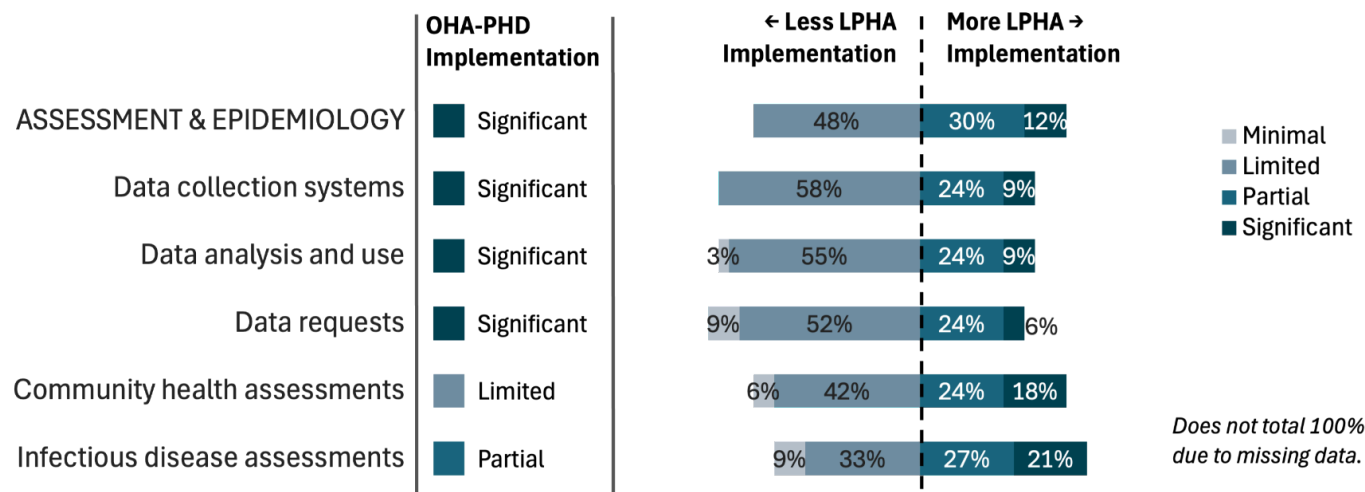
Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $73.6 million on assessment and epidemiology. An estimated additional $23.2 million is needed to achieve full implementation of this foundational capability, bringing the total cost to $96.8 million. Notably, in 2023, OHA-PHD and LPHAs received additional federal dollars for COVID-19 response and recovery, thus the gap in resources needed to fully implement assessment and epidemiology functions may be underestimated. For comparison to other foundational capabilities and programs, see Figure 12 in the full report.

Sharing details

Figure 10 displays the percentage of LPHAs sharing assessment and epidemiology work with other agencies. Many LPHAs reported receiving services from another agency to fulfill the roles of this program, at 57% (n=19), with 39% partially and 18% collaboratively. While 33% reported not receiving support from other agencies. Partners that supported the LPHAs included hospitals and

CCOs, OHA, other LPHAs, and other governmental agencies within their jurisdiction. For providing services, the difference was greater, with 18% (n=6) of LPHAs indicating providing services partially or collaboratively to another agency, and 73% (n=24) indicating not. The LPHAs that provided services to others listed mostly small and extra small LPHAs as those they supported.

Figure 10. Assessment & epidemiology sharing (N=30)

Legend:
- No
- Partially
- Collaboratively
- Completely

← No LPHA sharing | More LPHA → sharing

	No	Partially	Collaboratively	Completely
Received from another agency	33%	39%	18%	
Provided to another agency	73%	12%	6%	

Does not total 100% due to missing data.
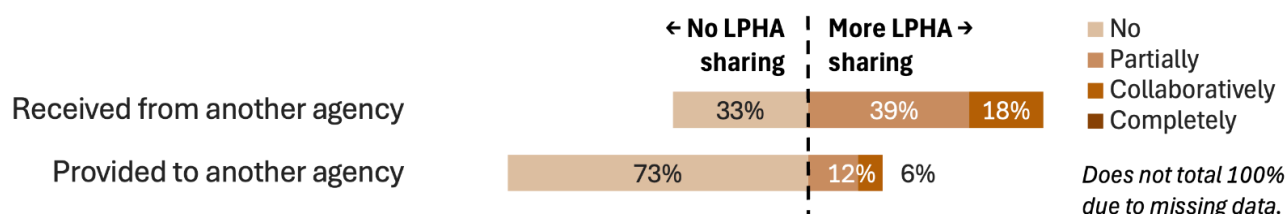
Community Partnership Development

Vision: Relationships with diverse partners allow the governmental public health system to define and achieve collaborative public health goals.[21]

Roles:
- Identify and develop partnerships
- Engage partners in policy

Implementation

Figure 11 displays the OHA-PHD level of implementation and the percentage of LPHAs at each implementation level for community partnership development roles. For LPHAs, the role of engaging partners in policy reported much lower implementation (18%) compared to the role of identifying and

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[21] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 28)

developing partnerships (51%). Notably, within this role, 15% of LPHAs reported minimal implementation. OHA-PHD reported partial implementation for all roles within this foundational capability.

Figure 11. Implementation level of community partnership development (LPHA N=30)
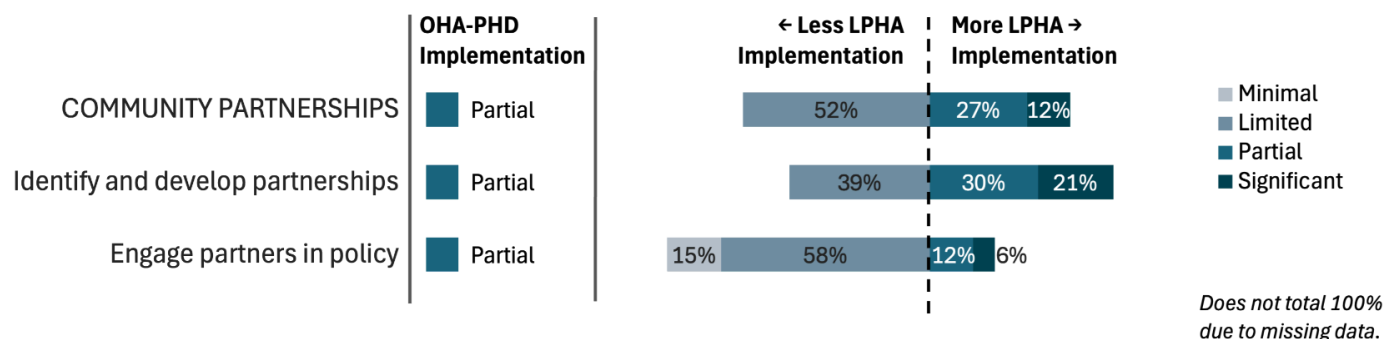

Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $25.6 million on community partnership development. An estimated additional $17.5 million is needed to achieve full implementation of this foundational capability, bringing the total cost to $43 million. For comparison to other foundational capabilities and programs, see Figure 12 in the full report.

Sharing details

Figure 12 displays the percentage of LPHAs sharing community partnership development work with other agencies. For both receiving and providing services, the majority of LPHAs reported not receiving or sharing services, at 70% (n=23) and 82% (n=27) respectively. LPHAs were slightly more likely to receive services from another agency, 21% (n=7), than to provide services, 9% (n=3), to another agency. LPHAs identified a diverse range of partners supporting their efforts to fulfill this capability, including CBOs, law enforcement, hospitals, and schools.

Figure 12. Community partnership development sharing (N=30)

Received from another agency — No LPHA sharing: 70%, More LPHA sharing: 9% 12%
Provided to another agency — No LPHA sharing: 82%, More LPHA sharing: 3% 6%

Legend:
- No
- Partially
- Collaboratively
- Completely

Does not total 100% due to missing data.
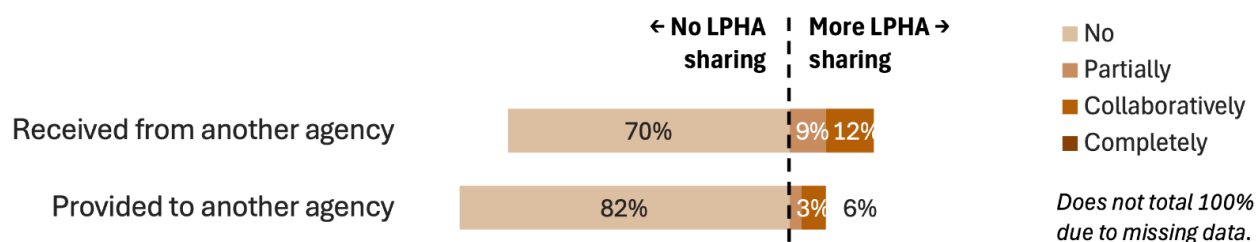
Health Equity and Cultural Responsiveness

Vision: Ensure equal opportunity to achieve the highest attainable level of health for all populations through policies, programs, and strategies that respond to the cultural factors that affect health. Correct historic injustices borne by certain populations. Prioritize the development of strong cultural responsiveness by public health organizations.[22]

Roles:
- Foster health equity
- Communicate and engage inclusively

Implementation

Figure 13 displays the OHA-PHD level of implementation and the percentage of LPHAs at each implementation level for health equity and cultural responsiveness roles. For LPHAs, all roles within this foundational capability have nearly the same level of implementation, and OHA-PHD reported limited implementation for all roles.

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[22] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 20)

Figure 13. Implementation level of health equity & cultural responsiveness (LPHA N=30)
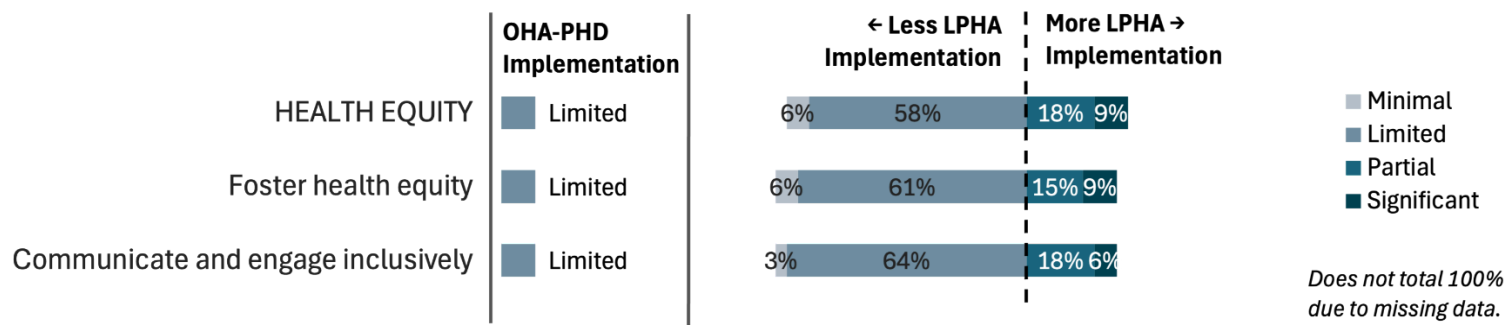
Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $9 million on health equity and cultural responsiveness. An estimated additional $18.3 million is needed to achieve full implementation of this foundational capability, bringing the total cost to $27.3 million. For comparison to other foundational capabilities and programs, see Figure 12 in the full report. Additionally, shown in Figure 13 above, OHA-PHD and LPHAs reported low levels of implementation for this foundational capability.

Sharing details

Figure 14 displays the percentage of LPHAs sharing health and culturally responsive work with other agencies. Overall, sharing was not common, 58% (n=19) of LPHAs reported not receiving any support to fulfill the roles of this capability, while 33% (n=11) of LPHAs indicated they receive services from other agencies, at 15% partially and 18% collaboratively. Partners that these LPHAs received support from were varied, including many types of CBOs and coalitions, as well as CCOs and other local governmental agencies. For providing services, 88% (n=29) of LPHAs reported not providing any services to other agencies to help fulfill the health equity and cultural responsiveness roles for those other jurisdictions. Only 3%

indicated providing support and doing so completely (previously defined as: helping another agency completely fulfill the responsibilities).

Figure 14. Health equity & cultural responsiveness sharing (N=30)

← No LPHA sharing | More LPHA → sharing

No
Partially
Collaboratively
Completely

Received from another agency: 58% | 15% | 18%

Provided to another agency: 88% | 3%

Does not total 100% due to missing data.
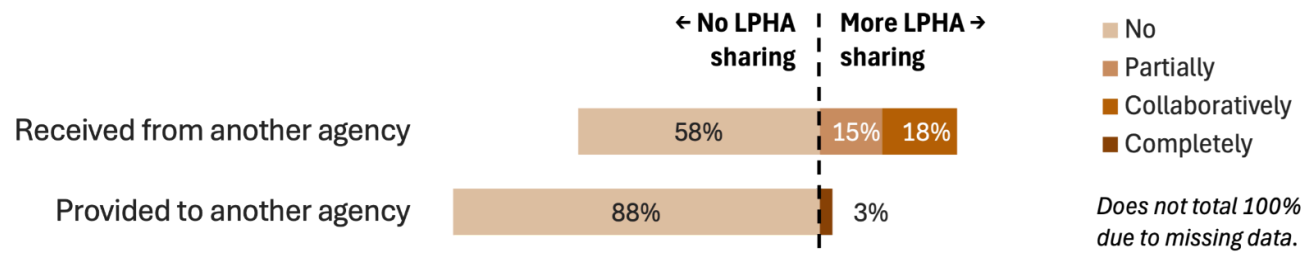
Leadership and Organizational Competencies

Vision: Provide team-based leadership within the state or LPHA that defines the strategic direction needed to achieve public health goals. This leadership will guide stakeholders to accomplish those goals.[23]

Roles:

- Leadership & governance
- Performance management, quality improvement, and accountability
- Human resources
- Information technology
- Financial management, contracts, procurement services, and facility operations

Implementation

Figure 15 displays the OHA-PHD level of implementation and percent of LPHAs at each implementation level for leadership and organizational competencies roles. For LPHAs, the leadership and governance role

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[23] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 15)

reported the highest level of implementation (51%). Significant implementation was also reported by OHA-PHD for this role. All other roles had similar levels of implementation for both LPHAs and OHA-PHD.

Figure 15. Implementation level of leadership and organizational competencies (LPHA N=30)
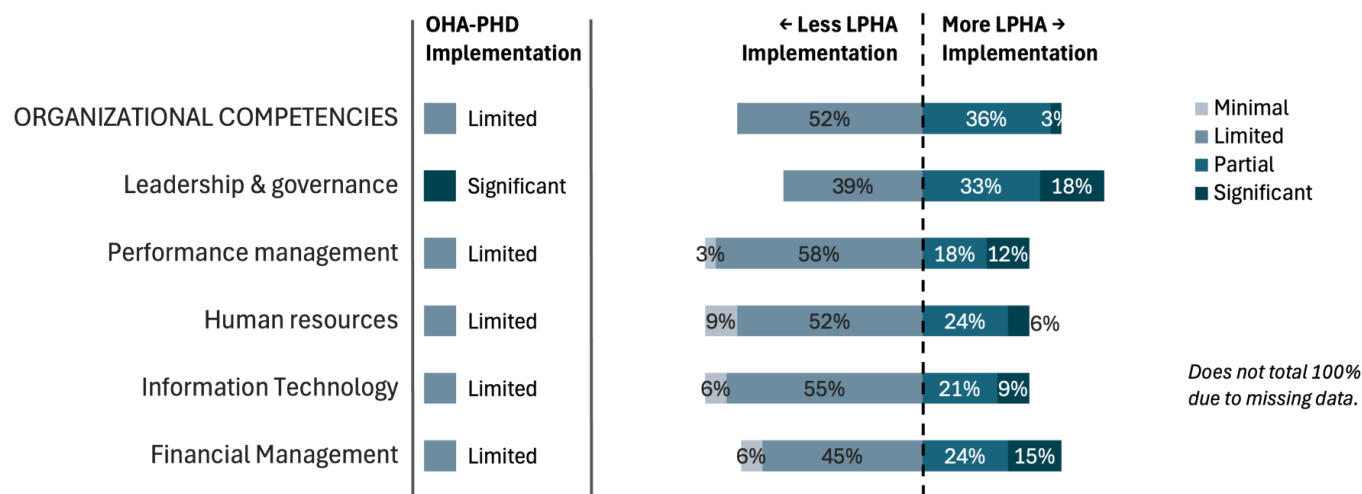

Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $44.1 million on leadership and organizational competencies. An estimated additional $31.8 million is needed to achieve full implementation of this foundational capability, bringing the total cost to $75.9 million. For comparison to other foundational capabilities and programs, see Figure 12 in the full report.

Sharing details

Figure 16 displays the percentage of LPHAs sharing leadership and organizational competencies with other agencies. Overall, sharing was not common for this capability. For LPHAs that received support from other agencies to fulfill these roles, 27% (n=9) received that support partially (15%) and collaboratively (12%). Partners were primarily other governmental agencies and departments, typically to assist with human

resources and information technology tasks. But most indicated not receiving any services from, nor providing services to, any other agency (64% and 85% respectively). Only 6% (n=2) reported partially providing support to another agency.

Figure 16. Leadership and organizational competencies sharing (N=30)
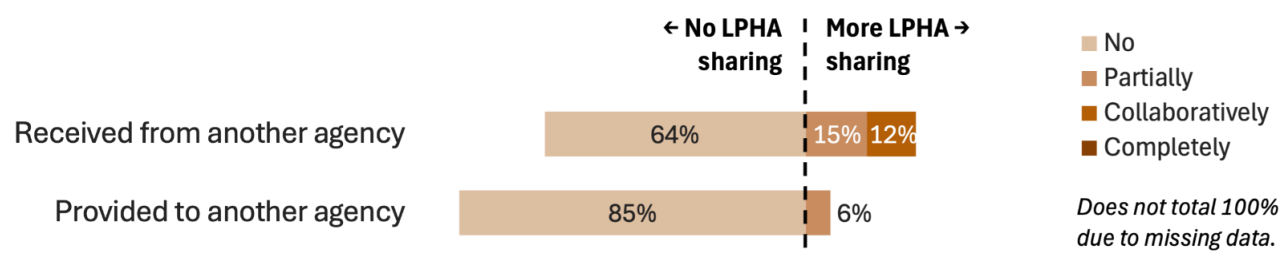
Policy and Planning

Vision: The public health system will implement policy, systems, and environmental changes to meet the community's changing needs and align with state and federal policies. Public health policy, systems, and environmental changes will eliminate health disparities, reduce leading causes of death and disability, and improve health outcomes for all people in Oregon.[24]

Roles:
- Develop and implement policy
- Improve policy with evidence-based practice
- Understand policy results

Implementation

Figure 17 displays the OHA-PHD level of implementation and the percentage of LPHAs at each implementation level for policy and planning roles. For LPHAs, all roles within this foundational capability

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[24] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 47)

reported similarly low levels of implementation, with OHA-PHD reporting limited implementation for those same roles. Notably, 21% of LPHAs reported minimal implementation in the policy and planning role, particularly in efforts to improve policy.

Figure 17. Implementation level of policy & planning (LPHA N=30)
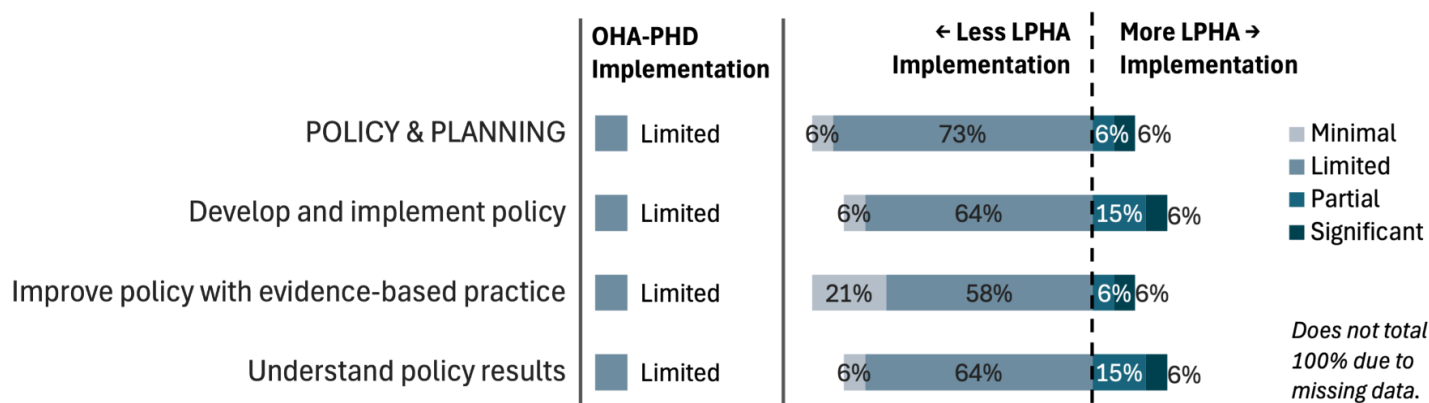
Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $12.1 million on policy and planning. An estimated additional $6.8 million is needed to achieve full implementation of this foundational capability, bringing the total cost to $18.9 million. For comparison to other foundational capabilities and programs, see Figure 12.

Sharing details

Figure 18 displays the percentage of LPHAs sharing policy and planning work with other agencies. Similar to the other capabilities, sharing for policy and planning is generally low. The majority of LPHAs reported not receiving any support from, nor providing support to, other agencies, 70% (n=23) and 88% (n=29), respectively. LPHAs that reported receiving services to help fulfill the roles of this capability, 21% (n=7),

indicated many medium, small, and extra small LPHAs as their partners they received services from. Only 3% of LPHAs indicated providing support to other agencies. These partners were small LPHAs as well.

Figure 18. Policy & planning sharing (N=30)
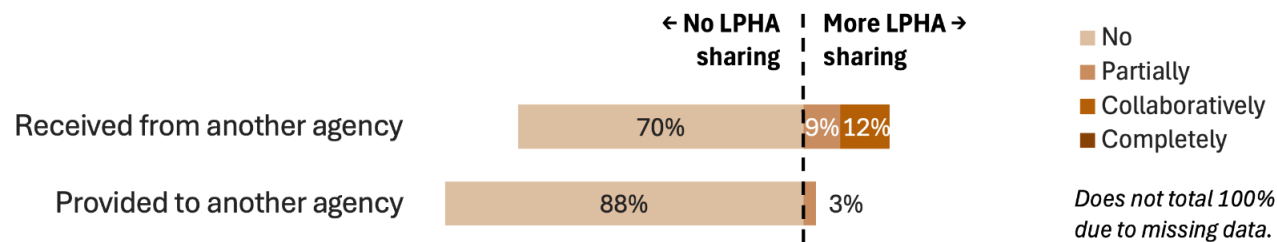
Emergency Preparedness and Response

Vision: A healthy community is a resilient community, which is prepared and able to respond to and recover from public health threats and emergencies.[25]

Roles:
- Prepare for emergencies
- Respond to emergencies
- Coordinate and communicate before and during an emergency

Implementation

Figure 19 displays the OHA-PHD level of implementation and the percentage of LPHAs at each implementation level for emergency preparedness and response roles. For LPHAs and OHA-PHD, communicating about emergencies had the highest level of implementation (54% and partial, respectively). All other roles within this foundational capability reported nearly the same level of implementation for both LPHAs and OHA-PHD.

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[25] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 58)

Figure 19. Implementation level of emergency preparedness and response (LPHA N=30)
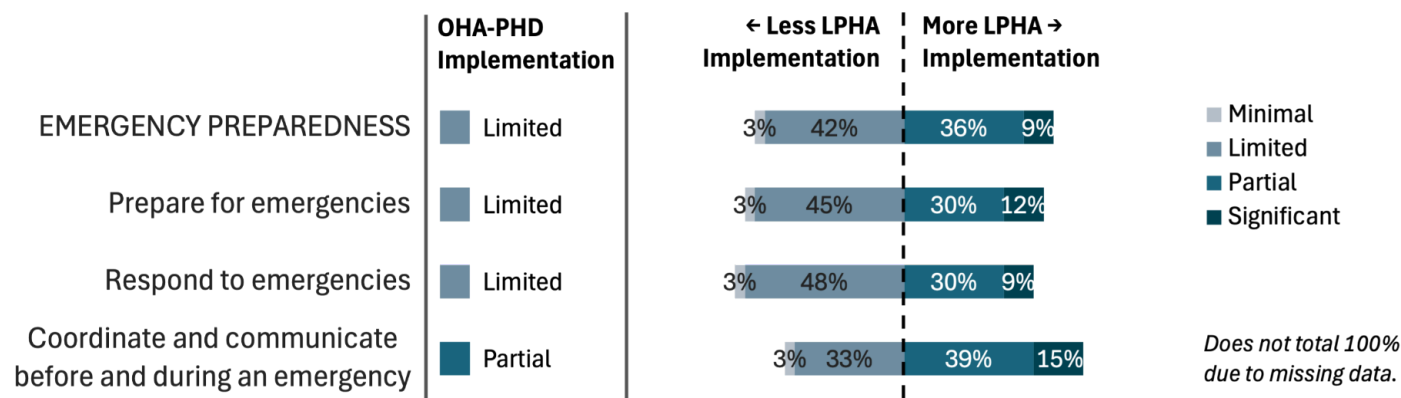
Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $30.7 million on emergency preparedness and response. An estimated additional $14.6 million is needed to achieve full implementation of this foundational capability, bringing the total cost to $45.3 million. For comparison to other foundational capabilities and programs, see Figure 12 in the full report.

Sharing details

Figure 20 displays the percentage of LPHAs sharing emergency preparedness and response work with other agencies. This capability saw slightly more sharing than others, with 48% (n=16) of LPHAs reporting that they receive support and engage in partnerships to fulfill the roles of emergency preparedness and response. The partners indicated were varied and included regional coalitions, hospitals, CCOs, OHA, other county government departments, and CBOs, including the Red Cross. The majority of LPHAs, 88% (n=29) reported not providing any support to other agencies. The 3% that reported collaboratively providing services listed small LPHAs.

Figure 20. Emergency preparedness and response sharing (N=30)

Received from another agency: No 42%, Partially 21%, Collaboratively 27%

Provided to another agency: No 88%, 3%

← No LPHA sharing | More LPHA → sharing

Legend: No, Partially, Collaboratively, Completely

Does not total 100% due to missing data.

Communications

Vision: Governmental public health is a trusted source of clear, consistent, accurate, and timely health information. Governmental public health consistently uses health communication strategies, interventions, and tools to eliminate health disparities and achieve equity.[26]

Roles:

- Regular communications
- Emergency communications

Implementation

Figure 21 displays the OHA-PHD level of implementation and percent of LPHAs at each implementation level for communications roles. For LPHAs, emergency communications had a higher level of implementation than regular communications (69% and 48%, respectively). OHA-PHD reported limited implementation for all communication roles.

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[26] Oregon Health Authority. (2017). *Public Health Modernization Manual.* (p 53)

Figure 21. Implementation level of communications (LPHA N=30)

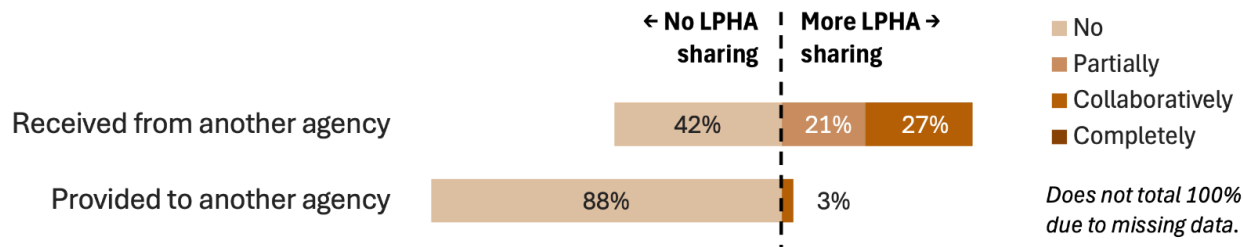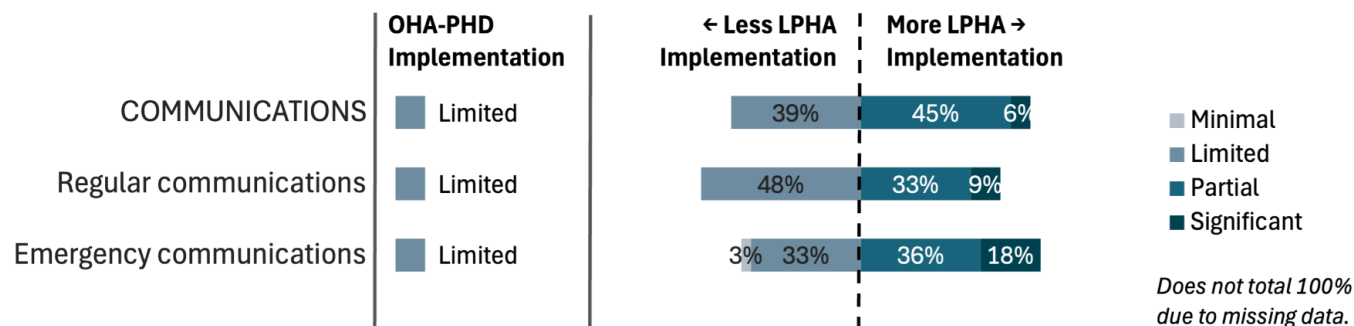## Cost details

In FY23, OHA-PHD and LPHAs collectively reported spending $4.1 million on communications. An estimated additional $11.3 million is needed to achieve full implementation of this foundational capability, bringing the total cost to $15.4 million. For comparison to other foundational capabilities and programs, see Figure 12.

Sharing details

Figure 22 displays the percentage of LPHAs sharing communications work with other agencies. A slightly higher percentage of LPHAs reported receiving services from another agency, compared to those who reported not receiving services, 48% (n=16) and 42% (n=14) respectively. The partners listed that helped support fulfilling the roles of this capability primarily included schools, CLHO, CBOs, other local government departments, and state departments such as the Department of Environmental Quality. The difference in providing services to other agencies is more pronounced, with only 3% (n=1) of LPHAs indicating they provide services, while 88% (n=29) reported not providing services to another agency.

Figure 22. Communications sharing (N=30)

	← No LPHA sharing	More LPHA → sharing			Legend
					▢ No
					▪ Partially
					▪ Collaboratively
					▪ Completely
Received from another agency	42%	21%	27%		
Provided to another agency	88%	3%			*Does not total 100% due to missing data.*
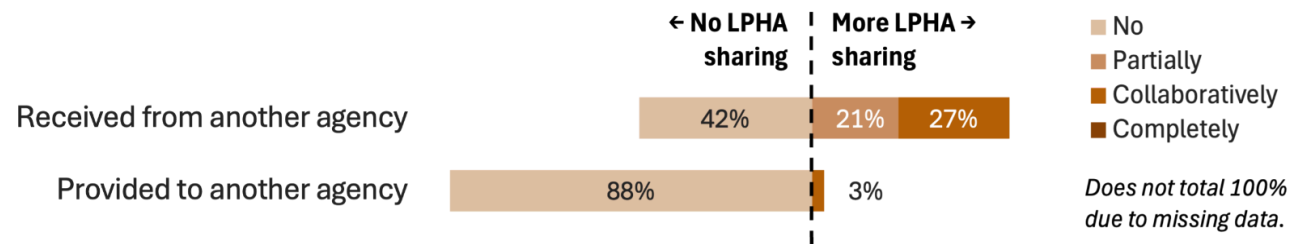
Expertise and Capacity Levels of Foundational Capabilities and Programs

Expertise and Capacity Scale

LPHAs and OHA-PHD used the following scale to rate their expertise and capacity on all foundational capability and programmatic roles (Figure 23).

Figure 23. Expertise and capacity rating scale

Expertise		Capacity
(knowledge, skills, education, and experience related to the role, capability, or program)		*(staff and/or other resources, materials, and supplies to implement the role, capability, or program)*
Absent: No or basic awareness of the expertise, but limited ability to apply it.	1	**Absent:** Staff time and other resources are not present or are largely unavailable.
Basic: Knowledge of the expertise and can apply it at a basic level.	2	**Minimal:** some staff time and/or other resources are present to complete basic functions.
Proficient: Expertise is available and can be applied adeptly.	3	**Moderate:** Most staff time and other resources are present to partially implement most functions.
Expert: Expertise is routinely applied and those with the expertise can build it within others.	4	**Full:** Sufficient staff time and other resources are present to fully implement all functions.

Foundational Programs

Figure 24 presents reported expertise and capacity ratings for all foundational programs. There are no instances of expertise and capacity ratings falling on the extremes of the rating scale (i.e., none were rated as completely "absent" or "full") for each foundational program. Since these ratings are used to calculate implementation levels, this consistency is noteworthy because it demonstrates that implementation levels are not driven by one measure over the other.

Figure 24. Expertise and capacity level of OHA-PHD and LPHAs (LPHA N=30)
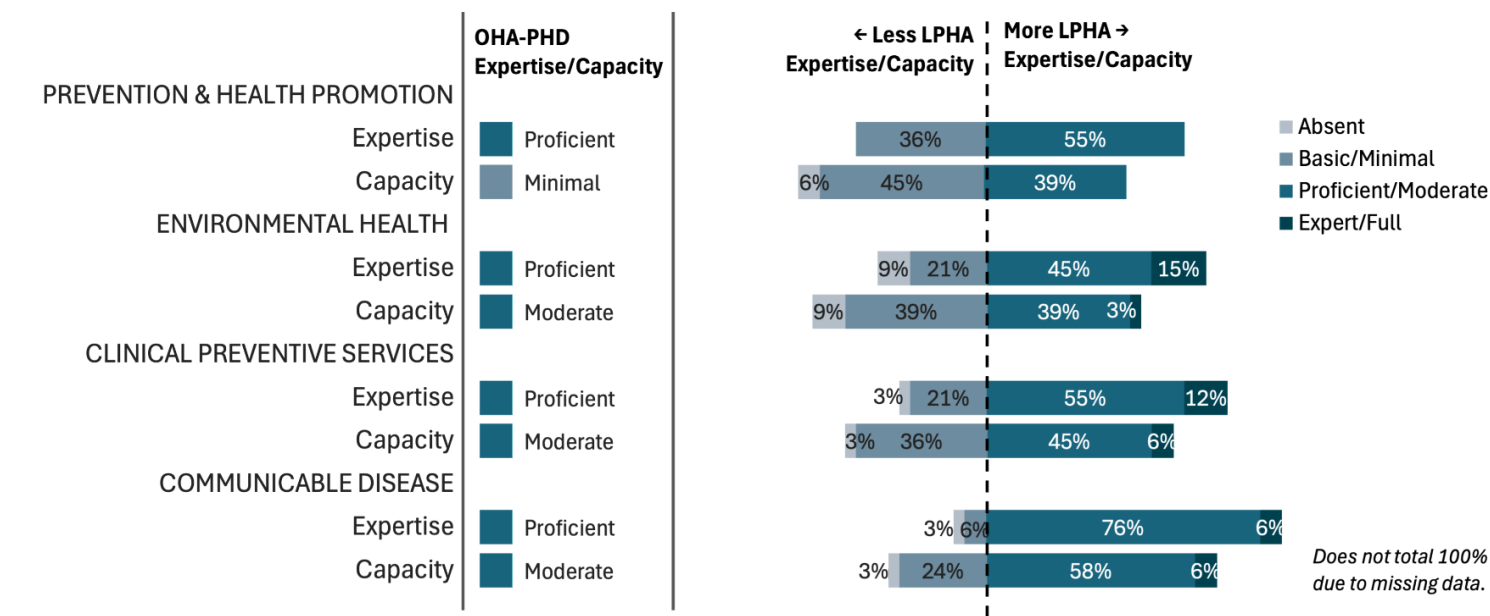
Foundational Capabilities

Figure 25 presents reported expertise and capacity ratings for all foundational capabilities. Overall, there are no instances of expertise and capacity ratings falling on the extremes of the rating scale for each foundational capability.

Figure 25. Expertise and capacity level of OHA-PHD and LPHAs (LPHA N=30)

	OHA-PHD Expertise/Capacity	← Less LPHA Expertise/Capacity	More LPHA → Expertise/Capacity
POLICY & PLANNING			
Expertise	Basic	3% 55%	30% 3%
Capacity	Minimal	6% 67%	12% 6%
HEALTH EQUITY			
Expertise	Basic	3% 52%	30% 6%
Capacity	Minimal	6% 48%	30% 6%
ASSESSMENT & EPI			
Expertise	Expert	39%	39% 12%
Capacity	Moderate	42%	45% 3%
COMMUNITY PARTNERSHIPS			
Expertise	Proficient	33%	45% 12%
Capacity	Moderate	45%	36% 9%
EMERGENCY PREPAREDNESS			
Expertise	Proficient	3% 30%	45% 12%
Capacity	Minimal	39%	48% 3%
COMMUNICATIONS			
Expertise	Basic	27%	55% 9%
Capacity	Minimal	39%	48% 3%
ORGANIZATIONAL COMPETENCIES			
Expertise	Proficient	27%	61% 3%
Capacity	Minimal	45%	42% 3%

Legend:
- Absent
- Basic/Minimal
- Proficient/Moderate
- Expert/Full

Does not total 100% due to missing data.

Appendix H: OHA-PHD and LPHA Cost data by Foundational Capability and Programs

Foundational Programs

Communicable Disease Control

Figure 1. Communicable disease spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$125.9 M	$9.7 M	$135.6 M
OHA-PHD	$100.4 M	$5.7 M	$106.1 M
LPHAs	$25.4 M	$4 M	$29.5 M

Prevention & Health Promotion

Figure 2. Prevention and health promotion spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$125.7 M	$63.3 M	$189 M
OHA-PHD	$81.9 M	$44.7 M	$126.6 M
LPHAs	$43.9 M	$18.6 M	$62.5 M

Environmental Health

Figure 3. Environmental health spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$71 M	$47.3 M	$118.4 M
OHA-PHD	$42.4 M	$27.4 M	$69.8 M
LPHAs	$28.6 M	$20 M	$48.6 M

Access to Clinical Preventive Services

Figure 4. Access to clinical preventive services spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$80.4 M	$18.2 M	$98.6 M
OHA-PHD	$61.1 M	$9.2 M	$70.3 M
LPHAs	$19.3 M	$9 M	$28.3 M

Foundational Capabilities

Assessment & Epidemiology

Figure 5. Assessment & epidemiology spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$73.6 M	$23.2 M	$96.8 M
OHA-PHD	$66 M	$13 M	$79 M
LPHAs	$7.6 M	$10.2 M	$17.8 M

Community Partnership Development

Figure 6. Community partnership spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$25.6 M	$17.5 M	$43 M
OHA-PHD	$19.6 M	$11 M	$30.6 M
LPHAs	$6 M	$6.4 M	$12.4 M

Health Equity and Cultural Responsiveness

Figure 7. Health equity & cultural responsiveness spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$9 M	$18.3 M	$27.3 M
OHA-PHD	$2 M	$12.8 M	$14.9 M
LPHAs	$7 M	$5.4 M	$12.4 M

Leadership and Organizational Competencies

Figure 8. Leadership & organizational competencies spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$44.1 M	$31.8 M	$75.9 M
OHA-PHD	$19.9 M	$986,207	$20.9 M
LPHAs	$24.1 M	$30.9 M	$55 M

Policy and Planning

Figure 9. Policy & planning spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$12.1 M	$6.8 M	$18.9 M
OHA-PHD	$7.7 M	$845,807	$8.5 M
LPHAs	$4.4 M	$5.9 M	$10.3 M

Emergency Preparedness and Response

Figure 10. Emergency preparedness spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$30.7 M	$14.6 M	$45.3 M
OHA-PHD	$23.8 M	$3.8 M	$27.6 M
LPHAs	$6.9 M	$10.8 M	$17.7 M

Communications

Figure 11. Communications spending and cost estimates (LPHA N=30)

	FY23 annual spending	Annual cost gap*	Total annual cost to fully implement*
Combined OHA-PHD & LPHAs	$4.1 M	$11.3 M	$15.4 M
OHA-PHD	$118,770	$868,864	$987,634
LPHAs	$4 M	$10.4 M	$14.4 M

Note: All cost data by foundational capabilities and programs include specific COVID-19 adjustments (for more detail, see Appendix A of the final CCA report)

FTE

FTE/Occupation Types

A major cost associated with providing foundational capabilities and programs is the Public Health Workforce.

LPHA

Figure 12 displays the FY23 full-time equivalent (FTE), gap, and full implementation FTE estimates at each foundational capability, program, and additional important programs for LPHAs. Among the foundational capabilities and programs, the three largest gaps were seen in prevention and health promotion at 99.8 FTE, environmental health at 97.4 FTE, and leadership and organizational competencies at 73.6 FTE. The three smallest gaps were in health equity and cultural responsiveness at 22.5 FTE, policy and planning at 22.8 FTE, and access to clinical preventive services at 25.4 FTE. The

assessment results indicated that approximately 139.4 FTE staff in 2023 were hired for COVID-19 response, and a majority of these occupations were behavioral health and social services staff, community health workers, and registered nurses.

Figure 12. LPHA FY23 FTE, Full Implementation FTE Estimates, and FTE Gap (adjusted to remove COVID-19 Labor FTE from FY23) (N=30)

Capability/program	FY23 FTE	FTE Gap	Full Implementation FTE Estimates
Assessment & epidemiology	42.3	47.4	89.7
Community partnership development	27.0	35.0	62.0
Health equity & cultural responsiveness	31.5	22.5	54.0
Leadership & organizational competencies	89.3	73.6	162.9
Policy & planning	25.2	22.8	48.0
Emergency preparedness & response	30.7	29.7	60.4
Communications	22.4	29.7	52.1
Communicable disease control	78.4	48.6	127.0
Prevention & health promotion	188.0	99.8	287.8
Environmental health	148.8	97.4	246.3
Access to clinical preventive services	78.0	25.4	103.4
Capabilities/programs only FTE	761.6	532.1	1293.7
Additional important programs	516.2	123.8	639.9
Total FTE	1277.7	655.9	1933.6

OHA-PHD

Figure 13 displays the FY23 FTE, gap, and full implementation FTE estimates for each foundational capability, program, and additional important programs for OHA-PHD. The three largest gaps were observed in prevention and health promotion at 21.5 FTE, environmental health at 20.3 FTE, and communicable disease control at 13.0 FTE. The smallest gap was seen in communications at 1.0 FTE. Health equity and cultural responsiveness, and access to clinical preventive services, both had

the same FTE gap at 2.5. Community partnership development had the third lowest gap at 3.0 FTE. Importantly, FY23 FTE was adjusted to exclude COVID-19 FTE.

Figure 13. OHA-PHD FY23 FTE, Full Implementation FTE Estimates, and FTE Gap (adjusted to remove COVID-19 Labor FTE from FY23)

Capability/program	FY23 FTE	FTE Gap	Full Implementation FTE Estimates
Assessment & epidemiology	160.5	8.0	168.5
Community partnership development	34.0	3.0	37.0
Health equity & cultural responsiveness	5.7	2.5	8.2
Leadership & organizational competencies	37.7	6.0	43.7
Policy & planning	22.6	4.8	27.3
Emergency preparedness & response	32.0	4.6	36.6
Communications	0.4	1.0	1.4
Communicable disease control	104.3	13.0	117.3
Prevention & health promotion	150.7	21.5	172.2
Environmental health	129.0	20.3	149.3
Access to clinical preventive services	116.3	2.5	118.7
Capabilities/programs only FTE	793.2	87.0	880.2
Additional important programs	162.7	3.5	166.2
Total FTE	955.9	90.5	1046.4

Note: The workforce indicated in foundational capabilities may appear smaller than the actual number since some of the workforce skillsets are captured in foundational programs.