OREGON'S LOCAL PUBLI C HEALTH WORKFORCE REPORT, 2021

Oregon Coalition of Local Health Officials

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Letter from CLHO's Chair

Dear colleagues and friends,

As Chair of the Oregon Coalition of Local Health Officials (CLHO), I am pleased to present *Oregon's Local Public Health Workforce Report, 2021*, with deep appreciation to the CLHO staff, Board of Directors, and other local health department leadership who prioritized this effort during some of the most demanding months of the pandemic response.

The need for a more robust public health infrastructure is not a revelation of the pandemic. It has long been a goal, for example, of the federal government's Healthy People initiative and of public health modernization in Oregon. Although data and technology are often associated with infrastructure and are critical public health tools, the foundation of public health infrastructure is not technology, it is people. Public health is people-powered. All public health services require enough capable and qualified health professionals working at the local level to assess and respond to community health needs.

Modernization of the public health system in Oregon is based on the recognition that public health has been severely underfunded and understaffed for decades. Before the pandemic began, the Legislature had begun to make investments in local public health infrastructure. The pandemic, however, combined with climate emergencies including wildfires, heat waves, and winter storms, as well as the continued surfacing of the painful outcomes of systemic oppression, made starkly clear the challenges that remain to achieve the vision of public health modernization in Oregon.

A quotation popular in health care improvement circles aptly captures the experiences of local public health over the past two years: "Every system is perfectly designed to get the results it gets." This report is an attempt to draw out, from all of the pain, struggle, confusion, and exhaustion of the last two years, some of the lessons learned about the public health system and what is needed to build a strong and sustainable work force.

The good news is that we have welcomed many new people into the workforce in the past two years, a diverse group of people who answered the call to serve their communities. We have an opportunity now to create the structures and supports to train and retain this workforce for the important work of modernization and achieving health equity in our communities.

Sincerely,

Jocelyn Warren, PhD, MPH
Chair, Oregon Coalition of Local Health Officials

Executive Summary

Oregon's local public health system is facing a pivotal moment. The COVID-19 pandemic has demonstrated the need for a well-funded and supported public health workforce, but many challenges remain to being able to build up public health infrastructure. The goal of this report is to shed light on these challenges and to provide recommendations on the steps necessary to address those challenges.

CLHO staff interviewed leaders at 30 local public health authorities (LPHAs) between May 2021 to August 2021. CLHO staff gathered data on the number of full-time equivalents (FTEs) working in local public health; pay scales for public health nurses, health administrators, epidemiologists, and environmental health specialists; and challenges and successful strategies in recruiting and retaining public health professionals.

Key findings include:

- As of August 2021, Oregon's LPHA workforce was made up of 1,143.9 FTEs for non-COVID roles. Between March 2020 and August 2021, LPHAs added 761.1 FTE for the COVID-19 response for a total workforce of 1,905.0 FTE. 22.1% of this total FTE serve in rural settings (see Figure 8).
- LPHAs serving under 50,000 people have limited epidemiological capacity (see Table 3).
- The average starting wage across all counties is $29.36 per hour for public health nurses, $45.28 per hour for health administrators, $30.39 per hour for epidemiologists, and $26.33 per hour for environmental health specialists (see Table 4).
- LPHA leaders discussed multiple challenges to recruiting public health professionals, including having a limited pool of diverse and qualified applicants, working around strict protocols from human resource departments, offering competitive pay, and having limited affordable housing options in their counties.
- LPHA leaders discussed multiple challenges when hiring public health professionals, including hiring those with advanced public health education but little knowledge of public health practice and needing to invest significant time into training and supporting new staff.
- LPHA leaders discussed multiple challenges to retaining staff, including the lack of upward mobility within the LPHA, the need for LPHA staff to take on many roles ("wear many hats"), and staff burnout.

Some preliminary recommendations from these findings include (see Table 8 for the full list):

- Examine position descriptions and lower the minimum requirements and/or weigh lived experience over education to increase diversity.

- Increase the workforce by both “home-growing” professionals from within communities and by reducing barriers for out-of-state professionals.
- Work with county commissioners and labor unions to increase pay scales for public health professionals, particularly for nurses.
- Work with academic institutions at all levels (K-12, community colleges, undergraduate programs, and graduate programs) to increase awareness around public health careers, to recruit for internships and jobs, to create opportunities for public health certifications without needing a bachelor’s or master’s degree, and to ensure a workforce prepared for public health practice.
- Create supportive structures (such as caucuses and support groups) for LPHA staff who have few local counterparts and/or who wish to advance their careers.

CLHO will continue to work with partners to develop these recommendations and to develop a statewide strategic plan for workforce development.

Introduction

Local Public Health Authorities (LPHAs) are a central piece of Oregon's public health system. They provide essential services - ranging from investigating disease outbreaks to providing immunizations, planning health promotion initiatives, and ensuring healthy water systems - that have a wide-reaching impact on their communities. Despite this vital role in their communities, LPHAs and the wider public health system have faced multiple challenges in recent years that have stretched this local system and its workforce beyond capacity, including persistent structural barriers. Chronic underinvestment, "siloed" funding streams, the increasing number of public health crises (sometimes happening concurrently, like COVID-19 and wildfires), and increased scrutiny and criticism have put incredible stress on the local public health system.

With the increased attention and demand on public health systems, this is also a time of opportunity. Public health and the work that public health professionals do have been featured on front-page news nearly every day of the last nearly two years of the COVID-19 pandemic, raising the profile of public health work and its importance. This increased attention and persistent advocacy efforts have resulted in new investments from both state and federal sources, including the American Rescue Plan Act (APRA) public health workforce funds, additional Public Health Modernization investments from the Oregon Legislature, the not-yet passed Public Health Infrastructure Saves Lives Act introduced in the US Senate, and the increased number of grant opportunities focused on public health workforce development.[1,2,3] In addition, a growing number of students are interested in the public health field with schools of public health around the nation reporting increased enrollments.[4] There are clear opportunities for Oregon's LPHAs to strengthen their workforce and to advocate for increased and stable funding for public health work.

The following report explores the key challenges Oregon's LPHAs face and the potential opportunities for developing the local public health workforce. It is based on interviews with local public health administrators across Oregon and serves several purposes. The first is to establish a baseline estimate of Oregon's local public health workforce from which to measure future changes and additions resulting from recent investments. It is also an effort to identify challenges and strategies for recruiting and retaining qualified and diverse staff, and it breaks down the complex factors influencing how LPHAs develop their workforce. Finally, it offers recommendations and avenues for county commissioners, state policy makers, state and local public health officials, advocates, and other partners to consider for addressing public health workforce challenges. It is important to note that this report looks into challenges facing CLHO's members, or local

governmental public health authorities. It does not encompass the Oregon Health Authority, local community-based organizations, or tribal health authorities which each have additional unique challenges to providing public health services and developing their workforces.

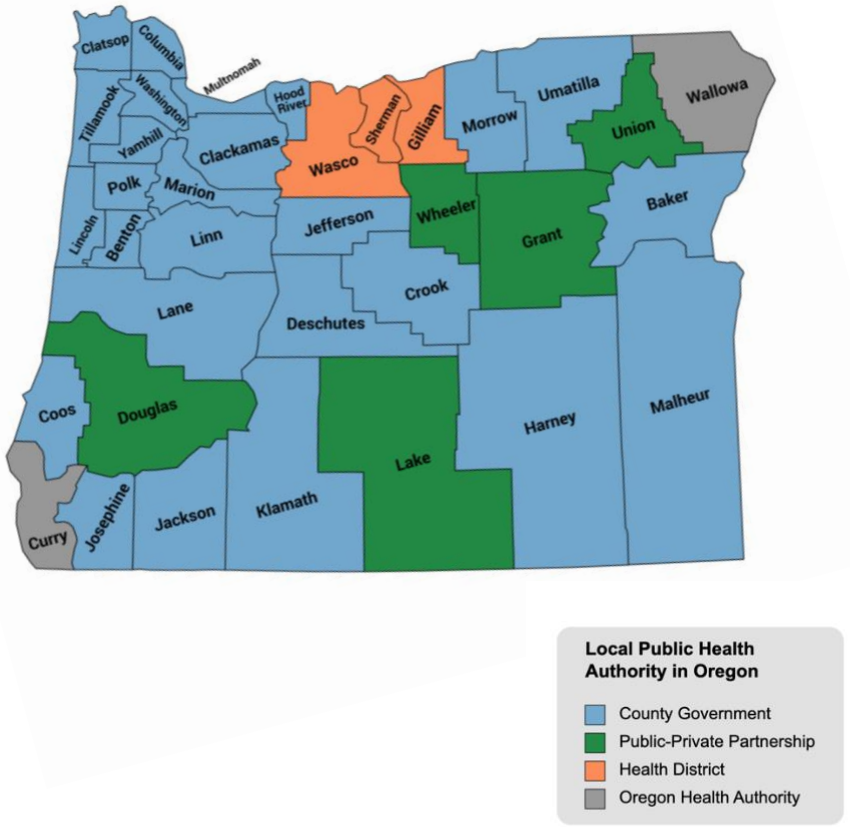
Background and Context

Oregon's Local Public Health System

Oregon has a decentralized public health system, with the Oregon Health Authority (OHA) functioning as the state health department and overseeing the Oregon Public Health Advisory Board (PHAB) which serves as the advising body for public health policy development. At the local level, 32 local public health authorities (LPHAs) provide oversight and services. OHA and LPHAs also partner with community-based organizations (CBOs) and the nine federally-recognized tribal governments to better reach all communities and populations in Oregon.

Of Oregon's 32 LPHAs, 26 are part of county governments, one serves a three-county health district, and five are public-private partnerships. Two of Oregon's counties, Wallowa and Curry, ceded their local authority back to OHA in 2018 and 2021, respectively.[5,6] LPHAs are funded through a combination of county dollars, investments approved by the Oregon State Legislature, and grants through the state and/or federal government. LPHAs are largely under the supervision of the county boards of commissioners, the elected governing body for each county, though some public-private partnerships may also have a Board of Directors.

Figure 1
Public Health Authority in Oregon Counties

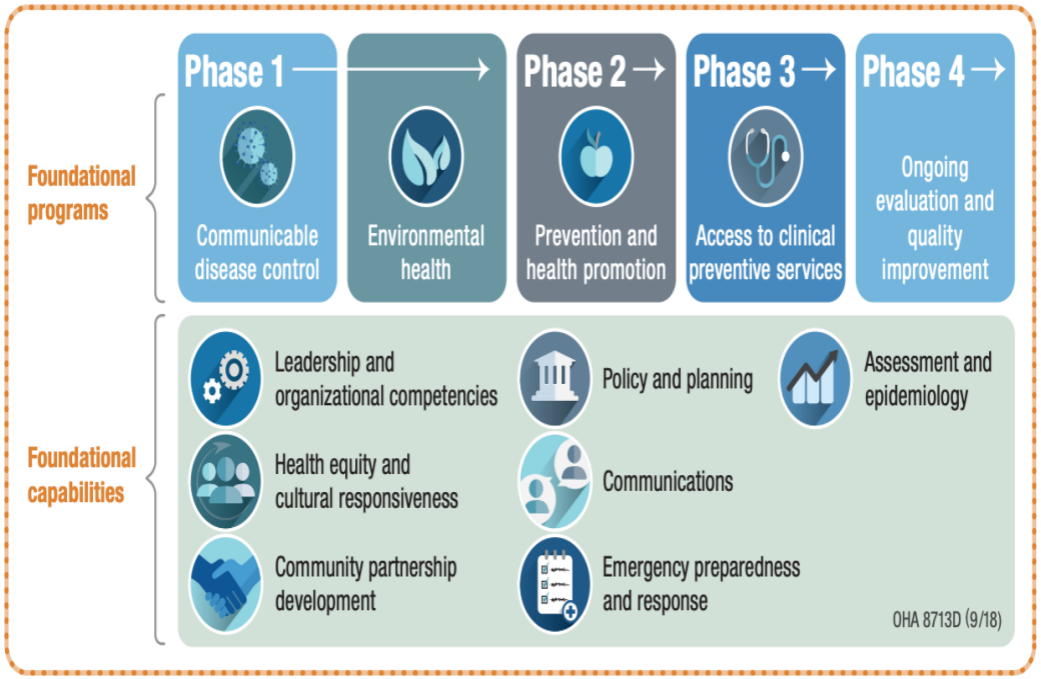


Public Health Modernization

An important component of any discussion of Oregon's public health system is Public Health Modernization. In 2014, the Task Force on the Future of Public Health (created by HB 2348 during the 2013 Legislative Session) released a report describing an effective, modern public health system that provides foundational programs to all Oregonians and foundational capabilities that all LPHAs should possess to keep pace with new and emerging threats and trends in public health (see Figure 1).[7] In 2015, the Oregon Legislature passed these recommendations into law through HB 3100, commonly known as Public Health Modernization.[8] The law also established that adequate funding (estimated to be a total $210 million per two-year budget cycle) for fully implementing Public Health Modernization would be approved by the Oregon Legislature over 10 years, and the model was separated into phases of implementation to match funding levels.[9] This law is essential to include in any description of Oregon's public health system as it is still in the process of being funded/implemented and touches nearly every aspect of public health practice in Oregon. As of the writing of this report, the Oregon Legislature had invested a total of $60.6 million into Public Health Modernization, and the public health system had begun working on non-regulatory environmental health programs in the second part of Phase 1 (see Figure 2).[10,11]

Figure 2

Proposed Phases for Foundational Programs for Public Health Modernization



Note: Foundational capabilities and programs and proposed phased implementation. Taken from *Public Health Modernization: Funding Report to Legislative Fiscal Office*, by Oregon Health Authority, 2020, p. 7. (https://www.oregon.gov/oha/PH/ABOUT/TASKFORCE/Documents/2020-Report-to-LFO.pdf). Copyright 2020 by the Oregon Health Authority.

Current Context and Challenges for Public Health

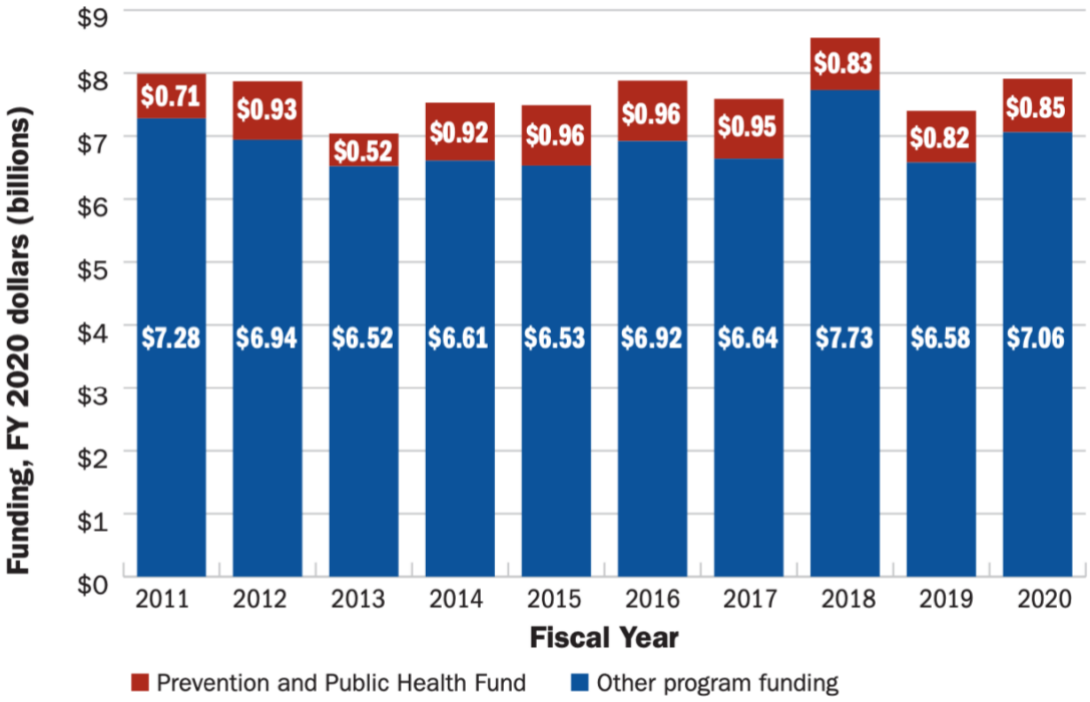
The local public health workforce, both nationally and in Oregon, exists in a complex context and faces multiple challenges. While there are many potential topics here for discussion, it is beyond the scope of this report to address them all. The current challenges and trends researched to provide context for this report include chronic underfunding, emerging areas of work, the politics involved in public health, the increasing burnout and exodus among the public health workforce, and the current makeup and trends in the public health workforce.

Funding

Inadequate funding is the longest-standing problem facing the US public health system. Prior to the COVID-19 pandemic, estimates showed that public health spending in the US only accounted for between 1.5%-3% of total health spending.[12,13] Federal funding to public health via the Centers for Diseases Control (CDC) was drastically cut during the Great Recession, and investment levels have remained flat despite occasional influxes of funds for emerging issues.[13,14] Program funding for the CDC in 2011 was approximately $7.99 billion; when adjusting for inflation and excluding one-time funding, this program funding decreased to $7.91 billion for the year 2020 (see Figure 3).[15] Because the CDC distributes almost 75% of its budget to the state health departments who then distribute it to local health departments, this stagnant budget has a trickle-down impact for all levels of public health services.[13] A 2021 study showed that most states' spending on public health has also remained flat or decreased from 2008 to 2018 with an average decrease in per capita spending from $80.40 per in 2008 to $75.83 in 2018.[14]

Federal attempts to allocate additional funds to public health have been largely hollow. For example, the Prevention and Public Health Fund (PPHF) was established as part of the Affordable Care Act with the intent of allocating $2 billion annually to support sustained investment in public health prevention programs. However, since this allocation began in 2015, funds have continually been diverted to other priorities; in 2020, this fund received approximately $895 million, less than half of the intended allotment (see Figure 3).[15]

Figure 3
CDC Program Funding, Adjusted for Inflation, FY 2011 - 2020



Note: CDC Program Funding, adjusted for inflation, FY 2011 – 2020. Taken from *The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations, 2020*, by Trust for America's Health, 2020, p. 11. (https://www.tfah.org/report-details/publichealthfunding2020/). Copyright 2020 by the Trust for America's Health

In addition to inadequate investment, public health funding comes from a variety of disjointed sources which can cause challenges in using the funds effectively or flexibly. Funding can come from federal, state, and/or local sources with little coordination for the intended purpose of the funds and different requirements for evaluation and reporting.[16] In addition, public health funding is often categorical which requires health departments to spend the funds on specific conditions, diseases, or programs and limits their ability to be flexible, to address problems innovatively, to go beyond addressing defined risk factors for those conditions, or to update ancillary infrastructure such as data systems and technology.[15,17] This system has grown to "reflect funder dictates, the flows of money, tightly compartmentalized programmatic categories, and the skill of public health leaders in 'braiding' together disparate funding streams…" rather than reflecting the needs of the community it is intended to serve.[16]

While the US public health system did receive significant investments for the COVID-19 pandemic response efforts, such as the Coronavirus Relief Funds (the CARES Act) and the American Rescue Plan Act (ARPA) funds, they generally followed the same pattern described above of being one-time funding designated for COVID-specific activities.[18,19] This reactionary investment, also known as the "boom bust cycle," is common when emergent issues arise and stops once the immediate threat is resolved, as was the case with concerns of bioterrorism attacks following 9/11 or the H1N1 outbreak in 2009.[13,17] It what some call the US's default approach to public health: "neglect, panic, repeat." [14,20]

However, there is a unique opportunity for Oregon's public health system with the aforementioned funding for Public Health Modernization. While the $60.6 million invested as of 2021 is still short of the $210 million funding gap estimated in the 2016 Public Health Modernization Assessment Report, this is the largest state-level stable investment in Oregon's history into public health that gives broad flexibility in spending.[8,9] This investment provides opportunities for LPHAs to create positions dedicated to community partnerships, health equity, and other emerging areas of public health work. In addition to Modernization, the American Rescue Plan Act (ARPA) allocated $7.4 billion to bolster the public health workforce across the US with Oregon's LPHAs receiving nearly $10.3 million; while this funding allows for flexible use, it is not ongoing funding at this time.[19,21]

Emerging areas of public health work

National, state, and local public health organizations are also addressing an increasing number of novel and/or extreme threats to health and are moving into areas of work not traditionally considered to be public health's purview. The most visible example of an emerging threat is the COVID-19 pandemic which as of the writing of this report had caused over 920,000 deaths in the US (with 6,373 of those deaths from Oregon), surpassing the 1918 Influenza Pandemic as the country's most deadly.[22] COVID is also predicted to bring a wave of disability and chronic illness among people with "long-COVID", which will have a long-lasting impact on our health care system and disability programs.[23]

However, there has also been a growing recognition of public health's role on a variety of health conditions and threats beyond normal infection control and prevention. Climate change, for example, is a major focus due to its increasingly severe impact on physical and mental health; multiple health care and public health organizations have declared climate change a health emergency.[24] Oregon has experienced this threat to health first hand with the most severe wildfire season in the state's history in 2020, resulting in damages to over 4000 homes and over 1 million acres burned, along with widespread drought and record-breaking, deadly heat waves in 2021.[25,26,27]

Finally, an overarching aspect of recent public health work at both the national and state levels is achieving health equity and eliminating health inequities, particularly those caused by systemic racism. In Oregon, OHA has set the goal to eliminate health inequities by 2030, and both OHA and the Conference of Local Health Officials (representing all 32 LPHAs in Oregon) have adopted the follow definition of health equity:

> "Oregon will have established a health system that creates health equity when all people can reach their full health potential and well-being and are not disadvantaged by their race, ethnicity, language, disability, gender, gender identity, sexual orientation, social class, intersections among these communities or identities, or other socially determined circumstances. Achieving health equity requires the ongoing collaboration of all regions and sectors of the state, including Tribal governments to address:
>
> - The equitable distribution or redistribution of resources and power; and
> - Recognizing, reconciling and rectifying historical and contemporary injustices resulting from race, ethnicity, language, disability, gender, gender identity, sexual.[28,29]

Many national public health organizations and state and local health departments are centering equity in their work and are taking extra steps to recognize the harmful impact of racism.[30] Wrapped into the goal of eliminating health disparities is an acknowledgment that public health must go "upstream" to address the social determinants of health, such as the built environment, income and economic stability, quality of education, community context, and access to quality health care.[31,32] Going upstream requires a shift from some aspects of traditional public health work to partnering across sectors and sharing power with communities in order to disrupt barriers to health and quality of life.

The Political Environment of Public Health

Another dynamic within the public health system is the complex political environment. The vast majority of public health work in the US is conducted through governmental public health authorities and overseen by elected officials. In Oregon, portions of LPHAs' funding is provided through county governments. While this level of local control can be beneficial to ensure public health activities represent the community, it presents challenges when politics oppose certain aspects of public health work or the science behind decisions.[33] This dynamic became apparent during the COVID-19 Pandemic response regarding protective behaviors, such as masking, social distancing, capacity limits for businesses, and vaccination.[34,35] However, it was present before the COVID-19 Pandemic, particularly in communities where government influence over individual choices and climate change are contested issues.[36]

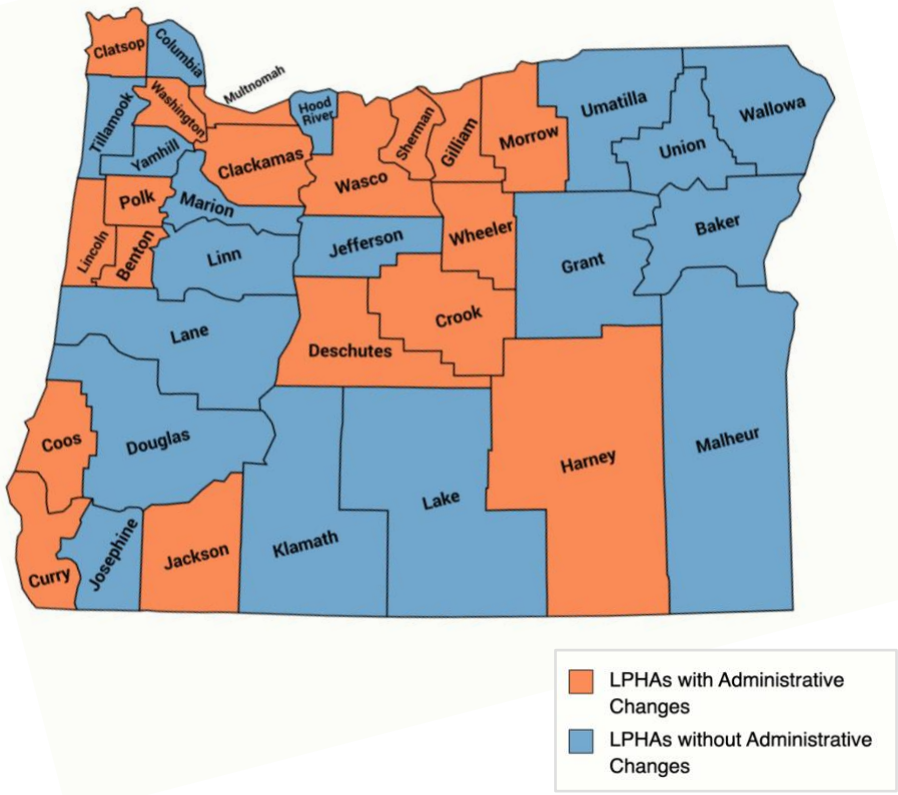
Public Health Workforce Morale and Burnout

Finally, the public health system is facing a crisis of low workforce morale and burnout. A workforce that has operated with strained resources and within complex political environments now has additional challenges brought by COVID-19, including long work hours, increased scrutiny and opposition from the public and elected officials, and, in some cases, threats of violence against public health professionals and/or their families for doing their jobs. A CDC survey of 26,174 state, tribal, local, and territorial public health workers from March-April 2021 found that 59.2% of respondents worked more than 40 hours per week, and the prevalence of depression, anxiety, post-traumatic stress disorder, and suicidal ideation increased with longer work hours and the inability to take time off from work.[37] Many public health officials also became high-profile figures during the pandemic by providing updates and education on COVID-19 and experienced intense critiques of their expertise in return.[38] Misinformation and opposition to public health orders circulated through major news outlets and by political figures led many to question public health orders and to discredit public health officials; it has also ultimately led to over half of US states to place limits on public health powers.[39,40] In more extreme circumstances, public health officials and their families faced harassment and threats of violence, including doxxing, vandalism, protests outside

personal residences, and threatening communication via phone, mail, and social media.[41]

These working conditions have led to high levels of mental health conditions and a mass exodus from the field for public health professionals. The CDC survey referenced above found that 52.8% of respondents reported symptoms of at least one mental health condition (depression, anxiety, post-traumatic stress disorder, and/or suicidal ideation) while the prevalence of these symptoms in the general population is 40.9%.[37] The National Association of County and City Health Officials (NACCHO) estimated in October 2021 that over 300 public health leaders (both state and local leaders) across the nation have left their positions since the pandemic began.[42] In Oregon alone, there have been 16 changes in health administrators at LPHAs since the start of the pandemic, meaning nearly half of the local health administrators in Oregon's 32 LPHAs are new to their positions.[43] While there is no national or statewide tracking of departures of public health professionals who are not in leadership, it is likely all levels of staff follow this pattern particularly with the nation in the midst of the "Great Resignation" where health care workers in all fields are leaving their jobs.[44]

Figure 4
Oregon LPHAs with Administrator Turnover, March 2020 - Present



Note: Curry County returned its local health authority to OHA in May 2021. All other administrative changes were due to retirement, resignation, or termination.

National Local Public Health Workforce Trends

Representative data on local public health workers in Oregon is limited as there has been little state-specific study around the public health workforce; one goal of this report is to begin filling that data gap. With state-level data limited, CLHO staff reviewed available sources of information on the national local public health workforce. This provides context and situates Oregon into the larger picture of trends for the public health workforce across the nation.

Composition of the Workforce

Prior to COVID, National Association of County and City Health Officials (NACCHO) data showed the national local public health workforce standing at 136,000 full-time equivalents (FTEs), a 16% decrease from the 162,000 FTEs documented in 2008 before the Great Recession.[45] In examining just the FTEs that provide foundational public health services, the de Beaumont Foundation recently estimated that only 72,500 FTEs nationally provide such services in local health departments, about 54,000 FTEs short of covering services for the entire population.[46] The 2019 National Profile of Local Health Departments from NACCHO calculated the average number of FTE by population services (see Table 1).

Table 1

Mean and Median Number Full-Time Equivalents (FTEs) in Local Health Departments (LHDs), by Size of Population Served

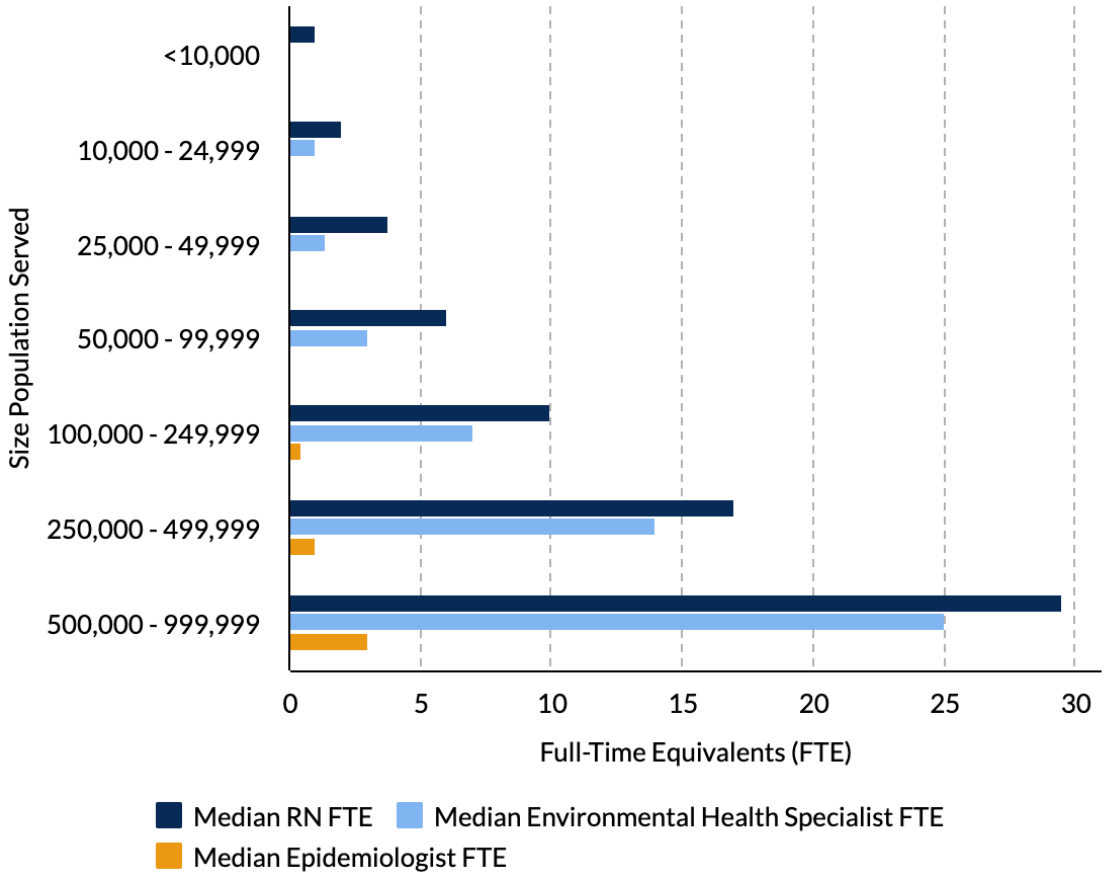
	Number of FTEs	
Size of Population Served	Mean	Median
All LHDs	56	17
<25,000	10	6
25,000 - 49,999	20	13
50,000 - 99,999	34	26
100,000 - 249,999	64	54
250,000 - 499,999	143	104
500,000 - 999,999	269	218
1,000,000+	769	456

n(employees) = 1467
n(FTEs)=1468

Note. Adapted from *2019 National Profile of Local Health Departments*, by NACCHO, 2020, p. 49. (https://www.naccho.org/uploads/downloadable-resources/Programs/Public-Health-Infrastructure/NACCHO_2019_Profile_final.pdf). Copyright 2020 by National Association of County and City Health Officials

Figure 5

Staffing patterns (in median Full-Time Equivalents (FTEs)) at LHDs, by size of population served



Note. Staffing patterns (in median Full-Time Equivalents (FTEs)) at LHDs, by size of population served. Adapted from *2019 National Profile of Local Health Departments*, by NACCHO, 2020, p. 57. (https://www.naccho.org/uploads/downloadable-resources/Programs/Public-Health-Infrastructure/NACCHO_2019_Profile_final.pdf). Copyright 2020 by National Association of County and City Health Officials

Small health departments (defined in the NACCHO profile as those serving less than 50,000 people) make up 61% of all health departments but only serve 9% of the population and represent 18% of the nation's FTE.[47] Office and administrative support staff make up the largest portion of the national public health workforce at 19%. Registered nurses (RNs) make up the second largest portion at 18% though the number of RNs working in public health decreased by 36% from 2008 to 2019.[47] In NACCHO's national profile, health departments that serve less than 25,000 people typically employ anywhere from 1 - 3.8 RN FTE, 1 - 2 office/administrative support FTE, 1 leadership FTE, and 1 environmental health FTE (see Figure 5).[47]

Demographics of the Workforce

The national local public health workforce tends to be populated by women and people in their mid-to-late careers. According to the most recent data from the Public Health Workforce Interests and Needs Survey (PH WINS) from the de Beaumont Foundation, women make up approximately 78% of the public health workforce, and 42% of the workforce is over the age of 50.[48,49] Younger people and recent graduates of Masters of Public Health Programs are not heavily represented in the local public health workforce; only 11% of PH WINS respondents were between the ages of 21 and 30, and another study found that only 17% of new MPH graduates go into governmental public health.[48,50] While PH WINS data show the public health workforce to be increasingly racially/ethnically diverse, this does not necessarily extend to leadership positions; less than 10% of executives reported being Hispanic/Latino or a race other than white.[48,49] While demographic data for Oregon's public health workforce is not part of this report, it should be a consideration for future reports.

Local Public Health Pay Scales

A major focus of this report is to gather data on local public health pay scales in Oregon. In a review of national data, there are few peer-reviewed studies or surveys available on local public health pay scales across the nation. Sumaya called for a standardized and validated method for measuring size, composition, education and training, wages, and turnover rates for the public health workforce in the American Journal of Public Health in 2012. To date, wage data for public health professionals remains unstudied while the other elements are captured through PH WINS and NACCHO's National Profile.[48,49,51] One study of over 64,000 graduates of public health from 55 institutions collected salary data for 9,857 of respondents and found that the median salary was $36,000 among bachelor's degree graduates who were employed full time, $58,000 for master's degree graduates, and $80,000 for doctoral degree graduates.[50] However, this data is not representative of local public health departments where 31% of employees have an associate's degree or no higher education.[48]

PayScale, a compensation management platform that pulls salary data from crowd-sourcing, company data, and salary surveys, measures an average salary of $62,510 per year for a public health administrator, $67,154 per year for an epidemiologist, $61,067 per year for a public health nurse, and $44,252 per year for an environmental health specialist (see Table 2).[52]

Table 2

Average Salary and Salary Range for Public Health Positions in the United States

Position	Average Salary	Salary Range
Public Health Administrator	$62,510	$45,000 - $96,000
Epidemiologist	$67,154	$46,000 - $87,000
Public Health Nurse	$61,067	$46,000 - $83,000
Environmental Health Specialist	$44,252	$34,000 - $71,000

Note. Data from "Salary for Industry - Public Health Department," by PayScale. (https://www.payscale.com/research/US/Industry=Public_Health_Department/Salary). Copyright 2022 by PayScale.

Other National Trends

Finally, a trend among local public health professionals nationally is high job satisfaction but with an intent to leave their jobs soon. PH WINS data showed that approximately 81% of participants state they are generally satisfied with their job, 70% are satisfied with their organizations, and 95% believe that the work they do is important. However, nearly half the public health workforce intended to leave their jobs within the next five years with 22% planning to leave for retirement and 25% planning to leave for other reasons.[49,53] The top reasons for leaving were inadequate pay (46%), lack of advancement (40%), and workplace environment (31%).[49]

Methods

In May 2021, CLHO staff began reaching out to LPHA administrators to discuss workforce challenges, particularly around pay scales and recruiting/retaining staff. CLHO also set out to gather information on the full-time equivalents (FTEs) working in health departments as a baseline measure prior to hiring with new Public Health Modernization funding for future advocacy work. After a few informal conversations with recurring themes and rich detail, CLHO staff formalized the process into a semi-structured interview with approximately 13 open-ended questions (see Appendix A) with the intent to summarize this information in a report. Based on anecdotal knowledge of the various practices in health departments and how complex staffing structures can be, CLHO staff opted to gather all information through interviews and discussion rather than a standardized survey for accuracy.

Between May 24th, 2021, and August 25th, 2021, CLHO staff conducted 31 one-hour interviews via Zoom conference call; in some cases, the administrator included, or would recommend CLHO staff interview, another person within the county to provide additional perspective. In addition to the 30 public health administrators/directors, CLHO staff also interviewed a Business Officer, three Public Health Section Managers/Directors, two Human Resources personnel, and two Deputy Directors of Public Health. A total of 30 LPHAs participated in these interviews; the two remaining LPHAs (Josephine and Lake) could not be reached to schedule an interview.

CLHO's Executive Director and Program Manager attended all 31 interviews and took typed qualitative notes and captured quantitative data in a spreadsheet. Prior to beginning each interview, CLHO staff explained the goal of this project and asked for verbal consent from all interviewees to capture this information and release it in a summary report. The questions in Appendix A served as a loose structure, but CLHO staff allowed the interviewees to guide the conversations to topics most relevant to them and their health departments. In some cases, interviewees were not able to provide FTE or pay scale data during the interview. CLHO staff requested this information by email following the interview and received additional materials, such as collective bargaining agreements or staff lists to verify FTE. After compiling and cleaning pay scale and FTE data, CLHO staff attempted to verify accuracy with each interviewee via email. One LPHA was unable to provide either FTE or pay scale data, and three LPHAs were able to provide partial data.

CLHO staff gathered five data points for FTE: total non-COVID FTE, total COVID FTE, total nursing FTE, total epidemiology FTE, and total environmental health specialist (EHS) FTE. Nurse FTE includes all nurses working under the supervision of the health department; in some cases,

this included nurses working in the county jail, and in other cases, this included no nurses because all public health nurse activities were contracted out. EHS FTE includes registered environmental health specialists (REHSs), trainees, permit technicians, and supervisors. Vacant FTEs were included in all these counts. All LPHAs that participated except for Union and Tillamook are represented in these data.

CLHO staff calculated the percentages that nurses, epidemiologists, and EHSs represented of all FTE. The majority of LPHAs did not break down nurse FTE and epidemiologist FTE into non-COVID and COVID-specific positions. Therefore, these percentages were calculated from the sum of total non-COVID FTE and total COVID FTE. CLHO staff also calculated the average FTE (non-COVID, COVID, nurse, epidemiologist, and EHS) by the size of population served and the percentage of FTE serving in rural settings. To classify counties as either rural or urban, CLHO staff used 2013 National Center for Health Statistics Urban-Rural Classification Scheme resulting in 17 of the participating LPHAs being designated as rural (micropolitan or noncore counties) and 11 participating counties as urban (large central metro, large fringe metro, central medium metro, and small metro counties).[54] All counts and percentages are rounded to the tenths place.

CLHO also gathered data other public health position classifications, union representation, how the LPHAs have their Health Officer agreements written, and whether LPHAs offer Public Employee Retirement System (PERS) benefits or other retirement benefits. Upon writing this report, this information became secondary to the FTE and pay scale data and is not summarized in this report. CLHO staff may release it as an additional appendix at a later date.

CLHO staff gathered the starting pay and the maximum pay for four positions - nurse, epidemiologist, health administrator (HA), and REHS. When a health department had separate pay classifications for the local health administrator (defined by ORS 431.150, 431.418 & OAR 333-014-0070) and the public health director, CLHO staff used the pay range for the designated local health administrator.[55,56] One exception to this is a county where the designated local health administrator per ORS/OAR is a county judge and not part of the health department; in this situation, CLHO staff used the public health director's salary. When LPHAs shared staff or contracted with other counties, CLHO staff used the pay scale provided by the fiscal agent LPHA for both LPHAs; this was most common for EHS positions in rural parts of the state. All LPHAs that participated except for Union and Douglas are represented in these data. CLHO staff used these data to calculate the average minimum, mid-range, and maximum pay for each position across the state and by population size served.

Qualitative Analysis

After several independent readings of the interviews, CLHO staff identified recurring ideas and determined

topical codes. CLHO staff then coded the data and performed content analysis to determine the frequency of these ideas. CLHO staff also used these codes to link together ideas and themes and to create categories. If an idea occurred multiple times in the interview/interviews with a county, CLHO staff counted this code once but included each comment containing the code when identifying themes to ensure as many ideas as possible were captured. CLHO staff verified quotes with participants and offered to not use the quotes or leave them unattributed if the participating preferred. If a participant requested a quote be unattributed, the quote was instead labeled with the county size.

Findings

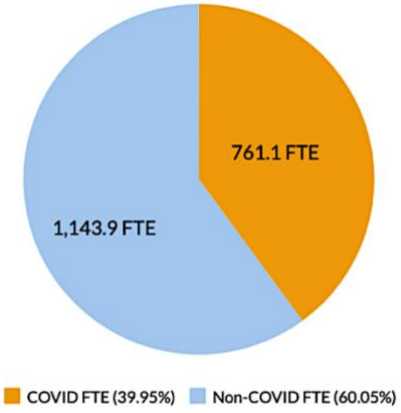
Point-in-Time Measure of the Local Public Health Workforce

As of August 2021, a total of 1,143.9 non-COVID FTE work in Oregon's local public health system. From March 2020 to August 2021, Oregon LPHAs added 761.1 FTE for COVID-19 response efforts resulting in a total workforce of 1,905 FTE (see Figure 6), a nearly 67% increase in the LPHA workforce. Of the total workforce, nurses made up 255.8 FTE (13.4%), epidemiologist made up 64.5 FTE (3.4%), and EHSs made up 101.9 FTE (5.4%) (see Figure 7).

Table 3 summarizes the mean and median total FTE (non-COVID and COVID) and FTE by position by the size of population served. Staffing patterns follow the general national patterns summarized by NACCHO (see Table 1 and Figure 5 above for national patterns). A noteworthy pattern is the limited epidemiological capacity in Oregon LPHAs serving populations under 50,000. Only two of the ten LPHAs that provided FTE data and that serve under 50,000 people have any FTE for epidemiologists. However, this limited capacity extends beyond county size; of the 28 LPHAs who provided FTE data, 12 reported no FTE for epidemiologists, including three serving populations between 50,000 and 99,999 and one serving a population over 100,000 (see Appendix B).

Figure 6

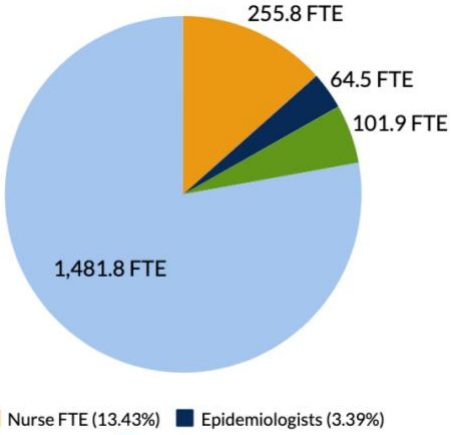
Percentage of total non-COVID vs. total COVID full-time equivalents (FTEs) in LPHAs



n(FTE)=1,905.0
n(LPHAs)=28
Note. Does not include Lake, Union, Tillamook, and Josephine Counties

Figure 7

Percentage of LPHA full-time equivalents (FTE) by job type



n(FTE)=1,905.0
n(LPHAs)=28
Note. Does not include Lake, Union, Tillamook, and Josephine Counties

Table 3

Mean and median full-time equivalents (FTEs) in Oregon local public health authorities (LPHAs) by position and by size of population served

	Total Non-COVID FTE		Total COVID FTE		Nurse FTE		Epi FTE		EHS FTE	
Size of Population Served	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
All LPHAs	41.0	24.5	28.2*	12.0*	9.1	5.7	2.4*	0.5*	3.6	2.9
<10,000[1]	4.5	5.0	1.2	1.5	1.5	1.0	0.0	0.0	0.3	0.5
10,000-24,999[2]	13.3	12.8	1.3*	1.0*	3.8	4.0	0.0*	0.0*	0.6	0.3
25,000-49,999[3]	25.0	25.5	9.8	7.7	5.5	5.8	0.5	0.5	1.8	1.8
50,000-99,999[4]	23.2	21.5	9.9	12.0	5.4	5.7	0.7	0.2	2.8	3.0
100,000-249,999[5]	36.1	40.5	17.7	15.0	9.2	8.0	2.0	1.0	4.4	5.0
250,000-999,999[6]	126.9	98.4	113.5	65.0	26.2	20.0	10.0	6.0	10.0	8.0

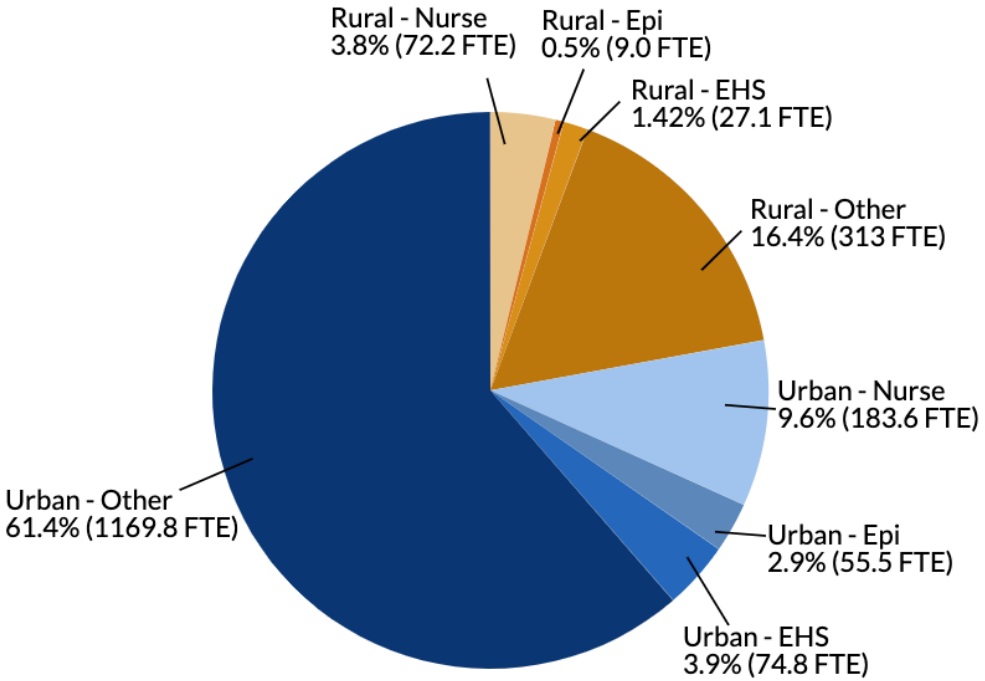
n(LPHAs)=28 (does not include Lake, Union, Tillamook, and Josephine)
1. Includes Wheeler, Grant, and Harney Counties
2. Includes Morrow, Baker, Hood River, and Jefferson Counties
3. Includes Crook, North Central Public Health District, Malheur, Clatsop Counties
4. Includes Lincoln, Columbia, Coos, Klamath, Umatilla, Polk, and Benton Counties
5. Includes Yamhill, Douglas, Linn, Deschutes, and Jackson Counties
6. Includes Marion, Lane, Clackamas, Washington, and Multnomah Counties
*Data missing from Hood River, not included in denominator

Of the 1905 FTE serving in Oregon's LPHAs, 421.3 (22.1%) serve in rural settings (see Figure 8). This is a larger proportion than the 18% of FTE serving in rural settings nationally.[47] It is important to note that the National Center for Health Statistics Urban-Rural Classification Scheme used to classify each county as rural or urban does not necessarily reflect the experience of people working in these counties. Multiple interviewees who serve in areas technically considered urban described rural challenges they face in their public health work, and the majority of counties in Oregon have geographic portions that are remote and experience the challenges common in rural settings.

Summary of Pay Scales

Table 4 summarizes the minimum, mid-point, and maximum pay for nurses, administrators, epidemiologists, and EHSs. Notably, the average starting wage for a public health nurse across all LPHAs that participated is $29.36 per hour. Also notable is the wide range in public health nurse starting pay across the state. The lowest starting pay for a public health nurse in Oregon among the LPHAs that participated is $24.57 per hour while the highest starting pay is $39.18 per hour (see Appendix B and Appendix C).

Figure 8
LPHA FTE serving in rural vs. urban settings by job type



n(FTE)=1905, n(LPHAs)=28
Rural: Morrow, Hood River, Malheur, Umatilla, Yamhill, Baker, Jefferson, Lincoln, Clatsop, Coos, Wheeler, Grant, Harney, Crook, North Central PHD, Douglas, and Klamath
Urban: Columbia, Polk, Deschutes, Lane, Washington, Linn, Jackson, Clackamas, Benton, Multnomah, and Marion
Does not include Lake, Union, Tillamook, and Josephine Counties

Table 4

LPHA average minimum, mid-range, and maximum wages by position by size of population served

	Average Nurse Wages			Average Administrator Wages[7]			Average Epidemiologist Wages[8]			Average EHS Wages[9]		
Size of Population Served	**Min**	**Mid**	**Max**	**Min**	**Mid**	**Max**	**Min**	**Mid**	**Max**	**Min**	**Mid**	**Max**
All LPHAs	29.36	35.15	40.94	45.28	51.76	58.24	30.39	34.97	39.55	26.33	32.00	37.66
<10,000[1]	30.75	39.34	47.94	31.63	36.83	42.04	NA	NA	NA	32.84	41.52	50.19
10,000-24,999[2]	27.03	30.58	34.13	41.18	46.81	52.45	NA	NA	NA	26.22	28.81	31.40
25,000-49,999[3]	27.99	33.58	39.16	40.49	43.55	46.61	25.94	27.54	29.14	25.00	28.17	31.33
50,000-99,999[4]	28.65	33.53	38.40	42.85	48.01	53.16	30.46	33.33	36.19	26.08	30.63	35.17
100,000-249,999[5]	28.81	34.91	41.02	53.67	61.09	68.52	31.16	35.89	40.63	24.26	31.86	39.46
250,000-999,999[6]	33.19	40.33	47.48	53.69	65.19	76.69	31.52	38.19	44.87	25.79	33.78	41.77

n(LPHAs)=28 (does not include Lake, Union, Douglas, and Josephine)
1. Includes Wheeler, Grant, and Harney Counties
2. Includes Morrow, Baker, Hood River, and Jefferson Counties
3. Includes Crook, Tillamook, North Central Public Health District, Malheur, Clatsop Counties
4. Includes Lincoln, Columbia, Coos, Klamath, Umatilla, Polk, and Benton Counties
5. Includes Yamhill, Linn, Deschutes, and Jackson Counties
6. Includes Marion, Lane, Clackamas, Washington, and Multnomah Counties
7. Data missing from Grant, Hood River, Coos, and Benton. Not included in denominator for statewide or population size averages.
8. Wheeler, Grant, Harney, Morrow, Baker, Jefferson, Clatsop, Coos, Klamath, and Benton do not have pay scales for epidemiologists. Data missing from Hood River, Tillamook, Malheur, and Polk. Not included in denominator for statewide or population size averages.
9. Data missing for Hood River. Polk County does not oversee EHSs. Not included in denominator for statewide or population size averages.

Workforce Challenges Themes

During the qualitative analysis, several major themes appeared around challenges in developing the local public health workforce. Generally, these themes could be divided into three stages or categories: recruitment of the workforce, hiring of the workforce, and retention of the workforce (see Table 5).

Recruitment

Interviewees described four key factors at play when recruiting public health professionals that CLHO staff placed under the general category of "recruitment." This includes the time it takes to develop the positions and post them to places qualified candidates will see them clear up through the interview process and acceptance of an offer. The four themes were: having a substantial pool of diverse and/or qualified applicants, working with human resources, offering competitive pay and benefits, and having affordable housing for non-local candidates.

Table 5
Qualitative Categories and Themes

Category	Theme	Number of times identified (n = 30 counties)
Recruitment	Diverse/qualified applicant pool	30
	Working with Human Resources	19
	Competitive pay and benefits	26
	Housing Challenges	9
Hiring	Staff characteristics	20
	Training and support	10
Retention	Upward mobility	9
	Wearing multiple hats	21
	Burnout	13

Diverse/Qualified Applicant Pool

When recruiting for positions, interviewees discussed the factors involved in obtaining a diverse and/or qualified pool of applicants. In general, participants described challenges with finding candidates who met the minimum requirements or who had the necessary license or certification. This was most common for nursing positions, for environmental health positions, and in rural counties where recruitments would be open for months at a time. A common strategy for dealing with this, particularly for public health nurses, was to reclassify positions into something that would expand the applicant pool beyond nurses, such as community health workers and disease investigation specialists, wherever it was possible. Several administrators also brought up the idea of "home-growing" public health professionals from within their communities because they were unable to attract qualified candidates from outside their communities.

"It takes about 6-12 months to hire a nurse. We live the life of being short-staffed."
Jacqui Umstead, Polk County Health Administrator

"Nurses aren't beating down the door, so we might need to convert positions into non-nurse positions and classifications."
Jackson Baures, Jackson County Health Administrator

"If you train any folks to do all the things that don't require a license, it allows the folks with a license to do the work they are qualified to do. It doesn't take away from the value of having a license - in fact, it lets them do more of their specialized work. That sort of flexibility lets us increase our workforce capacity creatively. We should be using nurses at the top of their license all the time and have other folks do the other administrative parts."
Carrie Brogoitti, Union County Health Administrator

"If we don't try to home-grow professionals here in the Pacific Northwest, we won't be able to attract people and solve [staff shortages]."
Large County LPHA Staff

"We either need to invest in public health so those people with MPHs will want to come and work in local public health, or we need to train people up."
Carrie Brogoitti, Union County Health Administrator

“We are lucky to get anyone to apply for any of our positions. So, the only position that has a bi-lingual preferred is our public health modernization position. We haven’t had a bi-lingual nurse in about 8 years.”
Jacqui Umstead, Polk County Health Administrator

“After minimum qualifications are reviewed, Washington County typically uses additional questions to review applicants. Subject matter experts review the responses, and the candidate names are blinded during review. But even that process may be biased because it favors those with strong English writing skills.”
Tricia Mortell, retired Washington County Health Administrator

“On our application, we have an open-ended question that asks applicants what other skills they bring to the county. We score applications, and being bi-lingual and the answer to the open-ended question are both weighted.”
Joseph Fiumara, Umatilla County Health Administrator

“We always ask: ‘are the job requirements excluding anyone because of lived experience?’”
Zumana Rahman, Multnomah County Human Resources Analyst

“It’s important to have a commitment to diversity at all levels, especially at the leadership level. It takes time and patience to go through the recruitment process and get a diverse pool of candidates. We may have to go beyond our normal recruitment practices - and not just post a job. It may mean keeping it open longer even if you want it filled fast. It’s also about the interview panel - it shouldn’t just be about your academic qualifications. We have to go deeper and ask more questions about experience.”
LaRisha Baker, Public Health Deputy Director Multnomah County

This challenge grew when also trying to recruit diverse staff who were bi-lingual, bi-cultural, members of the community they would be serving, or Black, Indigenous, or a Person of Color (BIPOC). First, interviewees described difficulties in having people with these skills and characteristics even apply for positions. With generally small applicant pools, the number of applicants who were bi-cultural, bi-lingual, or BIPOC was even smaller and sometimes nonexistent in smaller counties. Second, administrators explained how default screening procedures and interview processes would sometimes disqualify BIPOC candidates, people with lived experience, or candidates whose first language was not English from consideration. These processes favored people who were highly educated and discounted people with less education but valuable lived experience. Administrators also described the steps they were taking to change these processes to eliminate this bias. Some of these were to blind applications, change position descriptions to require bi-lingual skills, or weight bi-lingual skills and lived experience (see Appendix D). Interviewees in some counties were also taking a systems-level approach to challenge institutional racism and to ensure that the LPHA is a welcoming place for BIPOC employees.

Working with Human Resources

How LPHAs interacted with their human resources (HR) departments during recruitment was also a frequent topic. This theme was pulled out separately from the other themes under the "recruitment" category because HR appeared to have an overarching role across the whole process. Interviewees discussed having HR procedures that make it challenging to change job descriptions or classification requirements, to post job openings to a wide audience, or to screen applicants in a way that increases diversity and inclusion in the public health workforce. In addition, many counties described challenges such as having an HR department that serves all county government departments and, thus, is overloaded, or having rigid HR structures that make it difficult to offer enticing benefits to new employees.

Competitive Pay

Another significant theme around recruitment was around offering competitive pay and benefits. Health administrators across Oregon described their challenges with offering wages that competed with other employers, particularly for nurses. A common observation by interviewees, particularly from rural counties, was that their pay scales were based on comparisons to like-sized counties when they were usually not competing with these counties for

"We need to work on having comparable years of experience and not make them too long - HR is strict about meeting an exact number of years."
Jocelyn Warren, Lane County Health Administrator

"I've been working with HR for the past 2 years about where we post our positions. The County posts on Indeed, which is great, but we are trying to find additional organizational and association websites to post. Sometimes in a rural community, the positions just get passed over."
Jennifer Little, Klamath County Health Administrator

"HR will just post the position, and doing an intentional, inclusive process is really on the health department."
Philip Mason-Joyner, Clackamas County Health Administrator

"I've moved staff into HR roles from public health to help support hiring. The need is so great that we have had to shift some of our staff to support our HR department - the work is that demanding."
Jessica Guernsey, Multnomah County Health Administrator

"Human resources can only advertise the initial pay - they cannot put down a range."
Joseph Fiumara, Umatilla County Health Administrator

employees; they were more likely to be competing with local hospitals and clinics for nurses or with larger and more urban health departments bordering their counties, both of which offered significantly higher wages. Administrators also observed that having good benefits (such as retirement, health insurance, and flexible schedules) did not make up for the lower pay.

An important concept that administrators discussed was the role union-negotiated pay scales played in increasing pay. While administrators were supportive of union representation and the collective bargaining process, many observed that it caused some limitations in being able to raise pay scales. Some common challenges were being unable to raise public health nurse wages without reexamining wages across the entire county and the resulting compression of pay if the county did raise wages. In addition, some administrators in counties without union representation commented that they had more flexibility in raising pay.

> "Nurses can go to the hospital ICU and can make $100 per hour - when a public health department offers $27.30 an hour, they think we must have missed a digit."
> *Bob Dannenhoffer, Douglas County Health Administrator/Health Officer*
>
> "Our wages are compared to wages from similar sized counties, but never to Marion County [large neighboring county] which is where we lose staff and applicants."
> *Jacqui Umstead, Polk County Health Administrator*
>
> "We have an attractive benefits package, but that's not the way Gen X or Millennials want it. The pay is still too low."
> *Shane Sanderson, Linn County Health Administrator*
>
> "We probably have significantly lower pay scales than the hospital. We've been able to retain most of our nurses, but if we had to recruit again, I would emphasize benefits and environment over salary."
> *Anthony Arton, Coos County Health Administrator*

> "Hood River may have funds for the workforce right now, but we can't just raise pay without the union's approval. We cannot just offer sign-on bonuses without negotiating. Most of the time, if it happens for one union position it has to happen for all of them."
> *Trish Elliot, Hood River County Health Administrator*
>
> "If I want to pay my nurses more, then they make more than the nursing supervisors and you have to raise their wages. There's a compression problem across the county."
> *Joe Fiumara, Umatilla County Health Administrator*
>
> "Our public health nurse quit back in October to work at [a nearby hospital] for $20 more per hour, and we were without a nurse for about a month. The nurse who we got to replace her…was making $10 more per hour than what we were offering. We had to match that to get her, and we did. It's good we didn't have a union stopping us from doing that."
> *Nic Calvin, Harney County Public Health Director*

> “We have a rental problem - there are no apartment complexes that are not for low-income folks, which health department employees do not qualify for. That stops people from out of the area or young people from taking jobs here.”
> *Nic Calvin, Harney County Public Health Director*
>
> “It is difficult for the whole health system to recruit folks from elsewhere…. we also have so many vacation rentals here, so there aren’t many options for the people who actually live and work here.”
> *Florence Pourtal, Lincoln County Health Administrator*
>
> “Most of the folks who apply to our positions, like [our] nurse supervisor, are from out of the area and just cannot find housing here.”
> *Nazario Rivera, Morrow County Health Administrator*
>
> “Even if someone did want a job and wanted to move here, they wouldn’t be able to find a place to live.”
> *Marlene Putman, Tillamook County Health Administrator*

> “Even though schools say they are teaching about community health and that everyone is getting their rotation, [nurses] aren’t showing up.”
> *Margo Lalich, interim Clatsop County Health Administrator*
>
> “When new nurses are fresh out of school, they are looking at the student loans and turning away from public health without understanding how different public health is.”
> *Trish Elliott, Hood River County Health Administrator*

Housing

Finally, the lack of affordable housing was cited as a major barrier to recruiting new, non-local workers to work in health departments. Many interviewees described losing candidates or waiting for months for candidates because they could not find housing. With the current housing market, most interviewees relied on recruiting people already living in the area (home-growing) to bypass this problem.

Hiring

Another overarching theme that emerged from these interviews involved the actual hiring of employees. This was divided into two major themes: the common characteristics of the people LPHAs hired and onboarding/training requirements once these people were hired.

Staff Characteristics

Several concepts about the characteristics of staff who LPHAs eventually hired appeared throughout the interviews. First, interviewees noted that it was rare to hire a nurse who was a recent graduate of a nursing program. LPHA administrators attributed this to exposure to public health in nursing schools and the pay gap between public health nursing and hospital/clinical nurses.

In a similar vein, interviewees discussed that employees with advanced degrees had limited

knowledge of local public health practice. This was true for nurses (as discussed above) and other positions like environmental health specialists and epidemiologists.

Training and Support

Closely connected to these staff characteristics was the burden that fell on LPHAs to ensure additional training and support for new hires. Many interviewees discussed hiring people without public health education/training or licenses. While this was discussed in nearly every-sized county, it was most common in rural counties and was particularly challenging when the new hire did not have a co-worker in the same position to look to for support. Some interviewees discussed that they put together their own training programs or are working with local partners to develop their "home-grown" workforce.

Retention

Finally, there were recurring themes that all fit into the category of "retention" of the public health workforce. The three key themes that emerged were: upward mobility for staff, the many roles each staff member fills ("wearing many hats"), and burnout among public health staff.

> "There needs to be more workforce training for students in public health and related programs. Students do not know what public health accreditation is or what Public Health Modernization is. They don't teach about navigating the politics of local public health or about budgets. It might not prepare them more, but it might help them have their eyes more open. We might learn about policy change, but we don't learn about politics and what to do if things don't work like you expect."
> *Jennifer Little, Klamath County Public Health*
>
> "You may get somebody with a degree in PH, but the on-the-ground work is so different, especially doing the community work and relationship-building. It takes a full year to get someone up and running to do their job."
> *Shellie Campbell, North Central Public Health District Public Health Director*

> "For our REHS, most of the people we hire do not come to us licensed, so we will hire them and train them, which is a heavy lift for us, but it's what we have to do. Same with WIC Certifiers and such. We just do not have people with public health degrees."
> *Jennifer Little, Klamath County Health Administrator*
>
> "Most of the people who work in our department do not have formal training in public health. There are just a few people in my community who have an MPH, and one of them is me."
> *Carrie Brogoitti, Union County Health Administrator*
>
> "Because we are so small, our nurses don't have colleagues to bounce ideas off of…having only one home-visiting nurse doesn't create a community of practice."
> *Jacqui Umstead, Polk County Health Administrator*

> “People can move around laterally but can’t say they have the supervisory experience to move up the ladder. And the other big barrier is that, at least in our system, there is no way to promote people. They must compete for open positions that are typically different from what they are currently doing, so perhaps less satisfying. They cannot be assigned work that is outside their classification without a lot of paperwork and approvals, which can take months, so there is limited opportunity to grow in a position.”
> *Jocelyn Warren, Lane County Health Administrator*
>
> “Having entry level folks with no room to grow is tough. Folks will come and then not be able to gain the supervisory experience and will leave.’”
> *Tricia Mortell, retired Washington County Health Administrator*

Upward Mobility

Barriers to upward mobility was cited as a problem when it came to retaining and developing staff members. This was particularly true in large counties where staff members desiring to move to positions with increased responsibilities (such as supervisory roles) did not have opportunities to gain the necessary experience. In many counties, this lack of support or opportunity for development resulted in promising public health professionals leaving for advancement elsewhere.

> “One of our program coordinators works across a variety of programs because no one funding stream will fund one FTE.”
> *Jennifer Little, Klamath County Health Administrator*
>
> “If you don’t have a sustainable infrastructure in place, no seasoned administrator is going to want to work here.”
> *Margo Lalich, interim Clatsop County Health Administrator*
>
> “When COVID hit, we didn’t have a dedicated [Public Health Emergency Preparedness] person. That has been a struggle the whole time - I have stepped into that role.”
> *Joseph Fiumara, Umatilla County Health Administrator*

Wearing Many Hats

Another theme related to retention was how LPHA staff had to “wear many hats” and the impact this has on the workforce. Many LPHA administrators discussed how staff had to take on multiple roles; this was often because funding streams had to be braided together to fund one FTE, and it left one person handling work in multiple program areas. While this was a functional solution for some counties to fund a position, it was difficult to replace such a person when they left and was challenging amidst the COVID-19 response.

Burnout

Finally**,** burnout was identified as a key challenge for retaining staff. This theme was closely connected to "wearing many hats" in the smaller departments, but it became common across all sized departments when also discussing COVID. Interviewees described staff who care deeply about serving their communities but who have also been stretched by the pandemic response.

"A year and a half into this pandemic, our staff is tired. I'm concerned about burnout. In these small counties, we all wear many hats, and it starts to take a toll. We wouldn't be in public health if we didn't care."
Nancy Staten, Baker County Health Administrator

"I am worried about our leadership. Supervisors and managers, yes, have always worked for long hours, but this is for an extended period of time. They have to ask more of their staff, which lowers morale. Not only might we lose good people, but we might also have to promote people from within who are just not ready yet. I see that having a domino effect in years to come."
Large County LPHA Staff

Recommendations

As this report demonstrates, Oregon's local public health system is a complex environment with multiple layers and barriers to building up its workforce. While the above themes are broken apart for the sake of analysis, each one connects with the others creating a bundle of challenges that cannot be addressed with a single approach. Additional funding may be flowing to local public health, but this does not allow LPHAs to simply raise compensation without revisiting county budgets, negotiating with elected county officials, collaborating with unions, and consider compression of pay. LPHA leaders may want to increase diversity within their workforce, but how jobs are posted, the application processes, the minimum requirements, and initial pay may all be beyond their control. LPHA leaders may be able to lower the minimum requirements for some positions and hire someone from within the community with lived experience, but that places an additional burden of training on the LPHA, and that person may not have opportunities to move up within the public health department without higher education and will leave for other positions. There are no "quick fixes" to this system or the challenges described by CLHO members, but shedding light on these tangled challenges is the first step in identifying and working towards long-term solutions.

Throughout this report, CLHO staff pulled out ideas for recommendations from the themes and comments from members. Near the completion of this report, CLHO staff also convened a workgroup of CLHO members to review the major findings and provide additional direction for recommendations. The recommendations outlined here are preliminary; CLHO staff and members will continue collaborating with partners to identify short-, mid-, and long-term goals and new approaches to achieving these goals. The full range of preliminary recommendations are listed in Appendix E while some key themes are highlighted here.

Recruitment of the Public Health Workforce

Interviewees and workgroup members discussed many options for how to address the challenges around recruiting the local public health workforce. Most of the recommendations listed here center around steps for creating/increasing a diverse and qualified applicant pool. General recommendations around adjusting HR procedures and changing compensation are summarized in Appendix E. Solutions to housing challenges will require time and the collaboration of many partners and are not included in this report.

Home-Growing the Public Health Workforce

A common thread throughout the interviews was the need for Oregon to "home-grow" public health professionals. Identifying and developing leaders from within communities in Oregon is a both a way to

bring in people who know and love their communities and a way to address the lack of housing for people moving in from outside the community. Home-growing the workforce can include a variety of solutions ranging from working with academic partners to modifying minimum requirements and job classifications.

Workgroup members suggested that LPHAs begin building up a new generation of people passionate about public health by starting young and increasing awareness of public health in K-12 school settings and recruiting high school students for volunteer experiences, internships, and jobs. Interviewees and workgroup members also encouraged involvement with community colleges and universities through internships and provide presentations and discussions on current local public health work and careers options.

Another avenue discussed throughout the interviews was to revisit job classifications for public health positions and adjust them to open up the applicant pool. For example, with the lack of nurses entering the public health field, many LPHAs discussed hiring community health workers, disease intervention specialists, program coordinators, and other classifications that can perform aspects of the work that do not require a license. Revisiting job classifications and minimum requirements may also help with diversifying the workforce. Requiring higher education can be a barrier to hiring people who may have valuable experience and connection with communities, such as people who are low-income, are BIPOC, speak English as a second language, or who have a disability. At the county level, examining methods for lower minimum requirements, considering lived experience, and creating accommodating application processes are all possible solutions county leadership can pursue (see Appendix D for the list of strategies LPHAs provided during interviews). At the systemic level, CLHO and partners could explore opportunities to create certificate programs, associate degrees, or public health-specific scholarship programs to make various levels of higher education more accessible.

COVID Hires

In line with home-growing public health professionals, there is an excellent opportunity for LPHAs to bring on people who were hired for the COVID response. Oregon's local public health system grew by nearly 67% from March 2020 to August 2021 (see Figure 6). Interviewees described how people hired during this time received a crash course in how local public health functions and became invaluable members of the team. Many of them were people who would not otherwise have been hired by the LPHA, and some interviewees described how they were able to create permanent positions within the health department to keep these new hires. However, many LPHAs described the opposite, including barriers to being able to bring COVID response hires on as fulltime employees because of county structures and processes. This COVID workforce represents an immense increase in capacity that is easily situated to join existing

teams and programs; therefore, a recommendation of this report is for county leadership and human resource departments to explore ways to bring this workforce on permanently and not lose the people who have served their communities over the last two years.

Removing Barriers for Out-of-State Professionals

Workgroup members also discussed how recruiting professionals outside of Oregon is an excellent way to diversify and expand the applicant pool. However, several barriers exist to this including the availability and affordability of housing and strict state licensing requirements. For example, one workgroup member described how a current employee applying for a Master of Science in Nursing learned that recent changes to Oregon's nursing license requirements would not allow them to become licensed in Oregon because of the timing of certificates and degrees awarded by the program (which was not a problem in any other state or D.C.) A recommendation from this is for OHA to examine their licensing process and rules to ensure there aren't additional barriers to bringing on people from outside the state.

Workgroup members also discussed the additional barriers in place for BIPOC professionals in joining Oregon's local public health workforce. Given Oregon's history of systemic racism and blatant white supremacy and its continued lack of diversity, people from outside Oregon who are not familiar with recent progress may hesitate to look for/accept positions of any kind in this state.[57] With this in mind, workgroup members suggested an "Oregon Public Health Roadshow" which would be transparent about Oregon's history and the harm done to BIPOC communities, discuss Oregon's efforts to rectify this and aggressively pursue health equity, and highlight the exciting and innovating public health work happening in Oregon.

Training and Support Needs of the Public Health Workforce

Interviewees and workgroup members also discussed recommendations for initial and ongoing training needs for the public health workforce. One of the main findings was that recent graduates of nursing programs are not joining the public health workforce, a theme that is supported by Oregon-level literature.[58] A second finding was that graduates of bachelor's and master's programs of public health did not have some of the knowledge vital to doing public health work in Oregon. For example, graduates frequently did not know about Public Health Modernization, what the National Accreditation process looks like, or how to build working relationships within communities.

With these findings, one recommendation is for nursing programs to expand their community health curriculum and to allow for more non-clinical placements in public health to fulfill degree requirements. Another recommendation from the workgroup is to include key pieces of "operationalized" public health in curriculum, such as

Public Health Modernization, the Essential Public Health Services, Accreditation, and policy and operating within political structures.

For ongoing training and support needs, interviewees and workgroup members discussed how it would be helpful to have a statewide training series available to LPHAs on the basics of Oregon's public health system, health equity, and Public Health Modernization. Workgroup members also suggested a cohort system for hiring and training new LPHA employees so that new hires can have support and relationships with colleagues across the state which is particularly helpful if they are from a small health department and are the only person in their position.

Retaining the Public Health Workforce

Finally, some key themes from interviewees about retaining the public health workforce revolved around offering growth opportunities and support to employees. According to the interviewees, lack of upward mobility due to education/minimum requirements and supervisory experience caused many valuable LPHA staff to seek opportunities elsewhere. This connects back to the recommendation of revisiting position classifications and minimum requirements; however, interviewees also provided ideas for leadership programs that could provide skill-building and experience for LPHA staff seeking promotions and leadership roles. Some of the recommendations are summarized in Appendix E, and CLHO will continue working with members to identify additional solutions.

Beyond just growth, interviewees identified that LPHA staff needed support while wearing their many hats and while experiencing burnout. The last two years have put incredible strain on LPHA staff, and one recommendation for this was for CLHO to convene groups and create spaces for LPHA staff to connect, collaborate, and find support (similar to the idea of cohorting new hires). There is also the potential for CLHO and OHA to locate and provide trauma-informed leadership sessions and support for LPHA staff.

Some interviewees also discussed retaining employees by providing comprehensive benefits, competitive pay, hazard pay, plentiful leave, and longevity bonuses. As one interviewee stated offering these benefits were essential to show "we are valuing our workforce - our most important asset" *(Kimberly Lindsay, Grant County Health Department)*.

Limitations

There are limitations to the report and the conclusions one can draw from its results. First, not all LPHAs were able to participate, and some that did participate were not able to provide FTE or pay scale data resulting in an incomplete picture of Oregon's local public health workforce. While this report does achieve its purpose of establishing a baseline for advocacy efforts, the results should be used cautiously before making any assertions about the local public health workforce. However, given the high response rate from LPHAs, future iterations of this report may achieve 100 percent participation and be used for additional purposes.

While interviews were the best data collection method for achieving a high response rate and for discussing the complexities of each health department's FTE and pay scales that could not have been accurately captured in a survey, there are limitations to the method. Because CLHO staff formalized the questions and the process after conducting some of the interviews and were not able to repeat those initial interviews, portions of data are missing from multiple counties. In addition, upon cleaning and compiling the data, CLHO staff discovered additional questions or items that would have been useful (for example, the breakdown of nurse FTE and epidemiologist FTE into COVID and non-COVID work) but could not go back to gather this because of the lack of capacity of interviewees. Future versions of this report will include significant time in preparing interview questions in an iterative process with CLHO members to ensure CLHO staff are asking the correct questions.

Lack of capacity is another significant limitation to this report. Though this report is timely because of the interest in workforce development, it was not timely for LPHA staff who were still responding to the COVID-19 pandemic and wildfires. Multiple LPHAs did not have FTE or pay scale data available during the interview and were not able to respond to follow-up due to capacity. Future data collection will include more engagement up front so LPHA staff can prepare information and answers ahead of time.

It is also important to note that CLHO staff did not match position pay scales by examining position descriptions and classifications. Pay scales are grouped together entirely by title. Future iterations of this report or other partners studying this topic may wish to complete a market study to draw further comparisons. Again, this report achieves its intended purpose of compiling all local public health pay scales in one place for state and local advocacy efforts.

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Appendix A: Semi-Structured Interview Questions

1. What is the total non-COVID FTE in your public health department?
2. What is the total COVID-specific FTE in your public health department?
3. What is your public health nurse FTE (include all those that work under the supervision of the public health department)?
4. How many environmental health specialist FTEs do you have (including trainees, techs, and REHSs)?
5. How many epidemiologist FTEs do you have?
6. What are the other positions in your health department, and how do you categorize them?
7. How is your Health Officer agreement written?
8. Are health department employees represented by a union? If so, which one?
9. What is your health department's starting pay and max pay for the following positions?
    a. Public health nurse
    b. Health administrator
    c. Epidemiologist
    d. Environmental health specialist
10. Do your health departments receive PERS or other benefits?
11. What strategies have you been using to recruit and retain public health professionals?
12. What challenges have you faced in recruiting and retaining public health professionals?
13. Is there anything else you would like to share?

Appendix B: Local Public Health FTE and Wage Data

Table 6

LPHA FTE and pay scale data

Health Department	Pop	Rural	Region	Total_Non-COVID_FTE	Total_COVID_FTE	Nurse_FTE	Epi_FTE	EHS_FTE	Nurse_min	Nurse_max	Health_admin_min	Health_admin_max	Epi_min	Epi_max	EHS_min	EHS_max
BAKER	16,860	1	9	11.65	1.60	4.10			$24.90	$30.28	$29.08	$35.36			21.53	31.40
BENTON	93,976	0	2	24.00	13.00	7.00		3.00	$29.28	$47.50					$26.84	$35.55
CLACKAMAS	425,316	0	1	55.00	65.00	5.00	6.00	8.00	$34.38	$43.53	52.82	71.31	31.25	43.53	$25.92	$39.59
CLATSOP	41,428	1	1	21.40		3.80		3.80	$32.71	$48.32	$43.86	$53.32			$24.99	$33.48
COLUMBIA	53,014	0	1	10.50	16.00	1.00	0.20	2.75	$28.97	$35.86	$49.28	$62.63	$28.97	$35.86	$28.97	$43.39
COOS	65,154	1	3	18.00	12.00	4.00		2.50	$29.29	$37.03					$22.15	$25.94
CROOK	25,482	1	7	27.43	9.35	5.60	1.00	0.50	25.38	32.47	42.47	42.47	22.32	22.32	30.30	30.30
DESCHUTES	203,390	0	7	66.00	15.00	22.00	1.00	9.00	$26.54	$45.39	57.94	77.64	37.35	50.05	$25.28	$43.23
DOUGLAS	111,694	1	3	7.00	35.00	0.00	4.00									
GRANT	7,226	1	7	7.60	1.50	2.70		0.50	$32.84	$50.19					$32.84	$50.19
HARNEY	7,537	1	7	5.00	1.50	1.00		0.50	$27.40	$43.62	31.25	$34.08			$32.84	$50.19
HOOD RIVER	23,888	1	6	18.00		4.00		2.00	$24.57	$31.36						
JACKSON	223,827	0	5	42.00	15.00	8.00	4.00	5.00	$30.88	$44.86	57.82	73.8	28.18	37.18	$21.51	$35.53
JEFFERSON	24,889	1	7	14.00		4.00		0.50	$27.62	$35.30	51.55	61.60			30.30	30.30
KLAMATH	69,822	5	7	21.50	1.00	3.50		3.00	26.53	34.38	38.92	49.25			21.75	33.46
LANE	382,647	0	3	82.00	27.75	22.00	3.00	8.00	$28.23	$47.69	40.66	59.80	28.21	41.48	21.77	34.09
LINCOLN	50,903	1	2	39.10	13.51	5.70	1.00	3.00	29.92	40.20	42.92	57.69	29.92	40.20	29.92	40.20
LINN	130,440	0	2	40.50	12.50	8.00		5.00	28.60	36.50	45.98	58.23	28.60	36.50	23.50	40.26

MALHEUR	31,995	1	9	25.00	6.00	6.00			26.17	42.08	28.00	28.00			21.53	31.40
MARION	347,182	0	2	98.40	21.60	16.80	14.75	7.00	29.01	50.87	58.84	89.11	28.89	48.20	22.68	45.90
MORROW	12,635	1	9	9.50	1.00	3.00			31.01	39.58	42.91	60.38			26.84	32.5
MULTNOMAH	820,672	0	1	288.98	153.30	67.00	6.00	23.00	$39.18	$50.36	$57.37	$91.80	33.37	47.54	$30.56	$43.51
NORTH CENTRAL PHD	30,528	1	6	26.00	14.00	6.50	1.00	3.00	28.18	34.24	44.98	54.67	29.56	35.95	25.57	32.61
POLK	88,916	0	2	21.20	6.00	6.80	0.50		29.04	41.33	41.18	52.19				
TILLAMOOK	27,628	1	1						27.50	38.71	43.14	54.61			$22.62	$28.88
UMATILLA	80,463	1	9	28.15	8.00	9.50	1.00	5.00	27.53	32.5	41.96	44.06	32.50	32.50	25.56	32.5
UNION	26,295	1	9													
WASHINGTON	605,036	0	1	110.00	300.00	20.00	20.00	4.00	35.13	44.95	58.77	71.41	35.87	43.58	28.02	45.78
WHEELER	1,456	1	7	1.00	0.50	0.75			32.00	50.00	32.00	50.00			$32.84	$50.19
YAMHILL	108,261	1	2	25.00	11.00	8.00	1.00	2.80	29.20	37.32	52.95	64.39	30.49	38.80	$26.74	$38.80

Appendix C: Distribution of LPHA Starting Wages Across Oregon

Figure 9
Range of starting wages for public health nurses in local public health in Oregon

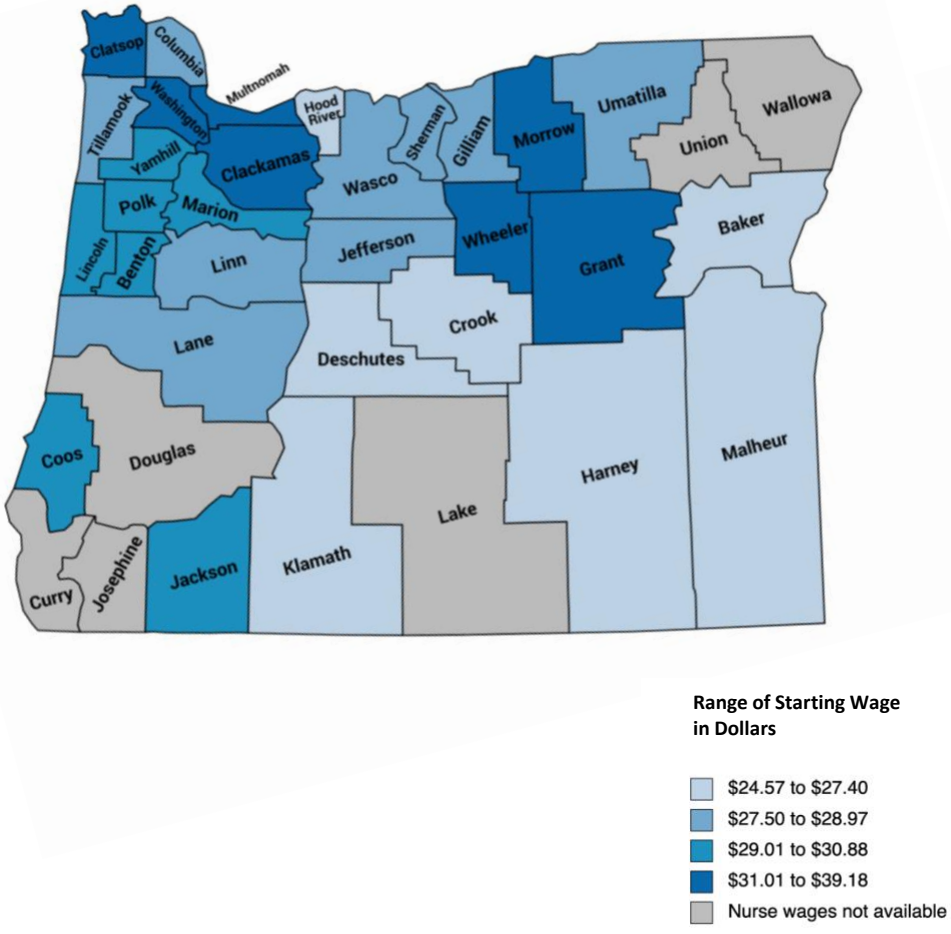

Figure 10
Range of starting wages for public health administrators in local public health in Oregon

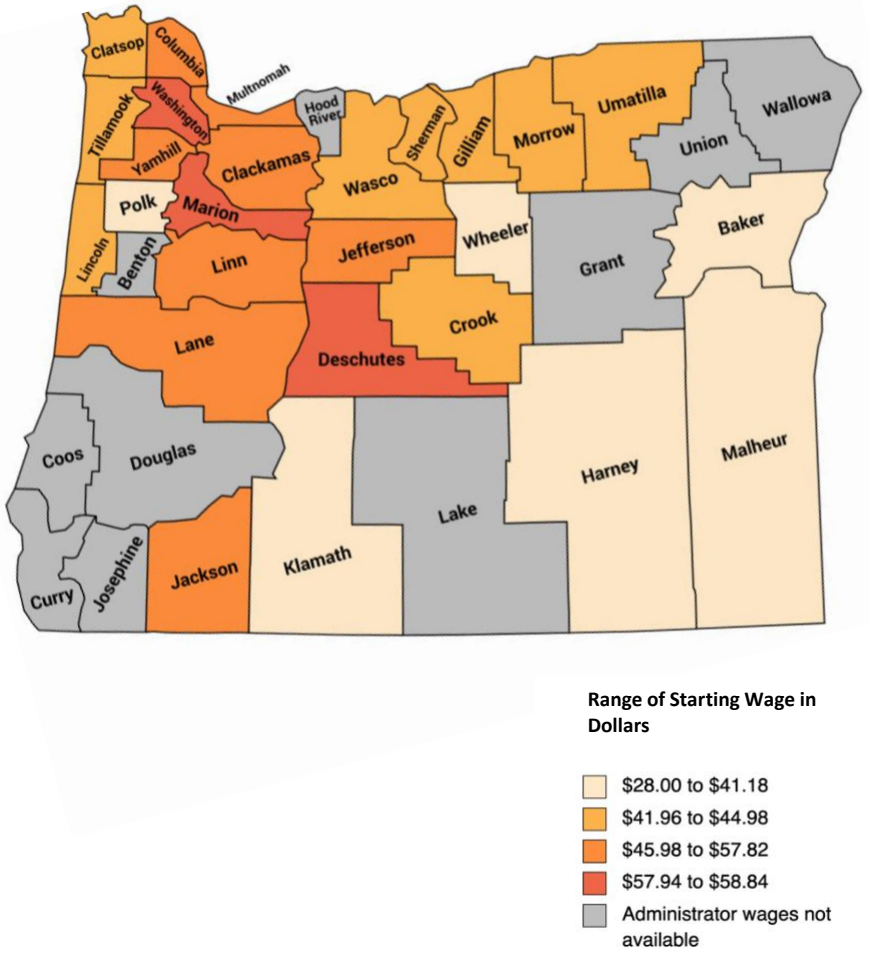

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Figure 11
Range of starting wages for epidemiologists in local public health in Oregon

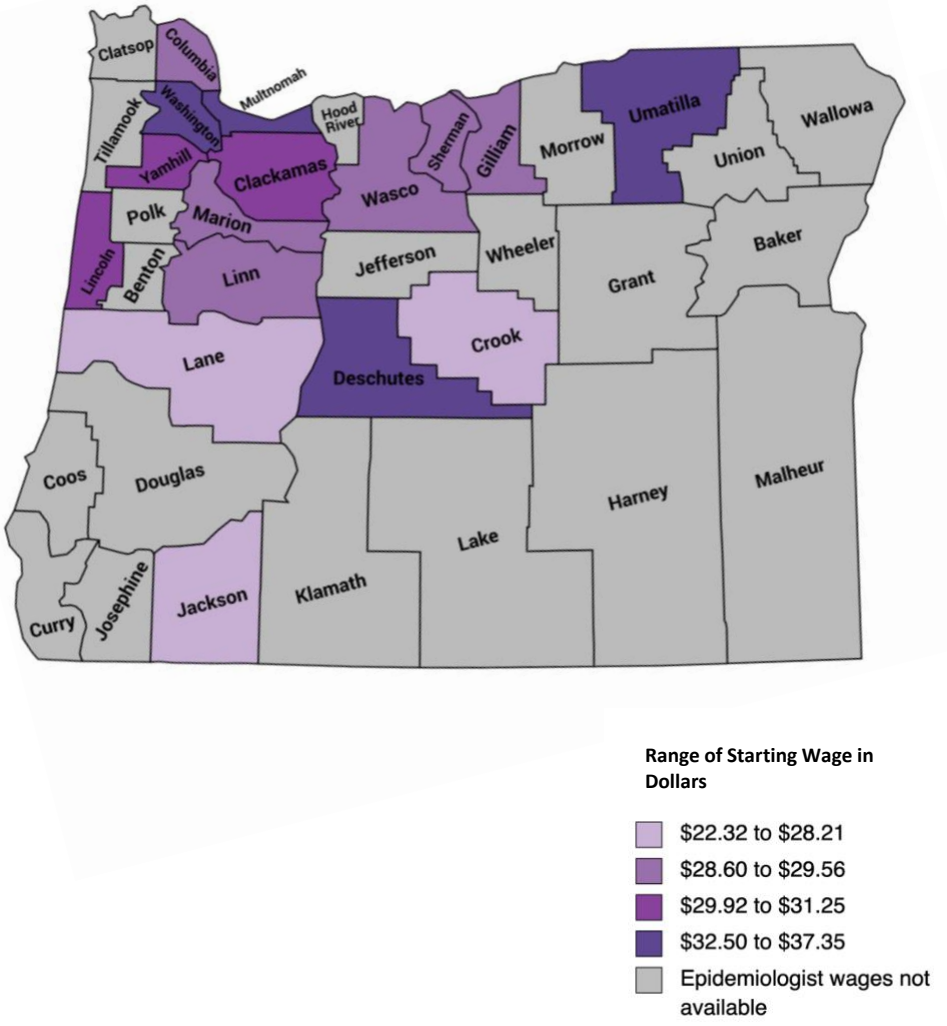
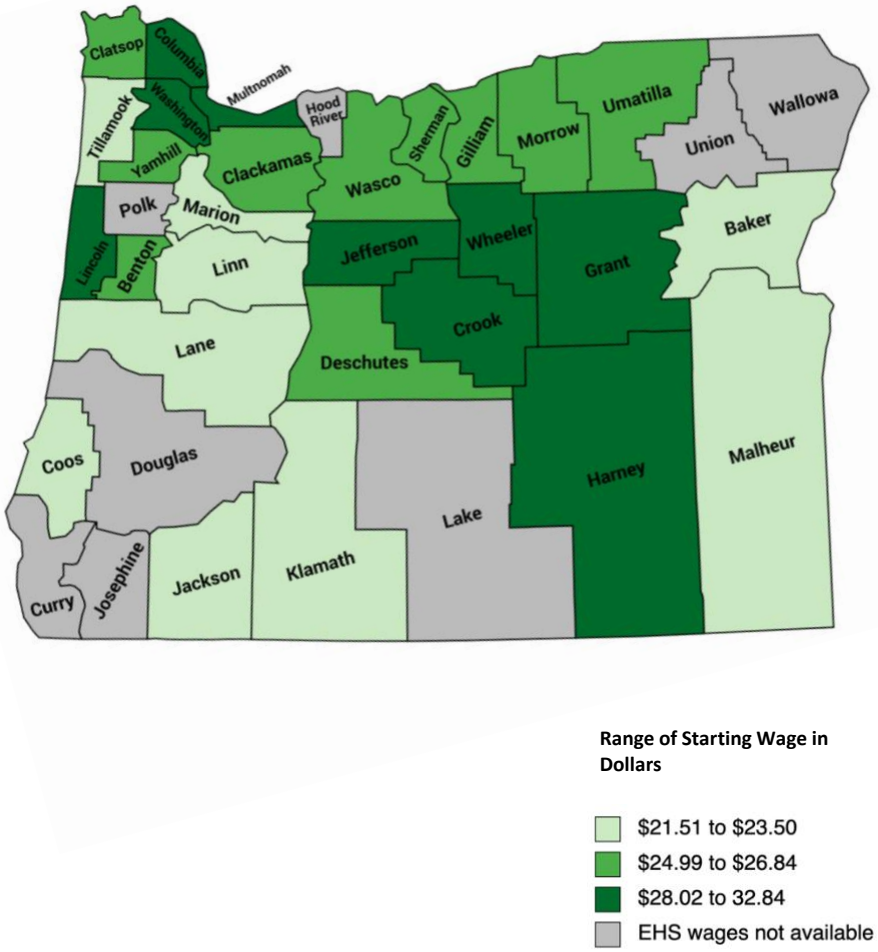


Figure 12
Range of starting wages for environmental health specialists in local public health in Oregon



Appendix D: Successful Strategies for Recruiting and Retaining Public Health Professionals

These strategies for recruiting and retaining public health professionals come from LPHA leaders who participated in interviews for this report. This is not a comprehensive list of all the strategies LPHAs are using. CLHO staff and members will continue developing a list of strategies/best practices as a resource for all LPHAs.

Table 7
Successful strategies for recruiting and retaining public health professionals

Topic	Strategy
For expanding recruitment process	Post to Indeed, LinkedIn, Handshake, and with national professional organizations (NACCHO)
	Offer remote work options
	Reclassify positions to allow non-licensed professionals take on the program functions that do not require a license (for example, DIS or CHW to supplement PHNs)
	Offers funds for visiting and/or relocation
For recruiting people within the community	Post positions in newspapers and to Facebook.
	Ask LPHA staff to recruit people they know (offer bonuses to those who referred if the recruits stay on)
	Rewrite minimum requirements of positions to lean on lived experience rather than education.
	Post positions with local community colleges
For removing bias from recruitment process	Mandatory anti-bias training for all people on the interview panel
	Add an open-ended question to the application to ask about any other experience or knowledge that the applicant brings (weight this question when scoring application)
	Blinded applications

	Consult with equity experts on organizational structures, processes, and culture (“readying the house”).
	Rewrite minimum requirements of positions to lean on lived experience and bi-lingual skills rather than education.
	Add positions that require bi-lingual skills
For offering competitive pay and benefits	Offer hiring, longevity, and referral bonuses, merit increases, and hazard pay
	Offer mental health and extended bereavement leave
	Offer remote work options
For increasing upward mobility for staff	Create tiered position structures to allow people the ability to move up
	Grant staff who want to gain leadership skills oversight over an intern or AmeriCorps Vista
	Engage in succession planning early to develop leaders
	Utilize career maps and actively engage with staff on their goals and plans (Multnomah Co. resource)
	Implement mentoring programs to provide support and growth to staff (Mentoring Matters in Multnomah Co.)
	Implement leadership programs (Emerging Leaders in Lane Co.)
	Pay for all licensing fees for staff
	Offer yearly stipend for training
	Dedicate 10% of staff time to continuing education and training

Appendix E: Recommendations

These recommendations come from qualitative themes and from a workgroup of volunteer CLHO members. Please note that these recommendations are preliminary and are not comprehensive. CLHO staff and LPHAs leaders will continue engaging with partners to identify additional solutions and implementation plans.

Table 8
Workforce report recommendations

Level		Solutions/Strategies/Activities
LPHA-level Recommendations	Recruitment	Engage with local schools (K-12, community colleges, and universities) to provide education on public health careers and to recruit students for internships and jobs. Have every health department staff spend at least one day each year on this type of outreach and education.
		Partner with local community-based organizations to create opportunities for job rotations.
		Actively consider opportunities for internships when budgeting (offering paid internships can reduce barriers to low-income students), redesigning workspace, and determining remote work options. Look for methods to keep interns on after completing the internship.
	Hiring Processes	Examine position descriptions and evaluate ways to reclassify, lower minimum requirements, or to weight lived experience as to not exclude people with valuable skills and experience (see Appendix D for strategies from other LPHAs).
		Examine recruitment and hiring processes (written screenings, interviews, interview panels, etc.) for any places that exclude people (BIPOC, people with disabilities, people who are low-income, people who speak English as a second language, etc.).
		Work with county commissioners and human resources departments at LPHAs to find methods for keeping people hired specifically for COVID.
	Retaining Employees	Implement programs that allow entry-level employees to gain supervisory experience and leadership skills (see Appendix D).

		Work with OHA/CLHO on options for cohort hiring systems. A statewide cohort of new LPHA employees ensures people are not alone and allows for cross-jurisdictional training (to get connected with people who do the same work).
CLHO/OHA-level Recommendations	LPHA Support	Create a clearinghouse of position descriptions to assist LPHAs in determining needed knowledge, skills, and abilities and compensation level when creating new positions.
		Create an internship program and help place interns at LPHAs across the state. CLHO/OHA can provide a support structure through recruiting students to fill internships across the state, meeting the requirements of the academic organizations, creating and managing cohorts of interns, and providing interns with the basic background on Oregon's public health landscape.
		Create additional support groups/caucuses for LPHA staff across the state to connect and find support.
		Create a virtual roadshow for Oregon's public health system that addresses Oregon's racist history, describes efforts in Oregon to rectify that history, and provides background on exciting public health work in Oregon (Public Health Modernization, state and local Equity Resolutions, Strategic Goal, move towards anti-racist structures). This can be used in outreach to academic and professional organizations both locally and nationwide.
		Support LPHAs in training new employees by creating a set of standard trainings that offer introductions to Oregon's public health system, foundations for health equity, introductions to programs and program elements, etc. Hold these trainings as part of the cohort system.
	Policy	Review statutes for licensing requirements in Oregon and address barriers to hiring professionals from out-of-state.
		Establish standards for the level/type of FTE needed at each LPHA to provide essential services.
		Work with county commissioners and unions to identify solutions for adjusting compensation to be competitive with local industries (based on qualitative data from this report).

		Work with the Oregon State Legislature on including public health professions in the various workforce development funding packages.
Partner/ Academic-level Recommendations	Public Health Curriculum	Actively connect students to LPHAs and CBOs for internships and work experiences. Allow for virtual options to fulfill degree requirements.
		Incorporate the following components into public health curriculum and advising for public health students ("operationalized public health"). • Public Health Modernization (Oregon Universities) • Essential Public Health Services • Public Health Accreditation • Public health licensing options for students upon completion of degree (REHS, CHES, etc.) • Policy and political structures • Building relationships, anti-racist collaboration, and working within communities • Federal Public Service Loan Forgiveness program
		Incorporate community/public health curriculum into nursing programs and expand placement options for students into public health settings.
		Partner with LPHAs and invite them to speak in classes about public health on the ground.
		Consider developing/expanding public health certificate programs and/or two-year degrees to reduce barriers for people unable to pursue higher education and to introduce people to the field of public health.
	Research	Complete a market study of public health positions in Oregon to assist LPHAs with increasing compensation.
		Compare public health nurse wages to nurse wages in competing industries (hospitals and clinics).
All	Planning	CLHO, LPHAs, OHA, Academic Institutions, and other partners can convene to develop a strategic plan for local public health workforce development.