Designing a Training Program for New Local Health Officials: A Comprehensive Needs Assessment

NACCHO and the Center for Public Health Systems School of Public Health, University of Minnesota

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Center for Public Health Systems, School of Public Health
University of Minnesota

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Background and Methods

Background

From 2008–2012 the National Association of County and City Health Officials (NACCHO) ran a training program for new local health officials (LHOs) called Survive and Thrive. Survive and Thrive provided new LHOs (health department leaders with two or fewer years of experience) with the knowledge and skills needed to be successful in their position.[1] Though the program ended, the need remained: public health workforce levels have been declining for decades, exacerbated by the aftermath of the Great Recession[2] and COVID-19,[3] and 20% of the overall workforce are planning to retire within the next five years,[4] creating a potential progressive loss of experienced local public health practitioners.

A similar program in today's public health environment would look different than it did in 2008. Based on program evaluations, Survive and Thrive was successful in training new LHOs, but the necessary knowledge and skills for new LHOs has changed since the program ended and have been shaped by the COVID-19 pandemic. Thus, in considering whether and how to restart the program, a formative evaluation is critical to identify how to best implement it for stakeholders – in this case, the new LHOs and those who work with them.[5] Therefore, NACCHO and the Center for Public Health Systems (CPHS) partnered to conduct an exploratory mixed-methods study[6] to 1) assess which content areas and learning formats are most effective to develop the skills necessary for success by new LHOs and 2) assess the feasibility and desirability of a program for new LHOs that builds skills necessary for success.

Methods

The Institutional Review Board at University of Minnesota reviewed and approved this study, which was conducted by CPHS staff in partnership with NACCHO staff. The approach was exploratory mixed methods[6] and included qualitative interviews with individuals to inform a follow-up nationally-representative quantitative survey. Additionally, secondary data analysis from the 2017 and 2021 Public Health Workforce Interests and Needs Survey (PH WINS)[4,7] and an environmental scan were conducted. Together, the data informed program recommendations and a program evaluation plan. This report summarizes the qualitative and quantitative data used to inform these recommendations and plan.

Interviews

Twenty-two stakeholders were interviewed (five former Survive and Thrive coaches, five former Survive and Thrive fellows, seven new LHOs, four experienced LHOs, and one other stakeholder) using video conferencing software. New and experienced LHOs were defined as those having been an LHO for two years or fewer and five years or more, respectively. One CPHS staff conducted each interview, and another assisted in taking notes. The interviewer followed virtual interview recommendations such as assessing the technology, having a contingency plan if technology fails, and conducting a practice session.[8]

NACCHO sent a recruitment email to potential participants that included the purpose of the study, interview details, and a scheduling link. Interested participants used the link to schedule an interview with the study lead researcher from CPHS who then followed up with the participant and provided the video conferencing information. At the scheduled date and time, the lead researcher (interviewer), assistant researcher, and participant met using the video conferencing software. After obtaining verbal consent, the semi-structured interviews were each recorded and lasted about one hour. At the conclusion, the participant was thanked for their time and the interview was considered complete.

Interview Guide

CPHS created the interview guide using existing LHO literature[1-3] and past Survive and Thrive evaluations. CPHS provided the draft interview guide to NACCHO leadership, the NACCHO workforce workgroup, and other LHO experts for feedback, which was incorporated into the finalized guide.

Interviewer Training

The lead CPHS researcher led a training for the assistant researcher[8] that consisted of background knowledge of public health workforce, LHOs, the purpose of the interviews, the guide, and training on technology used for the interviews.

Data Analysis

Interview transcripts were automatically created by the video conferencing software. Researchers checked the recordings for errors by listening to the audio and revising the transcript as needed. Transcriptions were then uploaded into NVivo QSR International Pty Ltd. (2020) NVivo (released in January 2022), for analysis.

The lead researcher and assistant researcher created and applied four domains (a priori codes) to each transcript ("Training Content," "Training Structure," "Training Evaluation," and "Barriers"). During analysis, the researchers created a fifth domain ("LHO Connection and Network") due to its high prevalence throughout the transcripts. They also revised "Barriers" into "Participant Barriers" and "Facilitators." Deductive coding was used within each a priori code.[9] The deductive coding used eclectic coding consisting of multiple, subsequent rounds of descriptive and in vivo coding followed by thematic analysis.[10] Each theme and sub-theme were based on the domains and cut across all participants. Participants may have discussed a topic multiple times and within different contexts. To maintain participants' original intent, those topics were coded into the theme of their intended context (though no double coding occurred). For example, a participant discussed how the training must be voluntary with participants wanting to be there as participants that were forced to complete the previous Survive and Thrive program did not do well. The first part of this was coded within facilitators and the second part was coded in barriers.

Survey

CPHS and NACCHO staff used the individual interview results to inform their development of the quantitative survey. The survey was designed and fielded as a probability-based, stratified sample, which was representative nationally. The sample was drawn proportionately based on the size of population served by the agency, with a slight oversample for large jurisdictions. NACCHO emailed the web-based survey to LHDs. The survey was in the field for about two weeks in May 2022. Participants received four reminders about five days apart and then one final reminder the day before the survey closed.

Analysis

Of the 913 LHOs invited to take the survey, 222 interacted with the survey. One duplicate response was dropped, in addition to an additional 37 responses because these LHOs did not participate in the survey questions. This left a final analytic sample of 184 LHOs. Descriptive statistics are presented for both the unweighted and weighted survey responses. Post-stratification weighting was employed to account for survey design and non-response. All data cleaning and analyses were conducted on STATA 17 software (StataCorp. 2021. *Stata Statistical Software: Release 17*. College Station, TX: StataCorp LLC).

Secondary Data Analysis

The data collected came from multiple sources and were cleaned and analyzed in STATA 17 software (StataCorp. 2021. *Stata Statistical Software: Release 17*. College Station, TX: StataCorp LLC). First, the research staff analyzed participants' responses from 2017 and 2021 PH WINS. Only participants who indicated they had an executive level position and whose setting was local government were included. Participants were then divided into three categories, those who had been in their positions for fewer than 2 years, 2-5 years, and more than 5 years, in 2017 and 2021. The domains examined were training gaps, perceptions, satisfaction, stress, prevalence of leaving, reasons for staying, and reasons for leaving. The second source of data came from trainings and resources recommended by key informant interviewees, which were analyzed by field experts. The third data source was from NACCHO membership database that compared the LHOs on file in the membership database on 7/28/2021 versus 4/26/2022. Anyone who had a status of "changed" was included in the analysis. It should be noted that the data are only at the organization-level and thus some LHOs may have simply switched from being an LHO at another agency. The dates are based on when the data were pulled from the database and not when the LHO took office and therefore do not include new or planned local health departments.

Environmental Scan

An environmental scan of leadership development practices in place for public health and those promoted by other sectors (e.g., regulatory compliance officers) was conducted using key word searches in Google Scholar and Scopus (using Publish or Perish platform), TRAIN, public health training centers, and universities offering public health leadership degrees (listed in ASPPH). Each search was tracked, and relevant documents and programs were listed within a Google Sheet that contained data collection columns including year, data type, document quality (with reason), Relevance for new LHOs (with reason), evaluation of program (if applicable; with reason), document description, and overall key takeaway(s). These results are not presented in this report.

Interview Results

Overall description of participants

Geographically, the participants were from nine of the 10 Health and Human Services regions. Please see Table 1 for a numerical distribution of the participants across the 10 regions.

Table 1.1. Numerical distribution of participants across Health and Human Services regions

Health and Human Services Region	States Represented	n
1	ME, NH, VT, MA, RI, CT	0
2	NY, NJ	3
3	DE, MD, PA, WV, VA	3
4	KY, TN, MS, AL, GA, SC, NC, FL	3
5	MN, WI, IL, IN, MI, OH	3
6	NM, TX, OK, AR, LA	1
7	NE, KS, IA, MO	1
8	MT, ND, SD, WY, UT, CO	3
9	CA, NV, AZ, HI	2
10	AK, WA, OR, ID	1

The most salient themes and subthemes (discussed by at least half of the participants) are included in the tables below with a discussion describing additional context.

Domain 1: LHO Connection and Networking

This domain was defined as overall connection and networking by LHOs (new and experienced). A total of 21 participants discussed content that was included in this domain.

Table 1.2. Domain 1 themes, theme definitions, subthemes, subtheme definitions, and example quotes

Theme (n)	Theme Definition	Subtheme (n)	Subtheme Definition	Example Quote
All LHOs connect with people and resources (n = 21)	All LHOs (new and experienced) need assistance with resources and connections to other LHOs to work together. Ideally these connections would happen systematically when a new LHO is hired.	New LHOs need peer support network (n = 8)	Peer support network help new LHOs	"For me having a network has been really what's made all the difference…most new local health directors don't have that platform."
		NACCHO workgroups (n = 5)	NACCHO workgroups are one avenue to increase connection for LHOs.	"NACCHO work groups [are a] great opportunity to grow and enhance your knowledge."
		LHO networking call (n = 4)	Regular, structured networking call for all LHOs.	"Local health director networking call [would help me] meet other people and talk about their issues and get help."
Importance of LHO networks (n = 14)	The importance of networks during an LHO's tenure.	LHOs need support (n = 3)	Networks (peer-support and others) help provide LHOs with the needed support to succeed in their position.	"Incoming group of health directors that need support."
		Sharing of ideas and KSAs (n = 3)	LHO networks allow for diffusion of KSAs beyond training.	"You can get to know people, then you know you're sharing your business card, and then you can go back and say 'hey, what do you do for this?'"

LHO Connection and Networking Discussion

Every participant discussed the importance of LHOs connecting with other LHOs and LHO resources. Many also discussed the need for this connection to occur automatically and systematically, such as by creating and maintaining a database or one-stop-shop of LHOs and LHO resources (e.g., places to find

supplemental training) and ensuring every new LHO is connected into the network. Participants mentioned using State Association of County and City Officials (SACCHOs) and the NACCHO Profile Study to assist with these efforts.

Additionally, participants mentioned the need for organized activities to help future (e.g., aspiring) and current LHOs connect such as networking sessions at conferences, virtual networking sessions, and NACCHO workgroups.

Domain 2: Participant Barriers and Facilitators

This domain was defined as barriers and facilitators potential new LHOs may experience regarding participating in a new LHO training program. A total of 22 participants discussed content that was included in this domain. One participant discussed content within "barriers" but not "facilitators" and vice versa.

Table 1.3. Domain 2 themes, theme definitions, subthemes, subtheme definitions, and example quotes

Theme (n)	Theme Definition	Subtheme (n)	Subtheme Definition	Example Quote
Barriers (n = 21)	Factors that are tangible, intangible, external, or internal that prevent LHOs from succeeding or completing training.	Time commitment (n = 21)	LHO does not have, or is not able to, commit the necessary amount of time to training. Competing priorities.	"You're doing multiple different jobs; you know to fit [in] a training is very difficult."
		External burdens (n = 17)	Event, responsibility, or circumstance that hinders an LHO's ability to participate in training. Jurisdictional differences or political environment.	"The biggest challenge, that comes to mind right off the bat is that each State is different."
		Internal burdens (n = 15)	Feelings, emotions, or beliefs that hinders an LHO's ability to start, participate, or complete training. Feeling overwhelmed, fear of failure.	"I don't want to let people know I don't know, because that might look like I'm a failure."

		Health Department leadership leaving or turnover (n = 12)	When multiple high level or core employees leave the LHO's health department before or right after they arrive, creating a void or vacuum for the LHO.	"I came in at an obviously a very tumultuous time with dealing with COVID [and] they hadn't had a permanent health officer and over a year."
		Limited LHO public health & supervising background (n = 12)	LHO does not have a background in public health and/or does not have experience in a leadership role.	"I didn't identify that I was going to have such a huge learning curve and some of these areas."
Facilitators (n = 21)	Factors that are tangible, intangible, external, or internal that assist or help LHOs succeed.	Limited LHO training available (n = 11)	When LHOs are motivated to participate in trainings relevant to their new positions because prior training has not been available or adequate.	"[I] didn't see anything out there, that was specific to new health officers."
		LHO Internal Motivators (n = 10)	Personal feelings, emotions, or beliefs that drive an LHO's actions.	"When you're new you want to be successful."

Participant Barriers and Facilitators' Discussion

Almost all participants expressed not having enough time to commit to training. Many also discussed the external and internal burdens that they faced that made it more difficult to start or complete trainings. External burdens were predominantly around office or governmental politics, being pulled in multiple directions, and travel issues. Internal burdens were focused on personal feelings and emotions connected to the participants role as an LHO. Many expressed that LHOs want to succeed at their job and were hesitant, scared, nervous, or uncomfortable to take time away to complete a training early on in their time as an LHO. Additionally, participants mentioned feeling the need to know all the answers and to hit the ground running when starting their new position. A few mentioned a limited background in public health and staff supervision, and were unaware of the gap, as barriers to seeking training. About half of participants noted how the role of an LHO has changed since the COVID-19 pandemic. Most participants did not articulate how it had changed, though some stated reasons such as how more people are aware of public health and LHOs, which has shifted the conversation around public health and trust in science (often indicated being for the worse), and that

LHOs are now more in their office than on the road traveling. About half of participants expressed that new LHOs don't know what they don't know, meaning they knew they probably had knowledge gaps or areas needing to be strengthened but weren't sure what they were. A few participants in smaller health departments mentioned the cost or financial burdens of attending a training program and that their department did not have enough staff to cover for absence of a director due to training.

Half the participants discussed the limited training currently available for LHOs as a facilitator or motivation for them to enroll in or apply for relevant training programs in the future. Almost half of the participants discussed their internal motivators such as wanting to be successful in their position and loving their community. Some discussed that LHOs need to want to be at the training and need to prioritize training to succeed. Others talked about using past knowledge and experience from other positions to facilitate their success. Participants explained that they often learned how to do their job "on the fly."

Domain 3: Training Content

This domain was defined as content participants identified as needed in a new LHO training program. A total of 22 participants discussed content that was included in this domain.

Table 1.4. Domain 3 themes, theme definitions, subthemes, subtheme definitions, and example quotes

Theme (n)	Theme Definition	Subtheme (n)	Subtheme Definition	Example Quote
LHO personal development (n = 22)	Content around an LHO's personal development and growth	Work through public health politicization and divisiveness (n = 13)	Strategies and skills are needed for LHOs to deal with the unprecedented politicization and divisiveness around public health and the health officers themselves.	"Public health's under assault and we have been for past year and a half and local health directors, and especially new local health directors haven't had to deal with the political vitriol that we deal with now."
		Behavioral health (n = 12)	Mental and behavioral strategies and skills to help LHOs succeed in their positions such as burnout mitigation, resiliency, stress management, work-life balance, and confidence building trainings.	"Top of the list dealing with stress…if we can't succeed at home first, we can't succeed at this job either."

		Challenge navigation skills (n = 12)	Skill development relevant to helping LHOs navigate potential challenges such as teamwork and problem solving.	"Everything you do all most of the problems that we have in public health or complex problems. We solve them through trans disciplinary teams."
		Life-long learning (n = 10)	Cultivating a desire for and creating habits that help LHOs continue to learn beyond the initial training.	"Recognizing that I don't know it all, and when I do need to learn something, I figure out where I need to go to get that information."
		Increased LHO openness (n = 10)	Helping LHOs increase their comfort in new and uncomfortable spaces and situations.	"We've got to get in these rooms whether they're red, blue or purple whatever and get comfortable and so many people have not been doing that you know we've got to get braver I guess and not be afraid."
		Managing change (n = 9)	Using theories to develop knowledge and skills around managing change personally, internal to the agency, and external to the community.	"Finding that line of introducing change, introducing new ideas, introducing my own leadership style, which was different um while still getting people on board who'd been used to one type of leadership."
Human resources (n = 22)	Content related to the business human resources side of being an LHO	Staff management (n = 16)	The importance of and skills related to hiring effective employees, gaining their trust, and documentation such as evaluations, firing, disciplinary.	"Work has fundamentally changed, and therefore the Labor market has fundamentally changed, and so…we want to be competitive and recruit talent like they're going to have to alter the way that public health practice actually plays out."
		Staff interaction (n = 14)	How to effectively interact with and direct staff with diverse backgrounds.	"Not having any experience or classes or training that grounds you in being an effective supervisor."

		Staff support (n = 12)	Supporting staff, particularly after COVID-19, using evidence-based strategies such as trauma informed care and psychological safety.	"Workforce, who is very stressed, a workforce who you know may have had a husband who lost a job, may have kids home, may have whatever it was and so that was a new aspect to me to have."
		Staff communication (n = 10)	Learning to effectively communicate with staff.	"You may be able to talk to one person in this way and they'll respond to that, but you may have to talk to another person in that way."
		Staff development (n = 10)	How to coach staff to build up their KSAs and develop into public health leaders.	"My job is not to make the decision it's to help them become better decision makers."
Day to day LHO operations (n = 21)	Content related to LHOs understanding their role, duties, and related technologies	Administration and management (n = 17)	Business related (non-human resource) administration and management aspects such as working with other departments, managing teams, managing different and conflicting priorities.	"Leadership is one thing, but managing it is another and I don't think a lot of local health directors know the difference and we've got to differentiate between managing and leading, and what it means when you're the head of organization that's charged with supporting your community's health regardless of what the issues are."
Public health foundations (n = 21)	Content related to the foundations of public health including public health 101, needs assessments, data collection/analysis/interpretation.	Population health (n = 12)	How to support and advance health departments' population health efforts including health equity and social determinants of health.	"How do you actually advert advanced the work of public health and health equity in the context of this much larger bureaucratic system."

		Public health 101 (n = 9)	Ensuring all participants have a grounded understanding of public health.	"I've had to build those up a lot more to be successful and like a lot of that is based off of the foundational understanding of what public health is."
LHO relationships (n = 20)	Content related to the importance of and best practices within developing and maintaining relationships with multiple different people and entities an LHO may encounter	Community-at-large (n = 15)	LHO relationships specifically with the community including around community engagement, community conflict management, effective programming, and sharing power.	"How to make sure that the Community you represent, has a seat at that table how to increase inclusiveness, how to increase diversity, how do you know tackle these controversial subjects that come up in a way that is relatable to people and not alienating to people that invites people to join the conversation."
		Community leaders and authorities (n = 13)	LHO relationships with community leaders and authorities such as elected officials and health boards.	"How to connect with the decision makers in a way that your message comes across as important and valuable."
LHO interpersonal communicatio n (n = 19)	Content related to the importance of and developing interpersonal communication skills	Communicating with diverse people and groups (n= 13)	Best practices and developing skills around engaging in conversations with various people and groups.	"How do you bring those two camps together in a way that helps you as a health officer develop a program that is inclusive addresses what you need to address but also has that awareness of those sensitive triggers that people are going to be not happy with, so that you can move find a path forward right because. You shut down conversation once you come into the table thinking no this is my stance, and this is what I'm going to do."

		Networking and reaching people (n = 11)	Creating networks and effectively reaching out to others.	"I had a lot of people to meet, and a lot of people needed to get to know me."
Leadership skills, styles, and theory (n = 18)	Content related to all things leadership including skills, styles, and theory	n/a	n/a	"Theory of change is if we equip local health officials they'll be able to make better decisions and have more effective organizations."
Public health authority and governance structure (n = 17)	Content around the authorities of public health and all levels of government structures	n/a	n/a	"Different states have different statutes and there's local policies versus you know local health department versus county health department versus state health department."
Public health modernization (n = 13)	Content around modernizing and bringing public health and departments into the future through strategic planning, Public Health 3.0, and increased efficiency	n/a	n/a	"If NACCHO's going to start up survive and thrive it's got to be all about the future and should be focused on the future and we're public health functions one five to ten years from now."
Budgeting, financing, and projecting (n = 12)	Content and skill development around health department budgeting, financing, and forecasting especially as LHOs deal with shrinking resources	n/a	n/a	"Finance piece, although I found that a little bit more challenging because everybody's financial processes and situations are a little bit different."

Survey Results

Professional Characteristics

A total of 184 LHOs completed the survey from 2,392 eligible local health departments. Table 2.1 describes the professional characteristics of the LHOs who participated in this survey. These LHOs

were primarily directors (43% weighted) with a master's degree (55%) and worked at an agency that primarily served small rural areas (40%). Their experience in public health ranged from fewer than one year to 44 years with a two in five LHOs (40%) reporting more than 21 years working in public health. Experience as an LHO ranged from fewer than one year to 33 years; almost half of LHOs (47%) reported fewer than five years of experience as an LHO, 43% reported six to 20 years, and 9% more than 21 years.

Table 2.1. Professional characteristics of local health officials

Professional Characteristics	Unweighted n (%)	Weighted n (%)
Total number of local health officials	184	2,392
Title		
Director	74 (44)	1,022 (43)
Administrator	23 (14)	407 (17)
Officer	19 (11)	217 (9)
Commissioner	16 (10)	209 (9)
Multiple titles (e.g., officer and administrator)	30 (18)	425 (18)
Other (e.g., health agent, researcher)	5 (3)	112 (5)
Years as a local health official		
2 years or less	56 (30)	728 (30)
3 to 5 years	34 (19)	416 (17)
6 to 10 years	47 (26)	592 (25)
11 to 20 years	32 (17)	430 (18)
21 or more years	15 (8)	226 (9)
Years spent working in public health		
2 years or less	13 (7)	196 (8)
3 to 5 years	11 (6)	161 (7)
6 to 10 years	24 (13)	356 (15)
11 to 20 years	58 (32)	720 (30)
21 or more years	78 (42)	959 (40)
Highest level of education		
High school degree	1 (1)	23 (1)
Associate's degree	5 (3)	100 (4)
Bachelor's degree	40 (22)	640 (27)
Master's degree	107 (58)	1,312 (55)
Doctorate degree	29 (16)	317 (13)
Primary type of population served by agency**, n (%)		
Urban core	11 (6)	111 (5)
Suburb	31 (17)	369 (15)
Medium metro	19 (11)	212 (9)
Small metro	15 (8)	183 (8)
Large rural	37 (20)	421 (18)
Small rural	63 (35)	961 (40)
Frontier and remote	6 (3)	135 (6)

*Percentages may not total to 100 due to rounding.

**Population type definitions were based on CDC (NCHS) and HRSA (FAR): Urban core - Metropolitan statistical area (MSA) of 1 million population that: 1) contain the entire population of the largest principal city of the MSA, or 2) are completely contained within the largest principal city of the MSA, or

3) contain at least 250,000 residents of any principal city in the MSA. Suburb - MSA of 1 million or more population that do not qualify as an inner city. Medium metro - In MSA of 250,000 – 999,999 population. Small metro - In MSAs of fewer than 250,000 population. Large rural - In micropolitan statistical areas (population of 10,000 to 49,999) that are not Frontier and Remote. Small rural - Rural populations not in micropolitan statistical area or Frontier and Remote areas. Frontier and Remote - Populations up to 25,000 people that are: 45 minutes or more from an urban area of 25,000 - 49,999 people; and 60 minutes or more from an urban area of 50,000 or more people.

Program Logistics

Table 2.2 provides an overview of LHO perspectives on the components of an LHO training program. LHOs were split in determining the frequency of LHO training cohorts; approximately 47% (weighted) of LHOs suggested these cohorts should begin every six months while 47% suggested every year. The majority of LHOs reported that small groups should be based on similar characteristics rather than different characteristics (75%). LHOs also suggested that an average of 36.4% of training time should be spent with a virtual and synchronous modality, 35.5% with a virtual and asynchronous modality, and 28.0% of time spent in-person. Of training time spent in-person, the ideal number of consecutive days spent in-person training was an average of 2.6 days (range: 0 to 20 days). Nine in 10 LHOs (90%) reported that their health department would be willing to contribute funds to an all-inclusive, in-person new LHO training if NACCHO could not secure external funding. However, 40% of LHOs suggested that their health department would only be willing to contribute $1,000 or less in support of a new LHO training program (range: $100 to $15,000).

Table 2.2. Local health official training program logistics

Program Logistics	Unweighted	Weighted
How often new local health official (LHO) training cohorts should begin, *n (%)*		
Every 6 months	87 (48)	1,131 (47)
Every 1 year	86 (47)	1,127 (47)
Every 2 years	8 (4)	112 (5)
Every 3 years	1 (1)	22 (1)
Suggested percentage of time spent per training modality (*n*=184), *mean (margin of error)*		
Virtual and synchronous	36.0	36.4 (±2.9)
Virtual and asynchronous	35.1	35.5 (±3.4)
In-person	28.9	28.0 (±3.4)
Ideal number of consecutive days for new LHO in-person training (*n*=184), *mean (95% CI)*	2.7	2.6 (2.4, 2.8)
Should small groups be based on similar or different characteristics, *n (%)*		
Similar	132 (72)	1,799 (75)
Different	18 (10)	186 (8)
Cohort composition does not matter	33 (18)	407 (17)
Health department willingness to contribute funds to an all-inclusive in-person new LHO training program if NACCHO cannot secure external funding, *n (%)*		

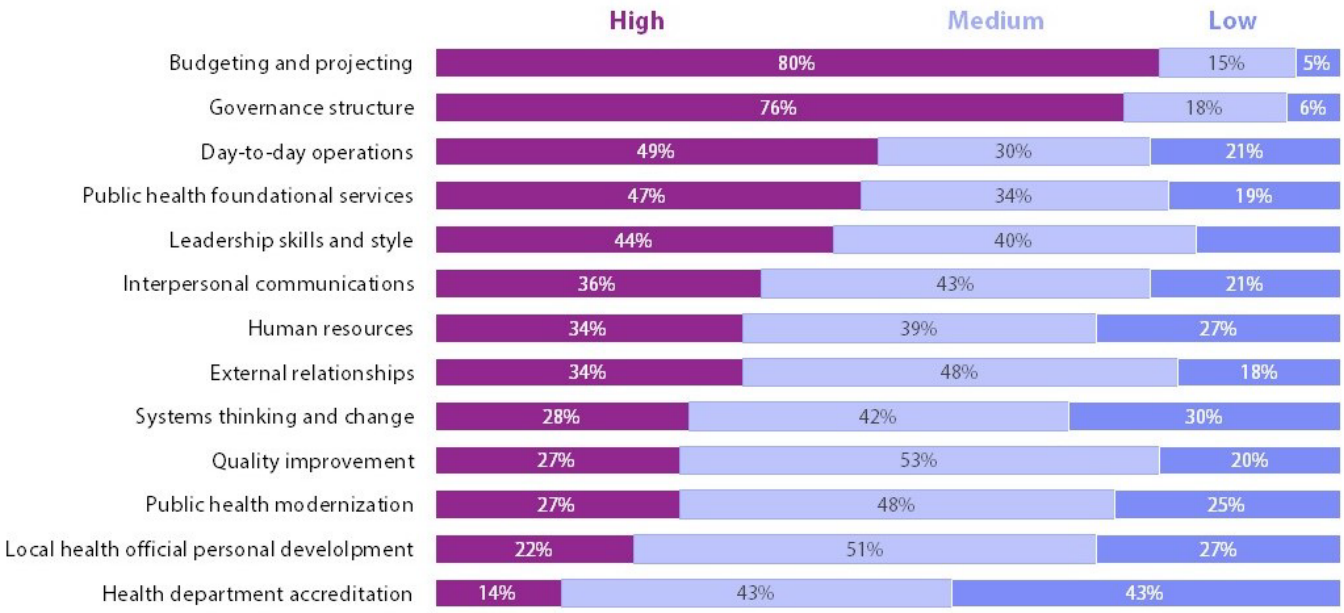
Yes	161 (92)	2,152 (90)
No	15 (8)	240 (10)
Amount of money health departments are willing to contribute to an all-inclusive in-person new LHO training program, *n (%)*		
$1,000 or less	61 (38)	967 (40)
$1,001 to $1,500	23 (14)	407 (17)
$1,501 to $2,500	44 (27)	583 (24)
$2,501 to $15,000	33 (21)	435 (18)

*Percentages may not total to 100 due to rounding.

LHOs were asked to rank the importance of 13 different training topics that may be included in a new LHO training program (Figure 2.1). The majority of LHOs ranked budgeting, financing, and projecting (80% weighted) and public health authority and governance structure (79%) as the two most important training topics to be included. The lowest ranked training topic for a training program was health department accreditation (43%).

Figure 2.1. The importance of different training topics included in a new local health official (LHO) training program

Weighted Percent of LHOs (n=XX)

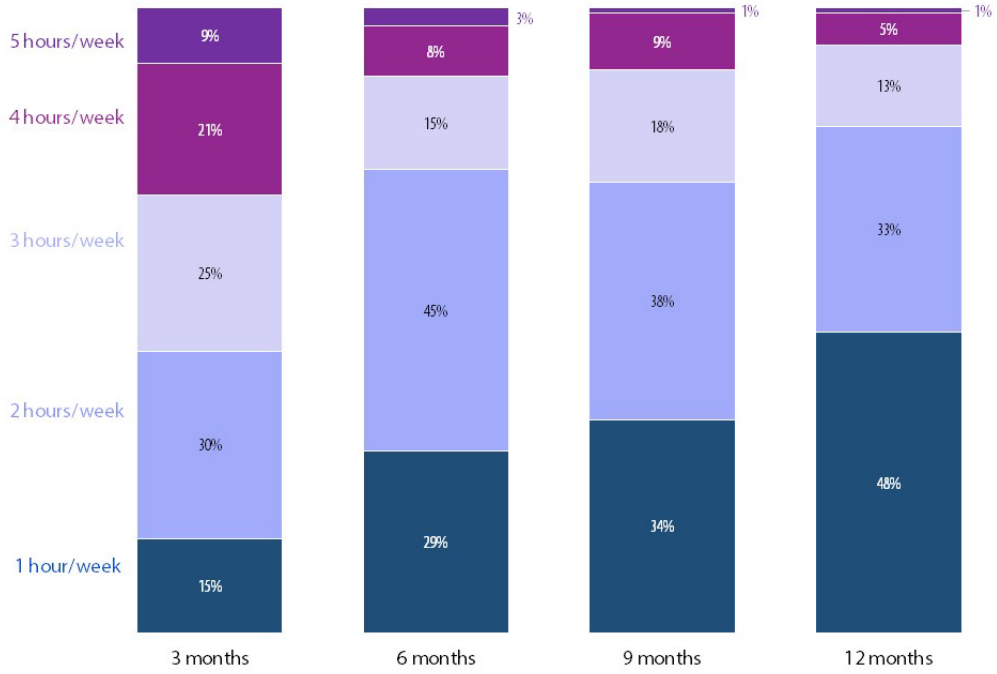


Note: PH = public health

Along with identifying the importance of different training topics, LHOs were asked to report the ideal number of hours per week and length of time for a new LHO training program (Figure 2.2). LHOs most commonly supported one to two hours per week dedicated to LHO training regardless of the number of months needed. Overall, the two most commonly identified LHO training models included having one hour per week of training over a one-year period or two hours per week of training over a six-month period.

Figure 2.2. The ideal number of hours per week and number of months for a new local health official (LHO) training program

Weighted Percent of LHOs (n=XX)



Mentor Activities

Table 2.3 describes the perspectives of LHOs on mentoring as a component of LHO training. The majority of LHOs (88% weighted) reported that a mentor component is a necessary part of LHO training. LHOs suggested the ideal average number of hours per week for a mentor commitment is about 2.8 hours (range: 0.5 to 25.0 hours). When asked if a training for mentors would improve their ability to provide quality mentoring, LHOs felt this mentor training would improve some of the quality (44%) and a lot of the quality (45%). Approximately 59% of LHOs would consider being a mentor to others, but some LHOs would only consider being a mentor if their direct expenses were reimbursed or they received a small stipend. Nearly all LHOs (96%) also reported that the mentor pairing methodology matters (e.g., similar backgrounds or department sizes).

Table 2.3. Mentor components in a local health official (LHO) training program

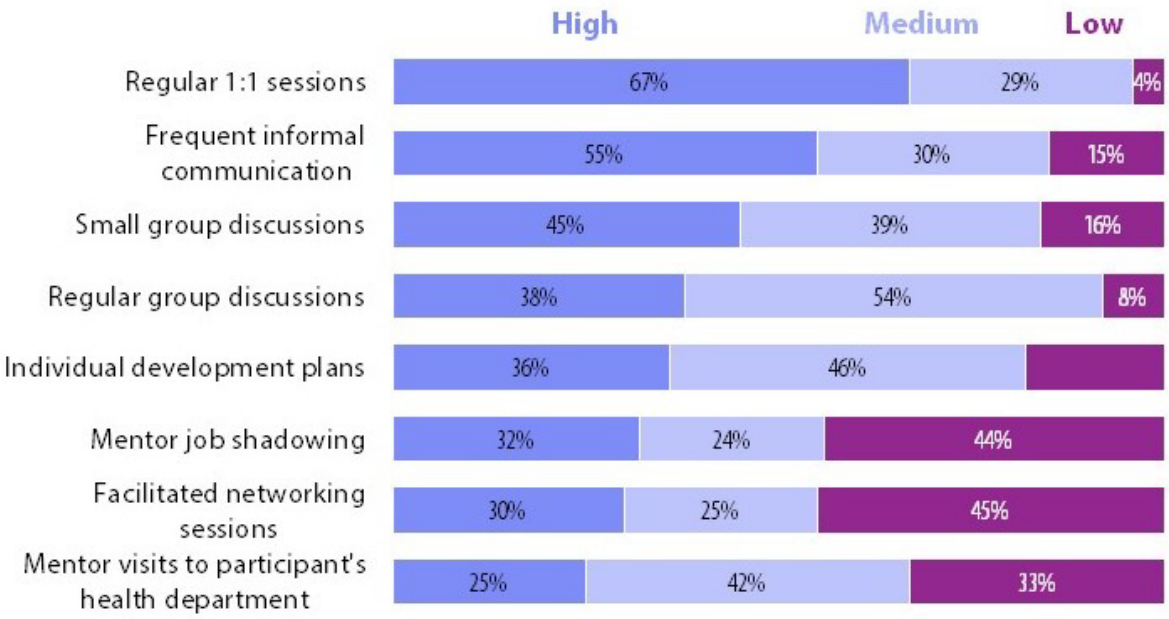
Mentoring	Unweighted	Weighted
A mentor/coach component in LHO training is needed, n (%)		
Yes	160 (89)	2,098 (88)
No	20 (11)	294 (12)
Ideal hours per week for a mentor/coach commitment (n=154), mean (margin of error)	2.8	2.8 (±0.5)
Would mentor/coach training improve mentor/coach ability to provide quality mentoring, n (%)		
A little	22 (14)	264 (11)
Some	66 (41)	1,057 (44)

A lot	72 (45)	1,071 (45)
Mentor consideration, n (%)		
Yes	26 (16)	338 (14)
Yes, if my direct expenses are reimbursed	57 (36)	792 (33)
Yes, if I receive a small stipend and my direct expenses are reimbursed	18 (11)	281 (12)
No	35 (22)	626 (26)
Other (e.g., would consider in the future, depends on time commitment, would like training first, not sure)	24 (15)	356 (15)
Mentor/coach pairing matters, n (%)		
Yes	173 (96)	2,284 (96)
No	7 (4)	108 (4)

*Percentages may not total to 100 due to rounding

Further, LHOs ranked the importance of eight different mentor activities to be included in LHO training programs (Figure 2.3). The three most important mentor activities according to LHOs included: regular one-on-one sessions (67% weighted), frequent informal communication (55%), and small group discussions (45%).

Figure 2.3. Importance of different mentor activities in a local health official training program
Weighted Percent of LHOs (n=XX)



Note: HD = health department

Secondary Data Analysis Results

PH WINS

The de Beaumont Foundation has fielded PH WINS in 2014, 2017, and 2021, in collaboration with Association for State and Territorial Health Officials (ASTHO) and NACCHO. In 2017 and 2021, PH WINS was fielded to a nationally representative sample of LHDs that had a staff size of at least 25 and served a population of at least 25,000. In the nationally representative sample, 29,115 local staff responded in 2017 and 27,948 responded in 2021. Please see the tables below for the training gaps and data on perceptions, satisfaction, stress, prevalence of leaving, reasons for staying, and reasons for leaving. All questions are presented with the exact wording and style as in PH WINS.

Training Gaps

The top three training gaps for new LHOs identified by PH WINS included:

1) Ensure the implementation of socially, culturally, and linguistically appropriate policies, programs, and services that reflect the diversity of individuals and populations in a community (46% of respondents)
2) Influence policies external to the organization that address social determinants of health (41% of respondents)
3) Determine the feasibility of a policy and its relationship to many types of public health problems (39% of respondents).

Table 3.1. New LHO training gaps

Ensure the implementation of socially, culturally, and linguistically appropriate policies, programs, and services that reflect the diversity of individuals and populations in a community		
LHO Tenure	2017	2021
<2 years	21%	46%
2-5 years	8%	18%
5+ years	31%	21%
Total	18%	26%
Influence policies external to the organization that address social determinants of health		
LHO Tenure	2017	2021
<2 years	36%	41%
2-5 years	26%	30%
5+ years	27%	33%
Total	28%	34%
Examine the feasibility (e.g., fiscal, social, political, legal, geographic) of a policy and its relationship to many types of public health problems.		
LHO Tenure	2017*	2021
<2 years	-	39%
2-5 years	-	33%

5+ years	-	31%
Total	-	34%
Design a business plan for the agency		
LHO Tenure	2017	2021
<2 years	34%	36%
2-5 years	38%	36%
5+ years	11%	44%
Total	28%	39%
Leverage funding mechanisms and procedures to develop sustainable funding models for the agency		
LHO Tenure	2017	2021
<2 years	17%	36%
2-5 years	49%	25%
5+ years	10%	32%
Total	31%	30%
Use financial analysis methods in making decisions about programs and services across the agency		
LHO Tenure	2017	2021
<2 years	37%	36%
2-5 years	23%	33%
5+ years	9%	32%
Total	20%	33%
Incorporate health equity and social justice principles into planning across the agency		
LHO Tenure	2017	2021
<2 years	30%	33%
2-5 years	29%	29%
5+ years	26%	33%
Total	28%	32%
Prioritize and influence policies external to the organization that affect the health of the community		
LHO Tenure	2017*	2021
<2 years	-	33%
2-5 years	-	43%
5+ years	-	32%
Total	-	36%
Assess the drivers in your environment that may influence public health programs and services across the agency		
LHO Tenure	2017	2021
<2 years	31%	31%

2-5 years	21%	12%
5+ years	15%	20%
Total	20%	20%
Ensure community member engagement in the design and implementation of programs to improve health in a community		
LHO Tenure	2017	2021
<2 years	13%	30%
2-5 years	17%	21%
5+ years	9%	22%
Total	14%	23%
Negotiate with multiple partners for the use of assets and resources to improve health in a community		
LHO Tenure	2017	2021
<2 years	12%	29%
2-5 years	23%	16%
5+ years	5%	19%
Total	16%	20%
Integrate current and projected trends into organizational strategic planning		
LHO Tenure	2017	2021
<2 years	24%	24%
2-5 years	26%	32%
5+ years	21%	21%
Total	24%	25%
Manage organizational change in response to evolving internal and external circumstances		
LHO Tenure	2017	2021
<2 years	37%	24%
2-5 years	21%	20%
5+ years	7%	19%
Total	18%	20%
Advocate for needed population health services and programs		
LHO Tenure	2017	2021
<2 years	12%	19%
2-5 years	25%	14%
5+ years	4%	19%
Total	16%	17%
Communicate in a way that persuades others to act		
LHO Tenure	2017	2021
<2 years	20%	19%

2-5 years	11%	7%
5+ years	4%	12%
Total	10%	12%
Build collaborations within the public health system among traditional and non-traditional partners to improve the health of a community		
LHO Tenure	2017	2021
<2 years	0%	15%
2-5 years	20%	5%
5+ years	12%	8%
Total	14%	9%
Create a culture of quality improvement at the agency or division level		
LHO Tenure	2017	2021
<2 years	29%	15%
2-5 years	20%	21%
5+ years	18%	20%
Total	20%	19%
Develop a diverse public health workforce		
LHO Tenure	2017	2021
<2 years	22%	15%
2-5 years	9%	18%
5+ years	18%	24%
Total	14%	20%
Ensure the use of appropriate sources of data and information to assess the health of a community		
LHO Tenure	2017	2021
<2 years	4%	14%
2-5 years	17%	5%
5+ years	13%	7%
Total	14%	8%
Content knowledge specific to my programmatic area		
LHO Tenure	2017*	2021
<2 years	-	13%
2-5 years	-	1%
5+ years	-	3%
Total	-	5%
Use valid data to drive decision making		
LHO Tenure	2017	2021
<2 years	8%	12%

2-5 years	3%	7%
5+ years	3%	3%
Total	4%	6%
Ensure health department representation in a collaborative process resulting in a community health assessment or community health improvement plan		
LHO Tenure	2017	2021
<2 years	13%	11%
2-5 years	6%	10%
5+ years	18%	7%
Total	11%	9%
Ensure the application of evidence-based approaches to address public health issues		
LHO Tenure	2017	2021
<2 years	0%	11%
2-5 years	17%	4%
5+ years	14%	11%
Total	14%	9%
Ensure the successful implementation of an organizational strategic plan		
LHO Tenure	2017	2021
<2 years	21%	9%
2-5 years	21%	24%
5+ years	5%	10%
Total	16%	15%
Technical Skills specific to my programmatic area		
LHO Tenure	2017*	2021
<2 years	-	7%
2-5 years	-	1%
5+ years	-	8%
Total	-	6%

*Indicates question / reason was not asked in 2017

Perceptions and satisfaction

All new LHOs stated that they felt the work they do is important, are determined to give their best effort at work every day and are satisfied that they have the opportunities to apply their talents and expertise. Most new LHOs felt that the communication was good between senior leadership and employees, felt completely involved in their work and felt that creativity and innovation were rewarded. Over half of participants indicated that their training needs were assessed. While this is a marked improvement from 2017, it is still indicative of necessary improvement. Almost all new LHOs indicated being satisfied with their job, organization, pay and job security. However, pay satisfaction was the lowest of those four measures and fell from 82% to 75% for new LHOs between 2017 and 2021.

Table 3.2. LHOs perceptions and satisfaction

I know how my work relates to the agency's goals and priorities (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	100%	100%
2-5 years	100%	99%
5+ years	100%	97%
Total	100%	98%
The work I do is important (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	100%	100%
2-5 years	100%	100%
5+ years	100%	100%
Total	100%	100%
Creativity and innovation are rewarded (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	81%	72%
2-5 years	78%	69%
5+ years	72%	76%
Total	76%	73%
Communication between senior leadership and employees is good in my organization (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	47%	84%
2-5 years	82%	73%
5+ years	79%	81%
Total	76%	79%
Supervisors work well with employees of different backgrounds (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	75%	87%
2-5 years	94%	71%
5+ years	93%	90%
Total	91%	83%
Supervisors in my work unit support employee development (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	84%	95%
2-5 years	89%	81%
5+ years	88%	96%
Total	88%	91%

My training needs are assessed (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	31%	56%
2-5 years	77%	39%
5+ years	73%	71%
Total	70%	57%
I feel completely involved in my work (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	97%	98%
2-5 years	100%	92%
5+ years	94%	96%
Total	98%	95%
I am determined to give my best effort at work every day (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	100%	100%
2-5 years	100%	99%
5+ years	100%	94%
Total	100%	97%
I am satisfied that I have the opportunities to apply my talents and expertise (agree or strongly agree)		
LHO Tenure	2017	2021
<2 years	94%	100%
2-5 years	94%	89%
5+ years	94%	92%
Total	94%	93%
Considering everything, how satisfied are you with (agree or strongly agree):		
Your job?		
LHO Tenure	2017	2021
<2 years	95%	96%
2-5 years	84%	89%
5+ years	92%	91%
Total	88%	91%
Your organization?		
LHO Tenure	2017	2021
<2 years	87%	97%
2-5 years	85%	80%
5+ years	86%	84%
Total	85%	85%

Your pay?		
LHO Tenure	2017	2021
<2 years	82%	75%
2-5 years	70%	77%
5+ years	81%	71%
Total	75%	74%
Your job security?		
LHO Tenure	2017	2021
<2 years	65%	85%
2-5 years	96%	81%
5+ years	82%	89%
Total	87%	86%

*Indicates question / reason was not asked in 2017

Stress

The following questions were only asked in 2021. Over 70% of new LHOs have felt bullied, threatened, or harassed by individuals outside the health department because of their role as a public health professional and that their public health expertise was undermined or challenged by individuals outside of the health department. When exploring post-traumatic stress disorder among LHOs due to COVID-19, over half indicated having at least one of the four symptoms: 1) had nightmares or thought about COVID-19 when they didn't want to, 2) tried hard to not think about COVID-19 or went out of their way to avoid situations, 3) were constantly on guard, watchful, or easily startled, 4) felt numb or detached from others, activities, or surroundings. Lastly, most participants indicated that their mental health was fair. Please see the table below for all the stress indicators.

Table 3.3. LHOs' stress

I have felt bullied, threatened, or harassed by individuals outside of the health department because of my role as a public health professional. (agree or strongly agree)	
LHO Tenure	2021
<2 years	71%
2-5 years	71%
5+ years	83%
Total	76%
I have felt my public health expertise was undermined or challenged by individuals outside of the health department. (agree or strongly agree)	
LHO Tenure	2021
<2 years	76%
2-5 years	93%
5+ years	93%
Total	89%

Has the coronavirus or COVID-19 outbreak been so frightening, horrible, or upsetting that you had nightmares about it or thought about it when you did not want to? (agree or strongly agree)	
LHO Tenure	2021
<2 years	55%
2-5 years	68%
5+ years	51%
Total	57%
Has the coronavirus or COVID-19 outbreak been so frightening, horrible, or upsetting that you tried hard not to think about it, or went out of your way to avoid situations that reminded you of it? (yes)	
LHO Tenure	2021
<2 years	53%
2-5 years	52%
5+ years	47%
Total	50%
Has the coronavirus or COVID-19 outbreak been so frightening, horrible, or upsetting that you were constantly on guard, watchful, or easily startled? (yes)	
LHO Tenure	2021
<2 years	58%
2-5 years	60%
5+ years	45%
Total	53%
Has the coronavirus or COVID-19 outbreak been so frightening, horrible, or upsetting that you felt numb or detached from others, activities, or your surroundings? (yes)	
LHO Tenure	2021
<2 years	55%
2-5 years	54%
5+ years	55%
Total	55%

Table 3.4. LHOs' mental health

In general, how would you rate your mental or emotional health?					
	2021				
LHO Tenure	Poor	Fair	Good	Very Good	Excellent
<2 years	2%	35%	28%	20%	15%
2-5 years	3%	23%	28%	38%	8%
5+ years	7%	19%	31%	31%	12%
Total	4%	24%	29%	31%	11%

Leaving and staying and reasons

Excluding retirement, 18% of new LHOs indicated considering leaving in the next year, up from 5% in 2017, and 16% indicated considering retiring in the next five years, down from 20% in 2017. Of those indicating they are leaving, 1 in 4 indicated that thinking about COVID-19 made them want to leave. The top three reasons new LHOs cited for leaving their organization in 2021 were work overload/burnout (83%), lack of support (77%), and leadership changeover (72%). The reasons new LHOs cited for staying in the agency in 2021 had a wider distribution than reasons for leaving. The top three reasons were benefits (e.g., retirement contributions/pensions, health insurance; 67%), exciting and challenging work (62%), and pride in the organization and its mission (60%). Please see below for all for the metrics on leaving and reasons for leaving and staying.

Table 3.5. Enumeration of new LHOs indicating their intent to leave

Considering leaving in next year (excluding retirements; yes)		
LHO Tenure	2017	2021
<2 years	5%	18%
2-5 years	16%	8%
5+ years	9%	27%
Total	12%	18%
Considering retiring in the next five years (yes)		
LHO Tenure	2017	2021
<2 years	20%	16%
2-5 years	47%	27%
5+ years	65%	57%
Total	50%	38%
I was thinking about staying, but COVID made me want to leave (yes)		
LHO Tenure	2017*	2021
<2 years	-	25%
2-5 years	-	16%
5+ years	-	28%
Total	-	24%

*Indicates question / reason was not asked in 2017

Table 3.6. Reasons why new LHOs were planning to stay

Lack of stress		
LHO Tenure	2017*	2021
<2 years	-	4%
2-5 years	-	0%
5+ years	-	0%
Total	-	1%
Unsatisfactory opportunities outside of the agency		
LHO Tenure	2017*	2021
<2 years	-	8%
2-5 years	-	1%
5+ years	-	5%
Total	-	4%
Training opportunities		
LHO Tenure	2017*	2021
<2 years	-	10%
2-5 years	-	6%
5+ years	-	1%
Total	-	5%
Opportunities for advancement		
LHO Tenure	2017*	2021
<2 years	-	12%
2-5 years	-	4%
5+ years	-	0%
Total	-	5%
Mentorship opportunities		
LHO Tenure	2017*	2021
<2 years	-	15%
2-5 years	-	4%
5+ years	-	1%
Total	-	6%
Acknowledgement/recognition for your work		
LHO Tenure	2017*	2021
<2 years	-	21%
2-5 years	-	32%
5+ years	-	12%
Total	-	22%
Satisfaction with your agency's leadership		

LHO Tenure	2017*	2021
<2 years	-	22%
2-5 years	-	27%
5+ years	-	32%
Total	-	28%
Flexibility (e.g., flex hours/telework)		
LHO Tenure	2017*	2021
<2 years	-	22%
2-5 years	-	33%
5+ years	-	29%
Total	-	29%
Pay		
LHO Tenure	2017*	2021
<2 years	-	25%
2-5 years	-	36%
5+ years	-	13%
Total	-	25%
Satisfaction with your supervisor		
LHO Tenure	2017*	2021
<2 years	-	30%
2-5 years	-	26%
5+ years	-	22%
Total	-	26%
Organizational climate/culture		
LHO Tenure	2017*	2021
<2 years	-	32%
2-5 years	-	28%
5+ years	-	36%
Total	-	32%
Support		
LHO Tenure	2017*	2021
<2 years	-	42%
2-5 years	-	17%
5+ years	-	10%
Total	-	21%
Job stability		
LHO Tenure	2017*	2021

<2 years	-	52%
2-5 years	-	41%
5+ years	-	22%
Total	-	37%
Job satisfaction		
LHO Tenure	2017*	2021
<2 years	-	53%
2-5 years	-	48%
5+ years	-	56%
Total	-	52%
Pride in the organization and its mission		
LHO Tenure	2017*	2021
<2 years	-	60%
2-5 years	-	61%
5+ years	-	63%
Total	-	62%
Exciting and challenging work		
LHO Tenure	2017*	2021
<2 years	-	62%
2-5 years	-	72%
5+ years	-	67%
Total	-	68%
Benefits (e.g., retirement contributions/pensions, health insurance)		
LHO Tenure	2017*	2021
<2 years	-	67%
2-5 years	-	58%
5+ years	-	54%
Total	-	59%

*Indicates question / reason was not asked in 2017

Table 3.7. Reasons why new LHOs are planning to leave

Lack of training		
LHO Tenure	2017	2021
<2 years	0%	0%
2-5 years	0%	0%
5+ years	0%	0%
Total	0%	0%
Reasons unrelated to my job		
LHO Tenure	2017*	2021

<2 years	-	0%
2-5 years	-	8%
5+ years	-	9%
Total	-	8%
Retirement		
LHO Tenure	2017	2021
<2 years	0%	0%
2-5 years	4%	57%
5+ years	0%	57%
Total	1%	50%
Lack of acknowledgement/recognition		
LHO Tenure	2017	2021
<2 years	0%	10%
2-5 years	0%	0%
5+ years	0%	13%
Total	0%	10%
Satisfaction with your supervisor		
LHO Tenure	2017	2021
<2 years	0%	10%
2-5 years	55%	7%
5+ years	0%	6%
Total	21%	7%
Job instability		
LHO Tenure	2017*	2021
<2 years	-	12%
2-5 years	-	0%
5+ years	-	5%
Total	-	5%
Job satisfaction		
LHO Tenure	2017	2021
<2 years	0%	16%
2-5 years	14%	13%
5+ years	0%	20%
Total	5%	18%
Stress		
LHO Tenure	2017	2021
<2 years	44%	38%
2-5 years	19%	49%

5+ years	3%	63%
Total	10%	57%
Lack of opportunities for advancement		
LHO Tenure	2017	2021
<2 years	0%	45%
2-5 years	59%	0%
5+ years	0%	5%
Total	22%	9%
Lack of flexibility (flex hours/telework)		
LHO Tenure	2017	2021
<2 years	0%	45%
2-5 years	42%	15%
5+ years	0%	6%
Total	16%	13%
Other opportunities outside agency		
LHO Tenure	2017	2021
<2 years	0%	51%
2-5 years	37%	0%
5+ years	3%	8%
Total	15%	12%
Pay		
LHO Tenure	2017	2021
<2 years	0%	55%
2-5 years	67%	19%
5+ years	12%	19%
Total	32%	24%
Weakening of benefits		
LHO Tenure	2017	2021
<2 years	0%	55%
2-5 years	29%	0%
5+ years	0%	1%
Total	11%	8%
Organizational climate/culture		
LHO Tenure	2017*	2021
<2 years	-	61%
2-5 years	-	36%
5+ years	-	18%
Total	-	27%

Leadership changeover		
LHO Tenure	2017	2021
<2 years	0%	72%
2-5 years	7%	7%
5+ years	0%	13%
Total	3%	20%
Lack of support		
LHO Tenure	2017	2021
<2 years	0%	77%
2-5 years	41%	28%
5+ years	3%	22%
Total	17%	30%
Work overload/burnout		
LHO Tenure	2017	2021
<2 years	44%	83%
2-5 years	34%	56%
5+ years	3%	59%
Total	15%	62%

*Indicates question / reason was not asked in 2017

NACCHO Profile Data

Over time the average tenure of LHOs has decreased for all health department sizes (< 50,000, 50,000-499,999, 500,000+; Figure 3.1).

Figure 3.1. LHO tenure from 2008 – 2019

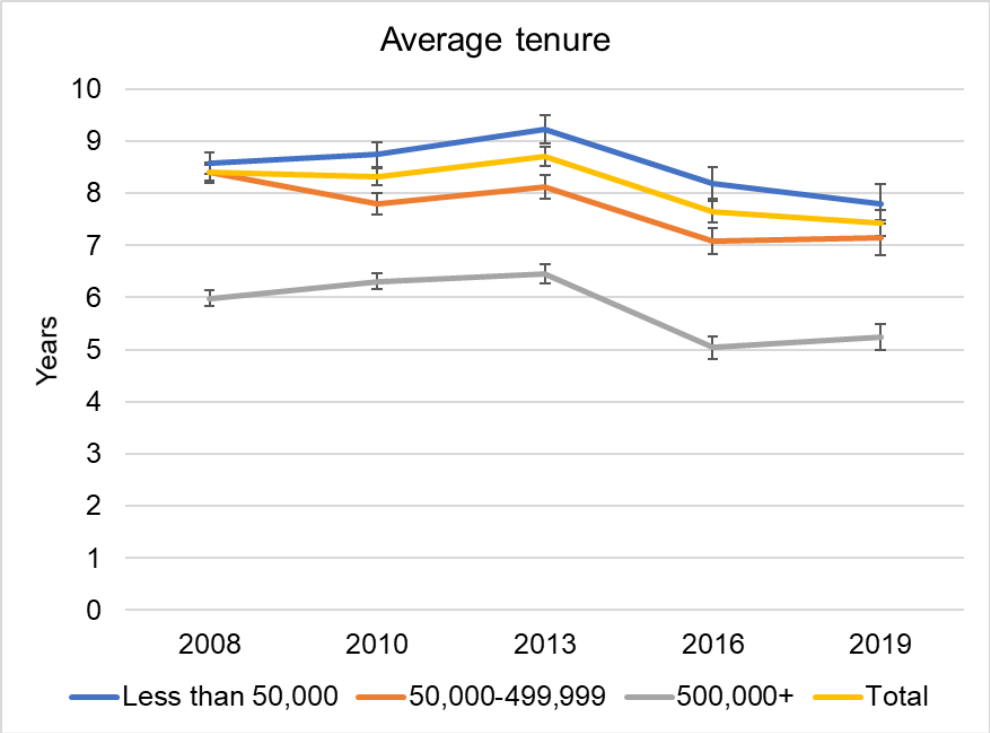


Table 3.9 displays education demographics of LHOs from 2008-2019. Though different data have been collected across time, a few trends are noted. First, LHOs with a medical degree (MD/DO) have decreased and LHOs holding a registered nurse (RN) licensure or no licensure have increased.

Table 3.9. LHO demographic from 2008 – 2019

	2008	2010	2013	2016	2019
Work Status					
Full-Time	-	-	-	-	94%
Highest Degree					
Associates	-	-	-	-	8%
Bachelors	-	-	-	-	29%
Masters	-	-	-	-	49%
Doctorate	-	-	-	-	14%
Specialized Degree					
AD/ASN	19%	18%	14%	-	-
AA	-	-	9%	-	-
Other Associate	-	-	3%	-	-

BA	18%	20%	18%	-	-
BS	41%	42%	43%	-	-
BSN	23%	23%	22%	-	-
Other Bachelor's	-	11%	4%	-	-
MA	-	-	5%	-	-
MS	-	-	13%	-	-
MPH	20%	22%	21%	-	-
MSN/MN	5%	5%	4%	-	-
MBA	4%	5%	4%	-	-
Other Masters	26%	28%	10%	-	-
DNP	-	-	0.20%	0.70%	-
DrPH	-	0.60%	0.60%	0.50%	-
DDS	-	0.10%	0%	0%	-
DVM	-	0.20%	0.30%	0.20%	-
JD	-	0.70%	0.40%	0.30%	-
PhD	-	0.20%	2%	2.00%	-
Other doctorate	-	2%	0.50%	1.00%	-
Medical Degree	15%	12%	12%	10%	9%
Nursing	-	-	-	-	24%
Public Health	-	-	-	-	30%
None	-	-	-	-	44%
Specialized post baccalaureate certificate/post graduate certificate/non-degree certificate					
Nursing	-	-	-	-	9%
Public Health	-	-	-	-	20%
None of the above	-	-	-	-	73%
Licensures Held					
LPN/LVN	-	0.50%	0.60%	-	0.50%
MD	14%	12%	12%	10%	9%
RD	-	2%	2%	-	2%
REHS/RS	-	18%	19%	-	16%
RN	-	5%	39%	-	28%
Other	-	23%	22%	-	15%
None	-	20%	19%	-	38%

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