Indiana Local Health Department Workforce Assessment

Fall 2022

IU Richard M. Fairbanks School of Public Health

PROJECT LEADS

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The authors wish to express sincere gratitude to Indiana's Local Health Department administrators and employees who participated in this comprehensive workforce assessment. This assessment was fully funded by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS) as part of the Strengthening U.S. Public Health Infrastructure, Workforce, and Data Systems grant awarded to the Indiana Department of Health. The contents of this assessment are those of the authors and do not necessarily represent the official views of, nor an endorsement, by CDC/HHS, or the U.S. Government.

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EXECUTIVE SUMMARY

A competent and sufficiently resourced workforce is essential to an effective public health system, one with the capacity to address ongoing and emergent public health needs of the communities they serve. National surveys, such as the Public Health Workforce Interests and Needs Survey (PH WINS), collect data on employees of governmental public health agencies; however, they are unable to provide comprehensive data about a state's workforce. Notably, only 11% of Indiana's responses to the 2021 PH WINS were from employees outside of the state public health agency, the Indiana Department of Health (IDOH), and the largest local health department, Marion County Public Health Department (MCPHD). Therefore, gaps remain in understanding the characteristics of the governmental public health workforce across the state. Following the 2020 Indiana Public Health System Report in 2021, Governor Eric Holcomb convened the Governor's Public Health Commission (GPHC), which conducted an intensive review of Indiana's public health system regarding workforce, funding, governance and infrastructure, data integration, child and adolescent health, and emergency preparedness. Using data from that review, in 2022, the GPHC released a report with recommendations and next steps toward strengthening the public health system in Indiana.[1,2] The report called for the collection of reliable information about local health departments in Indiana and the governmental public health workforce. As such, the Indiana University Richard M. Fairbanks School of Public Health (FSPH), in partnership with the IDOH, conducted a statewide Local Health Department (LHD) Workforce Assessment in the fall of 2022. Every LHD in Indiana was invited to participate in the Workforce Assessment. Starting in September, LHD administrators began collecting information from every employee, including their educational and training backgrounds and their most common day-to-day job tasks. They also provided type and length of employment, plans for retirement, salaries, and what percent of a position is grant-funded. In addition, LHD administrators completed an online survey about their organization. Once the workforce assessment and organizational survey were completed, administrators participated in a virtual semi-structured interview to discuss workforce needs and issues. Lastly, job descriptions were provided for workforce roles as available.

This report summarizes the findings of the 2022 LHD Workforce Assessment. Descriptive statistics are provided to characterize various aspects of Indiana's LHD workforce and to compare Indiana's workforce with that of governmental public health employees in neighboring states [Health and Human Services (HHS) Public Health Region 5] and among a nationally representative sample of LHDs. Data provided about individual employees represent 97.9% or 93 out of Indiana's 95 LHDs and 99.4% of the state's total population. Insights provided through the organizational survey of LHD administrators represent 96.8% or 92 out of Indiana's 95 LHDs. A total of 70 interviews were conducted (74% of LHDs). Key findings are summarized below.

- **On a per capita level, Indiana LHDs have fewer employees on average than LHDs nationwide**. LHDs average 3.0 local public health full-time equivalent (FTE)

employees for every 10,000 residents compared to the 2019 national average of 4.1 FTE employees per 10,000 residents.[3]

- More than 1 in 5 positions in Indiana LHDs were categorized as environmental health workers. Public health nurse, representing 12.8% of all LHD positions, was the second most common role reported across LHDs in the state.
- **Indiana's full-time environmental health workers earn less than those in HHS Region 5.** For example, almost half of all environmental health workers in Indiana (46.9%) earn $45,000 or less compared to 30.5% in HHS Region 5 LHDs.
- **Indiana's full-time public health nurses earn less than their counterparts in the region.** Nearly half of Indiana's full-time nurses earn between $25,000 and $55,000, whereas 77.1% of nurses in Region 5 earn more than $55,000.
- **According to LHD administrators, pay and workload/burnout were the top two reasons employees left their jobs in the last two years.**
- Indiana LHDs reported that public health nurse and environmental health worker positions had the highest turnover rates and were the hardest positions to fill.
- **A total of 311 or 16.1% of Indiana's LHD employees plan to retire within the next five years** (of 1,869 LHD staff who responded to this question). Some of Indiana's districts have disproportionately higher numbers of employees planning to retire within 5 years than others.
- Overall, Indiana's public health workforce has less formal public health training and advanced degrees than public health workers in the neighboring states of HHS Region 5. **Only 6.5% of Indiana's LHD employees have formal public health training, compared to 11.8% of employees in HHS Region 5 LHDs and 12.7% of U.S. employees.** Just over 12% of Indiana's LHD workforce has a master's degree compared to 27.5% of employees in HHS Region 5 and 27.8% nationally.
- A total of 12 Indiana universities offer bachelor's degrees in a public health discipline and seven universities offer public health relevant masters degrees. However, only two schools of public health and two programs of public health are accredited by the Council on Education for Public Health (CEPH). Certificates in public health are available to undergraduates at three universities and to graduate level students at four universities.
- A total of 3,916 individuals (an average of 783 per year) graduated from a public health-related discipline in Indiana over the last five years (2017-2021). Of these, 2,383 (60.9%) were graduates of bachelor's degree programs and 1,402 (35.8%) were graduates of master's programs.
- Estimates from the Public Health National Center for Innovation's Workforce Calculator suggest that **Indiana needs additional workforce capacity in four out of five Foundational Public Health Services (FPHS) Areas and six out of eight Capabilities.**

For the first time, decision makers in Indiana have reliable data on the number of governmental

public health employees working in LHDs and have the opportunity to compare the strengths and weaknesses among the staffing levels and services provided to Indiana communities. This information can be used to track changes in Indiana's workforce over time, to request resources to support LHDs and their employees, and to ultimately strengthen Indiana's public health system and the health of our state.

INTRODUCTION

The public health workforce is a crucial part of the public health system, without whom the important work of public health agencies could not be conducted.[4-7] Twenty years ago, Gebbie and colleagues explained it clearly, "Without a competent workforce, a public health agency is as useless as a new hospital with no health care workers."[4] Despite the importance of the public health workforce, longstanding challenges have limited the ability to enumerate and track the characteristics of the individuals working in governmental public health agencies.[8] This means that estimating the size and composition of the workforce and examining the factors that size and composition may influence is often impossible or difficult, at best. In the absence of these crucial data, state and national policymakers also have limited evidence about public health workforce needs, limited guidance for partners who train the workforce or for setting workforce development priorities, and insufficient information to make informed funding decisions.[9]

In response to the lack of information about the individuals working in public health in the U.S., in 2014, the Public Health Workforce Interests and Needs Survey (PH WINS) was launched.[9,10] Since then, three iterations of this national survey have been conducted, growing its reach and improving its generalizability with each iteration (2014, 2017, and 2021).[10,11] Some workforce assessments are periodically conducted by subsections of the public health workforce, such as the Council of State and Territorial Epidemiologists (CSTE).[12] These assessments, while valuable and informative, are not inclusive of the broader governmental workforce and employ varied approaches that make cross-discipline analyses difficult.[10] However, in the 2021 iteration of PH WINS, the 44,732 responses included representatives from 47 state public health agencies, 29 large city health departments, and 259 local health departments (LHDs).[11] As a result of PH WINS, we now have national data that summarizes and consistently collects information about the many roles in public health agencies and how many individuals serve in those roles. The data also provide estimates of the educational backgrounds of the workforce, their training needs, their time in the workforce, any plans to leave their current roles, as well as factors that relate to their plans for leaving, such as perspectives and data on public health salaries.

Data from PH WINS has been used to estimate the workforce necessary to meet the Foundational Public Health Services, including the foundational capabilities and areas necessary for public health agencies to meet the needs of our communities.[13-15] It is also used to inform the recommended competencies and skills for the workforce.[15] Although there are numerous ways the national data has been useful, it still only provides estimates of the workforce, and states may contribute differently, with some providing fewer data points than others. Enumerating the workforce remains an important need for states that want a comprehensive assessment of their governmental public health employees. Further, given the recent federal commitment to strengthening the public health infrastructure, data is needed to inform strategies to utilize new resources, prioritize existing public health responsibilities, and establish baselines for the coming improvements.[16]

Although many employees in Indiana participated in PH WINS in 2021, the vast majority of responses were from Indiana Department of Health (IDOH) state agency employees and the state's largest local health department, Marion County Public Health Department (MCPHD). In fact, only 11% of Indiana's 2021 PH WINS responses reflected employees outside of those two agencies. While national data is crucial, a comprehensive assessment of Indiana's public health workforce was needed. This need was further validated by the recent Governor's Public Health Commission Report.[2] In response to this need, the current statewide Local Health Department (LHD) Workforce Assessment was conducted in the fall of 2022.

This report summarizes the findings and key insights from the 2022 Indiana LHD Workforce Assessment. For the first time, decision makers in Indiana have reliable data on the number of governmental public health employees working in LHDs in Indiana and have the opportunity to compare the strengths and weaknesses among the staffing levels and services offered among the county-level departments. The current report provides data on the workforce's education and training backgrounds, their plans for retirement, salaries, and the specific day-to-day activities for each role within Indiana's public health workforce. In addition, the report includes assessments of the current workforce pipeline within Indiana, capacity related to the Foundational Public Health Services Areas and Capabilities, and the economic impact of LHDs within the state. This information can be used to track changes in Indiana's workforce over time, to request resources to support LHDs and their employees, and to ultimately strengthen Indiana's public health system and the health of our state.

APPROACH

The Indiana University Richard M. Fairbanks School of Public Health (FSPH) in partnership with IDOH conducted this statewide assessment of the local public health workforce in Indiana from September 2022 through January 2023. In late August, the FSPH team developed assessment tools informed by existing state and national efforts, including workforce data needs provided by IDOH, the 2021 Public Health Workforce Interests and Needs Survey (PH WINS), and the Public Health Foundational Capabilities and Areas.[10,13] Data collection included a LHD workforce assessment, organizational survey, follow-up, semi-structured interviews, and the submission of existing job descriptions from LHDs. The workforce assessment and organizational survey were piloted by representatives of five LHDs, reviewed by IDOH representatives, and other key public health stakeholders in Indiana. The assessment tools were then refined to address provided feedback.

Workforce Assessment

The workforce assessment was designed as an Excel spreadsheet to collect data on all occupied and vacant positions within each of Indiana's LHDs. Note that at the start of this assessment there were 94 LHDs in Indiana, as Fountain and Warren counties were operating as a combined LHD; however, during the data collection period, the combined LHD was in the process of separating into individual county LHDs. In light of this, the counties chose to complete the assessment as individual LHDs. As such, the total number of LHDs for the current assessment is 95.

Information collected through the workforce assessment included job titles for all positions, type of employment (e.g., part-time or full-time, permanent or temporary, seasonal, paid internships, and contractors), hours worked per week, on-call hours, employee demographics, salary information, time in current role and time in governmental public health, degrees and certifications held by the individual in that position, retirement timeline, supervisory status, percent effort spent on Foundational Public Health Services (the Areas and Capabilities), top three expected roles or activities for each position, and grant funding for each position. The Excel file contained five sheets: sheet 1 included general information and guidance and a description of roles and degrees and certifications; sheet 2 was for providing information on each position within the current workforce; sheet 3 was for reporting information on vacancies; and sheets 4 and 5 provided guidance on the Foundational Public Health Services (FPHS) Areas and Capabilities.

As the assessment required information from every employee in the LHD, it was suggested that for a small organization, the LHD administrator would work with each individual to fill in their responses on the same sheet. For a larger organization, the Excel file could be given to each department/division manager to complete with everyone they supervised. Following receipt of the workforce assessments, a member of the FSPH team reviewed the Excel files for completeness. If errors or missing data were found, an email was sent to the appropriate representative of each LHD to request edits. Once the updated sheets were received, individual LHD data was summarized in preparation for the follow-up qualitative

interviews. Workforce assessment data presented in this report represents 97.9% (n=93) of Indiana's 95 LHDs. Workforce assessment data were not provided by Crawford or Wabash counties.

Organizational Survey

A 12-question organizational survey was developed using REDCap, a well-established, secure software package designed for online data collection. The survey was designed to gather additional information about each LHD's organizational structure, external partnerships, recruitment and retention experiences, and training needs. Specific questions focused on contractual relationships for delivery of public health services, engagement with local officials, methods of recruiting new employees, and efforts related to retention, including career development planning. LHD representatives were also asked to rank workforce development and training needs that would be most beneficial to their staff. Lastly, the survey captured quantitative data related to employee turnover, including the number of employees lost in the previous two years (not including COVID-19-related hires), and qualitative insights about employee reasons for leaving and where former employees went after leaving the LHD. As this tool collected organizational level data, it was intended to be completed by the LHD administrator or other persons with extensive knowledge of the organization. Following receipt of the organizational survey, a member of the FSPH team reviewed the data for completeness, and it was summarized and combined with the workforce assessment data in preparation for follow-up interviews with each LHD. There were 92 organizational survey submissions, out of the 95 local health departments in the state (96.8%). Organizational-level data presented in this report do not represent Marion, Wabash, or Warrick counties.

Qualitative Interviews

Following receipt and review of the workforce assessment data and organizational survey, the FSPH team sent an invitation to the LHD administrator to schedule a virtual interview. The purpose of the interviews was to provide clarification and confirm accuracy of the data each LHD provided. LHD specific PowerPoint slides were created using summary data from the organizational survey and individual LHD workforce assessment to guide the interviews. To create a standard process across interviews, an initial PowerPoint template was created using data from the LHD that was the first to submit both assessments. The FSPH team conducted internal reviews and edits to the interview template and developed a set of standard questions for the qualitative interviews. The PowerPoint template and contributing data were further refined following the first set of interviews, and the resulting product was used to guide all subsequent interviews.

The interviews were semi-structured, lasted between 45 minutes to an hour, and were conducted via Zoom. At least two members of the FSPH team were present for each interview, with one serving as the lead interviewer and the other the lead notetaker. The notetaker entered summary notes into a shared Google sheet, which were then reviewed and updated as appropriate by the other member(s) of the interview team.

Recruitment and Incentives

The FSPH team and IDOH employed multiple strategies to encourage participation in the

statewide assessment. These efforts included a joint letter from FSPH and IDOH, two separate presentations during IDOH Local Health Department webinars to announce the assessment and provide guidance on data collection, an email invitation with guidance about completing the assessments, and an FAQ shared on IDOH's LHD SharePoint site. In addition, a link was provided for LHDs to submit questions to the FSPH team related to the assessment.

The organizational survey and individual LHD workforce assessments launched on September 12, 2022, with initial qualitative interviews beginning October 10, 2022. Results presented include data collected through January 25, 2023. FSPH provided weekly updates on LHD participation to the IDOH project leadership team and members of the IDOH team reached out to individual LHDs to encourage participation as necessary. To further incentivize participation, LHDs were eligible for up to $1000 based on completion of assessment components ($600 for completing the workforce assessment and the organizational survey, $250 for completing the follow-up interview, and $150 for sharing job descriptions/scopes of work for positions within the LHD).

Analytical Methods

Descriptive statistics are presented for key characteristics of Indiana's LHD workforce. Data are presented at the district and state levels except in the case of the enumeration of the workforce, which is presented at the county level. Indiana's 10 preparedness districts were established for public health and coordination and outreach (https://www.in.gov/health/emergency-preparedness/preparedness-districts/). In addition, we present data by LHD size as defined by size of population served. Two key variables were recoded after data was collected: type of employment and role. Processes for recoding these variables are detailed below.

Type of Employment

Employees indicated whether they were full or part time and whether they were permanent or temporary. Further classification was made if the employee was a seasonal employee, a paid intern, or a county-hired 1099 contractor (e.g., a county employee without benefits). In instances where an employee was assigned as seasonal, paid intern, or county-hired contractor but not assigned full/part time and/or permanent/temporary, decision rules were employed to assign these classifications depending on the number of hours they reported working per week and if they were fully funded by a grant. Note that the FSPH team did not assign full time/part time or permanent/temporary classifications in the list of LHD employees who were designated as third-party paid contractors. Those employees are solely categorized as third-party paid contractors and are included in the data tables and analyses as appropriate.

Salary

Each employee provided either an annual salary or an hourly rate in the Excel workforce assessment. To estimate the annual income for each hourly employee, the number of hours worked in a week was multiplied by the hourly rate, then multiplied by 52 weeks.

Role

Each employee's job title was provided in the Excel workforce assessment. However, because job titles differ across LHDs, a methodology was employed to consistently assign each employee a

standard title/role based on 1) the specific LHD employee title provided and 2) the three most common job tasks the employee completes in their day-to-day work, as reported in the assessment.

To ensure that the findings of this assessment could be compared to national and regional workforce data, the roles listed in the 2021 PH WINS assessment were used and assigned to each LHD employee as appropriate. FSPH staff/faculty with experience in governmental public health agencies in Indiana and specific backgrounds at the LHD level, reviewed roles and conducted the categorization/reassignment of standardized roles.

If an LHD employee selected just one primary job task, the PH WINS role that best matched that task was assigned as their only role. However, some employees were assigned a primary and a secondary role. For example, if the employee's second most commonly performed task was related to a different role not typically performed by their primary role, they were assigned a secondary role and/or a tertiary role. Additionally, in circumstances where an LHD employee provided a dual title for themselves (e.g., public health nurse/health educator), the reviewer assigned both a primary and a secondary PH WINS role based on the percent of time allocated to their top three job tasks. To ensure consistency in PH WINS role assignment, the reviewers collaborated on the development of the approach for the categorization/reassignment of standardized roles. To validate the PH WINS assignments made for each position, the two reviewers assessed every 20th entry to ascertain if they agreed with the designation made by the other reviewer. Discrepancies were rare, and only minor formatting changes were made after reviewing the records chosen for validation. Following the initial categorization of roles, the project leads reviewed the data and provided recommendations for further collapsing in instances where there was overlap in role type and/or when there were a small number of positions across the state. Suggestions were presented to the initial reviewers to reconcile and confirm the appropriateness of the re-categorization decisions.

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Secondary Data

National, regional, and state-level secondary data were employed to provide comparisons between Indiana's LHD workforce, the state population, and national and regional LHD workforces as appropriate. Lastly, census data from the American Community Survey - US Census Bureau (2021 ACS 1-Year Estimate) were used for county and state population size and population demographics (e.g., race, ethnicity, age, educational attainment) (https://www.census.gov/programs-surveys/acs). National and regional workforce data from PH WINS 2021 was used for comparison with Indiana's LHD workforce (e.g., educational attainment, certifications/training, and salaries) (https://debeaumont.org/phwins/what-is-phwins/). The region selected for comparison with Indiana included the five

additional states (in addition to Indiana) within Health and Human Services (HHS) Public Health Region 5. These states include: Michigan, Ohio, Illinois, Wisconsin, and Minnesota (https://www.hhs.gov/ash/about-ash/regional-offices/region-5/index.html).

Health and Human Services Region 5

LOCAL HEALTH DEPARTMENT WORKFORCE ENUMERATION

County-Level Enumeration

This section summarizes the size of the LHD workforce by county, district, and the state. Full-time equivalent (FTE) and FTE per capita comparisons are presented; however, note that there is wide variation in the services provided across Indiana's LHDs. While LHDs are mandated by the state to provide certain services, some LHDs seek and receive external grants to provide additional services to meet community needs.

ON A PER CAPITA LEVEL, INDIANA LHDs HAVE FEWER EMPLOYEES ON AVERAGE THAN LHDs NATIONWIDE.

Among the 93 LHDs that provided complete workforce data, a total of 2,086 employees were reported. Considering the total number of hours worked on average for each of the 2,086 LHD employees, a total of 1,897.6. Staff are employed in LHDs in Indiana (**Table 1/Figure 1**). **On a per capita level, Indiana LHDs have had fewer employees on average than LHDs nationwide.** Across the state of Indiana, the average was 3.0 local public health FTE for every 10,000 residents, which is lower than the national average of 4.1 FTEs per 10,000 people employed in LHDs in 2019.[3]

Among the 2,086 total employees in the 93 reporting Indiana LHDs, 1,696 (71.3%) were full-time employees and 390 (31.1%) were part-time employees. Included within the 2,086 total employees were 14 seasonal employees, six paid internship positions, and 50 positions where the employee is hired by the LHD or the county as an independent contractor. Many of the seasonal, paid internships, and contracted positions were reported as temporary, part-time positions. Contractors paid by a third party were not included in the employee or FTE sums presented in **Table 1**.

A total of 29 contractors paid by third-party organizations were reported across the 87 LHDs. These positions most often included clinical staff such as public health or immunization nurses and medical assistants, community health workers, school liaisons, and emergency preparedness coordinators. Additionally, these third-party contracted positions were often funded by grant dollars provided by or passed through IDOH. Lastly, one LHD reported having an associate from the Public Health Associates Program (PHAP) as a temporary, full-time staff member. The PHAP program is led and funded by the Centers for Disease Control and Prevention as a two-year competitive public health training program. Health departments can apply to become a host site for a developing public health professional who is selected for the PHAP program (https://www.cdc.gov/phap/index.html). Of the 58 LHD health officers, the majority (n=37, 64%) were part-time employees working an average of 12.7 hours per week (range of 1 to 40). Lastly, among the 2,086 employees, a total of 633 or 30% of the positions were fully funded by grants received by the LHD.

Table 1. Indiana Local Health Department Workforce Enumeration by County

LHD Name	Total Number of FTE Employees	Full Time Employees n (%)	Part Time Employees n (%)	Employees with Any Grant Funding n (%)	Employees 100% Funded by grants n (%)	Population Served by LHD	LHD FTE per capita
Adams County	6.5	6 (86%)	1 (14%)	1 (14%)	1 (14%)	35,809	1.8
Allen County	64.5	62 (94%)	4 (6%)	7 (11%)	6 (9%)	385,410	1.7
Bartholomew County	22.4	19 (76%)	6 (24%)	6 (24%)	4 (16%)	82,208	2.7
Benton County	4.9	4 (67%)	2 (33%)	4 (67%)	2 (33%)	8,719	5.6
Blackford County	5.5	5 (71%)	2 (29%)	2 (29%)	2 (29%)	12,112	4.6
Boone County	14.1	13 (76%)	4 (24%)	3 (18%)	3 (18%)	70,812	2.0
Brown County	7.8	7 (88%)	1 (13%)	3 (38%)	0 (0%)	15,475	5.0
Carroll County	3.0	3 (75%)	1 (25%)	1 (25%)	1 (25%)	20,306	1.5
Cass County	8.5	7 (70%)	3 (30%)	3 (30%)	3 (30%)	37,870	2.2
Clark County	31.9	27 (61%)	17 (39%)	29 (66%)	26 (59%)	121,093	2.6
Clay County	3.8	3 (60%)	2 (40%)	3 (60%)	2 (40%)	26,466	1.4
Clinton County	7.6	5 (50%)	5 (50%)	3 (30%)	3 (30%)	33,190	2.3
Crawford County						10,526	
Daviess County	11.3	9 (60%)	6 (40%)	6 (40%)	3 (20%)	33,381	3.4
DeKalb County	8.3	7 (70%)	3 (30%)	2 (20%)	-	43,265	1.9
Dearborn County	10	9 (82%)	2 (18%)	2 (18%)	2 (18%)	50,679	2.0

Table 1. Indiana Local Health Department Workforce Enumeration by County (continued)

LHD Name	Total Number of FTE Employees	Full Time Employees n (%)	Part Time Employees n (%)	Employees with Any Grant Funding n (%)	Employees 100% Funded by grants n (%)	Population Served by LHD	LHD FTE per capita
Decatur County	6.5	5 (71%)	2 (29%)	2 (29%)	2 (29%)	26,472	2.5
Delaware County	11.4	11 (92%)	-	5 (42%)	1 (8%)	111,903	1.0
Dubois County	15.4	14 (61%)	9 (39%)	3 (13%)	3 (13%)	43,637	3.5
East Chicago	8.3	7 (78%)	2 (22%)	1 (11%)	1 (11%)	26,099	3.2
Elkhart County	73.2	65 (82%)	14 (18%)	30 (38%)	27 (34%)	207,047	3.5
Fayette County	8.8	6 (43%)	8 (57%)	12 (86%)	9 (64%)	23,398	3.8
Fishers	23.0	12 (29%)	30 (71%)	29 (69%)	29 (69%)	101,171	2.3
Floyd County	16.4	13 (72%)	5 (28%)	-	-	80,484	2.0
Fountain County	4.0	4 (100%)	-	-	-	16,479	2.4
Franklin County	3.7	4 (80%)	1 (20%)	1 (20%)	1 (20%)	22,785	1.6
Fulton County	6.9	5 (63%)	3 (38%)	4 (50%)	-	20,480	3.4
Gary County	28.9	26 (79%)	2 (6%)	25 (76%)	22 (67%)	68,325	4.2
Gibson County	7.1	6 (60%)	4 (40%)	6 (60%)	4 (40%)	33,011	2.2
Grant County	11.0	10 (71%)	4 (29%)	7 (50%)	4 (29%)	66,674	1.6
Greene County	7.8	6 (67%)	3 (33%)	2 (22%)	-	30,803	2.5
Hamilton County	28.7	25 (81%)	6 (19%)	3 (10%)	3 (10%)	246,296	1.2
Hancock County	7.1	7 (88%)	1 (13%)	7 (88%)	-	79,840	0.9

Table 1. Indiana Local Health Department Workforce Enumeration by County (continued)

LHD Name	Total Number of FTE Employees	Full Time Employees n (%)	Part Time Employees n (%)	Employees with Any Grant Funding n (%)	Employees 100% Funded by grants n (%)	Population Served by LHD	LHD FTE per capita
Harrison County	14.5	12 (63%)	7 (37%)	6 (32%)	5 (26%)	39,654	3.6
Hendricks County	27.2	27 (96%)	1 (4%)	10 (36%)	8 (29%)	174,788	1.6
Henry County	10.5	7 (50%)	7 (50%)	6 (43%)	6 (43%)	48,914	2.1
Howard County	17.0	13 (65%)	7 (35%)	5 (25%)	4 (20%)	83,658	2.0
Huntington County	7.1	6 (67%)	3 (33%)	4 (44%)	1 (11%)	36,662	1.9
Jackson County	10.1	9 (60%)	6 (40%)	7 (47%)	6 (40%)	46,428	2.2
Jasper County	7.2	7 (78%)	2 (22%)	3 (33%)	1 (11%)	32,918	2.2
Jay County	6.1	4 (33%)	8 (67%)	6 (50%)	6 (50%)	20,478	3.0
Jefferson County	11.0	11 (100%)	-	6 (55%)	-	33,147	3.3
Jennings County	6.2	5 (71%)	2 (29%)	-	-	27,613	2.2
Johnson County	20.3	18 (78%)	5 (22%)	4 (17%)	3 (13%)	161,765	1.3
Knox County	9.2	6 (60%)	4 (40%)	2 (20%)	2 (20%)	36,282	2.5
Kosciusko County	12.6	11 (79%)	3 (21%)	4 (29%)	2 (14%)	80,240	1.6
LaGrange County	8.1	8 (100%)	-	1 (13%)	-	40,446	2.0
Lake County	31.5	30 (94%)	2 (6%)	4 (13%)	4 (13%)	404,134	0.8
LaPorte County	27.7	26 (81%)	6 (19%)	9 (28%)	8 (25%)	112,417	2.5

Table 1. Indiana Local Health Department Workforce Enumeration by County (continued)

LHD Name	Total Number of FTE Employees	Full Time Employees n (%)	Part Time Employees n (%)	Employees with Any Grant Funding n (%)	Employees 100% Funded by grants n (%)	Population Served by LHD	LHD FTE per capita
Lawrence County	9.5	6 (43%)	8 (57%)	7 (50%)	7 (50%)	45,011	2.1
Madison County	25.7	25 (96%)	1 (4%)	4 (15%)	4 (15%)	130,129	2.0
Marion County	665.2	649 (95%)	32 (5%)	273 (40%)	236 (35%)	977,203	6.8
Marshall County	7.0	7 (100%)	-	3 (43%)	3 (43%)	46,095	1.5
Martin County	2.3	1 (17%)	2 (33%)	4 (67%)	2 (33%)	9,812	2.4
Miami County	4.8	4 (80%)	1 (20%)	1 (20%)	-	35,962	1.3
Monroe County	30.0	27 (79%)	7 (21%)	13 (38%)	13 (38%)	139,718	2.2
Montgomery County	9.0	9 (100%)	-	4 (44%)	3 (33%)	37,936	2.4
Morgan County	14.8	12 (75%)	4 (25%)	4 (25%)	3 (19%)	71,780	2.1
Newton County	4.0	4 (80%)	1 (20%)	3 (60%)	-	13,830	2.9
Noble County	7.9	7 (70%)	2 (20%)	2 (20%)	2 (20%)	47,457	1.7
Ohio County	3.5	3 (60%)	2 (40%)	3 (60%)	1 (20%)	5,940	5.9
Orange County	3.0	2 (50%)	2 (50%)	2 (50%)	2 (50%)	19,867	1.5
Owen County	6.9	3 (38%)	1 (13%)	4 (50%)	4 (50%)	21,321	3.3
Parke County	2.5	1 (25%)	3 (75%)	3 (75%)	1 (25%)	16,156	1.6
Perry County	5.1	5 (83%)	1 (17%)	2 (33%)	2 (33%)	19,170	2.7
Pike County	4.0	3 (50%)	3 (50%)	3 (50%)	2 (33%)	12,250	3.2

Table 1. Indiana Local Health Department Workforce Enumeration by County (continued)

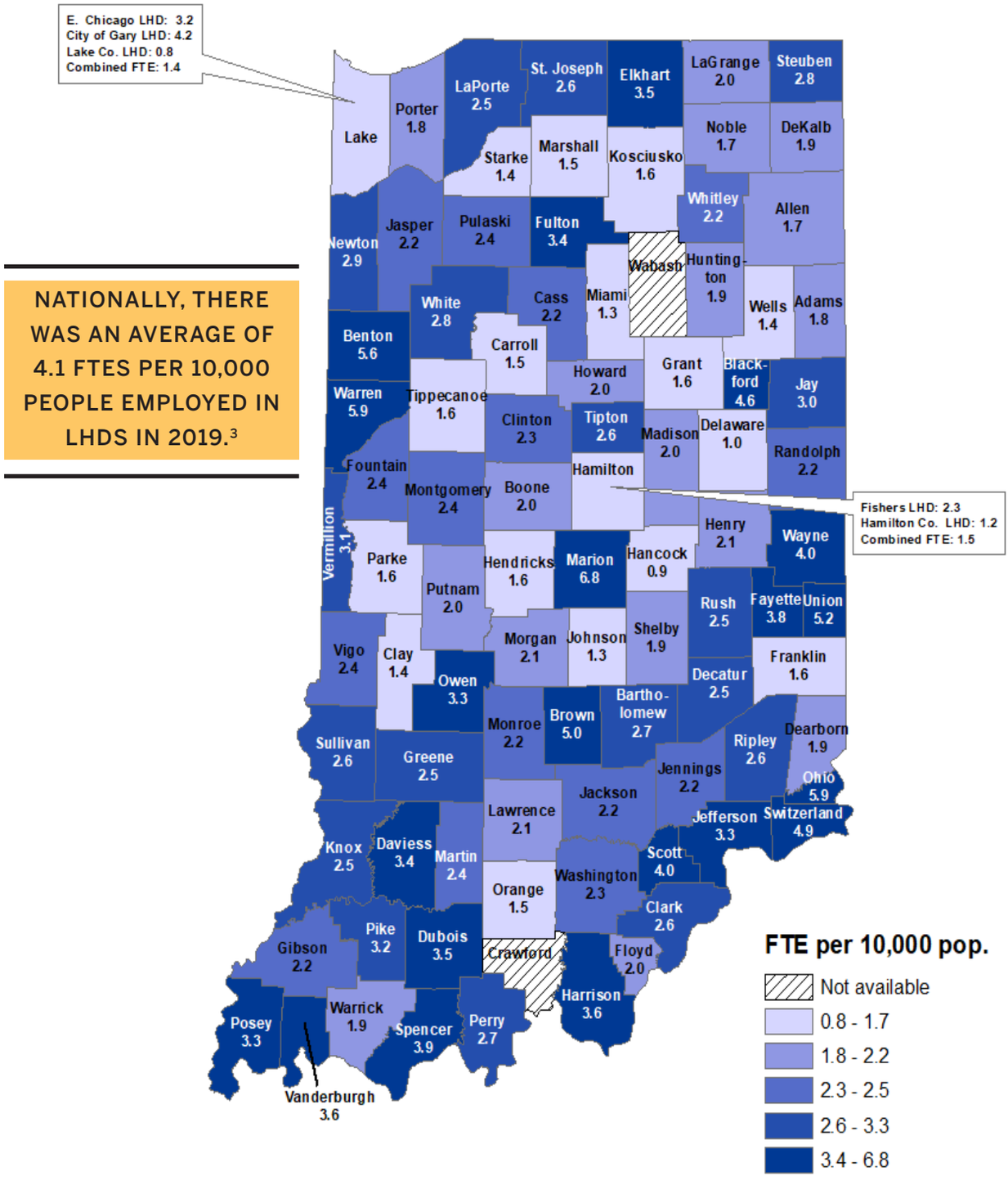
LHD Name	Total Number of FTE Employees	Full Time Employees n (%)	Part Time Employees n (%)	Employees with Any Grant Funding n (%)	Employees 100% Funded by grants n (%)	Population Served by LHD	LHD FTE per capita
Porter County	30.8	23 (66%)	12 (34%)	8 (23%)	4 (11%)	173,215	1.8
Posey County	8.4	7 (64%)	4 (36%)	3 (27%)	3 (27%)	25,222	3.3
Pulaski County	3.0	3 (100%)	-	2 (67%)	-	12,514	2.4
Putnam County	7.3	8 (100%)	-	3 (38%)	1 (13%)	36,726	2.0
Randolph County	5.4	5 (83%)	1 (17%)	2 (33%)	-	24,502	2.2
Ripley County	7.6	5 (56%)	4 (44%)	4 (44%)	2 (22%)	28,995	2.6
Rush County	4.2	3 (50%)	3 (50%)	1 (17%)	1 (17%)	16,752	2.5
Scott County	9.9	10 (83%)	2 (17%)	5 (42%)	4 (33%)	24,384	4.0
Shelby County	8.6	9 (90%)	1 (10%)	4 (40%)	4 (40%)	45,055	1.9
Spencer County	7.7	5 (45%)	6 (55%)	4 (36%)	3 (27%)	19,810	3.9
St. Joseph County	71.4	58 (79%)	15 (21%)	40 (55%)	26 (36%)	272,912	2.6
Starke County	3.3	3 (75%)	1 (25%)	-	-	23,371	1.4
Steuben County	9.7	7 (58%)	5 (42%)	4 (33%)	3 (25%)	34,435	2.8
Sullivan County	5.4	2 (20%)	8 (80%)	6 (60%)	5 (50%)	20,817	2.6
Switzerland County	4.8	4 (67%)	2 (33%)	3 (50%)	3 (50%)	9,737	4.9
Tippecanoe County	29.6	22 (69%)	10 (31%)	12 (38%)	12 (38%)	186,251	1.6
Tipton County	4.0	4 (100%)	-	2 (50%)	-	15,359	2.6

Table 1. Indiana Local Health Department Workforce Enumeration by County (continued)

LHD Name	Total Number of FTE Employees	Full Time Employees n (%)	Part Time Employees n (%)	Employees with Any Grant Funding n (%)	Employees 100% Funded by grants n (%)	Population Served by LHD	LHD FTE per capita
Union County	3.7	1 (20%)	4 (80%)	4 (80%)	2 (40%)	7,087	5.2
Vanderburgh County	64.0	58 (85%)	10 (15%)	40 (59%)	33 (49%)	180,136	3.6
Vermillion County	4.7	3 (50%)	3 (50%)	1 (17%)	1 (17%)	15,439	3.1
Vigo County	25.0	25 (100%)	-	2 (8%)	2 (8%)	106,153	2.4
Wabash County						30,976	
Warren County	5.0	5 (100%)	-	-	-	8,440	5.9
Warrick County	12.2	10 (71%)	3 (21%)	1 (7%)	1 (7%)	63,898	1.9
Washington County	6.6	5 (63%)	3 (38%)	1 (13%)	1 (13%)	28,182	2.3
Wayne County	26.8	13 (45%)	4 (14%)	17 (59%)	17 (59%)	66,553	4.0
Wells County	4.0	4 (100%)	-	-	-	28,180	1.4
White County	7.0	7 (100%)	-	-	-	24,688	2.8
Whitley County	7.7	7 (70%)	3 (30%)	3 (30%)	-	34,191	2.2
State Totals/ Averages	**1,897.6**	**1,696 (71.3%)**	**390 (31.1%)**	**796 (38.4%)**	**633 (29.1%)**	**6,785,386**	**2.6**

Notes: LHD is Local Health Department. FTE is Full Time Equivalent. A total of 93 LHDs among 95 LHDs in Indiana are included in this table. Workforce assessment data was not provided for Crawford and Wabash counties. Dashes (-) denote zeros reported for that category. Blank boxes denote missing data.

Figure 1. Local Health Department Full Time Equivalent per Capita



NATIONALLY, THERE WAS AN AVERAGE OF 4.1 FTES PER 10,000 PEOPLE EMPLOYED IN LHDS IN 2019.[3]

Workforce Enumeration by Size of Population

Tables 2 and 3 present data on the LHD workforce by by size of population served. While on average health departments in Indiana employee approximately 21.5 FTEs, this number varies greatly by the size of the population served low of 4.0 FTEs for LHDs serving populations of fewer than 10,000 people to a high of 208.2 FTEs fpr LHDs serving over 250,000 people. When adjusting to per capita numbers, there are 3.0 FTEs per 10,000 people across all LHDs. With the exception of very small (serving <10,000) and very large (serving 250,00+) LHDs, which had 4.8 and 4.1 FTEs per 10,000 residents respectively, all other sizes of LHDs fell well below the national average of 4.1 FTEs per 10,000 residents.[3] Across all sizes of LHDs, an average of 37.0% of employees are funded at least in part by grants received by the LHD, ranging from a low of 30.6% for LHDs serving populations of 25,000 to 49,999 to a high of 59.4% for LHDs serving populations of less than 10,000 (**Table 3**). An average of 29.2% of employees were 100% funded by grants, ranging from a low of 18.6% in LHDs serving populations of 50,000 to 99,999 to a high of 35.0% for those serving less than 10,000 people.

Table 2. Indiana Local Health Department Workforce Enumeration by size of population served

Size of Population Served	Number of FTEs of Positions	Average Number of FTE Positions	FTE of Positions per capita	Average Full Time Employees per LHD	Average Part Time Employees per LHD	Sum of Population Served	Count of LHDs
<10,000	23.8	4.0	4.8	3.0	2.0	49,735	6
10,000-24,999	128.6	5.4	2.8	4.2	2.5	451,743	24
25,000-49,999	287.0	8.7	2.4	7.0	3.1	1,185,514	33
50,000-99,999	183.3	15.3	2.1	13.0	3.8	865,151	12
100,000-249,999	469.5	33.5	2.2	27.9	8.5	2,152,082	14
250,000+	911.2	227.8	4.5	199.8	13.3	2,039,659	4
Total	2003.5	21.5	3.0	18.2	4.2	6,743,884	93

Notes: LHD is the Local Health Department. Data was unavailable for Crawford and Wabash Counties. A total of 93 LHDs among 95 LHDs are included in this table. Total population in the district does not include counties of LHDs that did not participate. "Positions" (n=2266) include current employees (n=2086) and vacancies (actively recruiting, n=180). FTE per capita is per 10,000 population. Contractors hired by an external agency are not included in this data.

Table 3. Indiana Local Health Department Grant Funded Workforce by Size of Population Served

Size of Population Served	Employees Funded by Grants	Employees 100% Funded by Grants	Sum of Population Served	Count of LHDs
<10,000	17 (59.4%)	10 (35%)	49,735	6
10,000-24,999	65 (36.9%)	40 (19.7%)	451,743	24
25,000-49,999	105 (30.6%)	71 (19.9%)	1,185,514	33
50,000-99,999	63 (31.4%)	44 (18.6%)	865,151	12
100,000-249,999	198 (35%)	173 (29.1%)	2,152,082	14
250,000+	324 (29.5%)	272 (23%)	2,039,659	4
Total	772 (37.0%)	610 (29.2%)	6,743,884	93

Notes: LHD is the Local Health Department. Data was unavailable for Crawford and Wabash Counties. A total of 93 LHDs among 95 LHDs are included in this table. Total population in the district does not include counties of LHDs that did not participate. "Positions" (n=2266) include current employees (n=2086) and vacancies (actively recruiting, n=180). FTE per capita is per 10,000 population. Contractors hired by an external agency are not included in this data.

LOCAL HEALTH DEPARTMENT WORKFORCE CHARACTERISTICS

Demographics

State-level demographics of Indiana's LHD workforce are presented in **Table 4**. Additional data about Indiana's population overall and HHS Region 5 workforce and national public health workforce demographics are presented.

As public health agencies strive to ensure that their workforce represents the communities they serve, demographic data indicate that Indiana's LHD workforce is slightly less diverse than the population of the state overall and the regional and national public health workforce. A smaller percentage of the LHD workforce self-identifies as Hispanic or Latino compared to the overall population of the state (6.7% compared to 7.6%, respectively). LHD employees predominantly identify as female across Indiana, HHS Region 5, and the national workforce (75%, 81%, and 78.8% respectively).

In terms of age, a bigger population of Indiana's LHD workforce fit into higher age brackets as compared to the HHS Region 5 and national public health workforce. For example, 38.2% of Indiana's LHD employees are aged 51-61+, whereas HHS Region 5 has 31.3% and the national workforce has 32.8% in that same age group. The U.S. Census data categories are slightly different from the public health workforce demographics; however, Indiana's population ages 50 to 64 years is only 18.9% of the state population. Lastly, Indiana's LHD workforce is proportionally younger than HHS Region 5 and the national workforce (ages 21-30 are 14.4% and 12.6% respectively).

Table 4. Indiana Local Health Department Workforce by Race, Ethnicity, Gender, and Age

Characteristics	Indiana Population Overall (6,805,985)	Indiana Statewide LHD Workforce (2,034)	Region 5 LHD Workforce (n=19,071 weighted)	National LHD Workforce (n=132,394 weighted)
	n (%)	n (%)	n (%)	n (%)
Race				
Asian	162,321 (2.4%)	31 (1.5%)	599 (3.1%)	10,450 (7.9%)
American Indian/Alaska Native	19,174 (0.3%)	7 (0.3%)	149 (0.8%)	2,394 (1.8%)
Black/African American	601,428 (8.8%)	304 (14.6%)	2,380 (12.5%)	24,884 (18.8%)
Native Hawaiian/Pacific Islander	1,687 (0.0%)	1 (0.1%)	27 (0.1%)	779 (0.6%)
White	5,308,520 (78.0%)	1,578 (75.7%)	14,875 (78.0%)	81,734 (61.7%)
Two or more races	502,019 (7.4%)	45 (2.2%)	820 (4.3%)	11,190 (8.4%)
Some other race alone	210,836 (3.1%)	-	-	-
Prefer not to respond/No response	-	120 (5.8%)	569 (3.0%)	5,846 (4.4%)
Ethnicity				
Hispanic/Latino	518,001 (7.6%)	139 (6.7%)	1,418 (7.4%)	26,964 (20.4%)
Non-Hispanic	6,287,984 (92.4%)	1,859 (89.1%)	17,319 (90.8%)	102,801 (77.6%)
Prefer not to respond/No response	-	88 (4.2%)	333 (1.8%)	2,628 (2.0%)
Gender				
Female	3,431,054 (50.4%)	1,573 (75.4%)	15,444 (81.0%)	104,314 (78.8%)
Male	3,374,931 (49.6%)	475 (22.8%)	3,111 (16.3%)	24,270 (18.3%)
Non-binary	-	2 (0.1%)	300 (1.6%)	2,177 (1.6%)
Prefer not to respond/No reponse	-	36 (1.7%)	215 (1.1%)	1,631 (1.2%)
Age				
<21		8 (0.4%)	22 (0.1%)	301 (0.2%)
21-30		360 (17.3%)	2,741 (14.4%)	16,672 (12.6%)
31-40		390 (18.7%)	4,441 (23.3%)	28,864 (21.8%)
41-50		433 (20.8%)	4,384 (23.0%)	30,028 (22.7%)
51-60		452 (21.7%)	3,802 (19.9%)	29,026 (21.9%)
61+		344 (16.5%)	1,921 (10.1%)	14,454 (10.9%)
Prefer not to respond/No response		99 (4.7%)	1,757 (9.2%)	13,044 (9.9%)

Notes: Data on national LHD workforce characteristics and Health and Human Services (HHS) Public Health Region 5 LHD Workforce are from the 2021 Public Health Workforce Interests and Needs Survey (PH WINS) 2021 dataset. HHS Region 5 includes Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Indiana state population characteristics are from the American Community Survey (ACS). *The ACS census age categories differed from PH WINS age categories.

Education

Although Indiana's LHD workforce reports a higher level of educational attainment than the state population overall, it is less educated than the HHS Region 5 public health workforce and the national public health workforce (**Table 5**). **Notably, Indiana's LHD workforce is more than twice as likely to report having no college degree as compared to both HHS Region 5 and the U.S. (25.1%, 12.4%, and 16.2%, respectively)**. While bachelor's degrees among the LHD workforce represented similar proportions across Indiana, HHS Region 5, and public health organizations, substantial differences exist in the proportion of individuals with a master's degree across these groups. Just over 12% of Indiana's LHD workforce has a master's compared to 27.5% of HHS Region 5 public health employees and 27.8% of the U.S. public health employees. Further, there is also notable variation in the proportion of LHD employees with master's degrees (**Table 6**). Indiana has a smaller percentage of the workforce with a public health degree compared to the HHS Region 5 and national public health workforces (6.5% vs. 12.7% vs. 11.8%, respectively). Note that a public health degree includes bachelor's, master's, or doctoral degrees in a public health field. Again, this number varied by LHD size with a range of 1.9% for LHDs serving populations between 10,000 to 24,999 to 10.1% for LHDs serving over 250,000. These differences may relate to a number of factors that will be discussed in more detail in subsequent sections of this report, including recruitment challenges and county-level salary restrictions.

THE 2ND MOST COMMON LHD ROLE IN INDIANA IS PUBLIC HEALTH NURSE, REPRESENTING 12.8% OF LHD POSITIONS.

Many of the skills necessary for roles in LHDs can be developed through certifications and other formal training programs. **Table 7** reports on the types of education and training held by Indiana's LHD workforce. The most common certification within LHDs in Indiana, HHS Region 5, and U.S. public health departments overall is a nurse certification (12.5%, 14.1%, and 12.0% respectively). In general, Indiana's LHD workforce is similar to the HHS Region 5 and national public health workforces in terms of education and training. **Table 8** presents certifications and training by size of population served. Note that Tables 8 and 9 include an "other" category for certifications/training. However, because an open-ended response option for "other" certifications was not available, these responses cannot be described more thoroughly.

A total of 146 LHD employees or 7% of the LHD workforce reported being currently enrolled in a formal degree or certificate program; with 30 people enrolled in a Master of Public Health (MPH) program and 11 others working on Bachelor of Public Health (BSPH) or a certificate of public health. A total of 364 (17.5%) LHD employees indicated being interested in pursuing further education (note that this number includes 50 of the people currently enrolled in a formal program but who selected an additional degree they are interested in as well). Among the 364, 83 (22.8%) are interested in an MPH and 51 (14.0%) are interested in a certificate of public health.

Table 5. Indiana Local Health Department Workforce Education and Training

	Indiana Population Overall	Indiana Statewide LHD Workforce	HHS Region 5 LHD Workforce	National LHD Workforce
	n (%)	n (%)	n (%)	n (%)
Education				
No college degree	2,480,963 (58.9%)	524 (25.1%)	2,356 (12.4%)	21,501 (16.2%)
Associate's degree	414,408 (9.8%)	281 (13.5%)	2,394 (12.6%)	16,311 (12.3%)
Bachelor's degree	843,069 (20.0%)	836 (40.1%)	8,343 (43.7%)	49,679 (37.5%)
Master's degree	343,526 (8.2%)	252 (12.1%)	5,251 (27.5%)	36,793 (27.8%)
Doctoral/Professional degree	130,192 (3.1%)	86 (4.1%)	469 (2.5%)	6,324 (4.8%)
No response	-	107 (5.1%)	256 (1.3%)	1,784 (1.3%)
Public Health Degree	-	135 (6.5%)	2,248 (11.8%)	16,876 (12.7%)

Notes: Public Health Degree includes bachelors, masters, or doctoral degrees in a public health field.

Table 6. Indiana Local Health Department Workforce Education by size of population served

Highest Education	<10,000	10,000-24,999	25,000-49,999	50,000-99,999	100,000-249,999	250,000+
No college degree	8 (26.7%)	62 (38.8%)	99 (29.7%)	83 (41.3%)	112 (22%)	160 (18.8%)
Associates degree	9 (30%)	33 (20.6%)	82 (24.6%)	34 (16.9%)	56 (11%)	67 (7.9%)
Bachelors degree	9 (30%)	40 (25%)	89 (26.7%)	62 (30.8%)	256 (50.2%)	380 (44.6%)
Masters degree	1 (3.3%)	3 (1.9%)	27 (8.1%)	10 (5%)	52 (10.2%)	159 (18.7%)
Doctoral/Professional degree	3 (10%)	15 (9.4%)	16 (4.8%)	11 (5.5%)	15 (2.9%)	26 (3.1%)
No Response	--	7 (4.4%)	20 (6%)	1 (0.5%)	19 (3.7%)	60 (7%)
Public Health Degree	**1 (3.3%)**	**3 (1.9%)**	**11 (3.3%)**	**4 (2.0%)**	**30 (5.9%)**	**86 (10.1%)**

Notes: Public Health Degree includes bachelors, masters, or doctoral degrees in a public health field.

Table 7. Indiana Local Health Department Workforce Certification

Education and Training	Indiana Statewide LHD Workforce n (%)	HHS Region 5 LHD Workforce n (%)	National LHD Workforce n (%)
Certification			
Nurse certification	260 (12.5%)	2,683 (14.1%)	15,910 (12.0%)
Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS)	77 (3.7%)	1,632 (8.6%)	5,458 (4.1%)
Certified in Public Health (CPH)	18 (0.9%)	560 (2.9%)	3,637 (2.8%)
Certified Health Education Specialist (CHES)	19 (0.9%)	415 (2.2%)	2,269 (1.7%)
Laboratory certification	18 (0.9%)	245 (1.3%)	2,412 (1.8%)
Certified Community Health Worker Training	15 (0.7%)	415 (2.2%)	2,713 (2.1%)
Education and Training			
Certified Profession-Food Safety (CP-FS) and/or Certified Foodborne Outbreak Investigator*	43 (2.1%)	121 (1.6%)	1425 (1.1%)
Certified Diabetes Educator (CDE)	3 (0.1%)	51 (0.3%)	374 (0.2%)
Infection Control Certification (CIC)	1 (0.1%)	89 (0.5%)	736 (0.6%)
Registered Dietician (RD)	61 (2.9%)	841 (4.4%)	3,249 (2.5%)
Lactation certification (CLC/CLE/CLS)	60 (2.9%)	1,288 (6.8%)	4,423 (3.3%)
Physical Activity in PH Specialist (PAPHS)	1 (0.1%)	17 (0.1%)	93 (0.1%)
Dental Public Health Board certification (DPH)	1 (0.1%)	6 (0.0%)	223 (0.1%)
Physician board certification	37 (1.8%)	80 (0.4%)	1,260 (0.9%)
Preventive Medicine Physician board certification	-	13 (0.1%)	214 (0.2%)
Other certification	561 (26.9%)	3,740 (19.6%)	25,966 (19.4%)

Note: Data about certifications and related trainings are not available for the Indiana state population overall. *LHD employees with ServSafe certification are also included in this category (https://www.servsafe.com/).

Table 8. Indiana Local Health Department Workforce Certification by Population Served

Certification	<10,000	10,000-24,999	25,000-49,999	50,000-99,999	100,000-249,999	250,000+
Nurse Certification	3 (1.2%)	31 (11.9%)	55 (21.2%)	27 (10.4%)	66 (25.4%)	78 (30%)
Registered Environmental Health Specialist/Registered Sanitarian (REHS/ RS)	1 (1.3%)	9 (11.7%)	14 (18.2%)	6 (7.8%)	29 (37.7%)	18 (23.4%)
Certified in Public Health (CPH)	--	4 (22.2%)	7 (38.9%)	--	4 (22.2%)	3 (16.7%)
Certified Health Education Specialist (CHES)	--	--	2 (10.5%)	1 (5.3%)	2 (10.5%)	14 (73.7%)
Laboratory certification	--	--	1 (5.6%)	2 (11.1%)	2 (11.1%)	13 (72.2%)
Certified Community Health Worker Training	--	--	1 (6.7%)	1 (6.7%)	2 (13.3%)	11 (73.3%)
Public Health Degree	1 (3.3%)	3 (1.9%)	11 (3.3%)	4 (2.0%)	30 (5.9%)	86 (10.1%)

Note: *LHD employees with ServSafe certification are also included in this category (https://www.servsafe.com/).

Roles

Table 9 presents the primary and secondary roles served across Indiana's LHD workforce. Roles within the category of public health sciences represented the highest proportion (n=878; 42.1%) of the statewide workforce, followed by the administrative (n=539; 25.8%) and clinical and lab categories (n=530; 25.4%), and social services and all other roles (n=139; 6.7%). **Table 10** shows the variation in roles served among the LHD workforce by size of population served. Notably there are only ten roles that are present across all sizes of LHDs. These include: administrator; clerical personnel; health officer; medical/vital records staff; public health nurse; health professional/clinical support staff; emergency preparedness worker; environmental health worker; health educator; and other program staff.

ENVIRONMENTAL HEALTH WORKER IS THE MOST COMMON ROLE AMONG EMPLOYEES IN LHDS IN INDIANA, REPRESENTING 1 IN 5 POSITIONS. APPROXIMATELY 7% OF ENVIRONMENTAL HEALTH WORKERS SERVE IN A SECONDARY ROLE AS WELL, MOST COMMONLY IN AN EMERGENCY PREPAREDNESS/MANAGEMENT ROLE.

Environmental health worker was the most common primary role reported overall, with more than 1 in 5 positions (n=422) at the state level. The majority (92.3%) of individuals in these roles reported it as their sole responsibility, with the remainder being most likely to report serving as an emergency preparedness/management worker as their secondary role. Public health nurse was the second most common primary role reported at the state levels representing 12.8% of all LHD positions reported in the state. The most common secondary role public health nurses reported serving in was disease intervention specialist or contact tracer. Among employees in administrative roles, the most commonly reported positions were clerical personnel (n=208) followed by medical/vital records staff (n=121). There were only three roles where 100% of positions reported serving in them as their sole responsibility, social worker/social service professional (n=122), nutritionist or dietitian (n=10), and peer counselor (n=7).

A total of 49 employees reported being an emergency preparedness/management worker with 32 (65.3%) serving in this role as their primary and sole role in the organization. However, a similar proportion of these employees are part-time 59.2% (n=29) so while they may serve in this as a sole role, they are likely part time employees. Additionally, emergency preparedness/management workers worked an average of 25.5 hours per week and are on call an average of 42.3 additional hours per week. A total of 9 of the emergency preparedness/management workers are third party contractors and 1 is an internship position.

Table 9. Indiana Local Health Department Workforce Roles Served

PH WINS Job Classification	Total Number	Employees Serving in this Role as SOLE Responsibility	Employees Serving in this Role as Primary Responsibility but Also Serving in Other Roles	Second Most Common Role of Individuals Performing this Role as their Primary Role	
		n (%)	n (%)	Role	n (%)
Administrative	**539**				
Accountant/Fiscal	34	12 (35.3%)	22 (64.7%)	Clerical Personnel-Administrative Assistant	5 (14.7%)
Administrator	84	45 (53.6%)	39 (46.4%)	Accountant/ Fiscal	11 (13.1%)
Business Support Services-Coordinator	26	17 (65.4%)	9 (34.6%)	Medical/Vital Records Staff	5 (19.2%)
Clerical Personnel-Administrative Assistant	208	155 (74.5%)	53 (25.2%)	Medical/Vital Records Staff	27 (13.0%)
Health Officer	58	53 (91.4%)	5 (8.6%)	Public Information Specialist	2 (3.4%)
Medical/Vital Records Staff	121	67 (55.4%)	54 (44.6%)	Medical/Vital Records Staff	29 (24.0%)
Public Information Specialist	8	7 (87.5%)	1 (12.5%)	Program Director	1 (12.5%)
Clinical and Lab	**530**				
Clinical Providers	43	42 (97.7%)	1 (2.3%)	Health Educator	1 (2.3%)
Community Health Worker	61	59 (96.7%)	2 (3.3%)	Public Information Specialist	2 (3.3%)
Health Professional/ Clinical Support Staff	54	45 (83.3%)	9 (16.7%)	Disease Intervention Specialist/Contact Tracer	3 (5.6%)
Laboratory Staff	23	22 (95.7%)	1 (4.3%)	Environmental Health Worker	1 (4.3%)
Nutritionist or Dietitian	10	10 (100.0%)	-	-	-

Table 9. Indiana Local Health Department Workforce Roles Served (continued)

PH WINS Job Classification	Total Number	Employees Serving in this Role as SOLE Responsibility	Employees Serving in this Role as Primary Responsibility but Also Serving in Other Roles	Second Most Common Role of Individuals Performing this Role as their Primary Role	
		n (%)	n (%)	Role	n (%)
Other Nurse-Clinical Services	71	54 (76.1%)	17 (23.9%)	Disease Intervention Specialist/Contact Tracer	4 (5.6%)
Public Health Nurse	268	213 (79.5%)	55 (20.5%)	Disease Intervention Specialist/Contact Tracer	16 (6.0%)
Public Health Sciences	**878**				
Data or Research Analyst	12	7 (58.3%)	5 (41.7%)	Epidemiologist	2 (16.7%)
Disease Intervention Specialist/Contact Tracer	88	57 (64.8%)	31 (35.2%)	Health Educator	12 (13.6%)
Emergency Preparedness/ Management Worker	49	32 (65.3%)	17 (34.7%)	-	-
Environmental Health Worker	442	408 (92.3%)	34 (7.7%)	Emergency Preparedness/ Management Worker	13 (2.9%)
Epidemiologist	12	11 (91.7%)	1 (8.3%)	Public Health Nurse	1 (8.3%)
Health Educator	113	101 (89.4%)	12 (10.6%)	Health Educator	3 (2.7%)
Health Navigator	9	8 (88.9%)	1 (11.1%)	Clerical Personnel-Administrative Assistant	1 (11.1%)
Other program staff	30	23 (76.7%)	7 (23.3%)	-	-
Peer Counselor	7	7 (100.0%)	-	-	-

Table 9. Indiana Local Health Department Workforce Roles Served (continued)

PH WINS Job Classification	Total Number	Employees Serving in this Role as SOLE Responsibility	Employees Serving in this Role as Primary Responsibility but Also Serving in Other Roles	Second Most Common Role of Individuals Performing this Role as their Primary Role	
		n (%)	n (%)	Role	n (%)
Program Director	55	24 (43.6%)	31 (56.4%)	Environmental Health Worker	10 (18.2%)
Public Health Manager or Program Manager	61	48 (78.7%)	13 (21.3%)	Public Health Nurse and Health Educator	6 (9.8%)
Social Services and all other	**139**				
Social Worker/Social Service Professional	122	122 (100.0%)	-	-	-
Other	17	14 (82.4%)	3 (17.6%)	Clerical Personnel-Administrative Assistant	2 (11.8%)

Notes: Roles listed in the 2021 PH WINS assessment were assigned to each LHD employee. Detailed methods are provided in the analysis section.

Table 10. Indiana Local Health Department Workforce Primary Roles by Size of Population Served

Job Classification	<10,000	10,000-24,999	25,000-49,999	50,000-99,999	100,000-249,999	250,000+
Administrative	12 (2.2%)	63 (11.7%)	119 (22.1%)	66 (12.2%)	143 (26.5%)	136 (25.2%)
Administrator	4 (4.8%)	9 (10.7%)	24 (28.6%)	12 (14.3%)	19 (22.6%)	16 (19%)
Business Support Services-Coordinator	--	2 (7.7%)	4 (15.4%)	4 (15.4%)	3 (11.5%)	13 (50%)
Accountant/Fiscal	--	4 (11.8%)	4 (11.8%)	5 (14.7%)	17 (50%)	4 (11.8%)
Clerical Personnel-Administrative Assistant	4 (1.9%)	21 (10.1%)	36 (17.3%)	18 (8.7%)	65 (31.3%)	64 (30.8%)
Health Officer	3 (5.2%)	15 (25.9%)	17 (29.3%)	10 (17.2%)	10 (17.2%)	3 (5.2%)
Medical/Vital Records Staff	1 (0.8%)	12 (9.9%)	33 (27.3%)	17 (14%)	28 (23.1%)	30 (24.8%)
Public Information Specialist	--	--	1 (12.5%)	--	1 (12.5%)	6 (75%)
Clinical and Lab	**6 (1.1%)**	**39 (7.4%)**	**102 (19.2%)**	**50 (9.4%)**	**130 (24.5%)**	**203 (38.3%)**
Community Health Worker	--	--	2 (3.3%)	1 (1.6%)	11 (18%)	47 (77%)
Laboratory Staff	--	--	--	--	3 (13%)	20 (87%)
Nutritionist or Dietitian	--	--	--	--	6 (60%)	4 (40%)
Public Health Nurse	4 (1.5%)	24 (9%)	62 (23.1%)	35 (13.1%)	65 (24.3%)	78 (29.1%)
Other Nurse-Clinical Services	--	14 (19.7%)	20 (28.2%)	5 (7%)	27 (38%)	5 (7%)
Clinical Providers	--	--	2 (4.7%)	1 (2.3%)	6 (14%)	34 (79.1%)
Health Professional/Clinical Support Staff	2 (3.7%)	1 (1.9%)	16 (29.6%)	8 (14.8%)	12 (22.2%)	15 (27.8%)
Public Health Sciences	**12 (1.4%)**	**58 (6.6%)**	**106 (12.1%)**	**85 (9.7%)**	**214 (24.4%)**	**403 (45.9%)**
Data or Research Analyst	--	--	--	--	6 (50%)	6 (50%)
Disease Intervention Specialist/ Contact Tracer	--	2 (2.3%)	1 (1.1%)	8 (9.1%)	27 (30.7%)	50 (56.8%)
Emergency Preparedness/ Management Worker	4 (8.2%)	12 (24.5%)	12 (24.5%)	6 (12.2%)	13 (26.5%)	2 (4.1%)
Environmental Health Worker	6 (1.4%)	36 (8.1%)	70 (15.8%)	53 (12%)	104 (23.5%)	173 (39.1%)
Epidemiologist	--	--	--	--	1 (8.3%)	11 (91.7%)
Health Educator	1 (0.9%)	3 (2.7%)	5 (4.4%)	2 (1.8%)	25 (22.1%)	77 (68.1%)
Health Navigator	--	--	--	2 (22.2%)	1 (11.1%)	6 (66.7%)
Peer Counselor	--	--	1 (14.3%)	--	5 (71.4%)	1 (14.3%)
Program Director	--	2 (3.6%)	6 (10.9%)	7 (12.7%)	20 (36.4%)	20 (36.4%)
Public Health Manager or Program Manager	--	1 (1.6%)	2 (3.3%)	3 (4.9%)	4 (6.6%)	51 (83.6%)
Other program staff	1 (3.3%)	2 (6.7%)	9 (30%)	4 (13.3%)	8 (26.7%)	6 (20%)

Table 10. Indiana Local Health Department Workforce Primary Roles by Size of Population Served (continued)

Job Classification	<10,000	10,000-24,999	25,000-49,999	50,000-99,999	100,000-249,999	250,000+
Social Services and all other	**--**	**--**	**6 (4.3%)**	**--**	**23 (16.5%)**	**110 (79.1%)**
Social Worker/Social Service Professional	--	--	1 (0.8%)	--	19 (15.6%)	102 (83.6%)
Other	--	--	5 (29.4%)	--	4 (23.5%)	8 (47.1%)

Notes: Roles listed in the 2021 PH WINS assessment were assigned to each LHD employee. Detailed methods are provided in the analysis section.

Salary

Salary data by job classification for full and part-time employees are presented in **Tables 11 and 12**. The average salaries for full time employees across overarching job categories ranged from $44,620 (range of $8,000 to $160,320) for those in administrative roles to $56,401 for those in clinical and lab roles (range of $18,200 to $227,356). Overall clinical providers, which included physicians, advanced practice providers, and public health dentists, had the highest average salary at $104,588 for full time positions. Full time public health nurses had the second highest average salary at $58,064 (range of $18,200 to $105,976). Among administrative personnel, LHD administrators had the highest average salary ($63,798; range of $26,851 to $131,310) followed by public information specialists ($60,934; range of $41,954 to $79,000). For roles in the public health sciences, public health managers/ program managers, program directors, and epidemiologists were the highest paid, with average full time salaries of $65,086, $62,827, and $62,843, respectively.

Tables 12, 13, 14, and 15 present salary data by roles adjusted for time in public health and education level for full-time employees. For most roles, there were no clear patterns for salary based on time in governmental public health or education level. This could be due to small sample sizes for some roles. When looking at the two most common roles (public health nurses and environmental health workers) across all LHDs, it does appear that average salaries for public health nurses generally increase with educational level and time in public health. For environmental health workers, while salaries do tend to generally increase for both education level and time in public health, separately, there is no clear trend when considering the two together.

Tables 16, 17, 18, and 19 present salary data by role, adjusting for education level and size of LHD (measured by size of the population served). Average salaries by education level for the different roles vary substantially by the size of LHD. For example, the average salary for individuals serving in an administrator role ranges from $40,676 in LHDs serving less than 10,000 people to $94,035 in LHDs serving over 250,000. While there is less variability, salaries for public health nurses with a bachelor's degree range from $46,327 in LHDs serving less than 10,000 people to $69,408 in LHDs serving over 250,000. For environmental health workers with a bachelor's degree, average salaries range from $41,737 in LHDs serving less than 10,000 to $51,820 in LHDs serving populations between 100,000 to 249,999.

Tables 20, 21, 22, and 23 present data on the percentage of Indiana and HHS Region 5's public health workforce salaries for full time employees falling within seven salary ranges, broken up by $10,000 increments, starting at "less than $25,000" and going up to "more than $75,000." There are several notable differences between salaries in Indiana as compared to HHS Region 5. For example, **Indiana's LHD administrators earn substantially less than their regional counterparts (Table 20)**. Similarly, the vast majority of Indiana's LHD health officers earn less than LHD health officers in HHS Region 5.Public health nurses in Indiana also tend to make less on average than those across HHS Region 5 with 46.8% making between $25,000 and $55,000 a year in Indiana versus 22.9% in HHS Region 5. When looking at roles in the public health sciences, almost half of all environmental health

workers in Indiana (46.9%) make $45,000 or less compared to 30.5% in HHS Region 5 (**Table 21**). While public health managers/program managers have some of the highest average salaries among Indiana's public health workforce they are half as likely to make more than $75,000 as compared to their counterparts in HHS Region 5 (26.7% vs. 52.4%).

Table 11. Local Health Department Workforce Salaries among Full Time Employees

PH WINS Job Classifications	Indiana Statewide LHD Workforce - Full Time			
	Count	Average of Annual Income	Min of Annual Income	Max of Annual Income
Administrative	**430**	**$44,620**	**$8,000**	**$160,320**
Accountant/Fiscal	32	$44,073	$28,776	$77,000
Administrator	83	$63,798	$26,851	$131,310
Business Support Services-Coordinator	26	$52,194	$31,824	$87,068
Clerical Personnel-Administrative Assistant	149	$38,538	$14,620	$69,867
Health Officer	21	$43,408	$8,000	$160,320
Medical/Vital Records Staff	113	$37,299	$23,700	$82,784
Public Information Specialist	6	$60,934	$41,954	$79,000
Clinical and Lab	**381**	**$56,401**	**$18,200**	**$227,356**
Community Health Worker	59	$41,112	$31,019	$67,059
Laboratory Staff	22	$52,550	$37,440	$93,205
Nutritionist or Dietitian	8	$57,713	$48,256	$73,819
Clinical Providers	36	$104,588	$38,694	$227,356
Health Professional/Clinical Support Staff	39	$41,836	$31,200	$60,000
Other Nurse-Clinical Services	29	$46,417	$35,000	$63,700
Public Health Nurse	188	$58,064	$18,200	$105,976
Public Health Sciences	**768**	**$49,874**	**$22,281**	**$125,777**
Data or Research Analyst	7	$54,630	$46,000	$61,422
Disease Intervention Specialist/Contact Tracer	83	$45,537	$32,760	$100,963
Emergency Preparedness/Management Worker	20	$50,489	$22,281	$89,352
Environmental Health Worker	401	$47,798	$27,158	$104,915
Epidemiologist	11	$62,843	$55,000	$72,613
Health Educator	105	$45,301	$32,000	$111,675
Health Navigator	8	$47,314	$41,600	$54,184

Table 11. Local Health Department Workforce Salaries among Full Time Employees (continued)

PH WINS Job Classifications	Indiana Statewide LHD Workforce - Full Time			
	Count	Average of Annual Income	Min of Annual Income	Max of Annual Income
Peer Counselor	4	$34,534	$33,565	$37,440
Program Director	54	$62,827	$35,745	$125,777
Public Health Manager or Program Manager	60	$65,086	$43,014	$97,864
Other program staff	15	$49,744	$31,750	$93,600
Social Services and all other	**117**	**$49,261**	**$25,350**	**$98,821**
Social Worker/Social Service Professional	108	$49,259	$26,857	$98,821
Other	9	$49,281	$25,350	$69,181

Notes: Given the small numbers of individuals classified as Laboratory Quality Control Workers and Laboratory Technicians, these individuals were combined with Laboratory Scientists/Medical Technologists for this salary table and relabeled as "Laboratory Staff".

Table 12. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Administrative Employees

Administrative	No college degree		Associates		Bachelors		Masters	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Accountant/Fiscal	**14**	**$41,612**	**9**	**$38,620**	**8**	**$54,825**	**1**	**$41,600**
<2 years	3	$36,325			1	$53,000	1	$41,600
2-4 years	3	$42,128	4	$38,537	2	$40,022		
5-9 years	4	$46,198	2	$33,976	1	$36,860		
10+ years	4	$40,603	3	$41,828	4	$67,175		
Administrator	**9**	**$47,272**	**11**	**$51,259**	**35**	**$63,833**	**11**	**$67,495**
<2 years			1	$40,056	3	$52,551	2	$65,053
2-4 years			1	$39,894	1	$52,098	1	$55,005
5-9 years	3	$44,211	3	$58,431	7	$53,717	3	$61,665
10+ years	6	$48,803	6	$51,435	24	$68,683	5	$74,468
Business Support Services-Coordinator	**10**	**$43,306**	**2**	**$39,587**	**1**	**$58,000**		
<2 years	1	$35,271	1	$38,757				
2-4 years	1	$33,197	1	$40,417				
5-9 years	1	$39,458			1	$58,000		
10+ years	7	$46,448						
Clerical Personnel-Administrative Assistant	**73**	**$37,235**	**17**	**$35,699**	**10**	**$36,453**	**2**	**$32,520**
<2 years	25	$35,369	3	$36,360	6	$35,445		
2-4 years	14	$37,524	4	$36,650				
5-9 years	15	$37,705	3	$36,875	1	$38,438		
10+ years	19	$39,105	7	$34,369	3	$37,807	2	$32,520
Medical/Vital Records Staff	**69**	**$36,369**	**14**	**$33,807**	**7**	**$35,698**	**1**	**$33,738**
<2 years	27	$34,906	5	$34,732				
2-4 years	13	$35,844	1	$28,606	3	$35,370		
5-9 years	7	$38,178	4	$33,663	3	$36,096	1	$33,738
10+ years	22	$37,899	4	$34,096	1	$35,485		
Public Information Specialist					**2**	**$71,314**		
<2 years					1	$64,000		
10+ years					1	$78,627		

Table 12. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Administrative Employees

Administrative	Doctoral/ Professional		Unknown		Overall	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Accountant/Fiscal					**32**	**$44,073**
<2 years					5	$40,715
2-4 years					9	$40,064
5-9 years					7	$41,372
10+ years					11	$50,599
Administrator	**5**	**$82,394**	**1**	**$51,300**	**72**	**$61,516**
<2 years					6	$54,636
2-4 years	1	$56,400			4	$50,849
5-9 years	2	$80,591	1	$51,300	19	$56,917
10+ years	2	$97,194			43	$65,501
Business Support Services-Coordinator					**13**	**$43,864**
<2 years					2	$37,014
2-4 years					2	$36,807
5-9 years					2	$48,729
10+ years					7	$46,448
Clerical Personnel-Administrative Assistant			**5**	**$33,991**	**107**	**$36,678**
<2 years			1	$36,921	35	$35,511
2-4 years			4	$33,258	22	$36,589
5-9 years					19	$37,612
10+ years					31	$37,485
Medical/Vital Records Staff			**6**	**$38,441**	**97**	**$36,052**
<2 years			3	$37,021	35	$35,062
2-4 years			1	$28,784	18	$34,970
5-9 years					15	$36,261
10+ years			2	$45,399	29	$37,809
Public Information Specialist					**2**	**$71,314**
<2 years					1	$64,000
10+ years					1	$78,627

Table 13. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Clinical and Laboratory Employees

	No college degree		Associates		Bachelors		Masters	
Clinical and Laboratory	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Clinical Providers	**1**	**$46,875**	**2**	**$38,694**	**1**	**$59,802**	**2**	**$96,540**
2-4 years							1	$80,080
5-9 years					1	$59,802	1	$113,000
10+ years	1	$46,875	2	$38,694				
Community Health Worker	**4**	**$36,973**	**4**	**$37,912**	**4**	**$45,713**	**2**	**$42,906**
<2 years	3	$35,964	4	$37,912	4	$45,713	2	$42,906
2-4 years	1	$40,000						
Health Professional/Clinical Support Staff	**14**	**$39,380**	**7**	**$39,029**	**3**	**$50,487**	**3**	**$55,575**
<2 years	8	$42,152	3	$39,925	1	$60,000	1	$53,000
2-4 years	3	$37,201	3	$36,476	1	$32,460		
5-9 years	3	$34,164	1	$44,000	1	$59,000	1	$53,726
10+ years							1	$60,000
Laboratory Staff			**2**	**$49,350**				
<2 years			1	$48,399				
10+ years			1	$50,301				
Nutritionist or Dietitian					**2**	**$51,241**	**2**	**$49,818**
<2 years					1	$48,381	2	$49,818
10+ years					1	$54,101		
Public Health Nurse	**4**	**$46,268**	**45**	**$50,306**	**74**	**$54,008**	**11**	**$56,416**
<2 years	1	$47,536	7	$51,075	23	$52,484	6	$58,306
2-4 years	1	$45,000	14	$50,725	20	$52,137	3	$55,972
5-9 years	1	$47,536	13	$52,279	14	$56,806		
10+ years	1	$45,000	11	$46,953	17	$55,965	2	$52,353
Other Nurse-Clinical Services	**12**	**$42,877**	**14**	**$49,885**	**1**	**$41,933**	**1**	**$50,000**
<2 years	10	$43,864	4	$51,946				
2-4 years	1	$35,000	4	$54,575	1	$41,933	1	$50,000
5-9 years	1	$40,878	4	$42,682				
10+ years			2	$50,787				

Table 13. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Clinical and Laboratory Employees

	Doctoral/ Professional		Unknown		Overall	
Clinical and Laboratory	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Clinical Providers					**6**	**$62,858**
2-4 years					1	$80,080
5-9 years					2	$86,401
10+ years					3	$41,421
Community Health Worker					**14**	**$40,586**
<2 years					13	$40,631
2-4 years					1	$40,000
Health Professional/Clinical Support Staff			**2**	**$36,000**	**29**	**$41,886**
<2 years					13	$43,846
2-4 years			2	$36,000	9	$36,166
5-9 years					6	$43,203
10+ years					1	$60,000
Laboratory Staff					**2**	**$49,350**
<2 years					1	$48,399
10+ years					1	$50,301
Nutritionist or Dietitian					**4**	**$50,529**
<2 years					3	$49,339
10+ years					1	$54,101
Public Health Nurse			**2**	**$45,307**	**136**	**$52,594**
<2 years					37	$52,881
2-4 years			1	$49,799	39	$51,682
5-9 years					28	$54,373
10+ years			1	$40,814	32	$51,825
Other Nurse-Clinical Services			**1**	**$41,259**	**29**	**$46,417**
<2 years					14	$46,173
2-4 years			1	$41,259	8	$48,312
5-9 years					5	$42,322
10+ years					2	$50,787

Table 14. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Public Health Sciences Employees

	No college degree		Associates		Bachelors		Masters	
Public Health Sciences	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Data or Research Analyst	**1**	**$46,000**			**1**	**$50,429**	**2**	**$54,996**
<2 years					1	$50,429		
2-4 years							2	$54,996
5-9 years	1	$46,000						
Disease Intervention Specialist/Contact Tracer	**11**	**$38,211**	**5**	**$41,588**	**30**	**$45,050**	**3**	**$51,207**
<2 years	9	$38,333	2	$36,090	12	$39,978	2	$51,811
2-4 years			1	$32,760	7	$47,917		
5-9 years	1	$35,326	2	$51,500	5	$47,468		
10+ years	1	$40,000			6	$49,834	1	$50,000
Emergency Preparedness/ Management Worker	**5**	**$37,768**	**1**	**$43,600**	**12**	**$54,888**	**2**	**$59,339**
<2 years	1	$26,400			1	$22,281		
2-4 years	1	$49,195			4	$54,986	1	$59,904
5-9 years	1	$33,000	1	$43,600	4	$59,387	1	$58,774
10+ years	2	$40,122			3	$59,627		
Environmental Health Worker	**61**	**$40,255**	**27**	**$44,618**	**176**	**$49,508**	**7**	**$50,766**
<2 years	18	$38,745	3	$36,245	45	$45,518	1	$35,486
2-4 years	13	$38,552	5	$36,680	34	$47,059	2	$44,833
5-9 years	9	$41,637	8	$46,674	33	$53,183	1	$42,750
10+ years	21	$42,012	11	$49,015	64	$51,779	3	$62,487
Epidemiologist					**1**	**$55,000**		
5-9 years					1	$55,000		
Health Educator	**2**	**$33,500**	**2**	**$45,130**	**22**	**$47,455**	**5**	**$56,450**
<2 years	1	$35,000	1	$49,000	6	$45,795		
2-4 years	1	$32,000	1	$41,259	9	$48,600	2	$51,415
5-9 years					3	$43,647	1	$55,299
10+ years					4	$50,226	2	$62,060
Health Navigator	**2**	**$42,681**						
2-4 years	1	$41,641						
10+ years	1	$43,721						

Table 14. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Public Health Sciences Employees

	Doctoral/ Professional		Unknown		Overall	
Public Health Sciences	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Data or Research Analyst					**4**	**$51,605**
<2 years					1	$50,429
2-4 years					2	$54,996
5-9 years					1	$46,000
Disease Intervention Specialist/Contact Tracer			**3**	**$36,500**	**52**	**$43,132**
<2 years					25	$40,021
2-4 years			2	$36,750	10	$44,168
5-9 years			1	$36,000	9	$45,741
10+ years					8	$48,626
Emergency Preparedness/ Management Worker					**20**	**$50,489**
<2 years					2	$24,340
2-4 years					6	$54,840
5-9 years					7	$53,275
10+ years					5	$51,825
Environmental Health Worker			**4**	**$35,999**	**275**	**$46,801**
<2 years					67	$43,133
2-4 years					54	$43,967
5-9 years			2	$39,299	53	$49,449
10+ years			2	$32,698	101	$49,387
Epidemiologist					**1**	**$55,000**
5-9 years					1	$55,000
Health Educator			**1**	**$36,000**	**32**	**$47,485**
<2 years					8	$44,847
2-4 years			1	$36,000	14	$46,392
5-9 years					4	$46,560
10+ years					6	$54,171
Health Navigator					**2**	**$42,681**
2-4 years					1	$41,641
10+ years					1	$43,721

Table 14. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Public Health Sciences Employees (continued)

	No college degree		Associates		Bachelors		Masters	
Public Health Sciences	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Peer Counselor	**3**	**$33,565**						
5-9 years	3	$33,565						
Program Director	**10**	**$49,888**	**7**	**$54,840**	**24**	**$63,074**	**8**	**$62,726**
<2 years	3	$44,638	1	$52,893	2	$58,024	1	$52,214
2-4 years	1	$43,710	1	$50,000	2	$57,902	4	$64,054
5-9 years	2	$50,373	3	$47,444	7	$61,655	1	$57,130
10+ years	4	$55,128	2	$69,328	13	$65,410	2	$68,122
Public Health Manager or Program Manager	**1**	**$56,000**	**7**	**$60,184**	**4**	**$60,053**	**1**	**$46,019**
<2 years			2	$47,588	1	$61,400		
2-4 years	1	$56,000			1	$53,018		
5-9 years			1	$59,000				
10+ years			4	$66,779	2	$62,897	1	$46,019
Other program staff	**5**	**$48,210**	**3**	**$61,041**	**4**	**$39,577**	**1**	**$55,221**
<2 years	4	$52,325	3	$61,041	3	$38,348		
2-4 years							1	$55,221
5-9 years					1	$43,265		
10+ years	1	$31,750						

Table 14. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Public Health Sciences Employees (continued)

	Doctoral/ Professional		Unknown		Overall	
Public Health Sciences	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Peer Counselor					**3**	**$33,565**
5-9 years					3	$33,565
Program Director					**49**	**$59,150**
<2 years					7	$50,724
2-4 years					8	$58,216
5-9 years					13	$56,292
10+ years					21	$64,083
Public Health Manager or Program Manager					**13**	**$58,732**
<2 years					3	$52,192
2-4 years					2	$54,509
5-9 years					1	$59,000
10+ years					7	$62,704
Other program staff	**1**	**$60,000**			**14**	**$49,836**
<2 years					10	$50,747
2-4 years	1	$60,000			2	$57,611
5-9 years					1	$43,265
10+ years					1	$31,750

Table 15. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Social Services & All Other Employees

	No college degree		Associates		Bachelors		Masters	
Social Services & All Other	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Social Worker/Social Service Professional	**3**	**$29,101**	**1**	**$32,704**	**6**	**$49,927**	**4**	**$60,243**
<2 years	1	$29,428			1	$44,094	1	
2-4 years	1	$31,019			2	$39,670	1	$50,113
10+ years	1	$26,857	1	$32,704	3	$58,709	2	$65,309
Other	**3**	**$36,918**						
<2 years	1	$25,350						
2-4 years	1	$36,400						
5-9 years	1	$49,003						

Table 15. Salary by Role, Experience Working in Governmental Public Health, and Education Level among Full Time Social Services & All Other Employees

	Doctoral/ Professional		Unknown		Overall	
Social Services & All Other	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Social Worker/Social Service Professional			**1**	**$32,704**	**15**	**$45,214**
<2 years					3	$36,761
2-4 years					4	$40,118
10+ years			1	$32,704	8	$49,876
Other					**3**	**$36,918**
<2 years					1	$25,350
2-4 years					1	$36,400
5-9 years					1	$49,003

Table 16. Salary by Role, Education Level, and Size of Population Served among Full Time Administrative Employees

Administrative	<10,000 (n=6 LHDs)		10,000-24,999 (n=24 LHDs)		25,000-49,999 (n=33 LHDs)		50,000-99,999 (n=12 LHDs)	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Accountant/Fiscal			**3**	**$30,774**	**3**	**$38,906**	**5**	**$41,627**
No college degree			1	$29,000	1	$40,683	2	$42,380
Associates degree			2	$31,661	1	$39,175	1	$28,776
Bachelors degree					1	$36,860	1	$53,000
Masters degree							1	$41,600
Administrator	**4**	**$38,852**	**9**	**$47,736**	**23**	**$52,256**	**12**	**$64,117**
No college degree	1	$34,000	1	$44,075	4	$45,889	1	$37,274
Associates degree	1	$40,056	2	$41,447	4	$50,729	3	$67,251
Bachelors degree	2	$40,676	5	$48,818	9	$52,709	5	$60,856
Masters degree			1	$58,567	3	$55,385	2	$77,450
Doctoral/Professional degree					2	$61,791	1	$71,200
Unknown					1	$51,300		
Business Support Services-Coordinator			**2**	**$35,977**	**4**	**$41,138**	**4**	**$48,257**
No college degree			1	$33,197	3	$35,518	4	$48,257
Associates degree			1	$38,757				
Bachelors degree					1	$58,000		
Masters degree								
Doctoral/Professional degree								
Clerical Personnel-Administrative Assistant	**1**	**$34,611**	**11**	**$33,679**	**24**	**$36,761**	**11**	**$34,523**
No college degree			9	$33,761	15	$37,612	8	$37,512
Associates degree	1	$34,611	1	$34,252	4	$37,134	1	$14,620
Bachelors degree					4	$35,222		
Masters degree							2	$32,520
Unknown			1	$32,367	1	$28,665		

Table 16. Salary by Role, Education Level, and Size of Population Served among Full Time Administrative Employees

Administrative	100,000-249,999 (n=14 LHDs)		250,000+ (n=4 LHDs)		Overall	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Accountant/Fiscal	**17**	**$44,654**	**4**	**$58,514**	**32**	**$44,073**
No college degree	9	$43,783	1	$34,075	14	$41,612
Associates degree	4	$40,328	1	$55,000	9	$38,620
Bachelors degree	4	$50,941	2	$72,490	8	$54,825
Masters degree					1	$41,600
Administrator	**19**	**$77,315**	**16**	**$91,480**	**83**	**$63,798**
No college degree			3	$63,273	10	$47,272
Associates degree	1	$36,233			11	$51,259
Bachelors degree	11	$77,523	6	$94,035	38	$64,805
Masters degree	5	$72,564	7	$106,878	18	$75,934
Doctoral/Professional degree	2	$108,594			5	$82,394
Unknown					1	$51,300
Business Support Services-Coordinator	**3**	**$46,901**	**13**	**$60,524**	**26**	**$52,194**
No college degree	2	$50,144	2	$40,009	12	$42,757
Associates degree	1	$40,417	2	$57,552	4	$48,570
Bachelors degree			4	$66,742	5	$64,993
Masters degree			3	$57,475	3	$57,475
Doctoral/Professional degree			2	$76,148	2	$76,148
Clerical Personnel-Administrative Assistant	**43**	**$37,598**	**59**	**$41,894**	**149**	**$38,538**
No college degree	31	$37,676	28	$40,059	91	$37,927
Associates degree	6	$38,911	9	$39,852	22	$37,462
Bachelors degree	3	$35,461	13	$44,745	20	$41,448
Masters degree			1	$44,034	3	$36,358
Unknown	3	$36,307	8	$45,471	12	$40,688

Table 16. Salary by Role, Education Level, and Size of Population Served among Full Time Administrative Employees (continued)

	<10,000 (n=6 LHDs)		10,000-24,999 (n=24 LHDs)		25,000-49,999 (n=33 LHDs)		50,000-99,999 (n=12 LHDs)	
Administrative	**n**	**Average Annual Income**	**n**	**Average Annual Income**	**n**	**Average Annual Income**	**n**	**Average Annual Income**
Medical/Vital Records Staff	**1**	**$37,409**	**10**	**$31,076**	**30**	**$34,865**	**16**	**$37,146**
No college degree			7	$30,653	18	$35,226	16	$37,146
Associates degree			3	$32,064	6	$33,924		
Bachelors degree	1	$37,409			4	$36,450		
Masters degree					1	$33,738		
Unknown					1	$28,784		
Public Information Specialist					1	$78,627		
Bachelors degree					1	$78,627		
Masters degree								

Table 16. Salary by Role, Education Level, and Size of Population Served among Full Time Administrative Employees (continued)

Administrative	100,000-249,999 (n=14 LHDs)		250,000+ (n=4 LHDs)		Overall	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Medical/Vital Records Staff	**26**	**$38,402**	**30**	**$40,929**	**113**	**$37,299**
No college degree	16	$39,957	20	$38,454	77	$37,031
Associates degree	4	$34,871	5	$42,541	18	$36,218
Bachelors degree	2	$33,338	3	$53,248	10	$40,963
Masters degree			1	$37,440	2	$35,589
Unknown	4	$38,242	1	$48,895	6	$38,441
Public Information Specialist			5	$57,395	6	$60,934
Bachelors degree			4	$51,994	5	$57,320
Masters degree			1	$79,000	1	$79,000

Table 17. Salary by Role, Education Level, and Size of Population Served among Full Time Clinical and Laboratory Employees

Clinical and Laboratory	<10,000 (n=6 LHDs)		10,000-24,999 (n=24 LHDs)		25,000-49,999 (n=33 LHDs)		50,000-99,999 (n=12 LHDs)	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Clinical Providers							**1**	**$59,802**
No college degree								
Associates degree								
Bachelors degree							1	$59,802
Masters degree								
Doctoral/Professional degree								
Unknown								
Community Health Worker					**2**	**$38,260**	**1**	**$37,129**
No college degree							1	$37,129
Associates degree					1	$45,500		
Bachelors degree					1	$31,019		
Masters degree								
Unknown								
Health Professional/Clinical Support Staff	**2**	**$42,729**			**7**	**$40,596**	**7**	**$44,823**
No college degree	1	$49,889			4	$39,749	4	$39,325
Associates degree	1	$35,568			2	$36,088	1	$37,461
Bachelors degree							2	$59,500
Masters degree					1	$53,000		
Unknown								
Laboratory Staff								
No college degree								
Associates degree								
Bachelors degree								
Masters degree								
Nutritionist or Dietitian								
Bachelors degree								
Masters degree								

Table 17. Salary by Role, Education Level, and Size of Population Served among Full Time Clinical and Laboratory Employees

Clinical and Laboratory	100,000-249,999 (n=14 LHDs)		250,000+ (n=4 LHDs)		Overall	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Clinical Providers	**4**	**$51,086**	**31**	**$114,542**	**36**	**$104,588**
No college degree	1	$46,875	1	$49,858	2	$48,366
Associates degree	2	$38,694	3	$77,054	5	$57,874
Bachelors degree			1	$98,966	2	$79,384
Masters degree	1	$80,080	5	$102,135	6	$98,459
Doctoral/Professional degree			13	$164,702	13	$164,702
Unknown			8	$72,323	8	$72,323
Community Health Worker	**9**	**$40,839**	**47**	**$41,370**	**59**	**$41,112**
No college degree	2	$35,382	22	$41,337	25	$40,692
Associates degree	3	$35,382	4	$40,389	8	$39,150
Bachelors degree	2	$52,416	11	$40,664	14	$41,654
Masters degree	2	$42,906	2	$56,410	4	$49,658
Unknown			8	$39,161	8	$39,161
Health Professional/Clinical Support Staff	**9**	**$38,479**	**14**	**$43,185**	**39**	**$41,836**
No college degree	4	$35,782	2	$39,720	15	$39,250
Associates degree	1	$45,000	4	$41,524	9	$39,589
Bachelors degree	1	$32,460	3	$42,578	6	$46,532
Masters degree	1	$53,726	1	$60,000	3	$55,575
Unknown	2	$36,000	4	$42,474	6	$39,237
Laboratory Staff	**2**	**$49,350**	**20**	**$52,870**	**22**	**$52,550**
No college degree			1	$47,382	1	$47,382
Associates degree	2	$49,350	2	$49,067	4	$49,209
Bachelors degree			13	$48,849	13	$48,849
Masters degree			4	$69,208	4	$69,208
Nutritionist or Dietitian	**4**	**$50,529**	**4**	**$64,896**	**8**	**$57,713**
Bachelors degree	2	$51,241	2	$68,754	4	$59,998
Masters degree	2	$49,818	2	$61,038	4	$55,428

Table 17. Salary by Role, Education Level, and Size of Population Served among Full Time Clinical and Laboratory Employees (continued)

Clinical and Laboratory	<10,000 (n=6 LHDs)		10,000-24,999 (n=24 LHDs)		25,000-49,999 (n=33 LHDs)		50,000-99,999 (n=12 LHDs)	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Public Health Nurse	**3**	**$45,013**	**15**	**$48,052**	**42**	**$50,037**	**22**	**$51,458**
No college degree							2	$45,000
Associates degree	1	$42,386	7	$48,542	17	$49,077	12	$50,567
Bachelors degree	2	$46,327	7	$48,595	19	$50,366	7	$55,140
Masters degree					5	$52,618	1	$49,289
Unknown			1	$40,814	1	$49,799		
Other Nurse-Clinical Services			**8**	**$40,347**	**9**	**$48,027**	**2**	**$58,003**
No college degree			4	$36,820	2	$47,000		
Associates degree			3	$44,747	5	$49,262	2	$58,003
Bachelors degree					1	$41,933		
Masters degree					1	$50,000		
Unknown			1	$41,259				

Table 17. Salary by Role, Education Level, and Size of Population Served among Full Time Clinical and Laboratory Employees (continued)

	100,000-249,999 (n=14 LHDs)		250,000+ (n=4 LHDs)		Overall	
Clinical and Laboratory	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Public Health Nurse	**50**	**$56,173**	**56**	**$71,606**	**188**	**$58,064**
No college degree	2	$47,536			4	$46,268
Associates degree	6	$54,248	2	$57,500	45	$50,306
Bachelors degree	39	$56,944	35	$69,408	109	$58,953
Masters degree	3	$55,768	18	$78,191	27	$70,558
Unknown			1	$58,240	3	$49,618
Other Nurse-Clinical Services	**5**	**$47,894**	**5**	**$47,121**	**29**	**$46,417**
No college degree	1	$37,638	5	$47,121	12	$42,877
Associates degree	4	$50,458			14	$49,885
Bachelors degree					1	$41,933
Masters degree					1	$50,000
Unknown					1	$41,259

Table 18. Salary by Role, Education Level, and Size of Population Served among Full Time Public Health Sciences Employees

Public Health Sciences	<10,000 (n=6 LHDs)		10,000-24,999 (n=24 LHDs)		25,000-49,999 (n=33 LHDs)		50,000-99,999 (n=12 LHDs)	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Data or Research Analyst								
No college degree								
Bachelors degree								
Masters degree								
Disease Intervention Specialist/Contact Tracer			**2**	**$35,253**	**1**	**$32,760**	**7**	**$39,714**
No college degree			1	$35,326			7	$39,714
Associates degree			1	$35,180	1	$32,760		
Bachelors degree								
Masters degree								
Unknown								
Emergency Preparedness/ Management Worker	**1**	**$22,281**	**3**	**$39,318**	**3**	**$48,380**	**2**	**$35,877**
No college degree			2	$33,945			2	$35,877
Associates degree								
Bachelors degree	1	$22,281	1	$50,066	3	$48,380		
Masters degree								
Environmental Health Worker	**4**	**$38,465**	**26**	**$40,465**	**59**	**$41,811**	**44**	**$48,697**
No college degree	2	$35,194	8	$38,427	23	$39,516	11	$40,179
Associates degree			4	$38,755	12	$41,711	4	$56,725
Bachelors degree	2	$41,737	13	$42,949	20	$44,809	28	$51,394
Masters degree					2	$41,321	1	$34,800
Unknown			1	$31,321	2	$39,299		
Epidemiologist								
Bachelors degree								
Masters degree								
Doctoral/Professional degree								

Table 18. Salary by Role, Education Level, and Size of Population Served among Full Time Public Health Sciences Employees

Public Health Sciences	100,000-249,999 (n=14 LHDs)		250,000+ (n=4 LHDs)		Overall	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Data or Research Analyst	**2**	**$52,600**	**5**	**$55,442**	**7**	**$54,630**
No college degree			1	$46,000	1	$46,000
Bachelors degree	1	$50,429	1	$53,560	2	$51,995
Masters degree	1	$54,771	3	$59,216	4	$58,105
Disease Intervention Specialist/Contact Tracer	**23**	**$44,891**	**50**	**$47,353**	**83**	**$45,537**
No college degree			6	$36,376	14	$38,093
Associates degree			7	$42,189	9	$40,362
Bachelors degree	18	$45,520	30	$46,272	48	$45,990
Masters degree	2	$51,811	7	$64,989	9	$62,061
Unknown						
Emergency Preparedness/ Management Worker	**9**	**$61,326**	**2**	**$50,353**	**20**	**$50,489**
No college degree			1	$49,195	5	$37,768
Associates degree	1	$43,600			1	$43,600
Bachelors degree	6	$64,943	1	$51,510	12	$54,888
Masters degree	2	$59,339			2	$59,339
Environmental Health Worker	**97**	**$51,337**	**171**	**$49,067**	**401**	**$47,798**
No college degree	8	$42,110	33	$46,373	85	$42,206
Associates degree	3	$52,048	10	$43,732	33	$44,756
Bachelors degree	82	$51,820	110	$50,464	255	$50,092
Masters degree	4	$59,480	16	$49,616	23	$50,019
Unknown			2	$38,628	5	$37,435
Epidemiologist	**1**	**$55,000**	**10**	**$63,627**	**11**	**$62,843**
Bachelors degree	1	$55,000			1	$55,000
Masters degree			9	$63,454	9	$63,454
Doctoral/Professional degree			1	$65,187	1	$65,187

Table 18. Salary by Role, Education Level, and Size of Population Served among Full Time Public Health Sciences Employees (continued)

Public Health Sciences	<10,000 (n=6 LHDs)		10,000-24,999 (n=24 LHDs)		25,000-49,999 (n=33 LHDs)		50,000-99,999 (n=12 LHDs)	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Health Educator	**1**	**$49,000**	**3**	**$36,886**	**3**	**$48,280**	**2**	**$46,021**
No college degree			1	$35,000				
Associates degree	1	$49,000	1	$41,259				
Bachelors degree			1	$34,398	2	$49,865	2	$46,021
Masters degree					1	$45,112		
Unknown								
Health Navigator							**2**	**$42,681**
No college degree							2	$42,681
Bachelors degree								
Peer Counselor								
No college degree								
Program Director			**2**	**$51,128**	**6**	**$50,110**	**6**	**$51,659**
No college degree			1	$46,600			2	$37,593
Associates degree			1	$55,655	2	$46,799	1	$36,628
Bachelors degree					2	$48,858	3	$66,048
Masters degree					2	$54,672		
Doctoral/Professional degree								
Public Health Manager or Program Manager			**1**	**$46,036**	**2**	**$49,519**	**3**	**$56,352**
No college degree								
Associates degree			1	$46,036			1	$53,000
Bachelors degree					1	$53,018	2	$58,028
Masters degree					1	$46,019		
Doctoral/Professional degree								
Other program staff					**5**	**$35,473**	**4**	**$67,600**
No college degree					2	$32,125	3	$58,933
Associates degree					1	$37,310	1	$93,600
Bachelors degree					2	$37,902		
Masters degree								
Doctoral/Professional degree								

Table 18. Salary by Role, Education Level, and Size of Population Served among Full Time Public Health Sciences Employees (continued)

Public Health Sciences	100,000-249,999 (n=14 LHDs)		250,000+ (n=4 LHDs)		Overall	
	n	Average Annual Income	n	Average Annual Income	n	Average Annual Income
Health Educator	**20**	**$49,400**	**76**	**$44,330**	**105**	**$45,301**
No college degree	1	$32,000	6	$40,640	8	$38,855
Associates degree			4	$40,362	6	$41,952
Bachelors degree	14	$48,776	48	$44,630	67	$45,584
Masters degree	4	$59,284	15	$47,345	20	$49,621
Unknown	1	$36,000			4	$37,080
Health Navigator			**6**	**$48,858**	**8**	**$47,314**
No college degree					2	$42,681
Bachelors degree			6	$48,858	6	$48,858
Peer Counselor	**3**	**$33,565**	**1**	**$37,440**	**4**	**$34,534**
No college degree	3	$33,565	1	$37,440	4	$34,534
Program Director	**20**	**$58,387**	**20**	**$76,276**	**54**	**$62,827**
No college degree	4	$44,041	3	$66,977	10	$49,888
Associates degree	1	$50,000	2	$74,000	7	$54,840
Bachelors degree	12	$62,751	8	$70,524	25	$64,523
Masters degree	3	$62,851	6	$82,070	11	$70,825
Doctoral/Professional degree			1	$125,777	1	$125,777
Public Health Manager or Program Manager	**3**	**$67,818**	**51**	**$66,568**	**60**	**$65,086**
No college degree			5	$66,454	5	$66,454
Associates degree	2	$66,158	4	$66,579	8	$62,209
Bachelors degree	1	$71,137	22	$61,032	26	$60,854
Masters degree			19	$71,666	20	$70,316
Doctoral/Professional degree			1	$74,984	1	$74,984
Other program staff	**3**	**$50,484**	**3**	**$48,983**	**15**	**$49,744**
No college degree			1	$48,464	6	$48,252
Associates degree	1	$52,212			3	$61,041
Bachelors degree	1	$39,240	1	$43,265	4	$39,577
Masters degree			1	$55,221	1	$55,221
Doctoral/Professional degree	1	$60,000			1	$60,000

Table 19. Salary by Role, Education Level, and Size of Population Served among Full Time Social Services and All Other Employees

	<10,000 (n=6 LHDs)		10,000-24,999 (n=24 LHDs)		25,000-49,999 (n=33 LHDs)		50,000-99,999 (n=12 LHDs)	
Social Services and All Other	**n**	**Average Annual Income**	**n**	**Average Annual Income**	**n**	**Average Annual Income**	**n**	**Average Annual Income**
Social Worker/Social Service Professional					**1**	**$26,857**		
No college degree					1	$26,857		
Associates degree								
Bachelors degree								
Masters degree								
Doctoral/Professional degree								
Unknown								
Other					**1**	**$36,400**		
No college degree					1	$36,400		
Bachelors degree								
Masters degree								

Table 19. Salary by Role, Education Level, and Size of Population Served among Full Time Social Services and All Other Employees

	100,000-249,999 (n=14 LHDs)		250,000+ (n=4 LHDs)		Overall	
Social Services and All Other	**n**	**Average Annual Income**	**n**	**Average Annual Income**	**n**	**Average Annual Income**
Social Worker/Social Service Professional	**14**	**$46,627**	**93**	**$49,875**	**108**	**$49,259**
No college degree	2	$30,223	10	$37,698	13	$35,714
Associates degree	1	$32,704	6	$37,901	7	$37,159
Bachelors degree	6	$49,927	28	$57,529	34	$56,187
Masters degree	4	$60,243	26	$58,106	30	$58,327
Doctoral/Professional degree			1	$54,600	1	$54,600
Unknown	1	$32,704	22	$38,472	23	$38,210
Other	**2**	**$37,177**	**6**	**$55,462**	**9**	**$49,281**
No college degree	2	$37,177	3	$54,260	6	$45,589
Bachelors degree			2	$53,310	2	$53,310
Masters degree			1	$63,372	1	$63,372

Table 20. Percent of Indiana's Administrative Employee Salaries by Category Compared to Health and Human Services Region Five

	Full Time Employees							
	Less than $25,000		$25,000 - $35,000		$35,000.01 - $45,000		$45,000.01 - $55,000	
Administrative Employees	**IN (2.1%)**	**HHS Region 5**	**IN (21.6%)**	**HHS Region 5**	**IN (45.1%)**	**HHS Region 5**	**IN (10.7%)**	**HHS Region 5**
Accountant/ Fiscal	-	-	18.8%	6.5%	50.0%	20.3%	15.6%	30.6%
Administrator	-	-	2.4%	3.2%	13.3%	3.7%	16.9%	6.4%
Business Support Services-Coordinator	-	-	7.7%	4.7%	34.6%	15.3%	23.1%	27.1%
Clerical Personnel-Administrative Assistant	0.7%	0.6%	22.2%	29.2%	64.4%	38.5%	8.7%	17.8%
Health Officer	33.3%	-	23.8%	-	19.1%	-	-	-
Medical/Vital Records Staff	0.9%	-	39.8%	25.0%	49.6%	31.6%	7.1%	23. %
Public Information Specialist	-	-	-	5.1%	33.3%	10.2%	-	17.6%

Note: Percentages account for only the total employees that provided salary information. PH WINS respondents did not provide exact salaries. They were asked to select the range within which their salary corresponded.

Table 20. Percent of Indiana's Administrative Employee Salaries by Category Compared to Health and Human Services Region Five

	Full Time Employees					
	$55,000.01 - $65,000		$65,000.01 - $75,000		More than $75,000	
Administrative Employees	**IN (7.7%)**	**HHS Region 5**	**IN (4.4%)**	**HHS Region 5**	**IN (5.8%)**	**HHS Region 5**
Accountant/ Fiscal	6.3%	14.2%	6.3%	18.7%	3.1%	9.8%
Administrator	22.9%	7.0%	16.9%	7.5%	19.3%	72.3%
Business Support Services-Coordinator	15.4%	22.5%	7.7%	6.2 %	11.5%	24.2%
Clerical Personnel-Administrative Assistant	0.7%	7.1%	0.7%	2.4%	-	4.3%
Health Officer	14.3%	3.0%	-	8.8%	9.5%	88.2%
Medical/Vital Records Staff	1.8%	6.9%	-	3.1%	0.9%	10.2%
Public Information Specialist	33.3%	14.2%	-	22.2%	33.3%	30.8%

Note: Percentages account for only the total employees that provided salary information. PH WINS respondents did not provide exact salaries. They were asked to select the range within which their salary corresponded.

Table 21. Percent of Indiana's Clinical and Lab Employee Salaries by Category Compared to Human Services Region Five

	Full Time Employees							
	Less than $25,000		$25,000 - $35,000		$35,000.01 - $45,000		$45,000.01 - $55,000	
Clinical and Lab Employees	**IN (0.3%)**	**HHS Region 5**	**IN (2.4%)**	**HHS Region 5**	**IN (31.2%)**	**HHS Region 5**	**IN (27.6%)**	**HHS Region 5**
Community Health Worker	-	1.2%	1.7%	20.4%	78.0%	40.0%	17.0%	24.8%
Laboratory Staff	-	-	-	7.1%	31.8%	24.1%	36.4%	18.2%
Nutritionist or Dietitian	-	-	-	4.8%	-	15.7%	62.5%	32.2%
Clinical Providers	-	-	-	1.4%	11.1%	12.2%	13.9%	14.8%
Health Professional/ Clinical Support Staff	-	0.8%	15.4%	22.4%	64.1%	26.7%	7.7%	19.1%
Other Nurse-Clinical Services	-	-	6.9%	5.6%	37.9%	18.2%	41.4%	38.0%
Public Health Nurse	0.5%	-	-	-	13.8%	3.6%	33.0%	19.3%

Note: Given the small numbers of individuals classified as Laboratory Quality Control Workers and Laboratory Technicians, these individuals were combined with Laboratory Scientists/Medical Technologists for this salary table and relabeled as "Laboratory Staff". Percentages account for only the total employees that provided salary information. PH WINS respondents did not provide exact salaries. They were asked to select the range within which their salary corresponded.

Table 21. Percent of Indiana's Clinical and Lab Employee Salaries by Category Compared to Human Services Region Five

	Full Time Employees					
	$55,000.01 - $65,000		$65,000.01 - $75,000		More than $75,000	
Clinical and Lab Employees	**IN (19.4%)**	**HHS Region 5**	**IN (6.3%)**	**HHS Region 5**	**IN (10.8%)**	**HHS Region 5**
Community Health Worker	1.7%	5.2%	1.7%	4.4%	-	3.9%
Laboratory Staff	13.6%	32.9%	9.1%	14.5%	9.1%	3.2%
Nutritionist or Dietitian	-	30.3%	37.5%	10.7%	-	6.4%
Clinical Providers	2.8%	6.7%	2.8%	6.6%	55.6%	58.3%
Health Professional/ Clinical Support Staff	7.7%	7.1%	-	6.9%	-	17.0%
Other Nurse-Clinical Services	13.8%	14.5%	-	15.9%	-	7.9%
Public Health Nurse	33.0%	28.8%	9.0%	29.5%	10.1%	18.9%

Note: Given the small numbers of individuals classified as Laboratory Quality Control Workers and Laboratory Technicians, these individuals were combined with Laboratory Scientists/Medical Technologists for this salary table and relabeled as "Laboratory Staff". Percentages account for only the total employees that provided salary information. PH WINS respondents did not provide exact salaries. They were asked to select the range within which their salary corresponded.

Table 22. Percent of Indiana's Public Health Sciences Employee Salaries by Category Compared to Health and Human Services Region Five

	Full Time Employees							
	Less than $25,000		$25,000 - $35,000		$35,000.01 - $45,000		$45,000.01 - $55,000	
Public Health Sciences Employees	**IN (0.1%)**	**HHS Region 5**	**IN (5.6%)**	**HHS Region 5**	**IN (37.9%)**	**HHS Region 5**	**IN (28.5%)**	**HHS Region 5**
Data or Research Analyst	-	-	-	3.5%	-	6.9%	57.1%	12.5%
Disease Intervention Specialist/Contact Tracer	-	-	8.4%	16.7%	54.2%	21.6%	22.9%	36.6%
Emergency Preparedness/ Management Worker	5.0%	-	15.0%	-	10.0%	4.5%	40.0%	29.6%
Environmental Health Worker	-	-	6.0%	5.1%	40.9%	25.4%	32.2%	25.4%
Epidemiologist	-	-	-	-	-	2.6%	9.1%	13.6%
Health Educator	-	-	2.9%	3.4%	58.1%	18.1%	22.9%	38.4%
Health Navigator	-	-	-	5.8%	37.5%	69.4%	62.5%	18.0%
Peer Counselor	-	-	75.0%	77.9%	25.0%	22.1%	-	-
Program Director	-	-	-	-	14.8%	14.0%	20.4%	41.7%
Public Health Manager or Program Manager	-	-	-	0.4%	1.7%	3.3%	26.7%	5.5%
Other program staff	-	1.2%	20.0%	10.7%	40.0%	26.2%	13.3%	18.2%

Note: Percentages account for only the total employees that provided salary information. PH WINS respondents did not provide exact salaries. They were asked to select the range within which their salary corresponded.

Table 23. Percent of Indiana's Social Services and Other Employee Salaries by Category Compared to Health and Human Services Region Five

	Full Time Employees							
	Less than $25,000		$25,000 - $35,000		$35,000.01 - $45,000		$45,000.01 - $55,000	
Social Services and all other Employees	**IN -**	**HHS Region 5**	**IN (5.1%)**	**HHS Region 5**	**IN (39.3%)**	**HHS Region 5**	**IN (21.4%)**	**HHS Region 5**
Social Worker/Social Service Professional	-	-	4.6%	4.8%	39.8%	19.5%	22.2%	28.1%
Other	-	2.5%	11.1%	8.5%	33.3%	16.3%	11.1%	14.3%

Note: Percentages account for only the total employees that provided salary information. PH WINS respondents did not provide exact salaries. They were asked to select the range within which their salary corresponded.

Table 22. Percent of Indiana's Public Health Sciences Employee Salaries by Category Compared to Health and Human Services Region Five

	Full Time Employees					
	$55,000.01 - $65,000		$65,000.01 - $75,000		More than $75,000	
Public Health Sciences Employees	**IN (13.4%)**	**HHS Region 5**	**IN (5.6%)**	**HHS Region 5**	**IN (5.9%)**	**HHS Region 5**
Data or Research Analyst	42.9%	24.2%	-	10.6%	-	42.4%
Disease Intervention Specialist/Contact Tracer	8.4%	11.5%	2.4%	5.7%	2.4%	7.9%
Emergency Preparedness/ Management Worker	15.0%	19.2%	10.0%	14.7%	5.0%	32.0%
Environmental Health Worker	10.5%	17.6%	5.0%	11.8%	2.2%	14.7%
Epidemiologist	63.6%	33.0%	27.3%	13.8%	-	37.1%
Health Educator	9.5%	28.5%	1.0%	7.1%	2.9%	4.5%
Health Navigator	-	6.8%	-	-	-	-
Peer Counselor	-	-	-	-	-	-
Program Director	27.8%	19.2%	13.0%	3.9%	22.2%	21.2%
Public Health Manager or Program Manager	23.3%	20.0%	13.3%	18.4%	26.7%	52.4%
Other program staff	13.3%	17.4%	-	11.2%	13.3%	15.1%

Note: Percentages account for only the total employees that provided salary information. PH WINS respondents did not provide exact salaries. They were asked to select the range within which their salary corresponded.

Table 23. Percent of Indiana's Social Services and Other Employee Salaries by Category Compared to Health and Human Services Region Five

	Full Time Employees					
	$55,000.01 - $65,000		$65,000.01 - $75,000		More than $75,000	
Social Services and all other Employees	**IN (21.4%)**	**HHS Region 5**	**IN (6.8%)**	**HHS Region 5**	**IN (4.3%)**	**HHS Region 5**
Social Worker/Social Service Professional	21.3%	18.2%	5.6%	15.7%	4.6%	13.6%
Other	22.2%	18.6%	22.2%	8.1%	-	31.6%

Note: Percentages account for only the total employees that provided salary information. PH WINS respondents did not provide exact salaries. They were asked to select the range within which their salary corresponded.

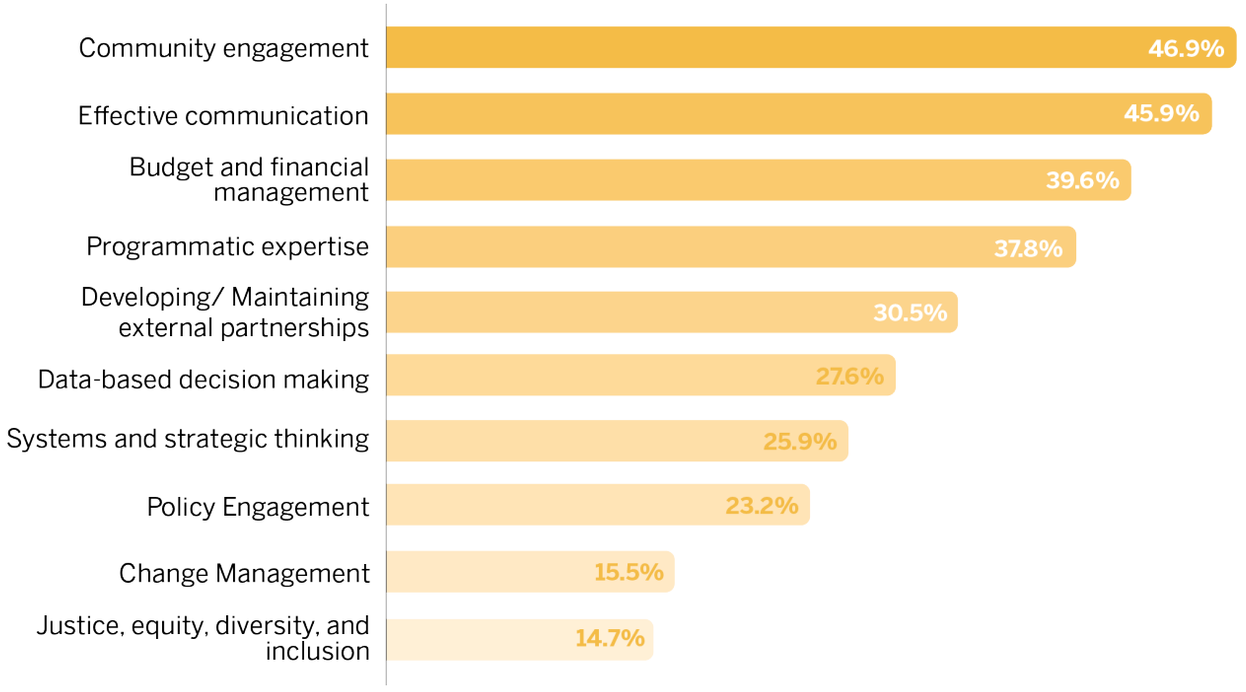
LOCAL HEALTH DEPARTMENT TRAINING NEEDS

In the organizational survey, LHD administrators were asked to rank the top training needs of their workforce from 1 to 10. Options included: 1) budget and financial management, 2) change management, 3) community engagement, 4) developing/maintaining external partnerships, 5) data-based decision making, 6) effective communication, 7) justice, equity, diversity, and inclusion, 8) policy engagement, 9) programmatic expertise, and 10) systems and strategic thinking. Among the 85 LHDs that responded to this question, the top training priorities they selected were effective communication (45.9%), community engagement (46.9%), and budget and financial management (39.6%) (**Figure 2**).

A total of 72 (78.3%) LHDs reported having a dedicated budget for training and education, although in most cases the budget for training was the equivalent of approximately $100 or $200 per employee. Given the limited funding for training, it was commonly reported that training opportunities are on a first-come first-served basis until the annual training budget is exhausted. It is uncommon for LHDs to have a dedicated full-time staff person responsible for training and education of the workforce. Trainings are typically tracked by the administrator or division/team supervisors. In some small LHDs, individual staff members are responsible for keeping track of their own training and educational needs/requirements.

Training needs and experiences were also

Figure 2. Training Priorities Identified as One of the Top Three Needs among LHDs



Notes: LHD administrators were asked to rank training priorities for their agency. Only the top 3 needs for each LHD are presented. A total of 85 LHDs responded to this question on the organizational survey.

discussed in qualitative interviews. LHDs reported a number of challenges that relate to onboarding/training new employees and ongoing training for current employees. The lack of continuity/succession plans and standardized onboarding processes within LHDs complicates the preparation and training of new employees. Some LHDs reported that they have historically relied on neighboring county LHDs for training assistance. However, participants indicated that this creates burdens on other LHDs, and it is complicated by issues related to the lack of standardization of processes and policies across county LHDs. The lack of continuity plans also often means that when an employee leaves a position, the institutional knowledge of that role is lost as well.

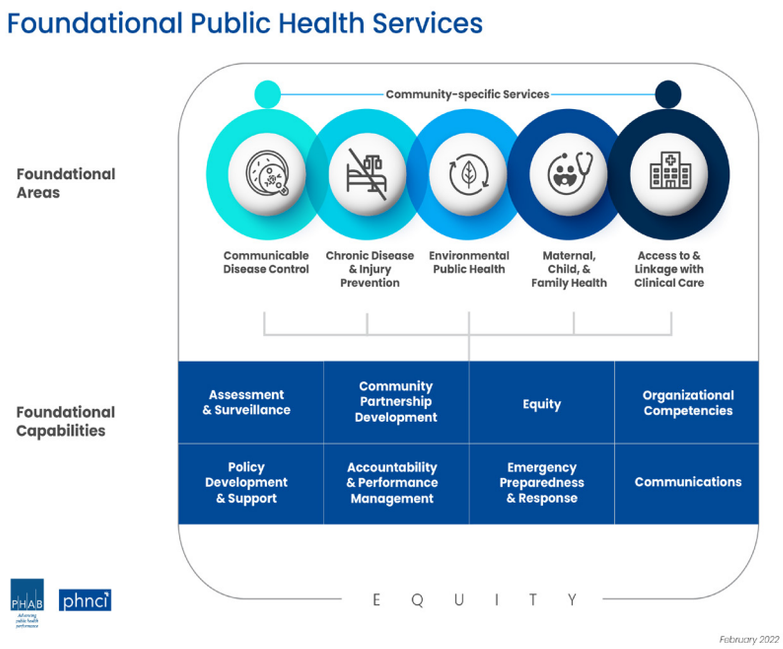
Regarding ongoing training for current staff, it was reported that smaller LHDs (54.8% of LHDs in Indiana have 10 or fewer employees) struggle to meet community needs when their employees attend in-person trainings offered by the state or other groups. This may mean one or two days of being short-staffed or, in some circumstances, LHDs reported closing while staff were attending in-person events. Participants suggested that these issues could be resolved by making more of the routine training opportunities available virtually or providing local options that require less travel to Indianapolis. In terms of training new employees, participants suggested that the state agency could standardize training options for common roles in LHDs and provide either state or regional training support. Other training-related recommendations included having an online site or dashboard with readily available courses and materials. Such a dashboard could host a general public health infrastructure training for all LHD employees, which was a common topic highlighted as a need by multiple LHDs. Considering that the majority of LHD employees do not have formal public health training or a public health degree, standard training options about the public health system, the role of public health agencies, and policies governing public health would be beneficial.

Foundational Public Health Services (FPHS)

The workforce assessment collected information about each employee's time (as a percent of overall time) dedicated to the Foundational Public Health Services (FPHS) capabilities and areas.[13] The FPHS is a recently developed framework (**Figure 3**) https://phnci.org/transformation/fphs) for guiding public health practitioners and ensuring sufficient infrastructure for effective public health systems. It outlines foundational capabilities and public health programs that should be provided to communities. It is particularly useful in guiding local public health agencies and is used for assessing the capacity of the public health system.

Based on the percent of the FTE that reported working toward the capabilities and areas in each LHD, we calculated the gap between current FPHS FTE and recommended FPHS FTE using a new national tool available from the Public Health National Center for Innovation, the Workforce Calculator.[18] Current and recommended LHD capacity toward the FPHS capabilities and areas is shown in **Figure 4**. The Workforce Calculator recommends additional capacity in the following capabilities: assessment and surveillance, organizational competencies, emergency preparedness and response,

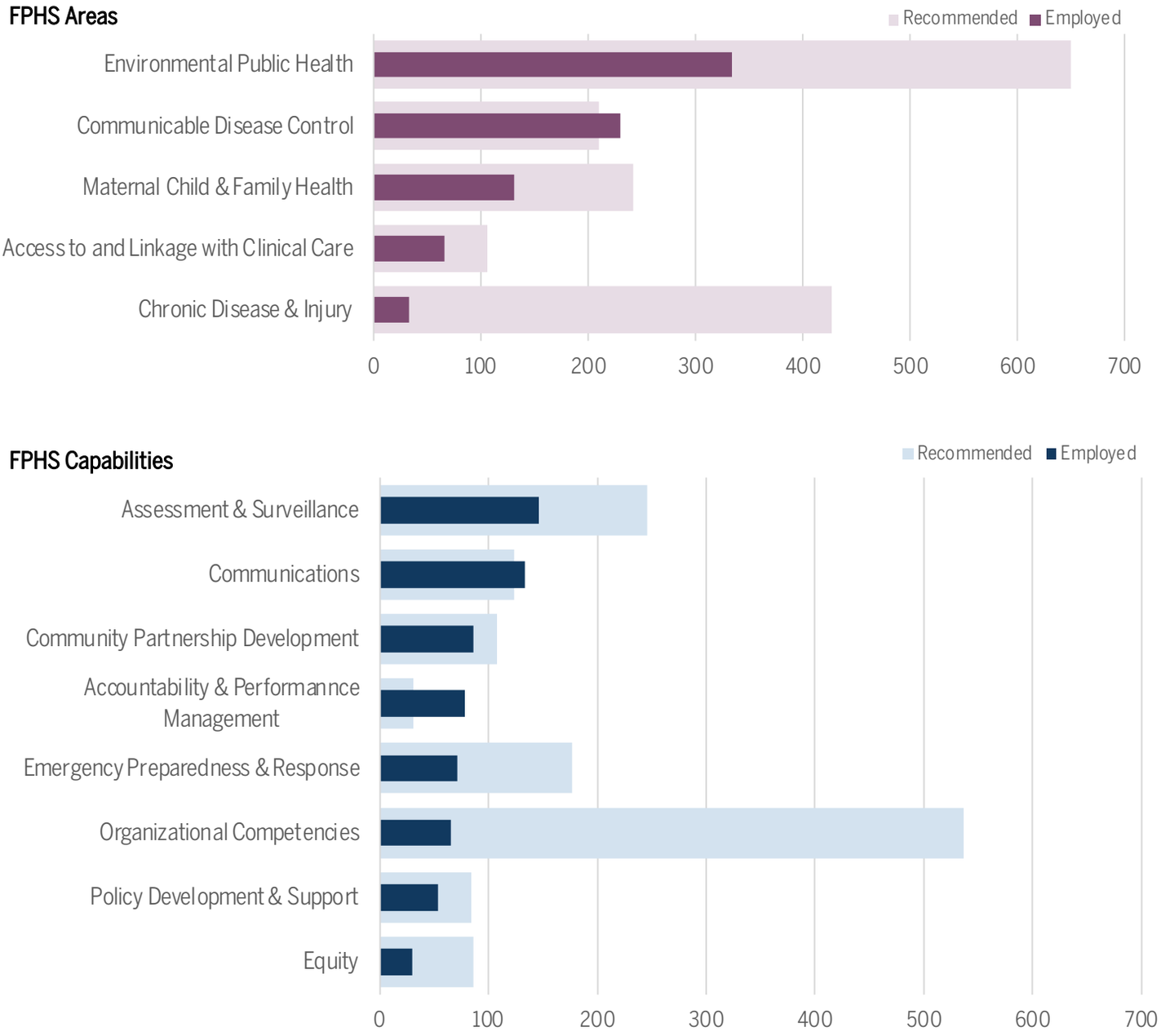
Figure 3. Foundational Public Health Services Framework



policy development and support, community partnership development, and equity. Across the areas, the Workforce Calculator recommends additional capacity in all areas, with the exceptions of communicable disease control. These recommendations align with the insights reported during qualitative interviews with LHD administrators. More specifically, they reported needing more staff overall, more assistance with data analysis including epidemiology roles/skills in their agencies, public relations support, more community outreach, and support toward health equity.

A few important notes for consideration need to be made when reviewing the workforce gaps generated from this analysis. First, the Workforce Calculator assumes a minimum number of FTEs for each capability and area for every agency. Given that there are 95 LHDs in Indiana, this baseline assumption may translate to a slight overestimate for recommended FTEs toward the areas and capabilities. Second, a number of factors impact community need and the types of work that LHD employees conduct, including state requirements. Even though some activities conducted by LHDs do not align within the activities of the FPHS, they may be necessary to meet needs in those communities and are valuable to those communities (e.g., provision of direct clinical care). This may contribute to what appear to be higher FTEs in some capabilities/areas than the Workforce Calculator recommends. The 10 Essential Services, which the FPHS are based upon, are meant to guide public health agencies in ensuring that every community has the infrastructure and programs to ensure population health.

Figure 4. Full Time Equivalents of Foundational Public Health Services (FPHS) Areas and Capabilities - Recommended vs Employed at Local Health Departments



Notes: Marion County is not included in this analysis as the Workforce Calculator does not have sufficient data for the largest category of LHDs to reliably compute workforce needs.

WORKFORCE PIPELINE

Appendices A-D summarize the bachelor's, master's, doctoral, and certificate programs available in Indiana in a public health discipline. These tables provide details about where future public health professionals are currently getting trained and where current professionals can seek additional public health training.

A total of 12 universities offer 15 bachelor's degrees in a public health discipline. Fourteen of the 15 bachelor's degrees are offered as in-person programs, although they may also provide some hybrid or online courses. Five of the bachelor's programs also provide an accelerated Bachelor to Master of Public Health (MPH) option (4+1) or a Master of Health Administration (MHA) (4+1) program. Seven Indiana universities offer eight master's degrees in a public health discipline. The programs and concentrations available at the master's level are often offered both in-person and as virtual/online degrees. However, the concentrations available in Indiana differ across universities. For example, a number of concentrations are only available at one university. Three universities offer doctoral degrees in public health disciplines. Certificate programs are available at the undergraduate-level in three universities and four universities at the graduate level.

Of these public health schools and programs, only two schools and two programs are accredited by the Council on Education for Public Health (CEPH). CEPH is an independent agency recognized by the U.S. Department of Education to accredit schools of public health and public health programs not within a school of public health (https://ceph.org/). The Indiana University - Indianapolis Richard M. Fairbanks School of Public Health and the Indiana University School of Public Health in Bloomington are the two CEPH-accredited schools of public health in Indiana. The public health programs at the University of Indianapolis and Purdue University in West Lafayette are the two CEPH-accredited programs.

In general, there are three major practical implications for students of receiving a public health graduate degree from a non-accredited institution:

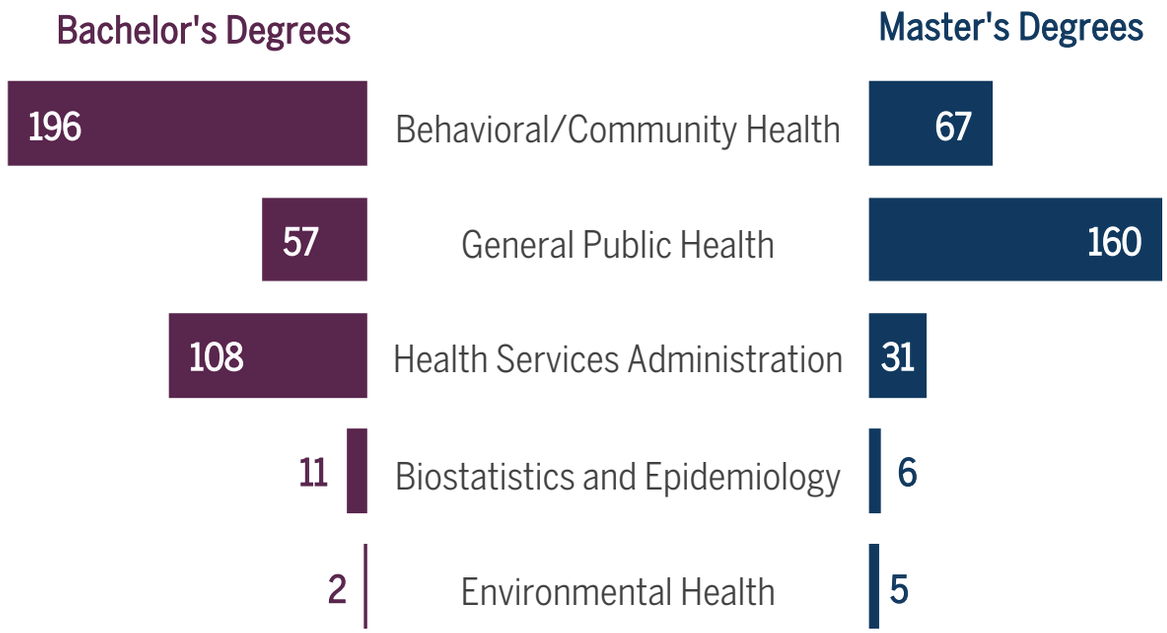
- Some employment is only open to graduates of CEPH-accredited schools/programs. The U.S. Public Health Service, some U.S. military public health jobs, and some state and local government agencies require that MPH-level jobs be filled with graduates of CEPH-accredited schools/programs.
- Some fellowships are only available to students attending CEPH-accredited schools/programs that are also members of the Association of Schools and Programs of Public Health (ASPPH). Not all CEPH-accredited programs are members of ASPPH (http://www.aspph.org).
- Attendance at a CEPH-accredited school/program provides a pathway to eligibility to sit for the Certified in Public Health exam and obtain the CPH credential. The exam and credential are administered by the National Board of Public Health Examiners (NBPHE). NBPHE has also defined other pathways to eligibility

that are based on public health work experience (http://www.nbphe.org/).

The list of available public health programs based in Indiana colleges/universities was created with a web search, including reviewing the list of schools accredited with the Council on Education for Public Health (https://ceph.org/about/org-info/who-we-accredit/accredited/). Telephone calls were made to individual schools as needed to ascertain if the instructional delivery mode is primarily in-person or if the degree/program is offered entirely online via a virtual setting. The information presented in the tables is current as of December 2022. Considering the rapid movement towards creating permanent online coursework, especially for advanced degrees, this information is prone to changes.

According to data available from the National Center for Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS), a total of 3,916 individuals (an average of 783 per year) have graduated from a public health-related disciplines in Indiana over the last five years (2017-2021). Data are presented in a public tableau dashboard (https://public.tableau.com/app/profile/jp.leider6501/viz/Countyidea/PHdirectory) created by the Center for Public Health Systems at the University of Minnesota. Degree types and disciplines are presented in **Figure 5**, summarizing the workforce pipeline of graduates with training related to the work of governmental public agencies. A total of 2,383 (60.9%) of these individuals were graduates of bachelor's degree programs and 35.8% (n=1,402) were graduates of master's programs."

Figure 5. Public Health Graduates per year



RECRUITMENT AND RETENTION

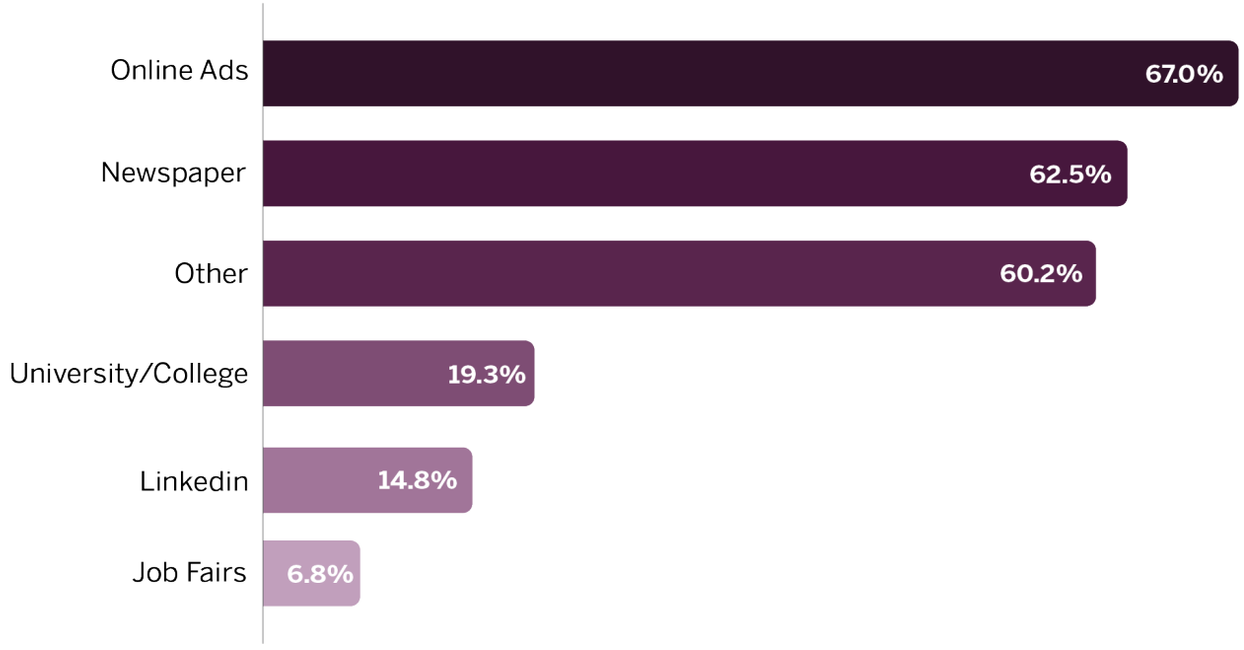
LHDs reported that they usually employed a multi-pronged approach to recruitment. The organizational survey asked LHD administrators to select all of the methods they have used in recruiting employees. Options included: 1) LinkedIn, 2) job fairs, 3) newspaper, 4) online ads, 5) university/college, and 6) other. The option for 'other' included open-ended text space to provide details. Word of mouth and the use of Indeed were commonly reported responses in the 'other' category. The top recruitment method reported was online ads (n=59, 67.0%) (**Figure 6**). In interviews, multiple LHDs reported that they post job openings on their county website and social media (e.g., Facebook) pages, with some LHDs noting that they are required to post any new county job opening internally before posting it for the public. In addition to having some of the highest turnover rates, nursing positions and environmental health positions were also commonly reported as the hardest to fill. Interviewees indicated that the part-time nature of many positions, as well as educational or training requirements and pay, were the primary issues for recruitment challenges. Further, administrators explained that a majority of applicants (as well as their current part-time employees), want and/or need benefits. However, LHD's often do not have control over benefits and salary decisions, as these are typically controlled by local county officials.

When asked about employee turnover on the organizational survey, LHDs reported a wide range of reasons for staff turnover. LHDs were asked to select all of the reasons relating to turnover experiences in the last two years, specifically among employees that were not temporary hires for the COVID-19 response. Options included: 1) pay, 2) workload/burnout, 3) lack of opportunities for advancement, 4) stress, 5) lack of flexibility, 6) organizational climate/culture, 7) retirement, and 8) other. The last option of "other" provided space for an open-ended response. These responses are summarized below.

OF THE 1,869 LHD STAFF (89.6%) WHO RESPONDED TO THE RETIREMENT TIMELINE QUESTION ON THE WORKFORCE ASSESSMENT, 311 OR 16.6% PLAN TO RETIRE WITHIN THE NEXT FIVE YEARS.

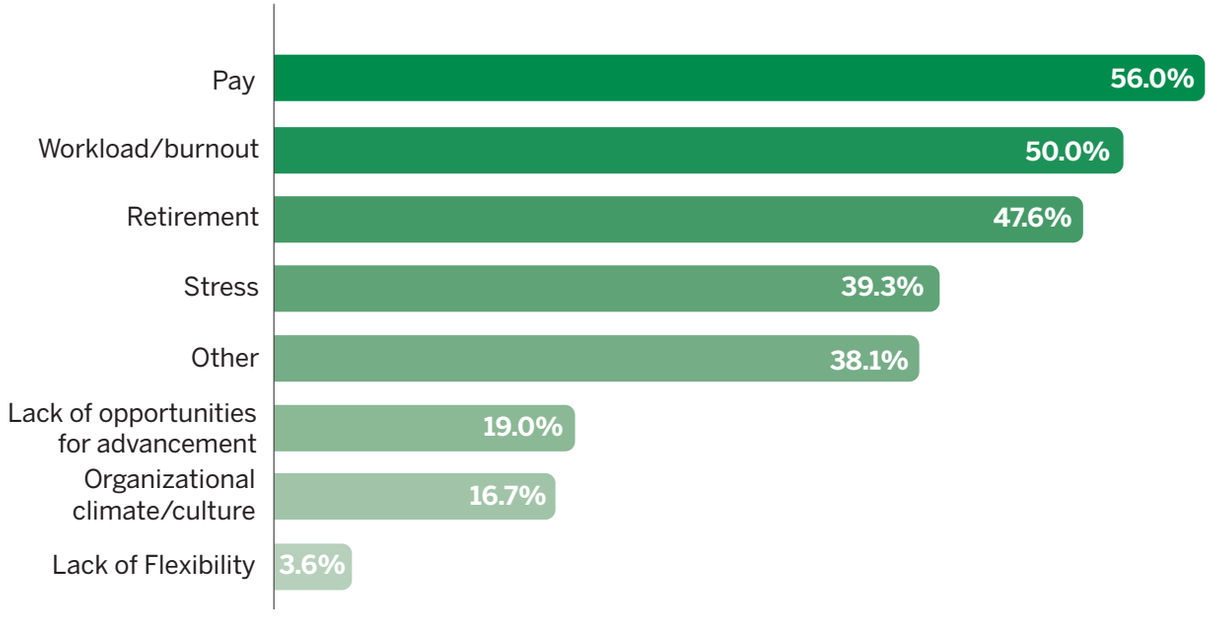
The top three reasons for employees leaving the 92 LHDs that responded to the organizational survey were pay (n=47, 56.0%), workload/burnout (n=42, 50.0%), and retirement (n=40, 47.6%) (**Figure 7**). The topic of turnover was further examined in the qualitative interviews with LHD administrators and health officials. **County salary restrictions hinder the recruitment and retention of skilled public health employees.** Setting arbitrary salary limits based on historic salaries of other county employees is hindering the ability to recruit experienced and trained public health employees. Given that the market is growing increasingly competitive, county leaders should create new guidance for the salaries of skilled public health workers. LHD administrators reported that employees often have high workloads with little pay, and many participants noted that numerous employees in their agencies are working a minimum of two roles.

Figure 6. Most Used Recruitment Methods



Note: Options were not mutually exclusive. LHD administrators were asked to select all that applied.

Figure 7. Reasons for Local Health Department (LHD) Employee Turnover within the Last Two Years as Reported by LHD Administrators



Note: LHD administrators were asked to select all reasons that related to non-COVID 19 temporary employee turnover within the last two years.

In the organizational survey, 87.0% of LHDs reported that they do not have formal promotion or career plans in place. In the qualitative interviews, participants explained that in small LHDs there are rarely new roles in which individuals can be promoted, so they do not see the need for career planning. In the 13.2% of LHDs that referenced having promotion programs or career plans in place, some noted that they are working on developing such plans but did not have details about their plans. A few LHD administrators noted that they have a promotion program. In these instances, LHDs guarantee employees a bonus or set percent raise (in addition to any cost-of-living adjustments) after 5, 10, and other intervals of years of service. A majority of administrators at LHDs that do not have a promotion program like this, said that they would put one in place if they were able to get it approved by their county officials.

LHD administrators were asked to report on the number of employees that left their position (turnover) within the last two years, excluding any losses of temporary employees hired solely for the COVID-19 pandemic response. Across the 92 LHDs that responded to the organizational survey, a total of 329 FTEs left the LHD workforce in the last two years (not including temporary COVID-19 employees), resulting in an average turnover of 3.7 FTEs per LHD. **Figure 8** shows the number of FTEs lost to turnover by district across the last two years. It also reports turnover as a percent of the LHD FTE workforce in the district overall. District turnover ranged from 19 FTEs in District 6 to 52 FTEs in District 3. As a percent of the district-level LHD workforce overall, turnovers accounted for as much as 36.8% of the workforce (district 7).

Nurses and environmental health workers were among the top positions discussed in the qualitative interviews as turning over the most. Reasons for turnover that were provided in qualitative interviews mirrored the organizational survey results (pay and workload). LHD administrators noted that most nurses left the organization to work for higher pay in the healthcare industry. When asked about the new jobs of staff members who left the LHDs in the past two years, 59.7% of administrators indicated that they left for non-governmental roles and 29.9% indicated they left to work in healthcare delivery organizations. Of the 1,869 LHD staff (89.6%) who responded to the retirement timeline question on the workforce assessment, 311 (16.6%) plan to retire in the next five years. There was considerable variation in these numbers across the state, with a range of 8.9% of District 5 employees to 31.0% in District 7 planning to retire in the next five years (**Figure 9**). Given these statistics and the generally older age of Indiana's non metro-LHD workforce (**Table 4**), planning for the potential retirement of a substantial number of LHD workers in the near term will likely be necessary.

Substantial recruitment needs have been highlighted by the workforce gaps and recommendations of the FPHS assessment as well as via direct requests and suggestions from administrators in both the organizational survey and qualitative interviews. Given ongoing challenges to recruiting new employees to work in LHDs, innovations and strategies are needed to utilize the growing number of potential employees trained in public health disciplines by Indiana's universities. Competitive salaries remain an ongoing issue that will hinder recruitment unless addressed.

Figure 8. Total Number of Turnovers within the Last Two Years and Turnovers as a Percent of District Local Health Department Full Time Equivalent (FTE)

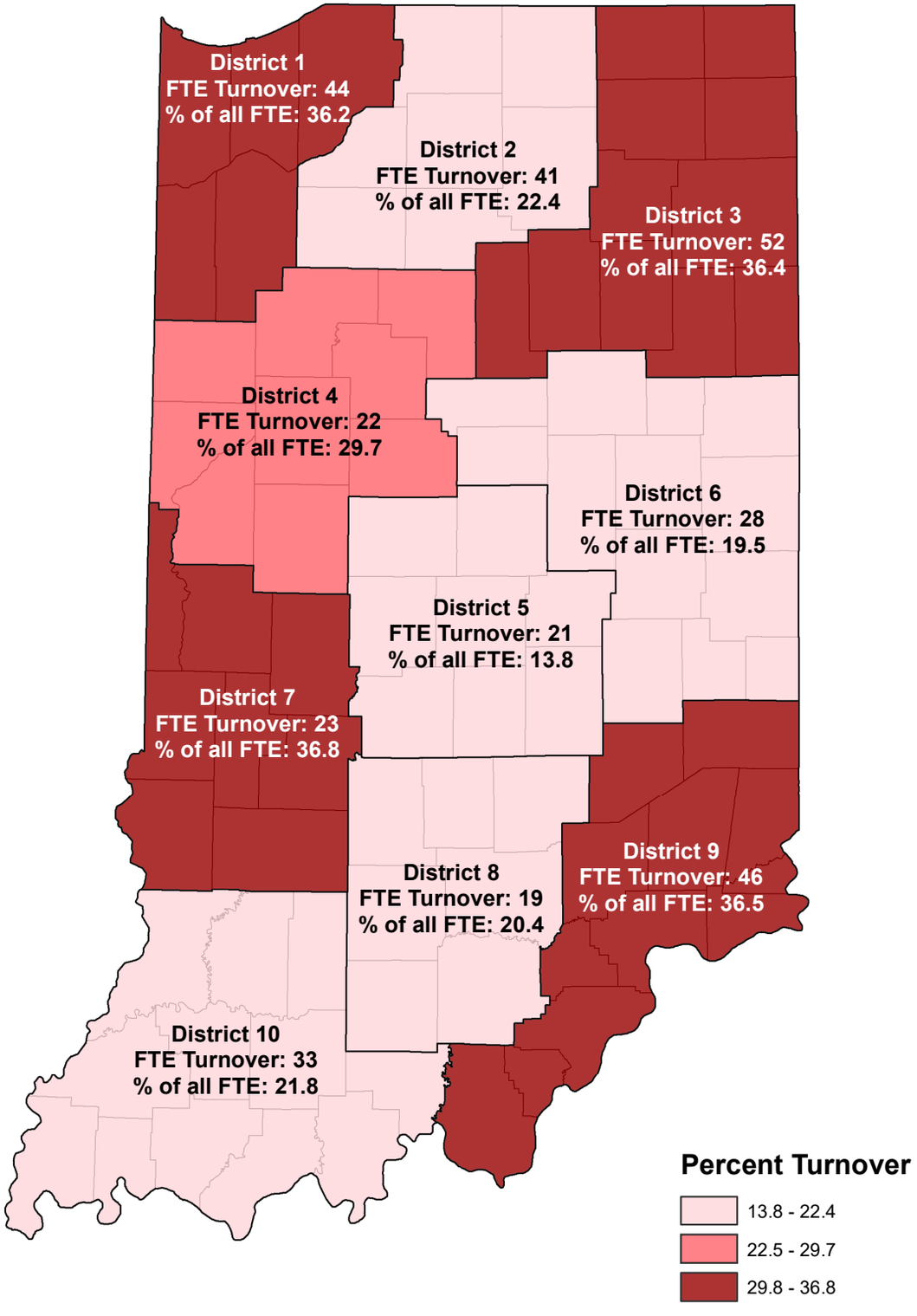
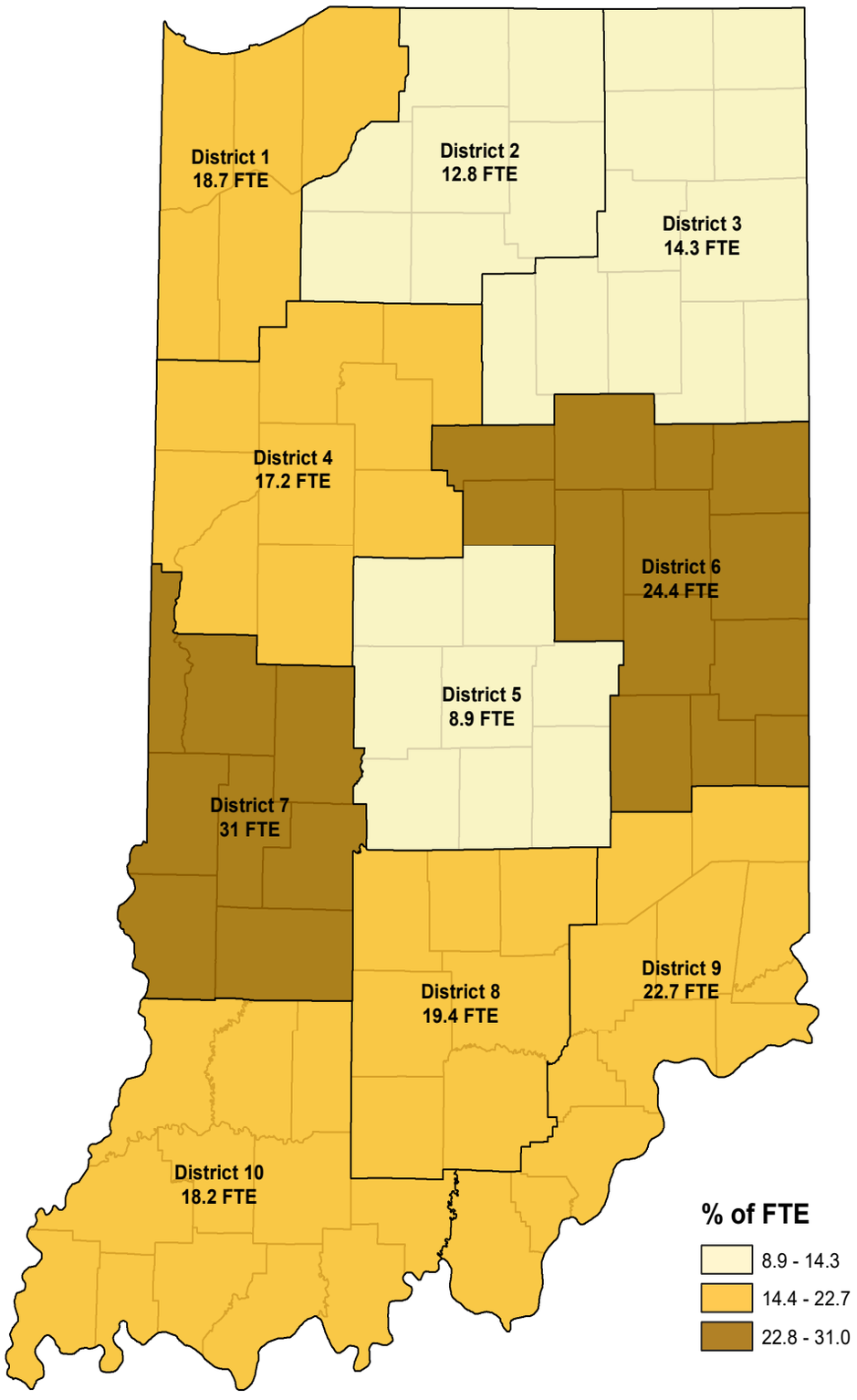


Figure 9. Percent of Full Time Equivalent (FTE) Planning to Retire within the Next Five Years



DISCUSSION AND RECOMMENDATIONS

Perhaps one of the most important findings of this assessment is that, on a per capita level, Indiana's LHDs have fewer employees on average than LHDs in the region and nationwide. Additionally, Indiana's LHD workforce is more than twice as likely to report having no college degree as compared to both the regional and national LHD workforce. The two most common positions in Indiana's LHD workforce (environmental health workers and public health nurses) are roles that require substantial expertise, and they were also reported as positions that turn over the most. Pay and workload/burnout were indicated as the primary reasons for this turnover. As reported in the 2020 Indiana Public Health System Review, Indiana has higher levels of preventable disease and injury burden, along with higher medical care costs, compared to other states. Workforce issues, including fewer employees per capita, complicate and hinder efforts to address Indiana's public health issues.

In the context of ongoing recruitment and retention issues, LHDs need to be able to offer competitive salaries to recruit and retain highly skilled employees. Given the role LHDs play in health promotion and the prevention of disease and illness in our communities, we need to make working in governmental public health a sought-after job. This report provides insights about the LHD workforce at a crucial point in time. As Indiana works to strengthen the infrastructure of the public health system, we must also invest in strengthening the current and future workforce by implementing additional strategies to increase capacity and expertise across the state. Indiana's universities offer several public health degree and certificate programs at the bachelor and graduate levels. Not only can these programs help in providing formal training to the current workforce, but they are also a good resource for recruiting additional skilled individuals to fill current and pending workforce gaps. Efforts to employ innovative recruitment pipeline initiatives should be considered, including paid internships and the removal of unrealistic work experience requirements that may deter recent graduates from applying for open positions.

LHD administrators were asked to share their perspectives on the potential of district-level roles to provide expertise that LHDs commonly do not have (e.g., data analysis, epidemiology, emergency response and preparedness expertise, etc.). Given that most LHDs do not have a staff member with those specific skills or funding to recruit for such a role, it was generally perceived that having this kind of support and expertise would be beneficial. However, participants shared a few points for consideration. For example, due to some counties having rules that prohibit sharing of employees with other counties, district-level, multiple-county funded roles would be difficult to establish. Other concerns expressed included a specific county's budget restrictions that require all employees live in the county in which they are employed, lack of standardization for employee salaries and benefits across counties, navigating shared costs across counties, and issues related to shared supervision of cross-county positions. Instead, several participants suggested that having more district support from the state would be a better solution to assist in providing additional capacity and would avoid the potential

county-level barriers.

As solutions to workforce training needs are explored, existing resources should be considered as complements to and/or components of future state plans. At the national level there are several resources for workforce development. For example, the National Association of City and County Health Officials (NACCHO) (https://www.naccho.org/) can serve as a resource for local health department staff. NACCHO also offers grant opportunities to LHDs, and these funds may be useful in addressing some of the gaps reported in the workforce assessment. Additionally, the Public Health Foundation hosts the TRAIN Learning Network.

On a regional level, Indiana is a part of the Region 5 Public Health Training Center, managed by the University of Michigan. The Center is funded through a cooperative agreement from HRSA. In addition, the Region 5 Public Health Training Center is now offering an annual leadership training series for a select number of LHD professionals in the region.

APPENDICES

Appendix A. Public Health-Related Bachelor's Degrees Available at Higher Education Institutions in Indiana, December 2022

Educational Institution	College/Department	Degree Type	Concentrations Available
Ball State University	College of Health	Bachelor of Science in Health Education and Promotion (BS)[IP]	
		Bachelor of Arts in Health Education and Promotion (BA)[IP]	
Bethel University-Mishawaka	College of Arts and Sciences	Bachelor of Arts in Community Health (BA)[IP]	
Butler University	College of Liberal Arts and Sciences.	Bachelor of Arts in Public Health (BA)[IP]	
Indiana State University	College of Health and Human Services	Bachelor of Public Health[IP]	Health Administration Health Communications Health Psychology Public Health
Indiana University-Bloomington	School of Public Health[a]	Bachelor of Science in Public Health (BSPH)[IP]	Community Health Environmental Health Epidemiology Fitness and Wellness
Indiana University-Indianapolis*	Richard M. Fairbanks School of Public Health[a]	Bachelor of Science in Public Health (BSPH)[IP]	Community Health Global Health Epidemiology
		Bachelor of Science in Health Services Management (BSHSM)[IP]	Accelerated Bachelor to Master of Health Administration (MHA) option (4+1)
Indiana Wesleyan University	School of Health Sciences	Bachelor of Science in Health Sciences[V]	Pre-Clinical Post-Clinical
Marian University	School of Behavioral and Applied Social Sciences	Bachelor of Science in Public Health (BSPH)[IP]	
		Bachelor of Arts in Public Health (BA)[IP]	
Purdue University	College of Health and Human Sciences	Bachelor of Science in Public Health (BSPH)[IP,a]	Accelerated Bachelor's to Master's of Public Health option (4+1)
University of Evansville	School of Health Sciences	Bachelor of Science in Public Health (BSPH)[IP,a]	Health Policy Accelerated Bachelor's to Master's of Public Health (MPH) option (4+1)
University of Indianapolis	College of Health Sciences	Bachelor of Science in Public Health Education and Promotion (BSPHEP)[IP,a]	Applied Public Health Accelerated Bachelor's to Master's of Public Health (MPH) option (4+1)
University of Southern Indiana	College of Nursing and Health Professions	Bachelor of Science in Health Services[IP]	Specialties include: Public Health Health Promotion Worksite Wellness
Valparaiso University	College of Nursing and Health Professions	Bachelor of Science in Public Health (BSPH)[IP]	Accelerated Bachelor's to Master's of Public Health (MPH) option (4+1)

Notes: *Programs offered collaboratively through Indianapolis and Ft. Wayne Campuses. IP=In-person program, V=Completely virtual instruction.
[a] Denotes CEPH accredited school/program of public health.

Appendix B. Public Health-Related Master's Degrees Available at Higher Education Institutions in Indiana, December 2022

Educational Institution	College/Department	Degree Type	Concentrations Available
Indiana State University	College of Health and Human Services	Master of Public Health (MPH)[V]	
Indiana University-Bloomington	School of Public Health[a]	Master of Public Health (MPH)	Behavioral, Social, and Community Health[IP] Environmental Health[IP, V] Epidemiology[IP, V] Parks and Recreation[V] Physical Activity[IP, V] Public Health Administration[V]
Indiana University-Indianapolis*	Richard M. Fairbanks School of Public Health[a]	Master of Public Health (MPH)	Epidemiology[IP, V] Health Policy and Management[IP, V] Social and Behavioral Sciences[IP, V] Public Health Informatics[IP, V]
		Master of Health Administration[IP]	
Purdue University	College of Health and Human Sciences	Master of Public Health (MPH)[a]	Family and Community Health[IP, V] Biostatistics[V]
		Master of Science in Public Health (MSPH)[IP,a]	
University of Evansville	School of Health Sciences	Master of Public Health (MPH)	Health Policy[V]
University of Indianapolis	College of Health Sciences	Master of Public Health (MPH)[a]	Health Disparities[V]
Valparaiso University	College of Nursing and Health Professions	Master of Public Health (MPH)[V]	

Notes: *Programs offered collaboratively through Indianapolis and Ft. Wayne Campuses. IP=In-person program, V=Completely virtual instruction.
[a] Denotes CEPH accredited school/program of public health.

Appendix C. Public Health-Related Doctoral Degrees Available at Higher Education Institutions in Indiana, December 2022

Educational Institution	College/School	Degree Type	Specific Concentrations/ Research Areas
Indiana University-Bloomington	School of Public Health[a]	PhD in Biostatistics[IP] PhD in Environmental Health[IP] PhD in Epidemiology[IP] PhD in Health Behavior[IP] PhD in Human Performance[IP] PhD in Leisure Behavior[IP] PhD in Nutrition[IP]	
Indiana University-Indianapolis*‡	Richard M. Fairbanks School of Public Health[a]	PhD in Biostatistics[IP] PhD in Epidemiology[IP] PhD in Health Policy and Management[IP] DrPH in Global Health Leadership[V]	
Purdue University	College of Health and Human Sciences	PhD in Public Health[IP,a]	Research areas: Women's Health[IP] Health Disparities[IP] Prevention Science Community-Engaged Research[IP] Intervention and Implementation Science[IP] Epidemiology and Biostatistics[IP] Health Systems and Policies[IP]

Notes: *Programs offered collaboratively through Indianapolis and Ft. Wayne Campuses. ‡ The School of Medicine offers a scholarly concentration in public health. IP=In-person program, V=Completely virtual instruction. [a] Denotes CEPH accredited school/program of public health.

Appendix D. Public Health-Related Certificates Available at Higher Education Institutions in Indiana, December 2022

Educational Institution	School	Level	Certificate Focus
Indiana University-Bloomington	School of Public Health	Undergraduate	Martial Arts Safety Management[IP] Underwater Resource Management [IP]
		Graduate	Addiction Intervention[V] Biostatistics[IP] Gerontology and Health[V] Public Health[V] Safety Management[V] Sexual and Reproductive Health[V]
Indiana University-Indianapolis*	Richard M. Fairbanks School of Public Health	Undergraduate	Community Health[IP] Health Administration[IP]
		Graduate	Health Policy[IP] Health Systems Management[IP] Infection Control and Prevention Epidemiology[IP, V] Public Health[IP, V] Medical Degree(MD)/MPH[IP, V]
Indiana University Northwest	School of Public and Environmental Affairs	Undergraduate (*Note: Must be pursuing an undergraduate degree in the IU system to be eligible for the certificate.*)	
Purdue University	College of Health and Human Sciences	Graduate	Healthcare Leadership[V] Healthcare Operations[V] Healthcare Quality Improvement[V]
University of Evansville	School of Health Sciences	Graduate	Public Health[V]

Notes: *Programs offered collaboratively through Indianapolis and Ft. Wayne Campuses. ‡ The School of Medicine offers a scholarly concentration in public health. IP=In-person program, V=Completely virtual instruction

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