The Council on Linkages Between Academia and Public Health Practice

Recruitment and Retention: What's Influencing the Decisions of Public Health Workers?

Council on Linkages Between Academia and Public Health Practice

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This report is available online at: www.phf.org/PHworkersurvey. The data collected through this survey is available for further research by request. Questions or requests for data can be sent to PHWorkforce@phf.org.

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Council on Linkages Between Academia and Public Health Practice

The Council on Linkages Between Academia and Public Health Practice (Council on Linkages; www.phf.org/councilonlinkages) is a collaborative of 21 national organizations focused on improving public health education and training, practice, and research. Established in 1992 to implement the recommendations of the Public Health Faculty/Agency Forum (www.phf.org/PHfacultyagencyforum), the Council on Linkages works to further academic/practice collaboration to ensure a well-trained, competent workforce and the development and use of a strong evidence base for public health practice.

Mission

The Council on Linkages strives to improve public health practice, education, and research by fostering, coordinating, and monitoring links among academia and the public health practice and healthcare communities; developing and advancing innovative strategies to build and strengthen public health infrastructure; and creating a process for continuing public health education throughout one's career.

Membership

Twenty-one national organizations are represented on the Council on Linkages:

- American Association of Colleges of Nursing
- American College of Preventive Medicine
- American Public Health Association
- Association for Prevention Teaching and Research
- Association of Accredited Public Health Programs
- Association of Public Health Laboratories
- Association of Schools and Programs of Public Health
- Association of State and Territorial Health Officials
- Association of University Programs in Health Administration
- Centers for Disease Control and Prevention
- Community-Campus Partnerships for Health
- Council on Education for Public Health
- Health Resources and Services Administration
- National Association of County and City Health Officials
- National Association of Local Boards of Health
- National Environmental Health Association
- National Library of Medicine
- National Network of Public Health Institutes
- National Public Health Leadership Development Network
- Quad Council Coalition of Public Health Nursing Organizations
- Society for Public Health Education

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Pipeline Workgroup

The Council on Linkages Between Academia and Public Health Practice's (Council on Linkages') Pipeline Workgroup (www.phf.org/pipelineworkgroup) aims to identify ways to strengthen the public health workforce by better understanding the ways public health workers enter the workforce, their rationale for entering the workforce, and factors that influence their decisions to remain working in public health.

Chair

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Key Findings

The public health workforce represents a critical element of the nation's health system, and ensuring a sufficient, capable workforce is key to ensuring the health of Americans. In conducting a survey of public health workers, the Council on Linkages Between Academia and Public Health Practice aimed to learn more about the individuals who participate in the public health workforce and their reasons for doing so to help build a foundation on which to base strategies for recruiting and retaining public health workers. The findings presented in this report suggest a number of potential considerations for public health policymakers, leaders, managers, and others involved in workforce initiatives. The following represent key findings from the nearly 12,000 public health workers who responded to this survey.

Recruitment and Retention

- **The factors that survey respondents valued in making employment decisions tended to be organizational more than personal,** and therefore, were factors that organizations have more ability to influence. These included the specific activities involved in a position, job security, competitive benefits, and identifying with the mission of the organization.
- **Linking workers to the vision and mission of public health may support recruitment and retention.** Several influential factors in respondents' decisions to begin and continue working for employers were intricately tied to individuals' feelings regarding the nature of public health work. The specific activities involved in a position, identifying with the mission of the organization, having a personal commitment to public service, and wanting a job in the public health field all received high ratings for their influence on employment decisions.
- **In planning recruitment and retention efforts, it may be more effective to focus on job security and benefits than on salary.** Among the most influential factors reported by respondents for both recruitment and retention were job security and competitive benefits, both of which received higher average ratings than competitive salaries.
- **Cuts to benefit packages may negatively impact recruitment and retention within public health.** Given the reported importance of competitive benefits in terms of respondents' employment decisions, future recruitment and retention efforts may be harmed if employers cut back on benefits.
- In general, **the factors that influence survey respondents' decisions to begin working for employers were the same factors that were important in their decisions to continue working for those employers.**
- **Healthcare settings, as well as private industry, may provide opportunities for recruiting workers into governmental public health.** For respondents entering governmental public health, approximately 31% came from healthcare services and 23% from private industry.
- **An additional opportunity for recruitment may be presented by academic programs**, as 33% of respondents indicated entering public health directly from educational programs, although not necessarily from public health programs. Only 10% of respondents reported coming into governmental public health from public health degree programs.
- Although survey respondents rated opportunities for training or continuing education as fairly important in their decisions to enter and remain working in public health positions, **attention to and resources for professional development appeared to be less than desirable**. With respect to professional development within their organizations,

respondents indicated being less than satisfied with the level of funds and resources available to allow them to take advantage of professional development opportunities.

- The number of survey respondents entering governmental public health directly from educational programs in areas other than public health and the relatively low levels of formal public health education reported by respondents, combined with the high levels of dissatisfaction related to aspects of professional development, suggest that **there may be opportunities to strengthen options for continuing education and training aimed at building public health skills within the workforce**.
- **By focusing on building leadership and management skills, public health organizations may be able to positively impact recruitment and retention through actions that do not require substantial additional funding.** The environment in which people work can significantly impact their satisfaction with and desire to remain in their jobs, and responses related to leadership and management within public health organizations indicated room for improvement.

Demographics

- In general, **respondents tended to be closer to the end of their careers than the beginning.** The average age of public health workers responding to this survey was 47. More than half (58%) were 45 or older, while only 15% were under the age of 35. In addition, approximately half of the respondents had been employed in public health for more than 10 years, with nearly one-quarter working in public health for more than 20 years.
- **There appeared to be limited diversity among the public health workers responding to this survey.** Significant majorities of respondents identified as female, White, and non-Hispanic.
- **Nurses accounted for one in four survey respondents.** Public health as a field encompasses a wide variety of specialties; however, 26% of respondents indicated that their primary professional role was as a nurse. With the exception of administrative and management positions, this percentage was more than double that of any other role reported on the survey.
- **Relatively few survey respondents completed their education with degrees specifically in public health.** While 55% of respondents held bachelor's, master's, or doctoral degrees at the start of their public health careers, only 9% of those indicated that their highest degree earned was in public health. This percentage had increased by the time of the survey, but still remained relatively low: 59% of workers had now earned bachelor's, master's, or doctoral degrees, with 11% reporting their highest degree was in public health.
- **The relative lack of public health degrees among survey respondents did not indicate a lack of education in general.** The most common level of education reported by respondents was a bachelor's degree. Both at entry into the field of public health and at the time of the survey, approximately one-third of respondents indicated that they had completed bachelor's degrees, while another 20% held more advanced degrees upon entering public health and 31% held these types of advanced degrees by the time of the survey.
- **Nearly one in five survey respondents continued their formal education after beginning work in the field.** In comparing education levels at the start of their public health careers and the time of the survey, 18% of respondents indicated continuing their education in some manner.
- **Nearly three out of four survey respondents indicated employment in governmental settings.** More respondents reported employment in various levels of

government (71%) than in any other setting; however, nearly one in four respondents (22%) indicated working in multiple settings and 24% worked exclusively outside of governmental settings. The most common non-governmental setting reported by respondents was healthcare services (26%).

Recruitment and Retention: What's Influencing the Decisions of Public Health Workers?

Introduction

The public health workforce is a vital part of the public health system. Protection of the public's health depends on maintaining a sufficient number of workers capable of delivering essential public health services. The recruitment of qualified and capable individuals into the field of public health and the retention of these individuals within the public health workforce are two important elements public health organizations must address to fulfill their responsibilities to the public. However, organizations often have limited time and resources for pursuing recruitment and retention efforts. In order to maximize the potential for success, ideally, recruitment and retention activities would be informed by evidence about influences on public health workers' employment decisions.

For more than 20 years, the Council on Linkages Between Academia and Public Health Practice[1] (Council on Linkages) has been leading workforce development efforts within the field of public health. In response to growing concern about emerging worker shortages within public health, in 2007, the Council on Linkages established the Pipeline Workgroup[2] to identify ways to strengthen the public health workforce by better understanding the ways public health workers enter the workforce, their rationale for entering the workforce, and factors that influence their decisions to remain working in public health. The Pipeline Workgroup's mandate included reviewing literature related to the public health workforce[3-5], considering existing workforce data and data sources, and convening experts from a variety of fields to share experiences addressing worker shortages. Based on the Workgroup's exploration, in 2008, the Council on Linkages concluded that the data available on the public health workforce were insufficient for developing evidence-supported recruitment and retention strategies.

To help address this gap, the Council on Linkages conducted a national survey in 2010 to learn more about public health workers and the factors that influence their employment decisions. This effort aimed to survey public health workers in the United States directly, and the findings offer insights for public health policymakers, leaders, managers, and others involved in workforce recruitment and retention.

Study Purpose

The Council on Linkages developed and conducted a survey of public health workers to gather information about individual workers who make up the US public health workforce. This survey focused on recruitment and retention within public health, exploring how and why workers enter and remain in the field and their satisfaction with the organizational environments in which they work. Specifically, the survey collected demographic information about individual public health workers; data on factors that initially attracted workers to public health and those that impacted their decisions to remain working in the field; and perspectives on a variety of factors related to organizational leadership, management, and professional development.

Study Methodology

The Council on Linkages' survey of public health workers was developed and distributed in 2009-2010. This online survey was designed to capture information about the characteristics of public health workers, factors influencing their employment decisions, and their satisfaction with work environments. The survey was distributed by email to over 70,000 public health workers in the spring and early summer of 2010, and responses were received from 11,640 individuals. These data were analyzed to begin providing insights for strengthening recruitment and retention efforts impacting the public health workforce.

Survey Design

The Council on Linkages' survey was developed by its Pipeline Workgroup in consultation with researchers at the University of Kentucky College of Public Health and drew on previous work in the area of recruitment and retention. Surveys from other disciplines, including education and nursing, were reviewed, and questions were adapted or developed to be specific to public health. Pilot tests of the survey were conducted with approximately 20 volunteers from the public health workforce and focus groups were held, with the information obtained used to further refine survey questions.

The final survey contained 28 questions addressing the demographics of public health workers, recruitment into public health, retention within public health, and organizational environment (see the Appendix). Twenty-seven of the questions were closed-ended, while one question was open-ended. All questions were optional, and the number of questions presented to individual respondents varied based on the answers provided. The Council on Linkages was particularly concerned about recruitment and retention of workers in governmental public health agencies, and as a result, the survey included several questions specifically for governmental public health workers.

This study was approved by the University of Kentucky's Institutional Review Board, and the opportunity to enter a drawing for small prizes was offered as an incentive for participation in the survey.

Survey Audience and Distribution

The survey targeted public health workers in the US, with a particular interest in those working in governmental public health settings. Potential survey respondents were identified using the TRAIN learning management network[6] developed and operated by the Public Health Foundation. TRAIN is an account-based online training system designed to support public health and represents the largest repository of individual-level information on the US public health workforce[7-8]. At the time of the survey, TRAIN had approximately 320,000 active registered users from across the US and beyond, and 24 affiliate states and national organizations used the system to provide their workers with access to public health training.

Each of the 24 TRAIN affiliates was invited to participate in the survey. Twenty-one of the affiliates agreed, allowing all public health workers in their states or organizations who were registered on TRAIN to be contacted for the survey. Public health workers from one non-affiliate state, Alabama, were also invited to participate.

This survey was distributed by email in the spring of 2010 to 70,315 individuals. Distribution occurred over a five-week period using a four-step process that included an email announcing the upcoming survey, an email inviting participation in the survey, and two reminder emails.

Data Analysis

Data gathered were analyzed using descriptive statistics, including tabulations and mean value calculations. Demographic characteristics of respondents were summarized. Additionally, responses to questions about factors that influenced respondents' decisions to begin and continue working for their current employers, as well as about perceptions of organizational environment, were tabulated to provide insights for workforce recruitment and retention efforts within public health.

Response Rates

The survey was distributed to 70,315 public health professionals, and 11,640 responses were received, for a response rate of approximately 17%. As all survey questions were optional, response rates for individual questions varied, ranging from a high of 99.9% of respondents ("Have you ever been employed by a governmental public health agency?") to a low of 25% ("Is there anything else you would like to tell us that we did not ask?").

Limitations

This survey was the first national effort to collect data on recruitment and retention factors directly from individual public health workers within the US, and the responses obtained from more than 11,000 individuals represent a valuable dataset for exploring these factors. These data represent a significant contribution to public health workforce research and can help inform decisions regarding recruitment and retention strategies; however, in interpreting the results of this survey, several limitations should be taken into consideration.

As is typical with surveys, the data are self-reported by the individuals who chose to respond to the survey. Although survey responses were received from public health workers across all 50 states and Washington, DC, the majority of respondents represent the states formally invited to participate in the survey. Potential survey respondents were identified almost exclusively from public health workers with active accounts in TRAIN at the time of the survey, and the survey had a response rate of 17%. Findings represent the survey respondents at the point in time that the survey was conducted and may not be generalizable to the entire public health workforce. Additionally, the survey focused on current public health workers, and the data do not reflect individuals who formerly worked in public health, but had left that workforce. The data collected cannot shed light on why people chose to pursue employment options outside of public health, only on why people chose to join and stay in the field.

Report Structure

This report describes findings from the survey of public health workers conducted by the Council on Linkages in 2010. The findings shared in this report are organized into three sections, which mirror the focus areas found in the survey:

- Demographics
- Recruitment and Retention
- Organizational Environment

Implications and conclusions based on these findings are also discussed.

Throughout the report, the findings represent the responses of the 11,640 individuals who participated in the Council on Linkages' survey. As all survey questions were optional, the number of individuals who responded to each question varied. In addition, some questions were only presented to select groups of respondents based on their answers to previous questions.

Demographics

Learning more about the individuals who comprise the public health workforce is an important aspect of effective recruitment and retention efforts. This section describes the demographics of survey respondents.

Work Location

Responses to this survey were received from individuals in all 50 states, the District of Columbia, and several US territories. The survey primarily targeted public health workers in states participating in TRAIN, as well as Alabama, and the majority of survey respondents reported working in one of those states. Responses from non-targeted states and territories may represent workers who were affiliated with the Centers for Disease Control and Prevention's Division of Global Migration & Quarantine or the Medical Reserve Corps, two non-state-based TRAIN affiliates, or workers who were registered users of National TRAIN and may have been located anywhere in the US. The number of responses received from workers in individual states and territories ranged from a high of 1,398 for Texas to a low of 1 each for American Samoa and the Northern Mariana Islands. Workers in seven states – Texas, Virginia, Kentucky, Wisconsin, Arkansas, Ohio, and Oklahoma – accounted for 57% of the survey responses (n=6,585), and 11% of respondents (n=1,320) did not provide their state or territory of employment.

Table 1. Work Locations of Survey Respondents (n=11,640)

State/Territory	Number of Survey Respondents	Percent of Survey Respondents
Alabama*	335	2.9%
Alaska	11	0.1%
American Samoa	1	<0.1%
Arizona	21	0.2%
Arkansas*	690	5.9%
California*	205	1.8%
Colorado	44	0.4%
Connecticut*	388	3.3%
Delaware*	109	0.9%
District of Columbia	35	0.3%
Florida	141	1.2%
Georgia	58	0.5%
Guam	2	<0.1%
Hawaii*	38	0.3%
Idaho	9	0.1%
Illinois	63	0.5%
Indiana	37	0.3%
Iowa	17	0.1%
Kansas*	462	4.0%
Kentucky*	1,045	9.0%
Louisiana	19	0.2%
Maine	13	0.1%
Maryland	50	0.4%
Massachusetts	51	0.4%
Michigan*	337	2.9%
Minnesota	100	0.9%
Mississippi	14	0.1%

Missouri	57	0.5%
Montana	8	0.1%
Nebraska	11	0.1%
Nevada	12	0.1%
New Hampshire*	80	0.7%
New Jersey	66	0.6%
New Mexico	27	0.2%
New York	110	0.9%
North Carolina	83	0.7%
North Dakota	4	<0.1%
Northern Mariana Islands	1	<0.1%
Ohio*	579	5.0%
Oklahoma*	536	4.6%
Oregon	36	0.3%
Pennsylvania	56	0.5%
Puerto Rico	3	<0.1%
Rhode Island*	39	0.3%
South Carolina	26	0.2%
South Dakota	2	<0.1%
Tennessee*	98	0.8%
Texas*	1,398	12.0%
Trust Territory of the Pacific Islands	2	<0.1%
Utah*	131	1.1%
Vermont	6	0.1%
Virginia*	1,396	12.0%
Washington	54	0.5%
West Virginia*	157	1.3%
Wisconsin*	941	8.1%
Wyoming*	106	0.9%
No Response	1,320	11.3%

* State formally participated in the survey.

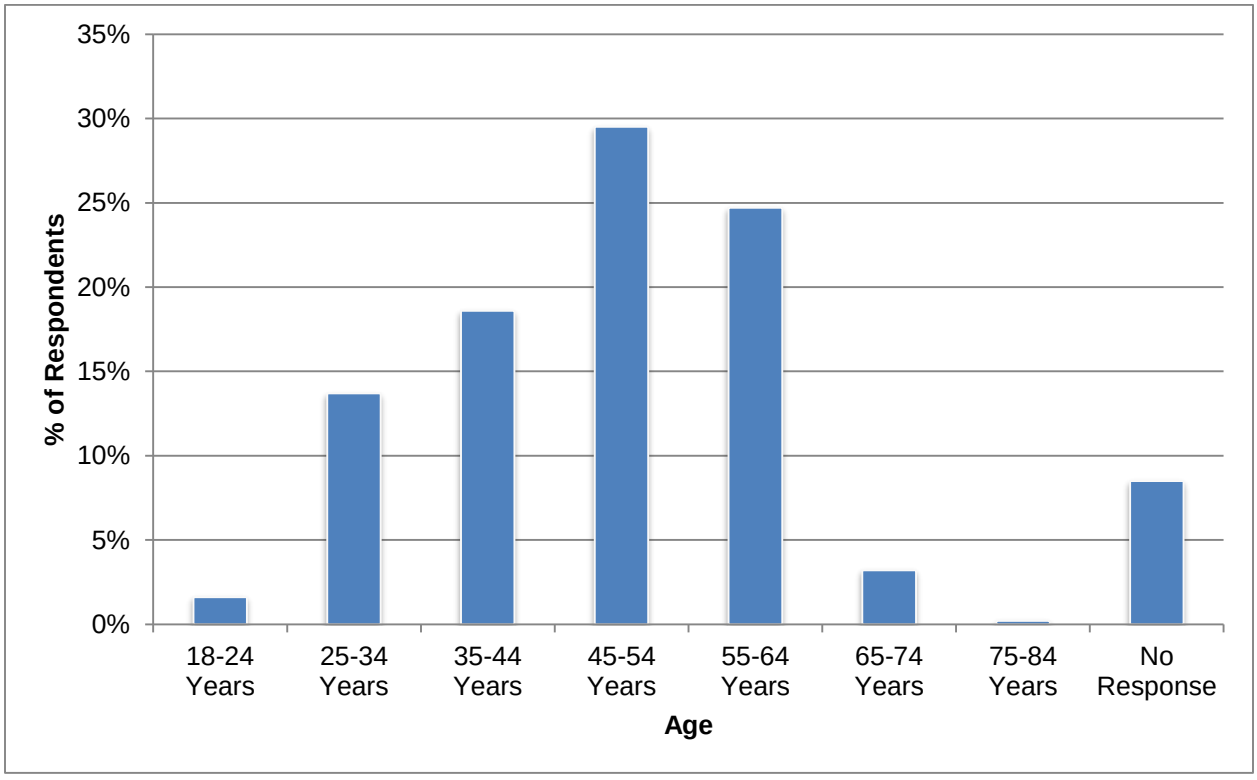
Age

Survey respondents ranged in age from 18 to 83 years, with a mean age of 47 years. Respondents aged 45-54 made up the largest single age group (30%; n=3,431). More than half (58%; n=6,696) were age 45 or older, with 28% (n=3,265) being 55 or older, while 34% (n=3,953) were younger than 45. Fifteen percent (n=1,784) were under age 35.

Table 2. Age of Survey Respondents (n=11,640)

Age	Number (Percent)
18-24 Years	184 (1.6%)
25-34 Years	1,600 (13.7%)
35-44 Years	2,169 (18.6%)
45-54 Years	3,431 (29.5%)
55-64 Years	2,870 (24.7%)
65-74 Years	376 (3.2%)
75-84 Years	19 (0.2%)
No Response	991 (8.5%)

Figure 1. Age of Survey Respondents (n=11,640)



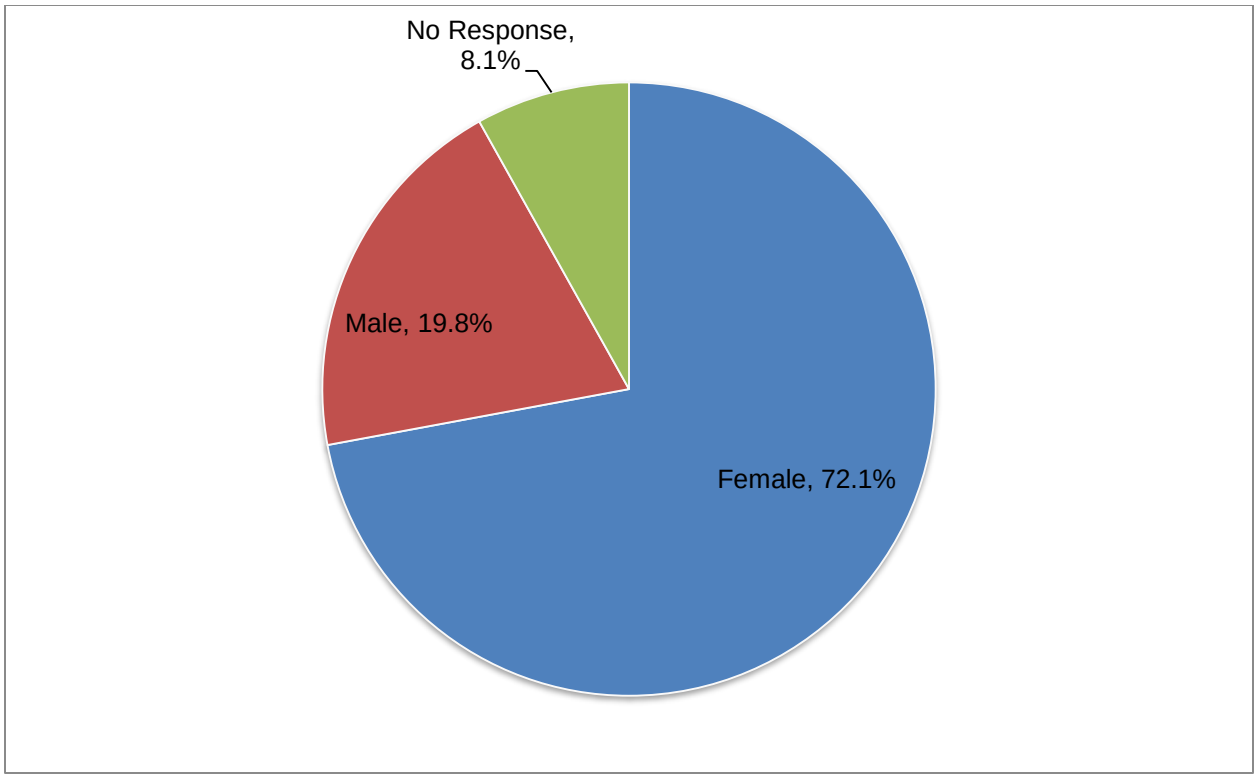
Gender

Survey respondents were predominantly female (72%; n=8,390); 20% of respondents (n=2,305) were male.

Table 3. Gender of Survey Respondents (n=11,640)

Gender	Number (Percent)
Female	8,390 (72.1%)
Male	2,305 (19.8%)
No Response	945 (8.1%)

Figure 2. Gender of Survey Respondents (n=11,640)



Race and Ethnicity

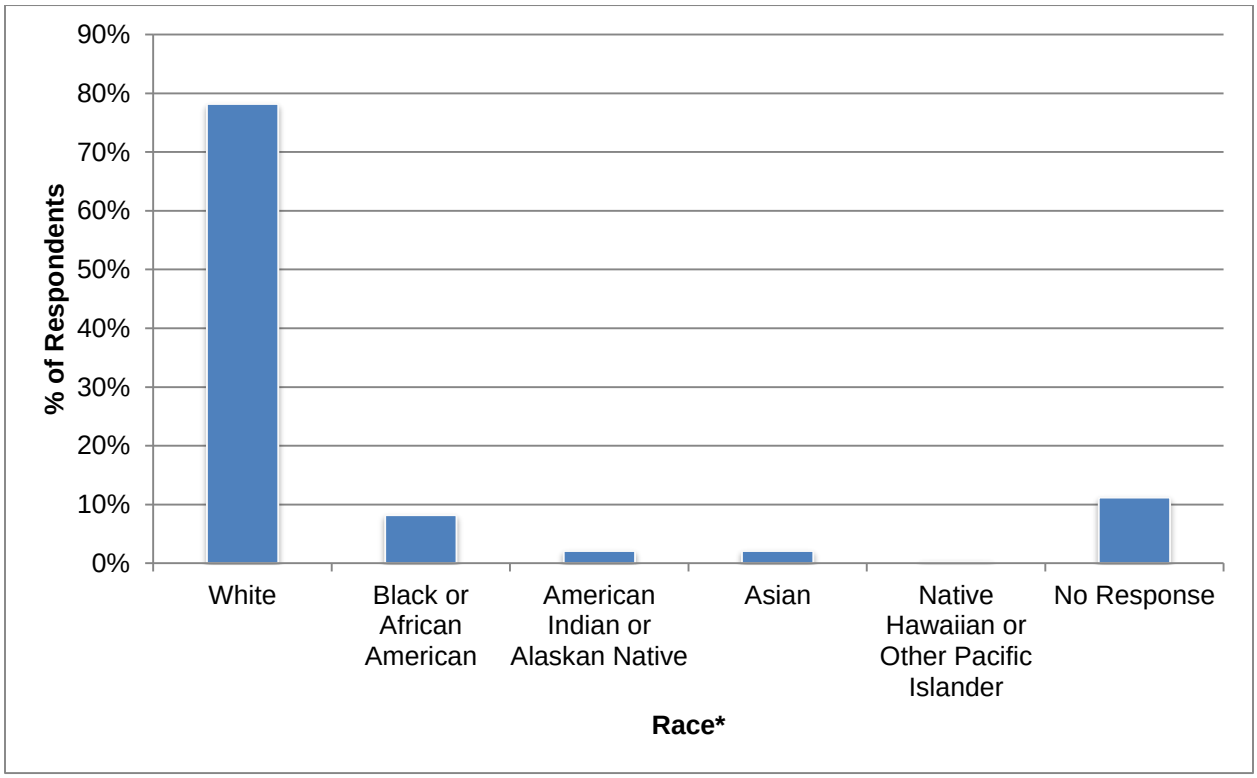
The majority of survey respondents were White (78%; n=9,097). Black or African American was the second most common race reported at 8% (n=951), and all other races combined accounted for less than 5% of responses (n=486). Two percent of respondents (n=216) selected multiple options, with the most common combination being White and American Indian or Alaska Native (n=138).

Table 4. Race of Survey Respondents (n=11,640)

Race*	Number (Percent)
White	9,097 (78.2%)
Black or African American	951 (8.2%)
American Indian or Alaska Native	249 (2.1%)
Asian	244 (2.1%)
Native Hawaiian or Other Pacific Islander	40 (0.3%)
No Response	1,300 (11.2%)

* Respondents could select multiple options.

Figure 3. Race of Survey Respondents (n=11,640)



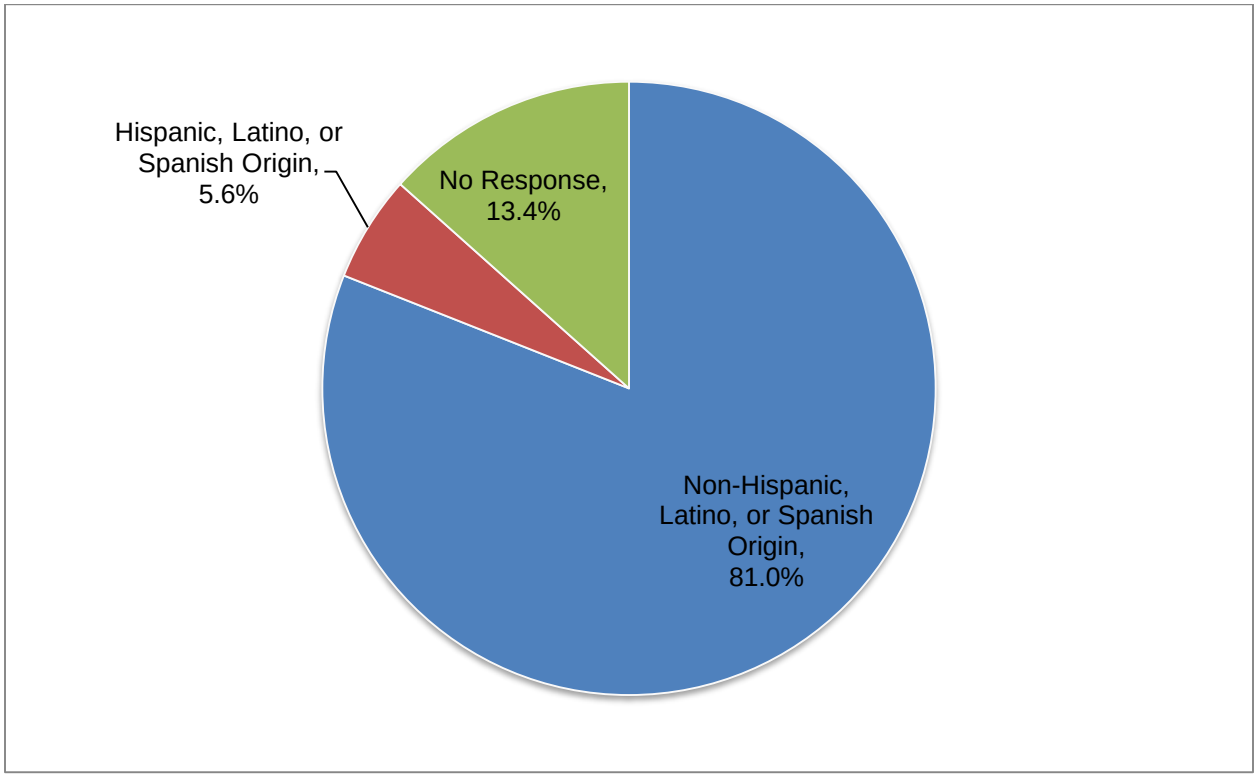
* Respondents could select multiple options.

With regard to ethnicity, approximately 6% of respondents (n=652) identified as Hispanic, Latino, or of Spanish origin.

Table 5. Ethnicity of Survey Respondents (n=11,640)

Ethnicity	Number (Percent)
Non-Hispanic, Latino, or Spanish Origin	9,424 (81.0%)
Hispanic, Latino, or Spanish Origin	652 (5.6%)
No Response	1,564 (13.4%)

Figure 4. Ethnicity of Survey Respondents (n=11,640)



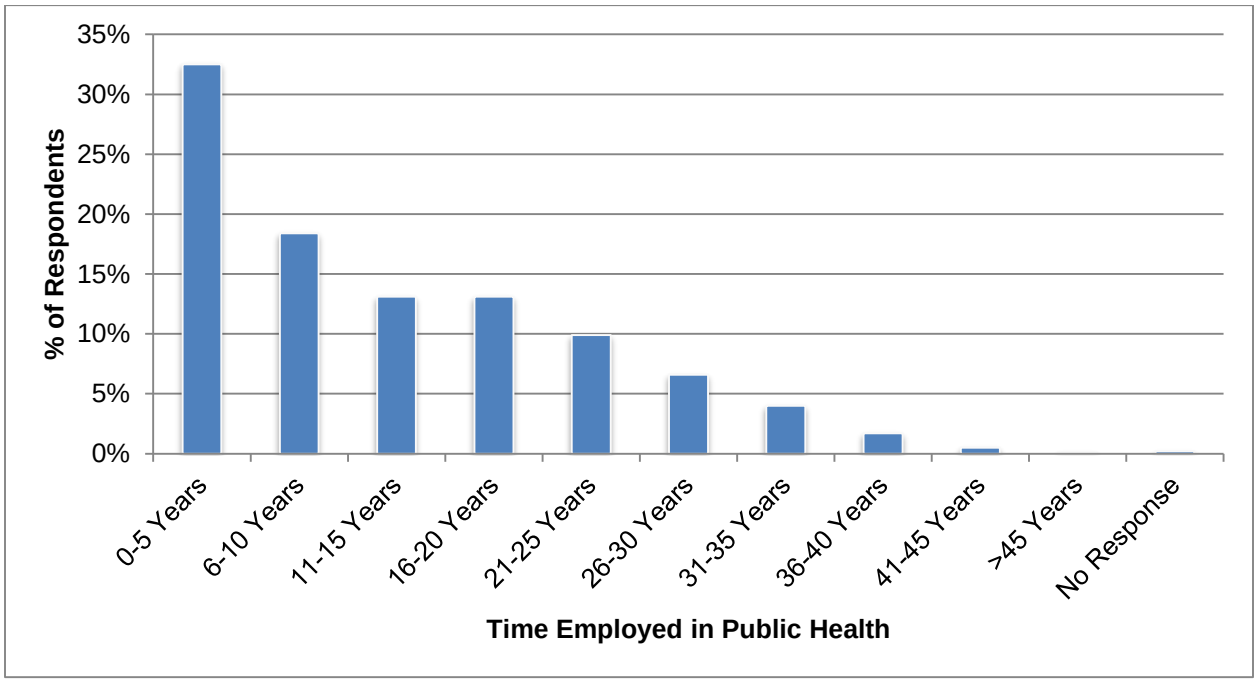
Length of Employment in Public Health

The average length of employment in public health among those who responded to the survey was nearly 13 years, with reported length of service ranging from 0 to 63 years. Nearly half of respondents (49%; n=5,694) had been employed in public health for more than 10 years, with 23% (n=2,652) employed for more than 20 years, while one-third had been employed for 5 years or less (33%; n=3,786).

Table 6. Length of Employment in Public Health of Survey Respondents (n=11,640)

Time Employed in Public Health	Number (Percent)
0-5 Years	3,786 (32.5%)
6-10 Years	2,136 (18.4%)
11-15 Years	1,522 (13.1%)
16-20 Years	1,520 (13.1%)
21-25 Years	1,157 (9.9%)
26-30 Years	773 (6.6%)
31-35 Years	461 (4.0%)
36-40 Years	194 (1.7%)
41-45 Years	53 (0.5%)
>45 Years	14 (0.1%)
No Response	24 (0.2%)

Figure 5. Length of Employment in Public Health of Survey Respondents (n=11,640)



Education

To explore the education level of public health workers, the extent to which workers continue their education after beginning public health careers, and the proportion of workers formally educated in public health, the educational background of survey respondents was considered at two points in time. Survey respondents reported the highest level of education they had completed when entering the field of public health, as well as their education level at the time of the survey, and whether their highest degree held was in public health.

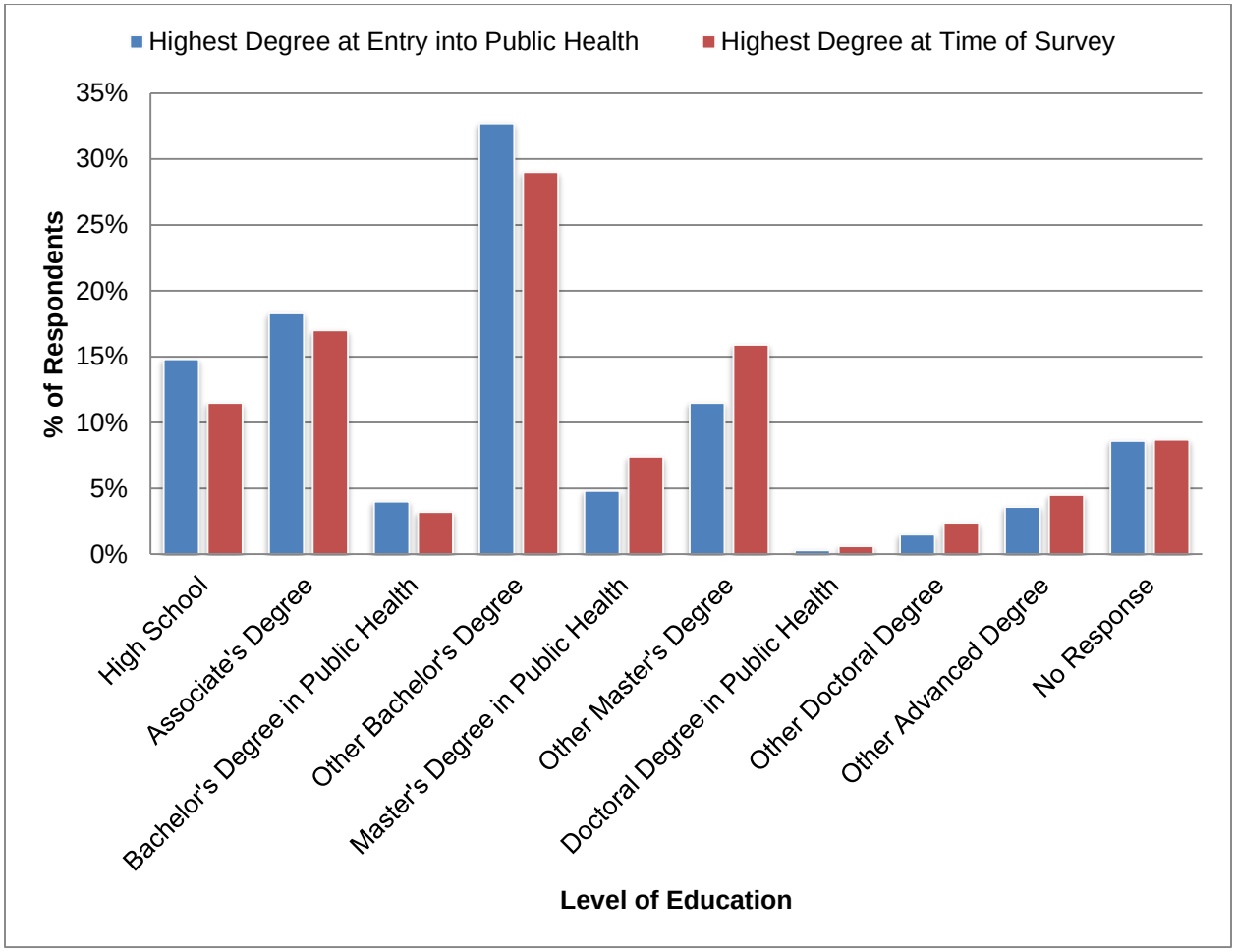
At the time of entry into the public health field, the most common highest degree held was a bachelor's degree, with 37% of respondents (n=4,271) reporting completing education at this level. An additional 33% of respondents (n=3,849) had completed less than a bachelor's degree, while 22% (n=2,516) held more advanced degrees. At the time of the survey, although a bachelor's degree remained the most common highest degree among respondents at 32% (n=3,740), the percentage of respondents holding more advanced degrees increased to 31% (n=3,580) and that holding less than a bachelor's degree decreased to 28% (n=3,309). Of the 10,629 respondents who reported their education level at both points in time, 18% (n=1,890) reported a change in education level, indicating that their education continued in some way after beginning their work in public health.

Survey respondents who reported that their highest degrees were in public health were in the minority. At entry into public health, 9% of respondents (n=1,056) had concluded their education with degrees in public health, with master's degrees most common at 5% of respondents (n=560). At the time of the survey, 11% of respondents (n=1,296) indicated that their highest level of education was a degree in public health. Master's degrees remained the most common type of public health degree at 7% (n=857).

Table 7. Education of Survey Respondents at Entry into Public Health and at Time of Survey (n=11,640)

Level of Education	Highest Degree at Entry into Public Health Number (Percent)	Highest Degree at Time of Survey Number (Percent)
High School	1,720 (14.8%)	1,335 (11.5%)
Associate's Degree	2,129 (18.3%)	1,974 (17.0%)
Bachelor's Degree in Public Health	466 (4.0%)	367 (3.2%)
Other Bachelor's Degree	3,805 (32.7%)	3,373 (29.0%)
Master's Degree in Public Health	560 (4.8%)	857 (7.4%)
Other Master's Degree	1,337 (11.5%)	1,855 (15.9%)
Doctoral Degree in Public Health	30 (0.3%)	72 (0.6%)
Other Doctoral Degree	172 (1.5%)	276 (2.4%)
Other Advanced Degree (e.g., MD, JD, etc.)	417 (3.6%)	520 (4.5%)
No Response	1,004 (8.6%)	1,011 (8.7%)

Figure 6. Education of Survey Respondents at Entry into Public Health and at Time of Survey (n=11,640)



Work Setting

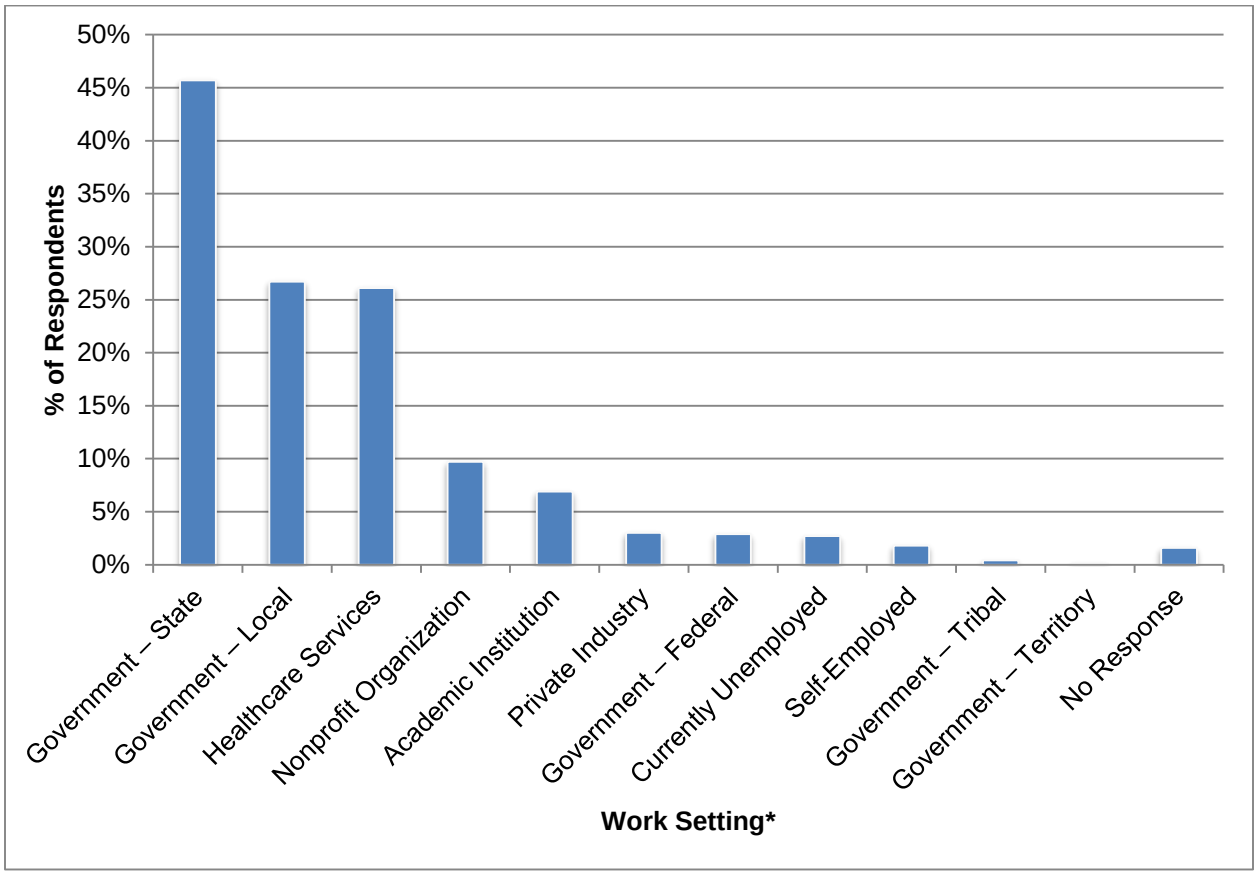
In terms of work setting, 71% (n=8,293) of respondents reported working within the government. Respondents were most likely to be employed in state government (46%; n=5,314), followed by local government (27%; n=3,105). Among non-governmental settings, 26% of respondents (n=3,035) worked in healthcare services and 10% (n=1,129) in nonprofit organizations. Few respondents worked in private industry (3%; n=347); were self-employed (2%; n=206); or were employed at the federal (3%; n=339), tribal (<1%; n=43), or territorial levels (<1%; n=16) of the government. Twenty-two percent of respondents (n=2,510) reported working in multiple settings, with the most common combination being state government and healthcare services (n=919), and 24% (n=2,841) worked exclusively outside of governmental settings.

Table 8. Current Work Setting of Survey Respondents (n=11,640)

Current Work Setting*	Number (Percent)
Government – State	5,314 (45.7%)
Government – Local	3,105 (26.7%)
Healthcare Services	3,035 (26.1%)
Nonprofit Organization	1,129 (9.7%)
Academic Institution	807 (6.9%)
Private Industry	347 (3.0%)
Government – Federal	339 (2.9%)
Currently Unemployed	319 (2.7%)
Self-Employed	206 (1.8%)
Government – Tribal	43 (0.4%)
Government – Territory	16 (0.1%)
No Response	182 (1.6%)

* Respondents could select multiple options.

Figure 7. Current Work Setting of Survey Respondents (n=11,640)



* Respondents could select multiple options.

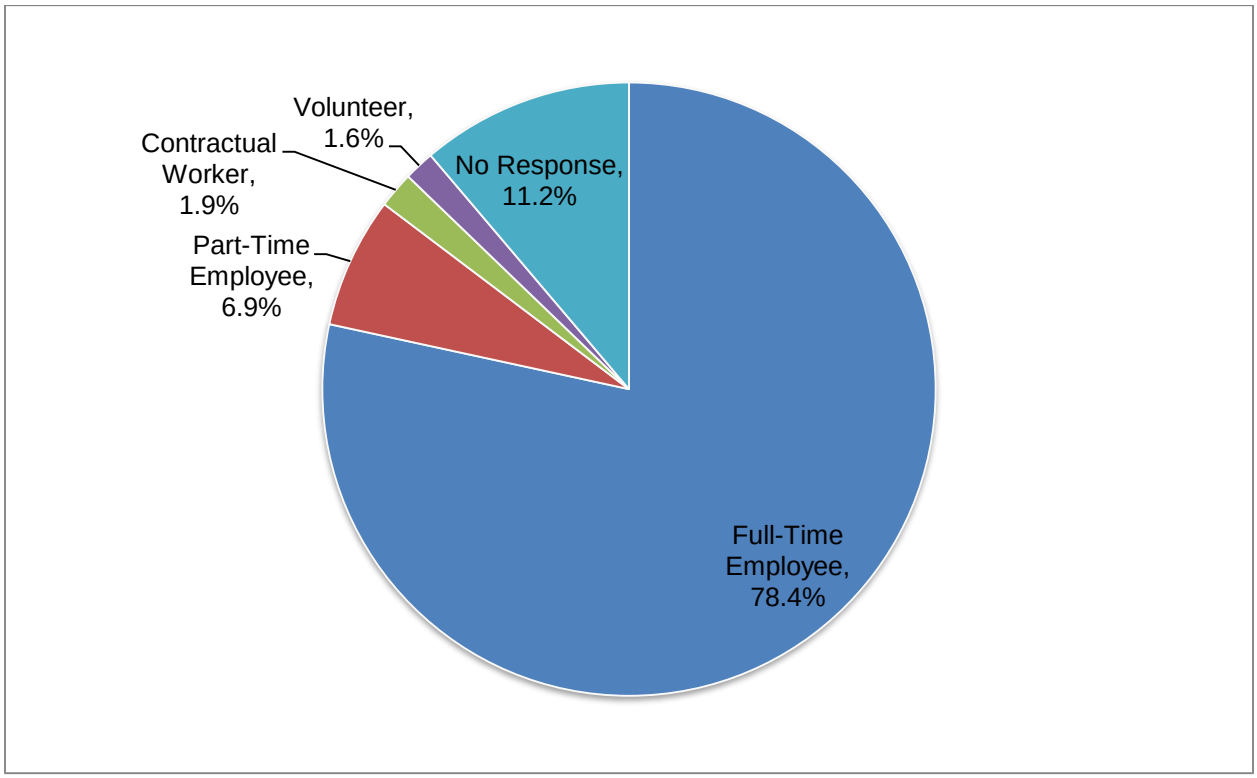
Employment Status

More survey respondents were employed full-time (78%; n=9,122) than were employed part-time (7%; n=804). Few respondents were employed on a contractual basis or served as volunteers (2% each).

Table 9. Employment Status of Survey Respondents (n=11,640)

Employment Status	Number (Percent)
Full-Time Employee	9,122 (78.4%)
Part-Time Employee	804 (6.9%)
Contractual Worker	222 (1.9%)
Volunteer	191 (1.6%)
No Response	1,301 (11.2%)

Figure 8. Employment Status of Survey Respondents (n=11,640)



Professional Role

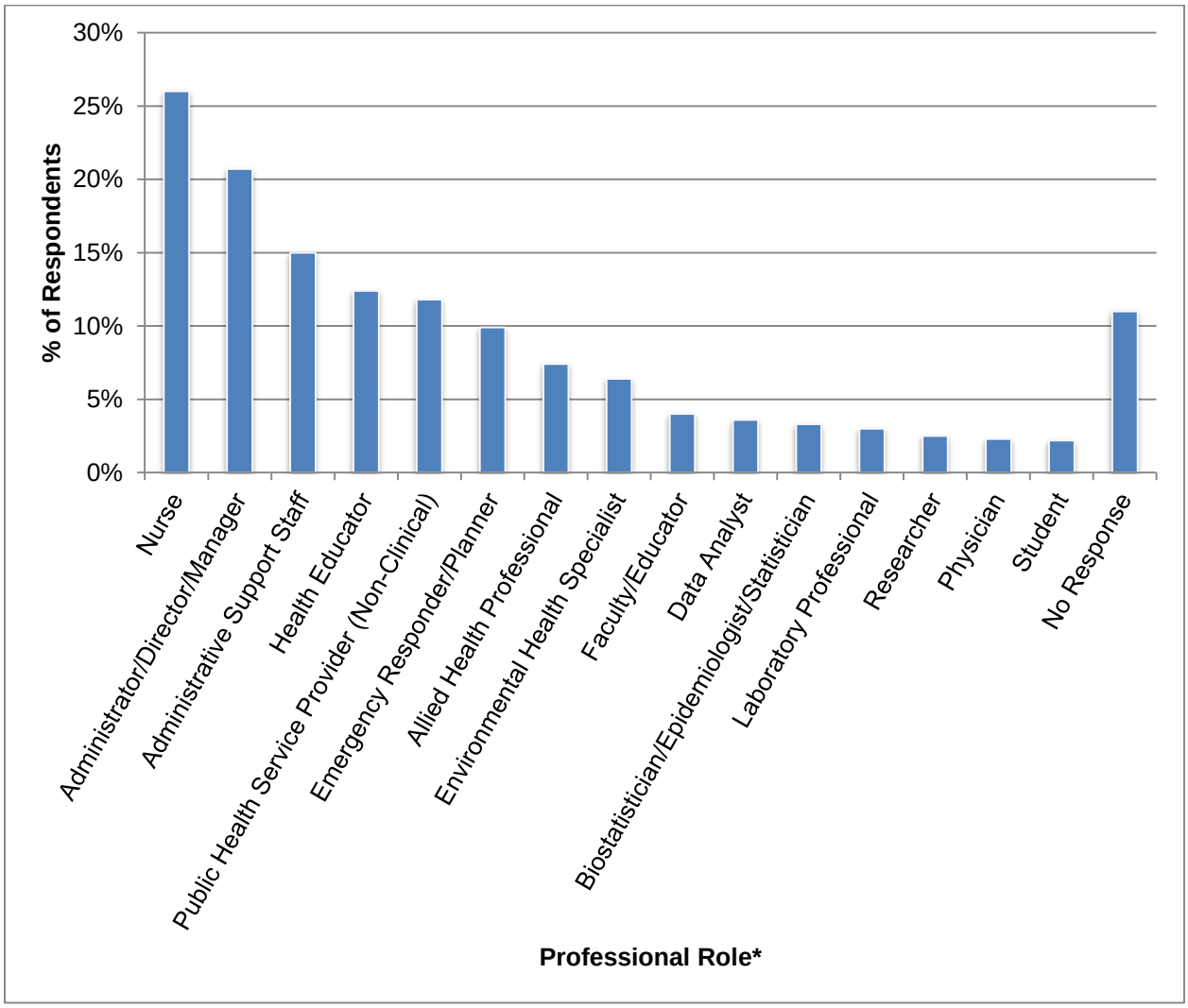
Nursing was the most common professional role among survey respondents; approximately one in four respondents (26%; n=3,022) reported working as a nurse. This was followed by administrative positions, with approximately one in five (21%; n=2,404) serving as an administrator, director, or manager and 15% (n=1,746) serving as administrative support staff. A variety of other professional roles were represented in lesser numbers among respondents, with the positions of researcher and physician among the least frequent (3% and 2%, respectively). Twenty-nine percent (n=3,398) of respondents reported filling multiple professional roles, with the most common combination being that of nurse and administrator/director/manager (n=503).

Table 10. Primary Professional Roles of Survey Respondents (n=11,640)

Primary Professional Role*	Number (Percent)
Nurse	3,022 (26.0%)
Administrator/Director/Manager	2,404 (20.7%)
Administrative Support Staff	1,746 (15.0%)
Health Educator	1,444 (12.4%)
Public Health Service Provider (Non-Clinical)	1,371 (11.8%)
Emergency Responder/Planner	1,152 (9.9%)
Allied Health Professional	859 (7.4%)
Environmental Health Specialist	742 (6.4%)
Faculty/Educator	467 (4.0%)
Data Analyst	418 (3.6%)
Biostatistician/Epidemiologist/Statistician	389 (3.3%)
Laboratory Professional	353 (3.0%)
Researcher	286 (2.5%)
Physician	262 (2.3%)
Student	261 (2.2%)
No Response	1,281 (11.0%)

* Respondents could select up to three options.

Figure 9. Primary Professional Roles of Survey Respondents (n=11,640)



* Respondents could select up to three options.

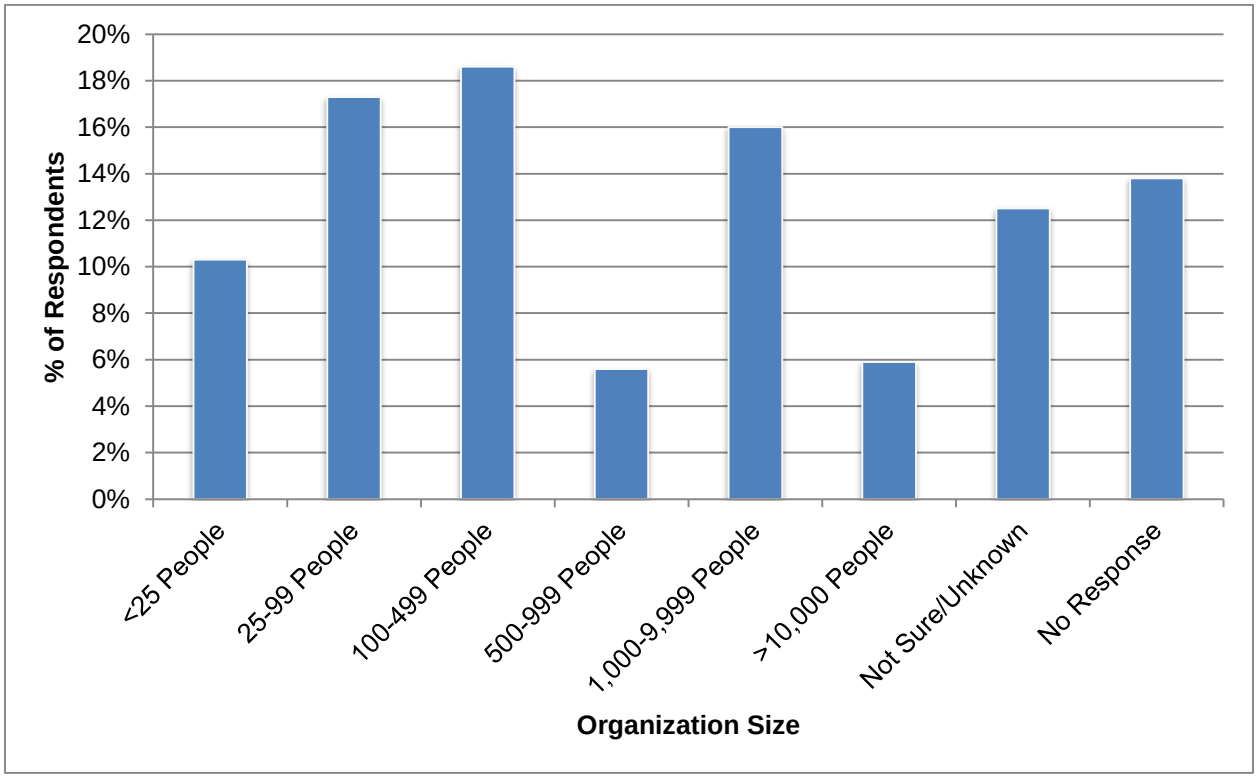
Organization Size

The organizations in which respondents were employed varied in size from fewer than 25 people to more than 10,000. Organizations employing 100-499 people were most common at 19% (n=2,166), although significant proportions of respondents were employed at organizations staffed by 25-99 people (17%; n=2,015) and 1,000-9,999 people (16%; n=1,866) as well.

Table 11. Size of Organizations Where Survey Respondents Work (n=11,640)

Size of Organization	Number (Percent)
<25 People	1,202 (10.3%)
25-99 People	2,015 (17.3%)
100-499 People	2,166 (18.6%)
500-999 People	647 (5.6%)
1,000-9,999 People	1,866 (16.0%)
>10,000 People	686 (5.9%)
Not Sure/Unknown	1,457 (12.5%)
No Response	1,601 (13.8%)

Figure 10. Size of Organizations Where Survey Respondents Work (n=11,640)



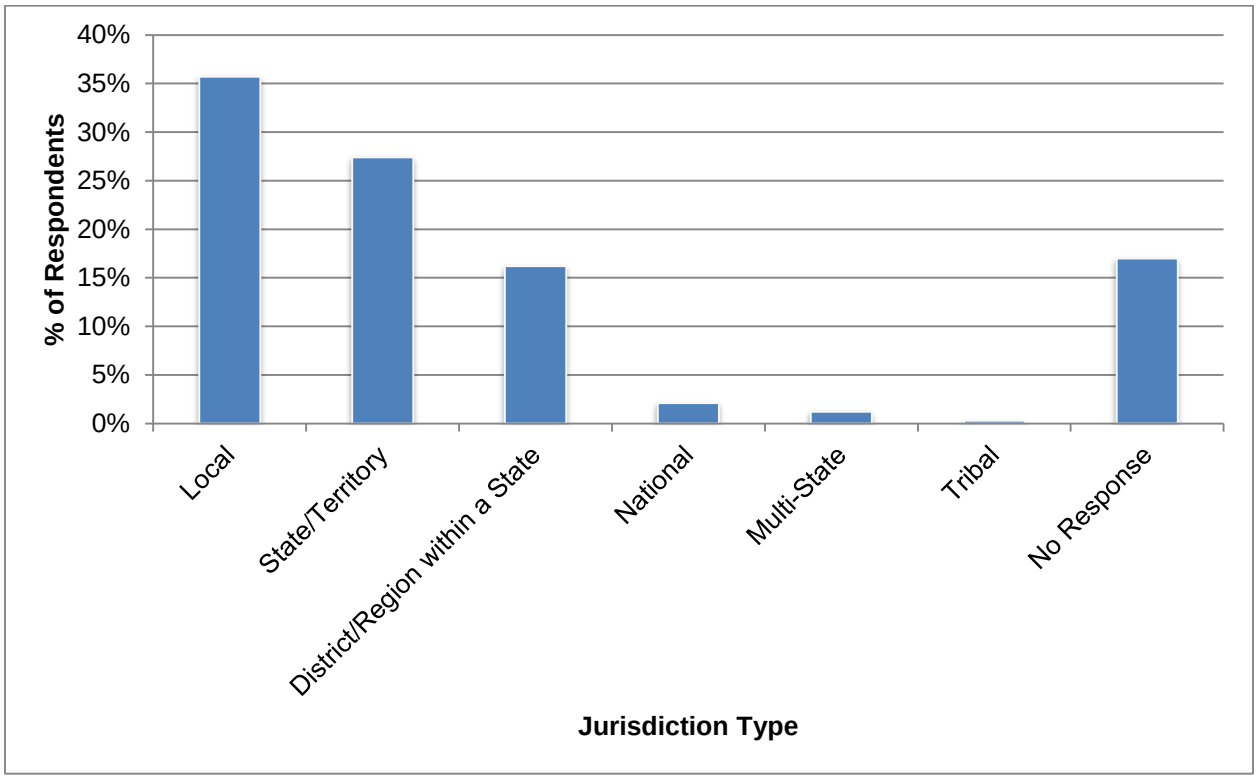
Jurisdiction Type and Size

Respondents were most likely to work in organizations serving local jurisdictions (36%; n=4,158), followed by state or territorial jurisdictions (27%; n=3,185) and districts or regions within a state (16%; n=1,887). Few respondents were employed by national organizations (2%; n=249) or those serving multi-state (1%; n=141) or tribal (<1%; n=40) areas.

Table 12. Type of Jurisdiction Served by Survey Respondents (n=11,640)

Type of Jurisdiction	Number (Percent)
Local	4,158 (35.7%)
State/Territory	3,185 (27.4%)
District/Region within a State	1,887 (16.2%)
National	249 (2.1%)
Multi-State	141 (1.2%)
Tribal	40 (0.3%)
No Response	1,980 (17.0%)

Figure 11. Type of Jurisdiction Served by Survey Respondents (n=11,640)



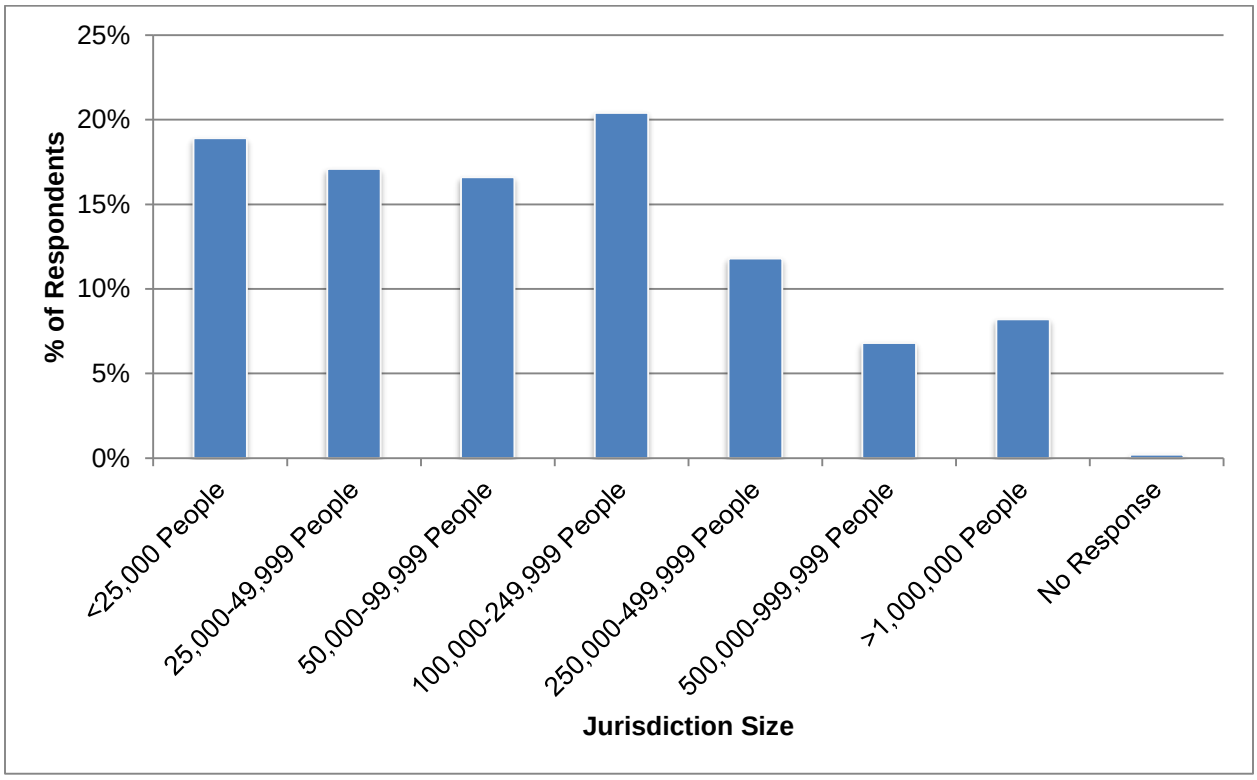
Of the 6,085 respondents employed by organizations operating at local, district/region within a state, or tribal levels, 36% (n=2,192) worked in organizations serving fewer than 50,000 people. Conversely, 8% (n=496) of respondents working at these levels served jurisdictions with populations over 1 million.

Table 13. Size of Jurisdiction Served by Survey Respondents (n=6,085*)

Jurisdiction Size	Number (Percent)
<25,000 People	1,149 (18.9%)
25,000-49,999 People	1,043 (17.1%)
50,000-99,999 People	1,012 (16.6%)
100,000-249,999 People	1,243 (20.4%)
250,000-499,999 People	715 (11.8%)
500,000-999,999 People	415 (6.8%)
>1,000,000 People	496 (8.2%)
No Response	12 (0.2%)

* Data collected from respondents working for local, district/region within a state, and tribal employers only.

Figure 12. Size of Jurisdiction Served by Survey Respondents (n=6,085*)



* Data collected from respondents working for local, district/region within a state, and tribal employers only.

Governmental Public Health

The Council on Linkages has been particularly concerned about recruitment and retention of workers in governmental public health agencies. As a result of this concern, the survey included several questions designed specifically for governmental public health workers. These questions explored how long individuals were employed in governmental public health agencies, including for their current employers, and their locations prior to entering the governmental public health workforce.

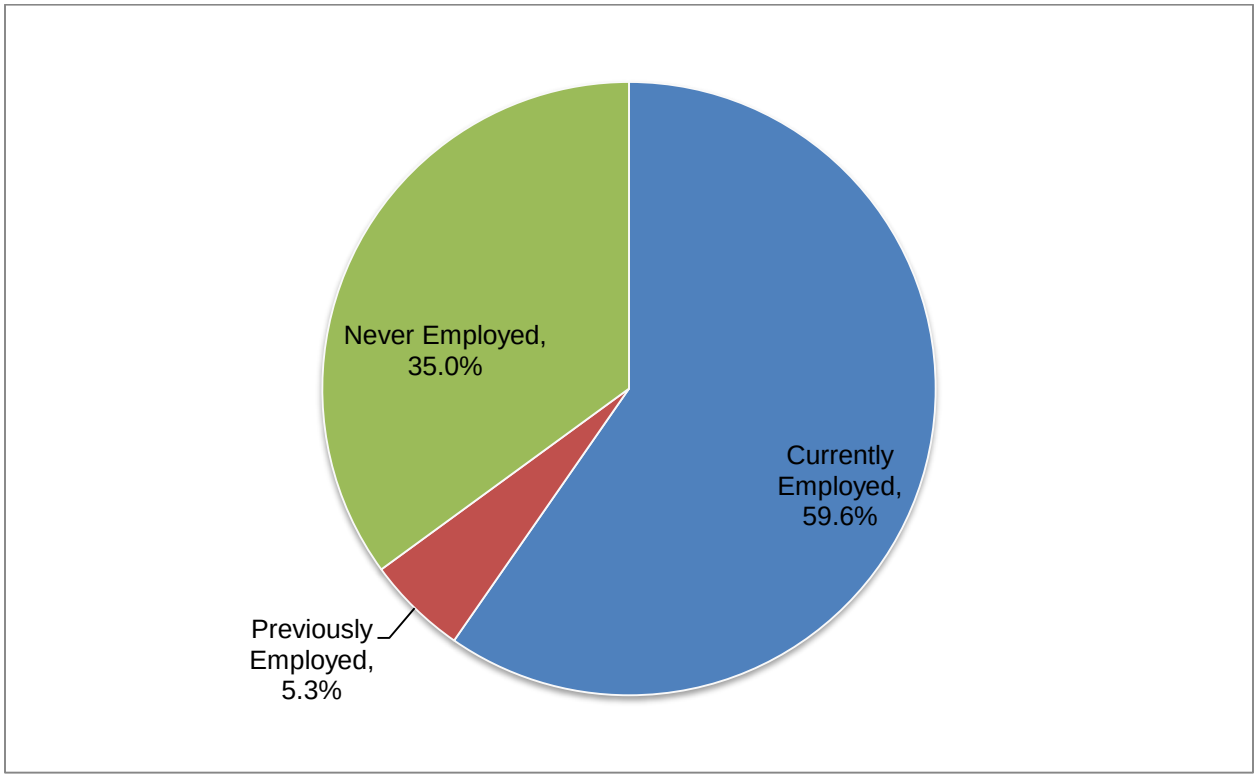
Employment in Governmental Public Health

The majority of survey respondents had been employed by a governmental public health agency at some time in their careers (65%; n=7,560). Of those who indicated that they had ever worked in governmental public health, 92% (n=6,939; 60% of all respondents) continued to do so at the time of the survey.

Table 14. Employment in Governmental Public Health (n=11,640)

Employment in Governmental Public Health	Number (Percent)
Ever Employed	7,560 (64.9%)
Currently Employed	6,939 (59.6%)
Previously Employed	621 (5.3%)
Never Employed	4,076 (35.0%)
No Response	4 (<0.1%)

Figure 13. Employment in Governmental Public Health (n=11,640)



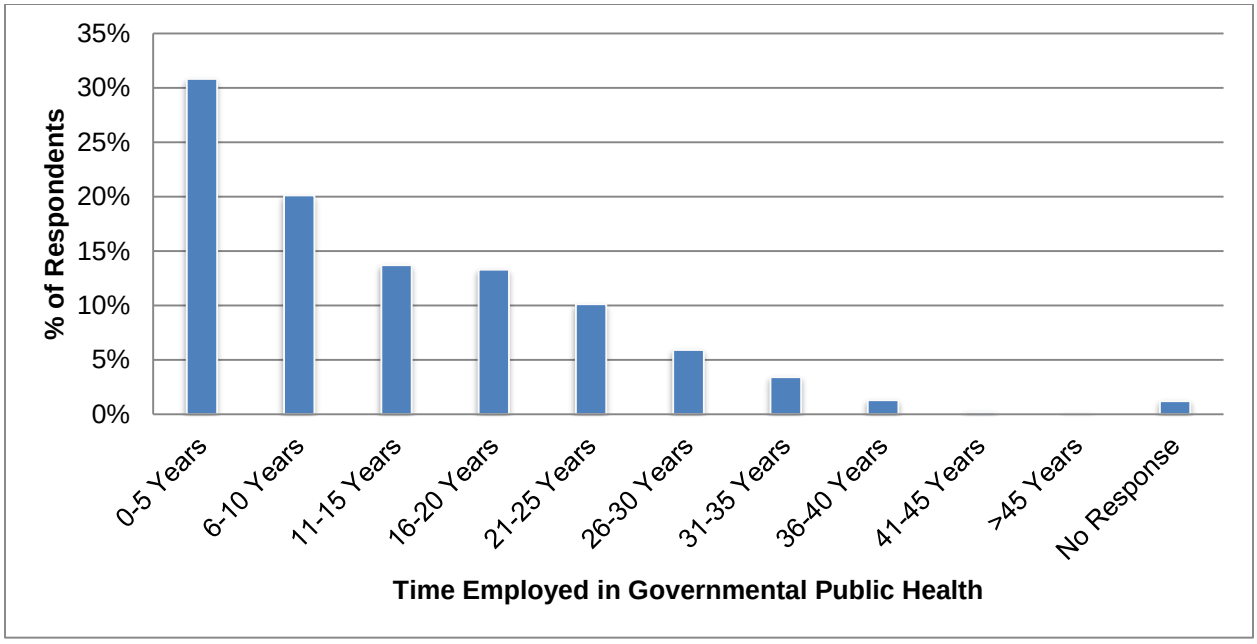
Length of Employment in Governmental Public Health

The average length of governmental employment among respondents who had ever worked for a governmental public health agency was 13 years, with reported length of governmental service ranging from 0 to 55 years. Approximately 31% of these respondents (n=2,327) had worked in governmental public health for five years or less. Forty-eight percent (n=3,623) had been employed in governmental public health for more than 10 years.

Table 15. Length of Employment in Governmental Public Health (n=7,560)

Time Employed in Governmental Public Health	Number (Percent)
0-5 Years	2,327 (30.8%)
6-10 Years	1,517 (20.1%)
11-15 Years	1,038 (13.7%)
16-20 Years	1,003 (13.3%)
21-25 Years	760 (10.1%)
26-30 Years	445 (5.9%)
31-35 Years	259 (3.4%)
36-40 Years	97 (1.3%)
41-45 Years	18 (0.2%)
>45 Years	3 (<0.1%)
No Response	93 (1.2%)

Figure 14. Length of Employment in Governmental Public Health (n=7,560)



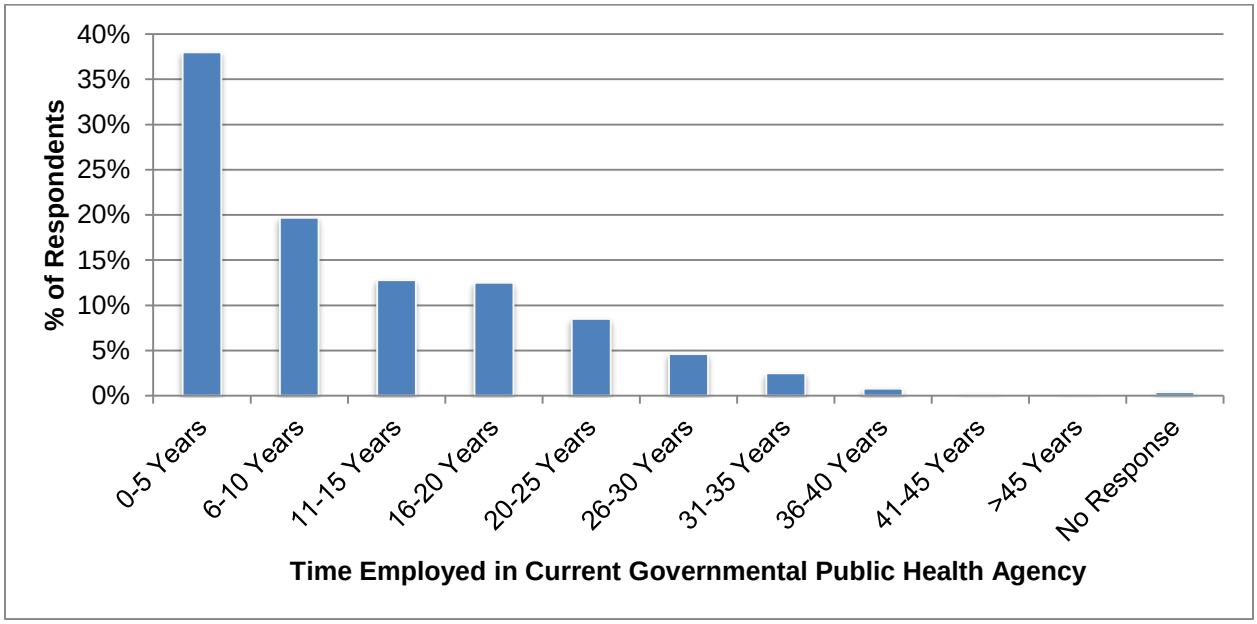
Length of Employment in Current Governmental Public Health Agency

Among respondents employed by governmental public health agencies at the time of the survey, the average length of employment with their current agencies was 11 years. Thirty-eight percent of respondents (n=2,637) had worked for their current employers for five years or less, while 42% (n=2,902) had done so for more than 10 years.

Table 16. Length of Employment in Current Governmental Public Health Agency (n=6,939)

Time Employed in Current Governmental Public Health Agency	Number (Percent)
0-5 Years	2,637 (38.0%)
6-10 Years	1,370 (19.7%)
11-15 Years	890 (12.8%)
16-20 Years	865 (12.5%)
20-25 Years	588 (8.5%)
26-30 Years	317 (4.6%)
31-35 Years	176 (2.5%)
36-40 Years	55 (0.8%)
41-45 Years	10 (0.1%)
>45 Years	1 (<0.1%)
No Response	30 (0.4%)

Figure 15. Length of Employment in Current Governmental Public Health Agency (n=6,939)



Location Prior to Entering Governmental Public Health

Respondents reported entering governmental public health from a variety of settings. The most common prior setting was healthcare services (31%; n=2,368), followed by private industry (23%; n=1,723). Slightly more than 10% of respondents (n=786) were employed by other governmental agencies immediately prior to joining the governmental public health workforce.

Educational programs were also a common prior setting for respondents working in governmental public health. Thirty-three percent of respondents (n=2,520) reported entering governmental public health from educational programs, with 10% of respondents (n=729) coming from degree programs specifically in public health.

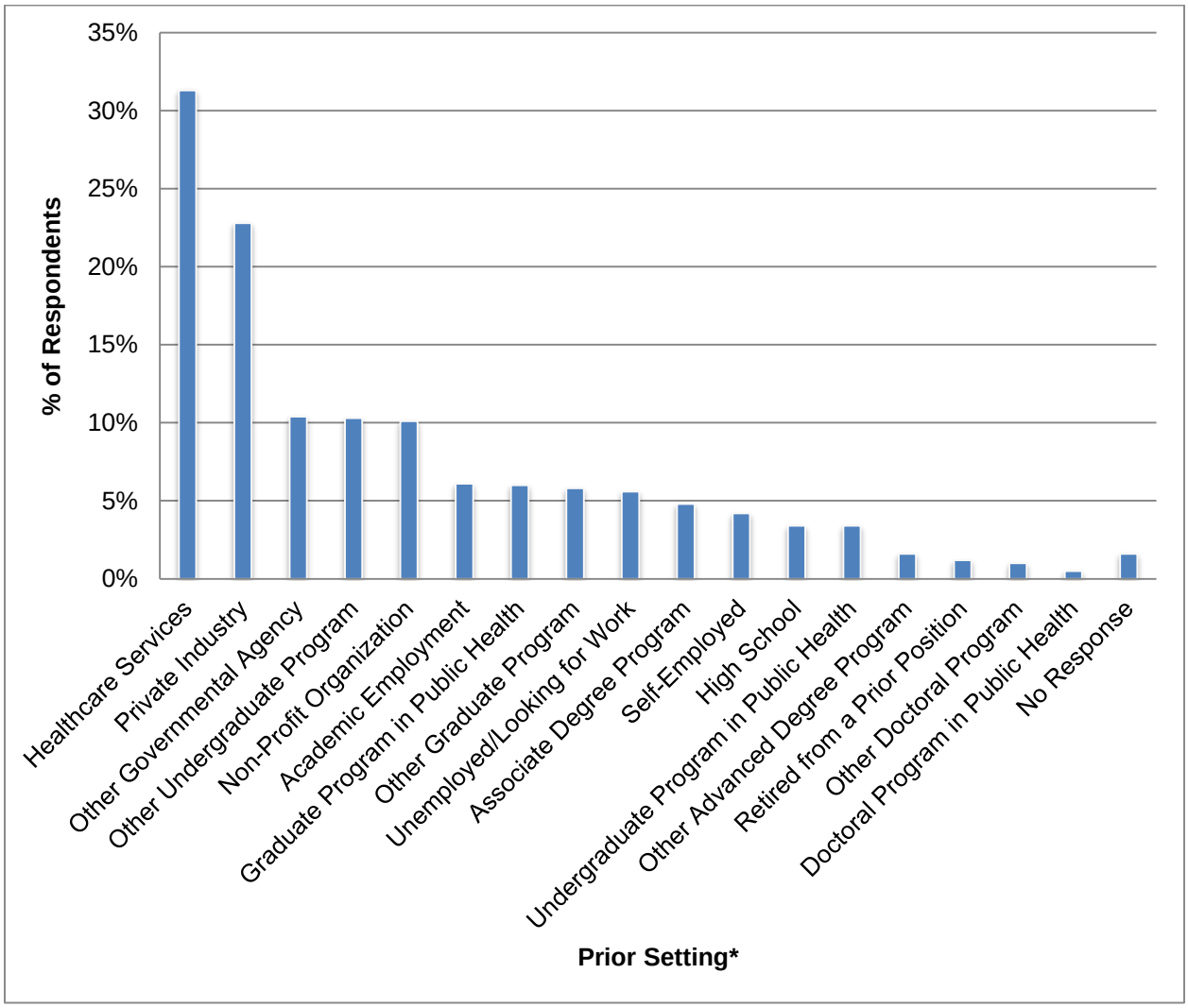
Twenty-two percent (n=1,656) of respondents reported multiple prior locations, with healthcare services and private industry being the most common combination (n=270).

Table 17. Location Prior to Entering Governmental Public Health (n=7,560)

Prior Setting*	Number (Percent)
Healthcare Services	2,368 (31.3%)
Private Industry	1,723 (22.8%)
Other Governmental Agency	786 (10.4%)
Other Undergraduate Program	780 (10.3%)
Non-Profit Organization	762 (10.1%)
Academic Employment	461 (6.1%)
Graduate Program in Public Health	456 (6.0%)
Other Graduate Program	442 (5.8%)
Unemployed/Looking for Work	421 (5.6%)
Associate Degree Program	360 (4.8%)
Self-Employed	314 (4.2%)
High School	255 (3.4%)
Undergraduate Program in Public Health	255 (3.4%)
Other Advanced Degree Program (e.g., MD, JD, etc.)	121 (1.6%)
Retired from a Prior Position	88 (1.2%)
Other Doctoral Program	79 (1.0%)
Doctoral Program in Public Health	36 (0.5%)
No Response	119 (1.6%)

* Respondents could select multiple options.

Figure 16. Location Prior to Entering Governmental Public Health (n=7,560)



* Respondents could select multiple options.

Recruitment and Retention

To explore recruitment and retention, survey respondents were asked to indicate how much a variety of factors influenced their decisions to begin working for their current employers and to continue working for those employers. Both factors related to the organizations in which public health workers are employed and personal factors were considered, and respondents rated the influence of factors on a scale from 0 (no influence) to 10 (a lot of influence).

Organizational Factors

Twelve organizational factors that may influence public health workers' employment decisions were explored. Survey respondents rated each of these factors on a scale of 0 (no influence) to 10 (a lot of influence) in terms of its impact on their initial decisions to work for their current employers as well as their decisions to remain working for their current employers. Mean ratings and standard deviations were calculated.

Among the strongest organizational influences on survey respondents' decisions to begin working for their current employers were the *specific work functions or activities involved in the current position* (6.9 average rating), *job security* (6.8 average rating), *competitive benefits* (6.7 average rating), and *identifying with the mission of the organization* (6.5 average rating). Similar factors were identified as influential in the decision to remain with those employers, with *job security* receiving the highest average rating at 7.4, followed by the *specific work functions or activities involved in the current position* (6.9 average rating), *competitive benefits* (6.7 average rating), *identifying with the mission of the organization* (6.7 average rating), and *flexibility of work schedule* (6.2 average rating).

The *ability to telecommute* received the lowest average ratings in terms of both recruitment and retention (1.3 and 1.9, respectively), followed by having an *immediate opportunity for advancement or promotion* (3.7 and 3.3, respectively). Factors such as *ability to innovate*, *competitive salary*, and *future opportunities for promotion* fell somewhere in between for both recruitment and retention.

Table 18. Organizational Factors Influencing Decision to Work for Current Employer and to Remain Working for Current Employer (n=11,640*)

Organizational Factor	Factors Influencing Recruitment Mean (SD)	Factors Influencing Retention Mean (SD)
Specific work functions or activities involved in current position	6.90 (2.76)	6.90 (2.91)
Job security	6.75 (3.15)	7.39 (3.01)
Competitive benefits	6.70 (3.18)	6.73 (3.29)
Identifying with the mission of the organization	6.49 (3.11)	6.67 (3.13)
Future opportunities for training/continuing education	5.81 (3.21)	5.83 (3.35)
Flexibility of work schedule	5.42 (3.56)	6.23 (3.51)
Ability to innovate	5.30 (3.27)	5.62 (3.36)
Competitive salary	4.76 (3.38)	4.97 (3.43)
Future opportunities for promotion	4.74 (3.36)	4.00 (3.54)
Autonomy/Employee empowerment	4.26 (3.44)	5.04 (3.58)
Immediate opportunity for advancement/promotion	3.70 (3.21)	3.30 (3.27)
Ability to telecommute	1.31 (2.64)	1.91 (3.16)

* Response rates for each factor ranged from 87.3% to 91.9%.

Personal Factors

Survey respondents were also asked about seven personal factors influencing their decisions to begin and continue working for their current employers. As with organizational factors, similar factors seemed to play a role in both recruitment and retention. Respondents rated *enjoy living in the area* (6.1 average rating), *personal commitment to public service* (6.1 average rating), *wanted to live close to family and friends* (5.9 average rating), and *wanted a job in the public health field* (5.8 average rating) as the personal factors most strongly influencing their decisions to begin working for their current employers. These same factors received the highest ratings in terms of deciding to remain working for those employers, although *personal commitment to public service* was given the highest average rating for retention, followed by *enjoy living in the area* (6.6 and 6.5 average ratings, respectively). For both recruitment and retention, having a *family member or role model working in public health* did not appear to be a strong influence on employment decisions.

Table 19. Personal Factors Influencing Decision to Work for Current Employer and to Remain Working for Current Employer (n=11,640*)

Personal Factor	Factors Influencing Recruitment Mean (SD)	Factors Influencing Retention Mean (SD)
Enjoy living in the area (e.g., climate, amenities, culture)	6.13 (3.63)	6.53 (3.61)
Personal commitment to public service	6.12 (3.30)	6.62 (3.22)
Wanted to live close to family and friends	5.86 (3.99)	6.22 (3.84)
Wanted a job in the public health field	5.82 (3.62)	6.09 (3.56)
Needed a job, but it didn't matter if it was in public health	3.89 (3.72)	3.53 (3.66)
Wanted to work with specific individual(s)	3.27 (3.48)	5.12 (3.73)
Family member/role model was/is working in public health	1.69 (3.00)	1.63 (2.96)

* Response rates for each factor ranged from 87.5% to 91.1%.

Comparing Organizational and Personal Factors

When looking across organizational and personal factors, four of the five highest scoring factors for both recruitment and retention were organizational rather than personal. These organizational factors included the *specific work functions or activities involved in the current position*, *job security*, *competitive benefits*, and *identifying with the mission of the organization*. These factors were joined by *enjoying living in the area* in terms of recruitment and *personal commitment to public service* for retention.

In addition, the majority of both organizational and personal factors were rated more highly in terms of their influence on decisions to remain working for employers than on decisions to take jobs with those employers initially. The only factors with lower average scores for retention compared to recruitment were *future opportunities for promotion* and *immediate opportunity for advancement/promotion*, among organizational factors, and *needed a job, but it didn't matter if it was in public health* and *family member/role model was/is working in public health*, among personal factors.

Organizational Environment

The environments in which individuals work can play an important role in job satisfaction, and factors related to organizational environment can influence employee recruitment and retention. To explore organizational environment, survey respondents were asked to react to 17 positive statements about characteristics of the environments in which they work. Statements considered aspects of leadership, management, and professional development, and respondents indicated how strongly they agreed or disagreed with the statements using a five-point Likert scale.

Leadership

Organizational leadership was explored with statements addressing trust and mutual respect, shared vision, professional standards, performance evaluations, and feedback. Overall, respondents were generally favorable toward organizational leadership, with more than half strongly or somewhat agreeing with the six positive statements presented (agreement ranged from 51-65% across the statements). Respondents were most likely to agree that *employees are held to high professional standards for the work they do*, with 65% of respondents (n=6,727) agreeing with this statement. However, more than a quarter of respondents disagreed with each of the other five positive statements about leadership within their organizations (disagreement ranged from 22-33% across all statements). Respondents most strongly disagreed that *there is an atmosphere of trust and mutual respect within the organization*, with 33% of respondents (n=3,435) indicating that they somewhat or strongly disagreed with this statement.

Table 20. Perceptions of Organizational Leadership (n=11,640*)

Organizational Leadership	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
There is an atmosphere of trust and mutual respect within the organization (n=10,402)	2,247 (21.6%)	3,553 (34.2%)	1,167 (11.2%)	1,958 (18.8%)	1,477 (14.2%)
Management and staff have a shared vision (n=10,392)	2,018 (19.4%)	3,746 (36.0%)	1,427 (13.7%)	1,944 (18.7%)	1,257 (12.1%)
Employees are held to high professional standards for the work they do (n=10,381)	3,211 (30.9%)	3,516 (33.9%)	1,332 (12.8%)	1,384 (13.3%)	938 (9.0%)
Employee performance evaluations are handled in an appropriate manner (n=10,381)	2,442 (23.5%)	3,051 (29.4%)	1,990 (19.2%)	1,624 (15.6%)	1,274 (12.3%)
The procedures for employee performance evaluations are consistent (n=10,371)	2,414 (23.3%)	2,893 (27.9%)	2,030 (19.6%)	1,628 (15.7%)	1,406 (13.6%)
Employees receive constructive feedback that can help them improve their performance (n=10,381)	2,206 (21.3%)	3,447 (33.2%)	1,869 (18.0%)	1,596 (15.4%)	1,263 (12.2%)

* Response rates for each statement ranged from 89.1% to 89.4%.

Management

A further six statements reflected areas of management, and respondents were asked to indicate their level of agreement that management within their organizations had made a sustained effort over the past 12 months to address employee concerns about tools, professional development, autonomy/employee empowerment, leadership issues, support for new employees, and safety and security. As with organizational leadership, respondents were generally favorable toward organizational management, with approximately half indicating that they strongly or somewhat agreed with all six positive statements (agreement ranged from 45-64% across the statements). Respondents most strongly agreed that management has made a sustained effort to address employee concerns about *safety and security*, with 64% of respondents (n=6,570) agreeing with this statement, and about *tools needed to do the job* (63% agreement; n=6,463).

However, similar to the findings regarding aspects of organizational leadership, up to a third of respondents disagreed with the positive statements presented (disagreement ranged from 14-32% across the statements). Respondents most strongly disagreed that management has made a sustained effort to address employee concerns about *leadership issues*, with 32% of respondents (n=3,259) indicating that they somewhat or strongly disagreed with that statement. Twenty-nine percent (n=2,938) disagreed that management had addressed concerns about *autonomy/employee empowerment*.

Table 21. Perceptions of Management Efforts to Address Employee Concerns (n=11,640*)

Organizational Management	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
Tools needed to do my job (n=10,334)	2,698 (26.1%)	3,765 (36.4%)	1,562 (15.1%)	1,393 (13.5%)	916 (8.9%)
Professional development (n=10,306)	2,520 (24.5%)	3,628 (35.2%)	1,697 (16.5%)	1,415 (13.7%)	1,046 (10.1%)
Autonomy/Employee empowerment (n=10,307)	1,777 (17.2%)	3,022 (29.3%)	2,570 (24.9%)	1,609 (15.6%)	1,329 (12.9%)
Leadership issues (n=10,295)	1,703 (16.5%)	2,974 (28.9%)	2,359 (22.9%)	1,746 (17.0%)	1,513 (14.7%)
New employee support (n=10,289)	1,869 (18.2%)	3,104 (30.2%)	2,995 (29.1%)	1,324 (12.9%)	997 (9.7%)
Safety and security (n=10,303)	2,885 (28.0%)	3,685 (35.8%)	2,286 (22.2%)	830 (8.1%)	617 (6.0%)

* Response rates for each statement ranged from 88.4% to 88.8%.

Professional Development

Finally, respondents were presented with five positive statements about professional development within their organizations related to aspects of funding, time, technology training, peer learning, and knowledge and skill development. Level of agreement with these statements varied widely, from 36-66% agreement across the statements. The most agreement was with the statement that *employees are provided with opportunities to learn from one another* (66%; n=6,793), followed by *professional development provides employees with the knowledge and skills most needed to do their work effectively* (60%; n=6,127). Disagreement also ranged widely, from 18-51% across the statements. Fifty-one percent of respondents (n=5,177) disagreed that *sufficient funds and resources are available to allow employees to take advantage of professional development opportunities*.

Table 22. Perceptions of Professional Development (n=11,640*)

Professional Development	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
Sufficient funds and resources are available to allow employees to take advantage of professional development opportunities (n=10,253)	1,104 (10.8%)	2,625 (25.6%)	1,347 (13.1%)	2,548 (24.9%)	2,629 (25.6%)
Adequate time is provided for professional development (n=10,240)	1,523 (14.9%)	3,063 (29.9%)	1,717 (16.8%)	2,204 (21.5%)	1,733 (16.9%)
Employees have sufficient training to fully utilize technology needed for their work (n=10,218)	1,557 (15.2%)	3,366 (32.9%)	1,733 (17.0%)	2,299 (22.5%)	1,263 (12.4%)
Employees are provided with opportunities to learn from one another (n=10,242)	2,435 (23.8%)	4,358 (42.6%)	1,616 (15.8%)	1,195 (11.7%)	638 (6.2%)
Professional development provides employees with the knowledge and skills most needed to do their work effectively (n=10,218)	2,399 (23.5%)	3,728 (36.5%)	1,936 (18.9%)	1,359 (13.3%)	796 (7.8%)

* Response rates for each statement ranged from 87.8% to 88.1%.

Implications and Conclusions

The public health workforce represents a critical element of the nation's health system, and ensuring a sufficient, capable workforce is key to ensuring the health of Americans. In conducting this survey, the Council on Linkages aimed to contribute to the information available about the individuals who participate in the public health workforce and their reasons for doing so. Greater access to this type of information can begin providing a foundation on which to base strategies for recruiting and retaining public health workers. The findings presented in this report suggest a number of potential considerations for public health policymakers, leaders, managers, and others involved in workforce initiatives.

Age of Public Health Workers

In general, survey respondents tended to be closer to the end of their careers than the beginning. The average age of public health workers responding to this survey was 47, with the youngest being 18 and the oldest 83. More than half (58%) were 45 or older, with 28% being 55 or older. Only 15% were under the age of 35. In addition, approximately half of the respondents had been employed in public health for more than 10 years, with nearly one-quarter working in public health for more than 20 years. Effective mechanisms for recruiting individuals into public health may become more and more critical as the existing workforce ages and enters retirement.

Diversity of Public Health Workers

For any profession serving a diverse public, diversity of the workforce is an important consideration, and there appears to be limited diversity among the public health workers responding to this survey. Significant majorities of respondents identified as female, White, and non-Hispanic, suggesting room for improvement in ensuring the diversity of the workforce is well matched to the public it serves.

Public Health Education

Relatively few survey respondents completed their education with degrees specifically in public health. While 55% of these public health workers held bachelor's, master's, or doctoral degrees at the start of their public health careers, only 9% of those indicated that their highest degrees earned were in public health. This percentage had increased by the time of the survey, but still remained relatively low: 58% of workers had now earned bachelor's, master's, or doctoral degrees, with 11% reporting their highest degrees were in public health.

The relative lack of public health degrees reported by survey respondents also did not indicate a lack of education in general. The most common level of education among respondents was a bachelor's degree. Both at entry into the field of public health and at the time of the survey, approximately one-third of respondents indicated that they had completed bachelor's degrees, while another 22% held more advanced degrees upon entering public health. This percentage increased over time, with approximately 31% completing these types of advanced degrees by the time of the survey.

Nearly one in five survey respondents continued their formal education after beginning work in the field. In comparing education levels at the start of their public health careers and at the time of the survey, 18% of respondents indicated continuing their education in some manner.

Employment Beyond Governmental Public Health

Public health may traditionally be thought of as the domain of government, and it is true that more respondents reported employment in various levels of government (71%) than in any other setting. However, a significant number of respondents (22%) reported working in multiple settings, and 24% worked exclusively outside of governmental settings. The most common non-governmental setting reported by respondents was healthcare services (26%). It is important to take into consideration the variety of settings in which the work of public health may be accomplished in discussing issues of recruitment and retention within the field.

Recruit from Healthcare, Private Industry, Academic Programs

Healthcare settings, as well as private industry, may provide opportunities for recruiting workers into governmental public health. While there may be a tendency to think of people leaving governmental public health for more lucrative jobs in healthcare and the private sector, the reverse also seems to occur – for respondents entering governmental public health, approximately 31% came from healthcare services and 23% from private industry. Comparatively, few respondents moved into governmental public health from other governmental agencies (10%), non-profit organizations (10%), or academia (6%). Creating opportunities for qualified professionals to move between healthcare, private industry, and governmental public health and looking for potential hires outside of the public sector may help with recruitment.

An additional opportunity for recruitment may be presented by academic programs, as 33% of respondents indicated entering public health directly from educational programs, although not necessarily from public health programs. Involving educational institutions in recruitment efforts may be beneficial; however, efforts could reach beyond schools and programs of public health: only 10% of respondents reported coming into governmental public health from public health degree programs.

Importance of Nursing

In this study, nurses accounted for one in four survey respondents. As is apparent in the diversity of educational backgrounds and professional roles held by public health workers responding to this survey, public health as a field encompasses a wide variety of specialties. However, one profession in particular stands out – nursing. Fully 26% of respondents indicated that their primary professional role was as a nurse. With the exception of administrative and management positions, this percentage was more than double that of any other role reported on the survey. In addition, when workers served in multiple roles, they were most likely to be involved in nursing as well as administration or management. The number of nurses present among survey respondents may influence other findings of this survey, such as the relatively low percentage of public health degree holders and relatively high percentages of individuals who work in healthcare or who entered governmental public health from healthcare settings.

Keys to Recruiting and Retaining Public Health Workers

In general, survey results indicated that the factors influencing respondents' decisions to begin working for employers were the same factors that were important in their decisions to continue working for those employers. While the relative importance of individual factors may have changed over time, the types of factors deemed important remained fairly static.

In addition, the factors that survey respondents valued in making employment decisions tended to be organizational more than personal. Of the 19 organizational or personal factors presented to respondents, four of the five highest scoring factors for both recruitment and retention were organizational, and therefore, were factors that organizations have more ability to influence. These included the specific activities involved in a position, job security, competitive benefits, and identifying with the mission of the organization.

Linking Workers to the Public Health Mission

Linking workers to the vision and mission of public health may support recruitment and retention. Several influential factors in respondents' decisions to begin and continue working for employers were intricately tied to individuals' feelings regarding the nature of public health work. The specific activities involved in a position, identifying with the mission of the organization, having a personal commitment to public service, and wanting a job in the public health field all received high ratings for their influence on employment decisions. Emphasizing the importance of an organization's mission and activities and the value of that organization in improving the public's health may prove beneficial in enhancing recruitment and retention efforts. Further, finding ways to highlight and be specific about the types of tasks that public health positions entail may help in recruiting individuals well-suited to positions; student internships may offer one such way of introducing potential future employees to the specific work activities involved in public health.

Focus on Job Security and Benefits Rather than Salary

In planning recruitment and retention efforts, it may be more effective to focus on job security and benefits than on salary. Among the most influential factors reported by respondents for both recruitment and retention were job security and competitive benefits, both of which received higher average ratings than competitive salaries. There can often be a tendency to focus on salary when discussing recruitment and retention, but this survey identified several other factors that respondents valued in making employment decisions. While public health may not be able to offer the highest salaries in the market, there are other draws, such as job security and benefits packages, that can be emphasized in recruitment efforts.

Cuts to Benefits Harmful

Cuts to benefit packages may negatively impact recruitment and retention within public health. Given the reported importance of competitive benefits in terms of respondents' employment decisions, future recruitment and retention efforts may be harmed if organizations cut back on benefits. If job security and benefits packages are to be used as significant recruitment and

retention factors for public health, these need to be maintained at levels comparable to or exceeding those found in related fields.

Importance of Professional Development

Although survey respondents rated opportunities for training or continuing education as fairly important in their decisions to enter and remain working in public health positions, attention to and resources for professional development appeared to be less than desirable. With respect to professional development within their organizations, respondents indicated being less than satisfied with the level of funds and resources available to allow them to take advantage of professional development opportunities. As well, approximately 38% of respondents reported not having adequate time for professional development and 35% felt they did not have sufficient training to fully utilize the technology needed to perform their jobs. This suggests a gap in strategies for supporting professional development and a need for organizations to find efficient ways to provide more professional development opportunities. Improving and emphasizing training and educational opportunities may help attract individuals to careers in public health and retain them within those careers.

As well, the number of survey respondents entering governmental public health directly from educational programs in areas other than public health and the relatively low levels of formal public health education reported by respondents, combined with the high levels of dissatisfaction related to aspects of professional development, suggest that there may be opportunities to strengthen options for continuing education and training aimed at building public health skills within the workforce. To ensure an effective workforce, the development of public health competencies and skills cannot be considered solely the responsibility of academic public health programs, but should be prioritized within public health practice organizations as well.

Build Leadership and Management Skills

By focusing on building leadership and management skills, public health organizations may be able to positively impact recruitment and retention through actions that do not require substantial additional funding. While job security, salary, and benefits all have roles to play in employment decisions, the environment in which people work can significantly impact their satisfaction with and desire to remain in their jobs. Responses to statements about leadership and management within public health organizations indicated room for improvement. For the areas considered, on average, approximately 25% of respondents disagreed with the positive statements presented, with particularly high levels of dissatisfaction related to the perception of an atmosphere of trust and mutual respect, management efforts to deal with leadership issues, the feeling that management and staff have a shared vision, consistency in procedures for employee performance evaluations, and management efforts to address employee concerns about autonomy or employee empowerment. Strengthening leadership and management skills could help to improve organizational environments and retain employees.

Using TRAIN for Research

Beyond contributing information about individuals who participate in the public health workforce to inform recruitment and retention efforts, this study presented an important opportunity to

explore using TRAIN for public health services and systems research. TRAIN represents the largest repository of individual-level data on public health workers in the US[7-8], offering researchers an avenue for studying this workforce at the individual worker level. TRAIN can be used to learn more about the current public health workforce and its skills, competence, and training; several tailored TRAIN datasets[8] are available for use by researchers, and customized data can be requested to meet specific research needs. As of December 2015, TRAIN has grown to include over 1 million registered users.

Future Directions

The Council on Linkages' survey of public health workers represents an important step in learning about the employment decisions of public health workers to better enable the development of evidence-supported recruitment and retention strategies. This survey provides considerable data for building and strengthening programs aimed at attracting and keeping workers in the public health field. These data are available to researchers by request to PHWorkforce@phf.org and have formed the basis for subsequent analyses and publications.[9-10] Additional data collection over time, such as that which occurred through the 2014 Public Health Workforce Interests and Needs Survey[11], will help continue to enhance the knowledgebase about public health employment factors. Further efforts are also needed to create and implement specific recruitment and retention strategies and evaluate these strategies to determine if they have a positive impact on attracting workers, retaining workers, and promoting a more satisfied and effective workforce.

For More Information

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8. Public Health Foundation. *Public Health Services and Systems Research*. http://www.phf.org/programs/PHSSR/Pages/Advancing_Public_Health_Services_and_Systems_Research.aspx.

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10. Yeager VA, Wisniewski JM, Amos K, Bialek R. Why Do People Work in Public Health? Exploring Recruitment and Retention among Public Health Workers. *Journal of Public Health Management and Practice*, in press.

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Appendix: Council on Linkages' Survey of Public Health Workers

COUNCIL ON LINKAGES BETWEEN ACADEMIA AND PUBLIC HEALTH PRACTICE

Version 21

PUBLIC HEALTH WORKFORCE SURVEY

BE A PART OF HISTORY—LET YOUR VOICE BE HEARD!!!

The Council on Linkages Between Academia and Public Health Practice (Council) is conducting this survey in order to determine how, when, and why individuals enter, stay in, and leave the public health workforce. Your participation and perspectives will help us strengthen our nation's public health workforce.

A survey of this nature has never been attempted before! The information you provide will assist the Council and other organizations with developing effective recruitment and retention strategies for the US public health system. The survey mainly focuses on governmental public health because this is where public health worker shortages are most critical. However, it is important for us to hear from you even if you are not working in governmental public health!

At the end of the survey, you will have an opportunity to enter a raffle to win gift certificates and other prizes. **Click here** for more information!

INSTRUCTIONS: Click Here to start the survey.

PLEASE NOTE:

- Your responses to the survey questions are voluntary and will be confidential
- There are 14-28 questions total (and only one open-ended question)
- It should take you approximately 15-20 minutes to complete the survey
- You do not need to complete the survey in one sitting - you can return to the survey site multiple times

QUESTIONS? Email: PHworkforce@phf.org.

Privacy Policy

The Council on Linkages Between Academia and Public Health Practice is comprised of 17 organizations:

American Public Health Association (APHA)
American College of Preventive Medicine (ACPM)
Association for Prevention Teaching and Research (APTR)
Association of Schools of Public Health (ASPH)
Association of State and Territorial Health Officials (ASTHO)
Association of University Programs in Health Administration (AUPHA)
Centers for Disease Control and Prevention (CDC)
Community-Campus Partnerships for Health (CCPH)
Council of Accredited Masters of Public Health Programs (CAMP)
Health Resources and Services Administration (HRSA)
National Association of County and City Health Officials (NACCHO)
National Association of Local Boards of Health (NALBOH)
National Environmental Health Association (NEHA)
National Library of Medicine (NLM)
National Network of Public Health Institutes (NNPHI)
Quad Council of Public Health Nursing Organizations (Quad Council)
Society for Public Health Education (SOPHE)

We thank the TRAIN community for allowing us to survey its users!

1. **How many years have you been employed as a public health professional (e.g. government, private organization, academia)?**

   _____

2. **Have you ever been employed by a GOVERNMENTAL public health agency?**
   - o Yes
   - o No (Go to **question #7**)

3. **Are you currently employed by a GOVERNMENTAL public health agency?**
   - o Yes
   - o No (Go to **question #5**)

4. **How many years have you been employed by the GOVERNMENTAL public health agency for which you are currently working?**

   _____

5. **In total, how many years have you spent as an employee of a GOVERNMENTAL public health agency?**

   _____

6. **Where were you immediately prior to entering the GOVERNMENTAL public health workforce? (SELECT ALL THAT APPLY)**
   - o High school
   - o Associate degree program
   - o Undergraduate program in Public Health
   - o Other undergraduate program
   - o Graduate program in Public Health
   - o Other graduate program
   - o Doctoral program in Public Health
   - o Other doctoral program
   - o Other advanced degree program (e.g. MD, JD, etc.)
   - o Other governmental agency
   - o Healthcare services
   - o Nonprofit organization
   - o Private industry
   - o Academic employment

- o Retired from a prior position
- o Self employed
- o Unemployed/Looking for work

7. **What is your current work setting (SELECT ALL THAT APPLY):**
   - o Academic institution
   - o Government-federal
   - o Government-state
   - o Government-local
   - o Government-territory
   - o Government-tribal
   - o Healthcare services
   - o Nonprofit organization
   - o Private industry
   - o Self employed **(Go to Demographics section)**

Organizational Factors

8.	**How much did these factors influence your decision to take your first position with your current employer?**	**No Influence 0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**A lot of Influence 10**
o	Job security											
o	Flexibility of work schedule											
o	Ability to work from home											
o	Autonomy/Employee empowerment											
o	Specific duties and responsibilities											
o	Identifying with the mission of the organization											
o	Ability to innovate											
o	Immediate opportunity for advancement/promotion											
o	Future opportunities for promotion											
o	Opportunities for training/continuing education											
o	Competitive salary											
o	Competitive benefits											

Personal Factors

9.	**How much did these factors influence your decision to take your first position with your current employer?**	**No Influence 0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**A lot of Influence 10**
o	Enjoy living in the area (e.g. climate, amenities, culture)											
o	Wanted to live close to family and friends											
o	Wanted to work with specific individual(s)											
o	Wanted a job in the public health field											
o	Needed a job, but it didn't matter if it was in public health											
o	Personal commitment to public service											
o	Family member/role model was/is working in public health											

Organizational Factors

10.	**How much do these factors influence your decision to remain with your current employer?**	**No Influence 0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**A lot of Influence 10**
o	Job security											
o	Flexibility of work schedule											
o	Ability to work from home											
o	Autonomy/Employee empowerment											
o	Specific duties and responsibilities											
o	Identifying with the mission of the organization											
o	Ability to innovate											
o	Immediate opportunity for advancement/promotion											
o	Future opportunities for promotion											
o	Opportunities for training/continuing education											
o	Competitive salary											
o	Competitive benefits											

Personal Factors

11.	**How much do these factors influence your decision to remain with your current employer?**	**No Influence 0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**A lot of Influence 10**
o	Enjoy living in the area (climate, amenities, culture, etc.)											
o	Want to live close to family and friends											
o	Want to continue working with specific individual(s)											
o	Want a job in the public health field											
o	Need a job, but it doesn't matter if it is in public health											
o	Personal commitment to public service											
o	Family member/role model was/is working in public health											

12.	**Please rate how strongly you agree or disagree with the following statements about leadership in your organization:**	**Strongly agree**	**Somewhat agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Strongly disagree**
o	There is an atmosphere of trust and mutual respect within the organization					
o	Management and staff have a shared vision					
o	Employees are held to high professional standards for the work they do					
o	Employee performance evaluations are handled in an appropriate manner					
o	The procedures for employee performance evaluations are consistent					
o	Employees receive constructive feedback that can help them improve their performance					
13.	**Over the past 12 months, management in the organization has made a sustained effort to address employee concerns about:**	**Strongly agree**	**Somewhat agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Strongly disagree**
o	Tools needed to do my job					
o	Professional development					
o	Autonomy /Employee empowerment					
o	Leadership issues					
o	New employee support					
o	Safety and security					
14.	**Please rate how strongly you agree or disagree with the following statements about professional development in your organization:**	**Strongly agree**	**Somewhat agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Strongly disagree**
o	Sufficient funds and resources are available to allow employees to take advantage of professional development opportunities					
o	Adequate time is provided for professional development					
o	Employees have sufficient training to fully utilize technology needed for their work					
o	Employees are provided with opportunities to learn from one another					
o	Professional development provides employees with the knowledge and skills most needed to do their work effectively					

DEMOGRAPHICS

Your responses to these questions will help us better understand the characteristics of the individuals completing this survey. Demographic information will **NOT** be linked to any identifier data and will only be used in a summary manner.

15. Gender:

o Male o Female

Questions on race and ethnicity are optional

16. Race (SELECT ALL THAT APPLY):

o American Indian or Alaska Native
o Asian
o Black or African American
o Native Hawaiian or Other Pacific Islander
o White

17. Ethnicity (Hispanic, Latino or Spanish origin):

o Yes
o No

---

18. Please enter your age:

_____

19. Primary professional role(s) (SELECT UP TO THREE):

o Administrative Support Staff
o Administrator/Director/Manager
o Allied Health Professional
o Biostatistician/Epidemiologist/Statistician
o Data Analyst
o Environmental Health Specialist
o Emergency Responder/Planner
o Faculty/Educator
o Health Educator

- Laboratory Professional
- Nurse
- Physician
- Public Health Service Provider (non-clinical)
- Researcher
- Student

20. What was the highest level of education you had completed WHEN YOU FIRST BECAME A PUBLIC HEALTH PROFESSIONAL?

- High school
- Associate degree
- Bachelor's degree in Public Health
- Other bachelor's degree
- Master's degree in Public Health
- Other master's degree
- Doctoral degree in Public Health
- Other doctoral degree
- Other advanced degree (e.g. MD, JD, etc.)

21. Current education level (HIGHEST ATTAINED):

- High school
- Associate degree
- Bachelor's degree in Public Health
- Other bachelor's degree
- Master's degree in Public Health
- Other master's degree
- Doctoral degree in Public Health
- Other doctoral degree
- Other advanced degree (e.g. MD, JD, etc.)

22. In your current position you are a:

- Full time employee
- Part time employee
- Contractual worker
- Volunteer

23. State/territory where you WORK:

24. Zip code of where you WORK:

25. The jurisdiction served by your current employer is:

- o Local (e.g. county, municipality, township) (Go to **question #26**)
- o District/region within a state (Go to **question #26**)
- o Tribal
- o State/Territory (Go to **question #27**)
- o Multi-state (Go to **question #27**)
- o National (Go to **question #27**)

26. How large is the jurisdiction served by your organization?

- o <25,000 people
- o 25,000-49,999
- o 50,000-99,999
- o 100,000-249,000
- o 250,000-499,999
- o 500,000-999,999
- o 1,000,000+

27. How large is your organization?

- o Not sure/Unknown
- o Less than 25 people
- o 25-99
- o 100-499
- o 500-999
- o 1,000-9,999
- o 10,000 or more

28. Is there anything else you would like to tell us that we did not ask?

_____

29. Sign me up for the following:

- o A summary of the results of this survey
- o PHF E-News - bringing you the latest ideas and tools for quality improvement and workforce development in public health
- o Hot Off the Press - notices of new learning resources available through the Public Health Foundation online store

30. Enter me in the drawing to win: gift certificates and other prizes! My email address is:

_____

Thank you for taking the survey!!!