2006

Enumeration of the Local Public Health Workforce in New York

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Enumeration of the Local Public Health Workforce in New York: 2006

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Preface

The Center for Health Workforce Studies, in collaboration with the New York State Department of Health (DOH) and the New York State Association of County Health Officials (NYSACHO), conducted an enumeration survey of New York's local public health workforce. The DOH, in conjunction with the New York-New Jersey Public Health Training Center, convened the Public Health Workforce Task Force in July 2005 to address the public health workforce challenges in New York. The Task Force acknowledged that it was necessary to increase the knowledge about the size and composition of the public health workforce. It called for a functional enumeration to determine current workforce composition, measure the extent of workforce needs, project future staffing needs, and identify unmet training needs. The results of this project will assist the Task Force to measure progress toward achieving its goals for a well-sized and competent public health workforce.

The goal of the study was to produce a detailed description of local public health workers and understand how health workers' composition, roles, educational backgrounds, and training needs affect the organizational capacity of local health departments in New York to perform essential public health services. This report summarizes the findings of the study.

This report was prepared by the Center for Health Workforce Studies at the School of Public Health, University at Albany, State University of New York, with support from the New York State Department of Health. The Center is dedicated to the collection, analysis, and dissemination of health workforce research to inform policy makers, planners, educators, health care providers, and the public about issues related to the supply, demand, distribution, and use of health workers. This report was prepared by Sandra McGinnis, Dwayne Robertson, and Jean Moore. The views expressed in this report are those of the Center for Health Workforce Studies and do not necessarily represent positions or policies of the School of Public Health, the University at Albany, State University of New York, NYSACHO, or the New York State Department of Health.

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EXECUTIVE SUMMARY

The Center for Health Workforce Studies, in collaboration with the New York State Department of Health (DOH) and the New York State Association of County Health Officials (NYSACHO), conducted a functional enumeration of New York's local public health workforce. The goal of the study was to produce a detailed description of the organizational capacity of local health departments in New York, including public health workers' job titles, roles, educational backgrounds, and training needs.

This report presents findings and recommendations of the study based on survey responses from 2,078 public health workers at 32 local health departments (LHDs) across the state, with the exception of the New York City Department of Health and Mental Hygiene. These included 18 full-service LHDs (those that directly provide environmental health services) and 14 part-service LHDs (those that depend on the New York State DOH for provision of their environmental health services). Data were collected from June 2006 to January 2007.

The findings indicated that the local public health workforce in New York was older than average**,** with a median age of 49, compared to the median age of a U.S. civilian worker of 40[1]. Sixty-two percent of local public health workers were between age 45 and 64. Of all categories of public health workers, administrators were the oldest, with a median age of 51.5, followed by nurses and other clinical staff, both with a median age of 50.

The public health workforce was not as diverse as the population it serves. Blacks/African-Americans and Hispanics/Latinos were particularly underrepresented (4% and 3%, respectively) when compared to their overall representation in the population of the state outside of New York City (8% for both groups). However, 13% of public health workers were bilingual.

Nearly one-quarter (24%) of public health workers worked in nursing job titles. About half of workers in local health departments serving smaller, less urban areas were in clinical titles, especially nursing titles, compared to fewer than one-quarter of workers in the health departments serving the largest urban areas.

Almost one-quarter of public health workers reported beginning their public health careers within the last five years. Blacks/African-Americans, Asians, and Hispanic/Latinos were much more likely to be new to public health than non-Hispanic Whites (34%, 33%, and 31%, respectively, versus 22%). Almost half of public health workers who were new to the field in the past five years were older than age 44.

Nearly one in every five local public health workers (18%) reported retirement plans. Nearly half of public health workers between age 55 and 64 (47%) planned to retire within the next five years. Twenty percent of public health workers younger than age 35 reported plans to leave the field of public health within the next five years. Plans of employees of all ages to remain in current positions were lowest among those in Epidemiology/Disease Control titles. Local public health workers in LHDs serving larger, more urban areas were more likely to report plans to seek

[1] Bureau of Labor Statistics, Current Population Survey, Basic Monthly Survey, June 2006.

new positions within public health and less likely to report plans to leave public health for other fields.

The majority of public health workers (64%) reported receiving training in emergency preparedness, but many also reported the need for additional training in this and other areas, including communicable and infectious diseases and management/supervisory skills. More than one-third of local public health workers were interested in pursuing additional degrees.

Almost one in five LHD employees had an advanced[2] degree, but only 2% had advanced degrees in public health. At the same time, 19% wanted to pursue master's degrees and more than one-third of these were interested in master's degrees in the field of public health.

The data in this report point to the need for strategies to address recruitment, career development, and retention of the state's local public health workforce. The data also suggest a need for ongoing monitoring of the public health workforce to assess the effectiveness of interventions to strengthen the state's local public health workforce. This report will assist the New York State Public Health Workforce Task Force to identify the necessary strategies for a competent public health workforce of sufficient size to meet the needs of New York's citizens.

[2] Master's degree or higher

I. INTRODUCTION

The Center for Health Workforce Studies, in collaboration with the New York State Department of Health (DOH) and the New York State Association of County Health Officials (NYSACHO), conducted a functional enumeration of New York's local public health workforce. The goal of the study was to produce a detailed description of local public health workers and understand how health workers' job titles, roles, educational backgrounds, and training needs affect the organizational capacity of local health departments in New York to perform essential public health services.

This report presents findings and recommendations of the study based on survey responses from 2,078 public health workers at 32 local health departments (LHDs) across the state. Results were tabulated using SPSS frequency, descriptive, and cross tabulation functions.

Methodology

All LHDs in New York were invited to participate in the survey. Contacts were identified and asked for a headcount of all employees. LHDs were offered a choice of paper or online versions of the survey, with an option of using both. The objective was to include all LHD employees *other than those in home health agencies*[3], including part-time and temporary and per diem workers.

Thirty-two of the 58 LHDs participated in the survey, which was conducted from June 2006 to January 2007. The Albany County Department of Health was the first LHD to participate in a pilot of the enumeration study and provided valuable feedback on approaches to improve the survey process. The largest LHD in the state, the New York City Department of Health and Mental Hygiene did not participate in the study. Participating counties included 18 full-service LHDs (those that directly provide environmental health services) and 14 part-service LHDs (those that depend on the New York State DOH for provision of their environmental health services). Results were tabulated through SPSS using frequency, descriptive, and cross tabulation functions. A total of 2,078 individuals from 32 LHDs completed surveys.

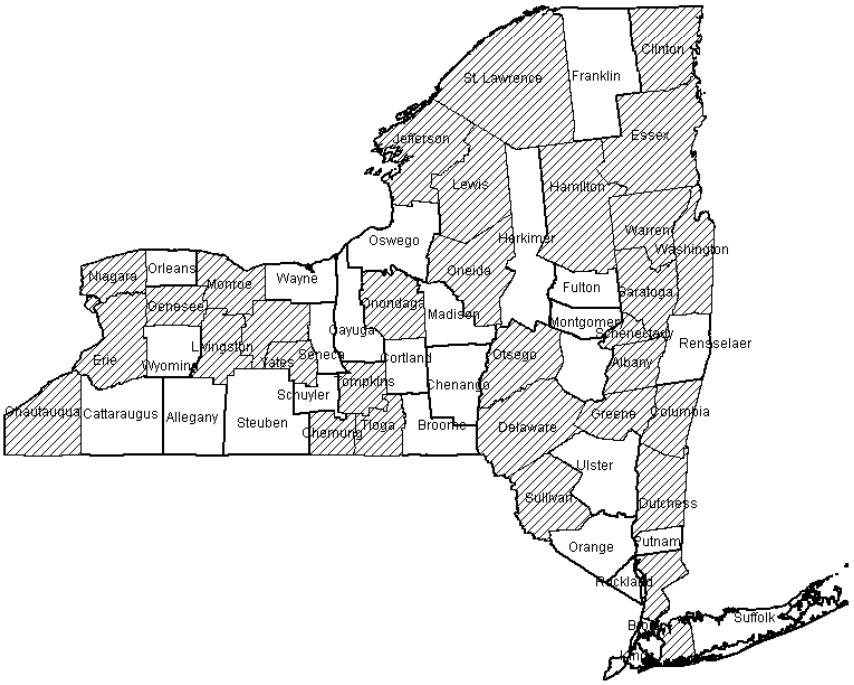
[3] Smaller LHDs were offered the option of including their home health workers for the purposes of providing the LHD administration with a statistical profile of their workforce; these workers were not included in the analyses presented in this report. At least one county was not able to separate their home health and public health workforce, and so a small number of respondents included in the analyses may work some or all of their hours in home health.

Table 1: Local Health Departments, Counts, and Response Rates

County	Respondents	Employees	Response Rate		County	Respondents	Employees	Response Rate
Albany	81	81	100%		Niagara	44	120	37%
Chautauqua	59	80	74%		Oneida	62	95	65%
Chemung	46	70	66%		Onondaga	407	407	100%
Clinton	37	45	82%		Ontario	6	9	67%
Columbia	33	67	49%		Otsego	20	32	63%
Delaware	15	20	75%		Saratoga	49	66	74%
Dutchess	145	149	97%		Schenectady	30	54	56%
Erie	224	370	61%		St. Lawrence	35	36	97%
Essex	12	14	86%		Sullivan	49	79	62%
Genesee	30	33	91%		Tioga	36	50	72%
Greene	44	56	79%		Tompkins	74	79	94%
Hamilton	3	4	75%		Warren	33	40	83%
Jefferson	81	100	81%		Washington	11	12	92%
Lewis	31	40	78%		Westchester	99	350	28%
Livingston	22	30	73%		Yates	14	16	88%
Monroe	129	248	52%		Missing	39	N/A	N/A
Nassau	79	370	21%		Total	2055	3222	64%

Note: Shaded counties are part-service LHDs.

Figure 1: Distribution of Participating LHDs



Note: Counties that are shaded were participating health departments.

The counties included in the survey were diverse, in terms of size as well as their locations. In these analyses, rural or urban was measured in terms of Rural/Urban Continuum Codes (RUCCs)[4]. The chart below shows the categories of RUCC that were used throughout the report as measures of rural or urban status. Because of the small cell size, categories of "urban, 2,500 to 19,999, not adjacent to a metropolitan area" and "rural, adjacent to a metropolitan area" were not used in the analyses.

[4] RUCC codes form a classification scheme that distinguishes metropolitan (metro) counties by the population size of their metro area, and nonmetropolitan (non-metro) counties by degree of urbanization and adjacency to a metro area or areas. The metro and non-metro categories have been subdivided into three metro and six non-metro groupings, resulting in a nine-part county codification. United States Department of Agriculture, Economic Research Service, 2004.

Table 2: Rural/Urban Continuum Codes Associated with Participating (Unshaded) and Non-Participating Counties (Shaded)

Metro/ 1 million+	Metro/ 250,000 to 1 million	Metro/ Under 250,000	Urban/ 20,000+/ Adj to Metro	Urban/ 20,000+/ Not Adj to Metro	Urban/ 2,500 to 19,999 / Adj to metro	Urban/ 2,500 to 19,999 / Not Adj to metro	Rural / Adjacent to Metro
Erie	Albany	Chemung	Chautauqua	Clinton	Columbia		Hamilton
Livingston	Dutchess	Tompkins	Genesee	St. Lawrence	Delaware		
Monroe	Oneida	Warren	Jefferson		Essex		
Nassau	Onondaga	Washington	Sullivan		Greene		
Niagara	Saratoga				Lewis		
Ontario	Schenectady				Otsego		
Westchester	Tioga				Yates		
Bronx	Broome	Ulster	Cattaraugus	Franklin	Chenango	Allegany	
Kings	Herkimer		Cayuga		Schuyler		
New York	Madison		Cortland		Seneca		
Orleans	Orange		Fulton		Wyoming		
Putnam	Oswego		Montgomery				
Queens	Rensselaer		Steuben				
Richmond	Schoharie						
Rockland							
Suffolk							
Wayne							

Statistics presented in this report are descriptive only, with no inferential analyses (e.g. significance testing).

Limitations

The data included in this report have several important limitations. First of all, these data did not represent the universe of all LHDs in New York, and were not comprehensive within all counties. The largest LHD in the state, the New York City Department of Health and Mental Hygiene was not represented. Consequently, these findings may not be representative of all LHDs in the state, or all employees within LHDs.

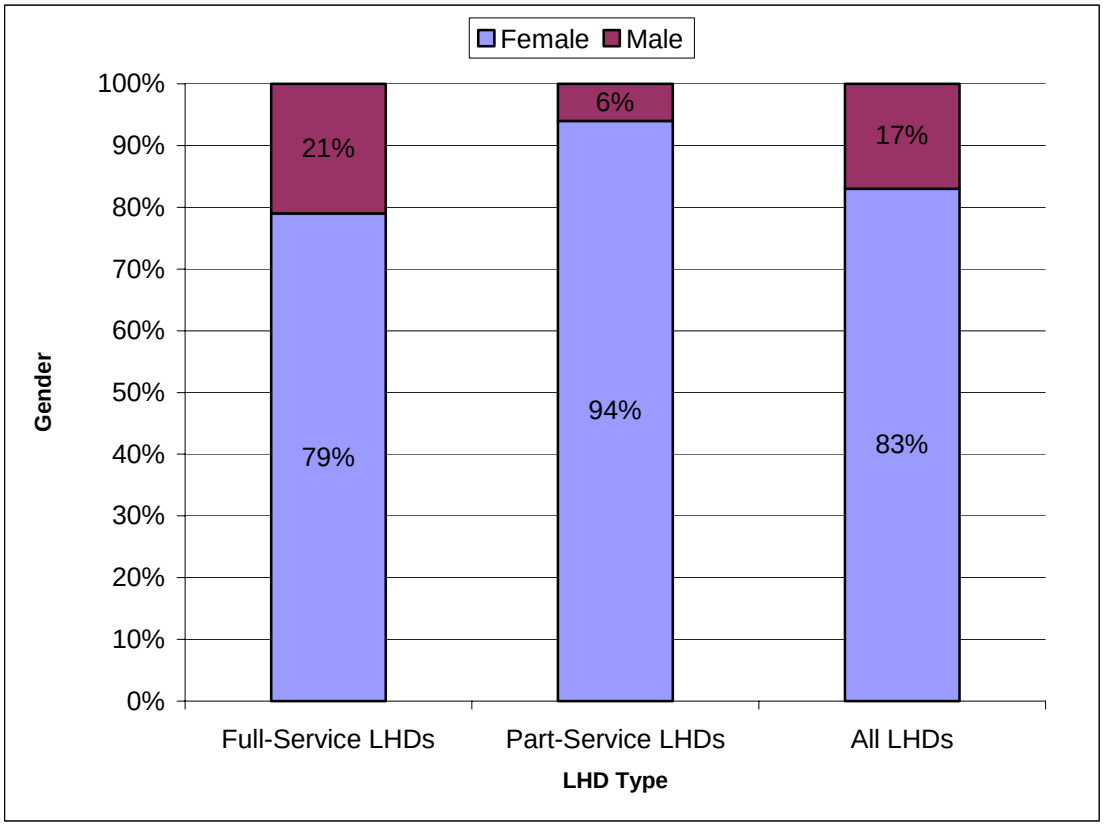
Another consideration is that all survey responses were self-reported. Formal job titles and job responsibilities were not cross-checked against any other data source. This raises the possibility that some of the questions were not answered accurately and sometimes questions were not well understood. When many respondents appeared to have misunderstood a particular question, this was noted in the text of the report; however individual variations in question interpretation could not be controlled.

II. CHARACTERISTICS OF THE WORKFORCE

Demographics

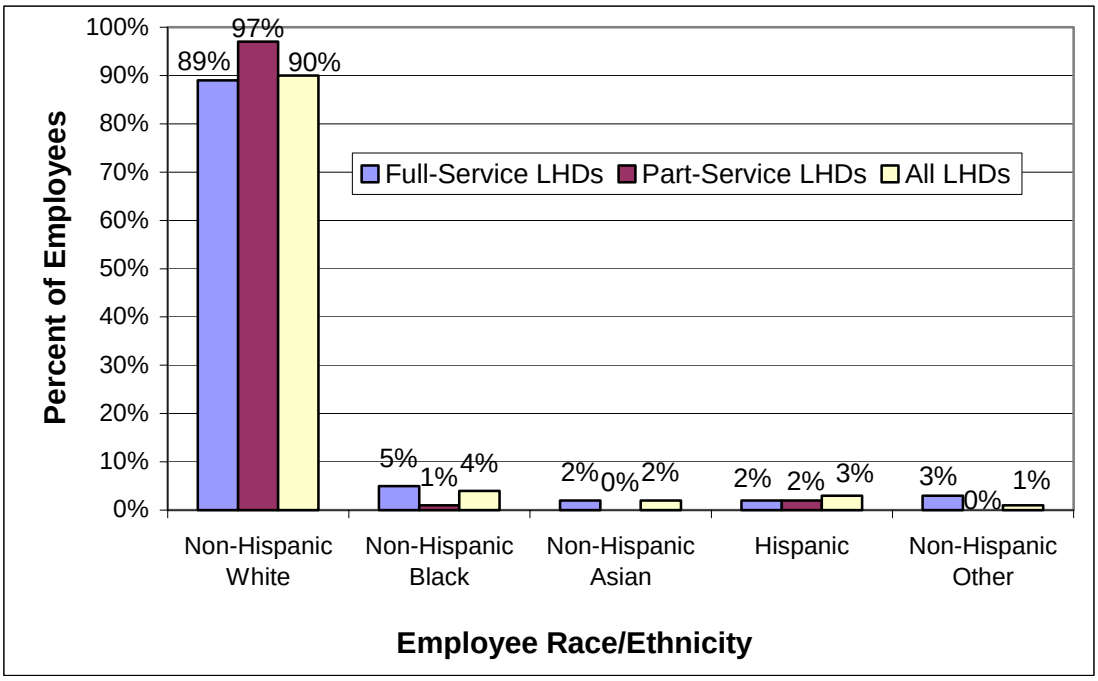
The vast majority of LHD employees were non-Hispanic White and female. Only 17% of LHD employees were men and 90% were non-Hispanic White. Minorities in general were underrepresented in the workforce, but Blacks/African-Americans and Hispanics/Latinos were particularly underrepresented (4% and 3%, respectively) when compared to their overall representation in the population of the state outside of New York City[5].

Figure 2: Gender Distribution of LHD Employees in New York, 2006 (N = 2058)



[5] Blacks/African-Americans account for 8% of the state's population outside of New York City, while Hispanics/Latinos account for another 8% of the population. American Community Survey, 2005.

Figure 3: Racial and Ethnic Distribution of LHD Employees in New York, 2006 (N = 2043)

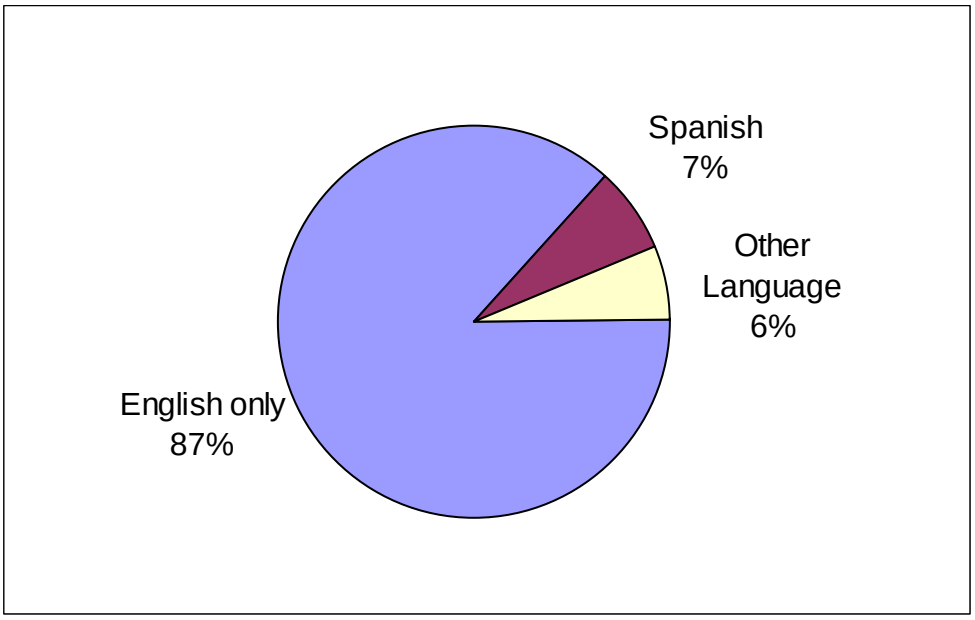


Not surprisingly, the workforce was more diverse in larger metropolitan counties, although even in the largest counties (metropolitan with a population of more than one million), the workforce was 86% non-Hispanic White (compared to 73% of the population of those counties).

Thirteen percent of the workforce reported the ability to speak a second language compared to 14% of the population in the 32 counties that spoke a language other than English at home in 2000[6]. In the larger metropolitan counties, 17% of the workforce was bilingual.

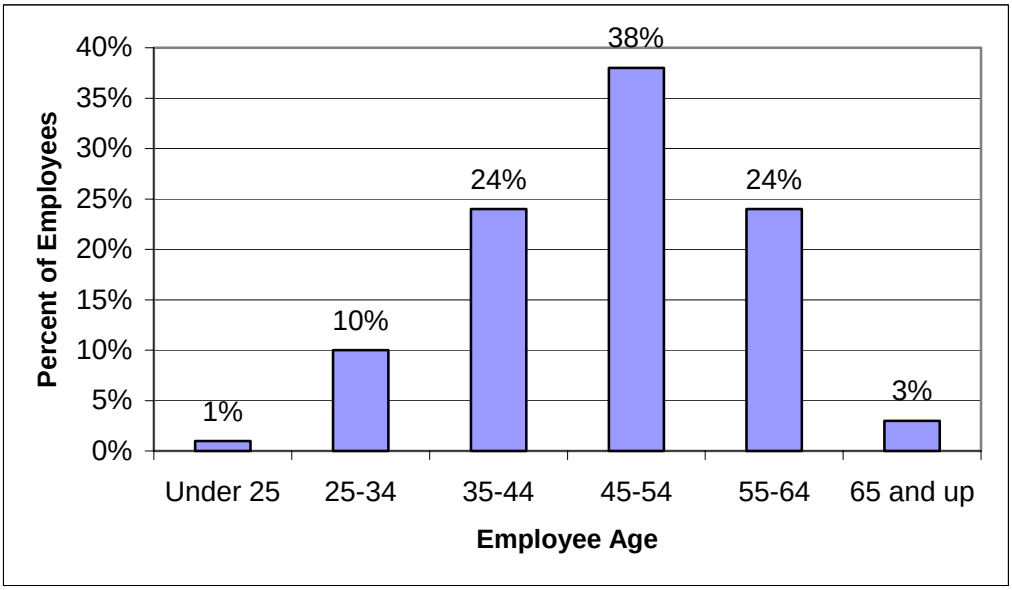
[6] U.S. Census Bureau, 2000.

Figure 4: Languages Spoken by LHD Employees, New York, 2006 (N = 2058)



The median age of the local public health worker was 49. Very few LHD employees were age 25 or younger (1%), and 10% were between age 25 and 34. The largest group of LHD employees was 45 to 54 years old, comprising 38% of the workforce. Nearly two-thirds of the workforce was age 45 and older. There was little variation in age of the workforce by either the size or geographic location of the county, or level of services provided by the counties.

Figure 5: Age Distribution of LHD Employees, New York, 2006 (N = 2063)

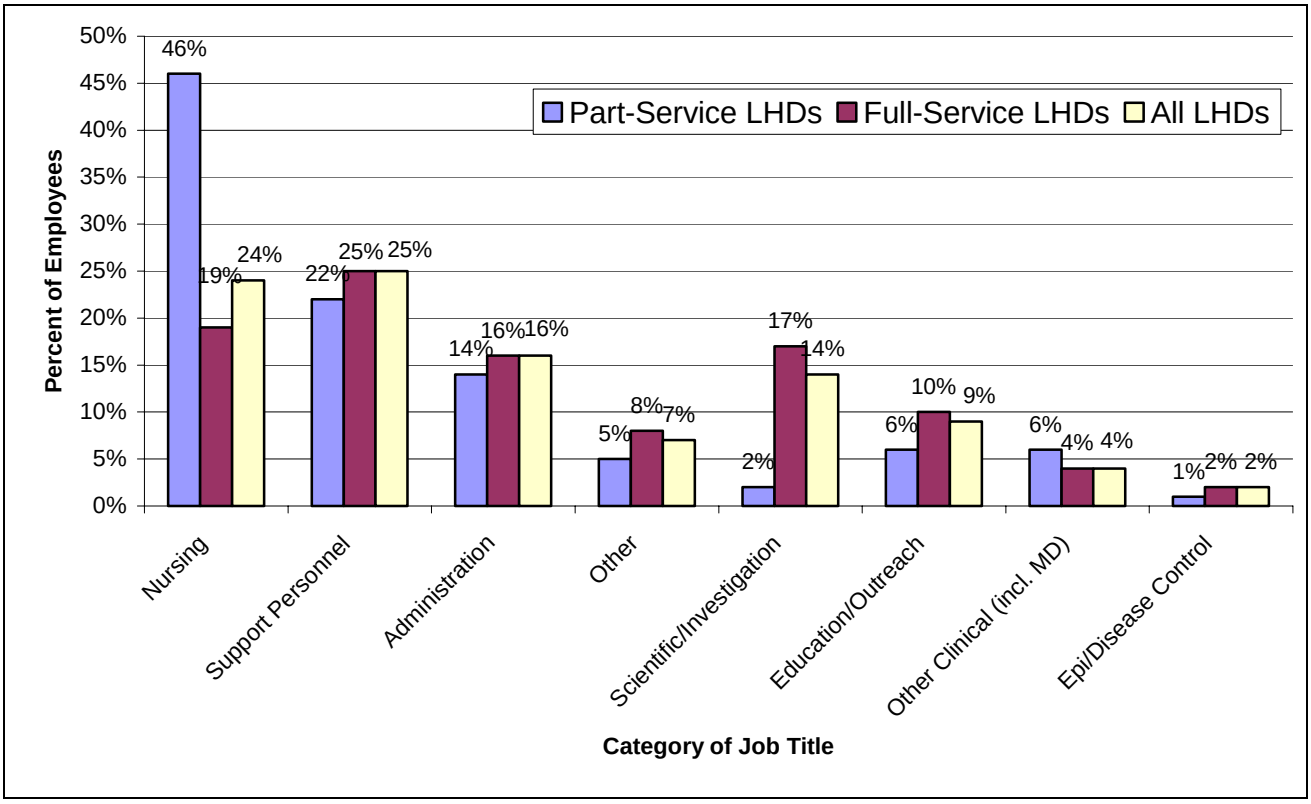


Formal Job Title

The survey asked each respondent to identify his/her specific job title within general groups of formal job titles (e.g., health educator, nutritionist, and public health representative were specific titles listed within the category of Education/Outreach). For a complete list of job title categories and specific job titles, see page 3 of the survey instrument in Appendix B.

The most common category of job title was Support Personnel (25%), followed by Nursing (24%, the same as in LHDs nationally[7]) followed by Administration (16%).

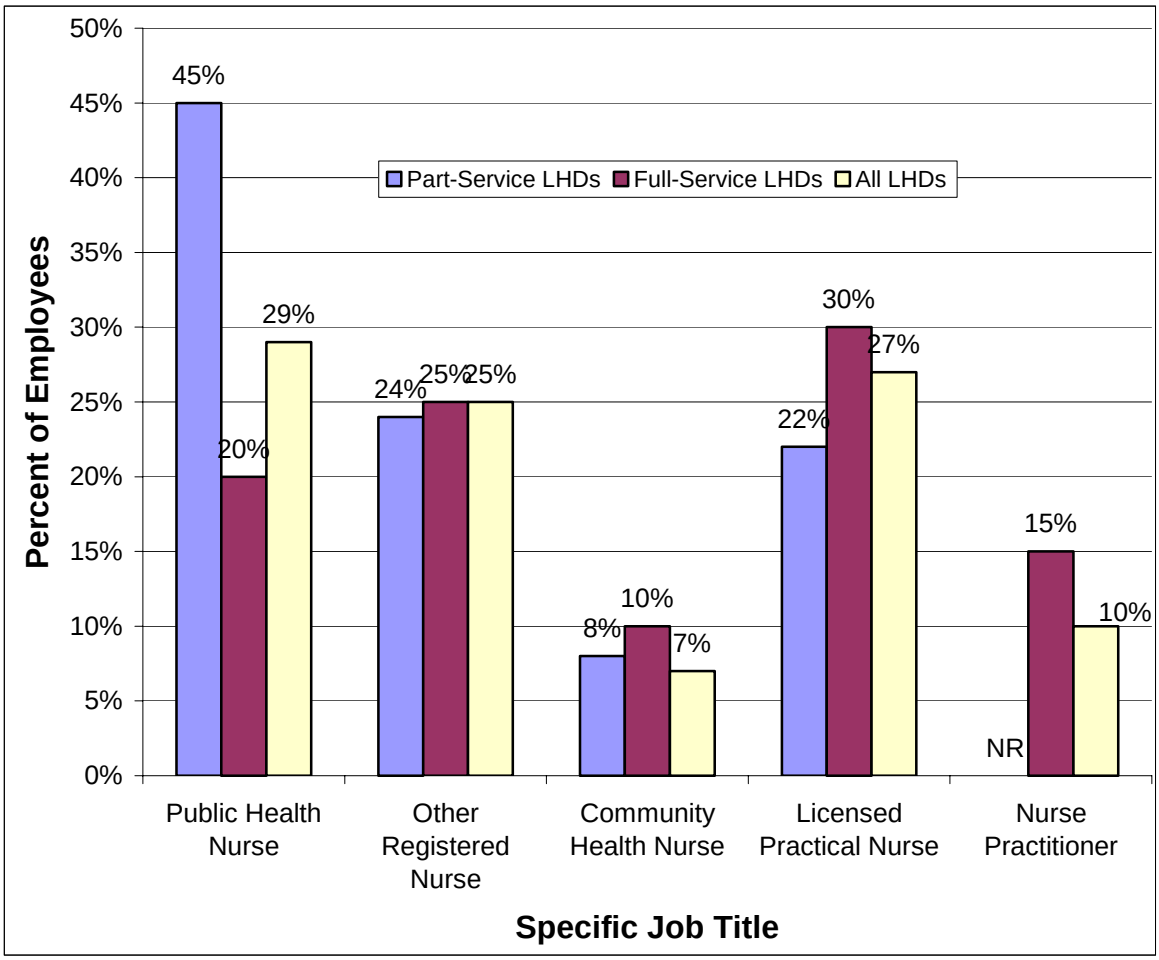
Figure 6: Formal Job Titles of LHD Employees Group (N = 1930)



[7] NACCHO, 2005. National Profile of Local Health Departments, pg. 34.

Employees in nursing job titles most commonly described themselves as Public Health Nurses (29%), while relatively few described themselves as Community Health Nurses (9%). Twenty-five percent reported their specific title as Other Registered Nurse, and a small number reported they were Nurse Practitioners (10%).

Figure 7: Specific Job Titles of LHD Employees in Nursing Jobs, New York, 2006 (N=456)



NR = Not Reportable due to insufficient number of cases

The vast majority of Support Personnel (91%) described themselves as Support Staff, while 6% reported they were Program Aides, and 3% reported they were Public Health Assistants.

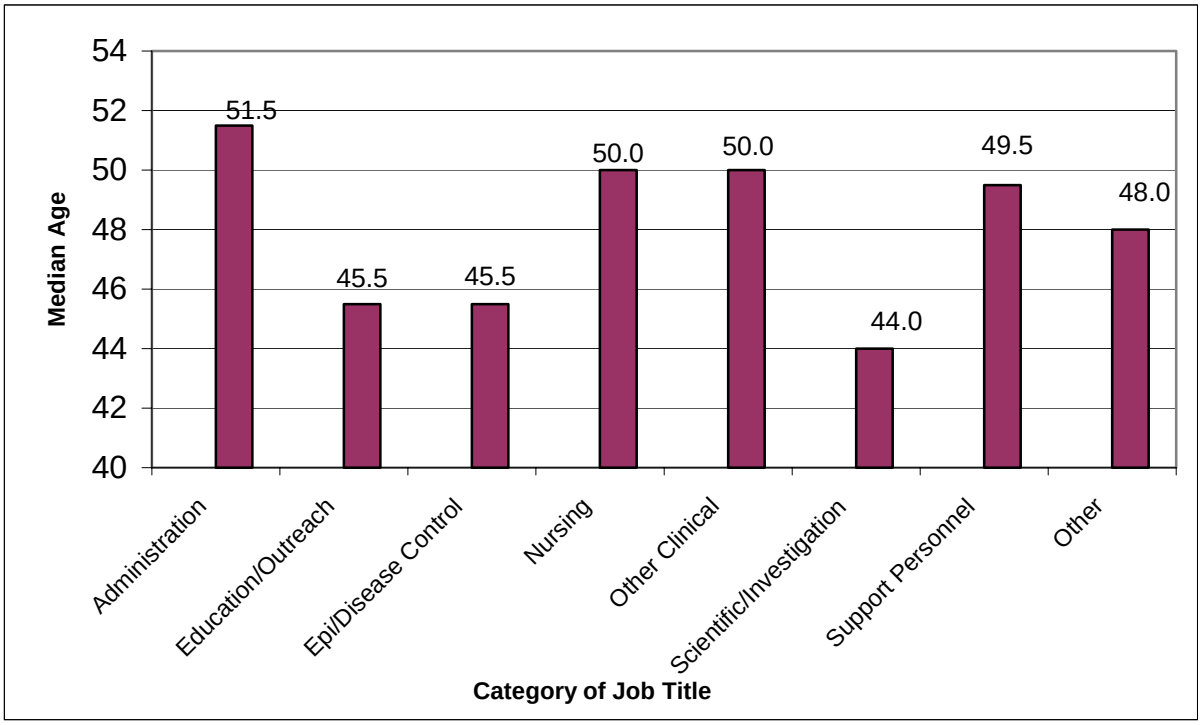
Most administrators were either Administrators/Public Health Leaders (36%) or Program Coordinators (41%), while 9% were Environmental Program Managers. Nearly half of those in Scientific/Investigation titles (46%) were Sanitarians.

Those working in Education/Outreach and Epidemiology/Disease Control titles were the most diverse (21% minorities in both categories). They were also most likely to be bilingual (18% and

21%, respectively). Women constituted the majority of workers in all job title groups except the Scientific/Investigation group, which was about 56% male.

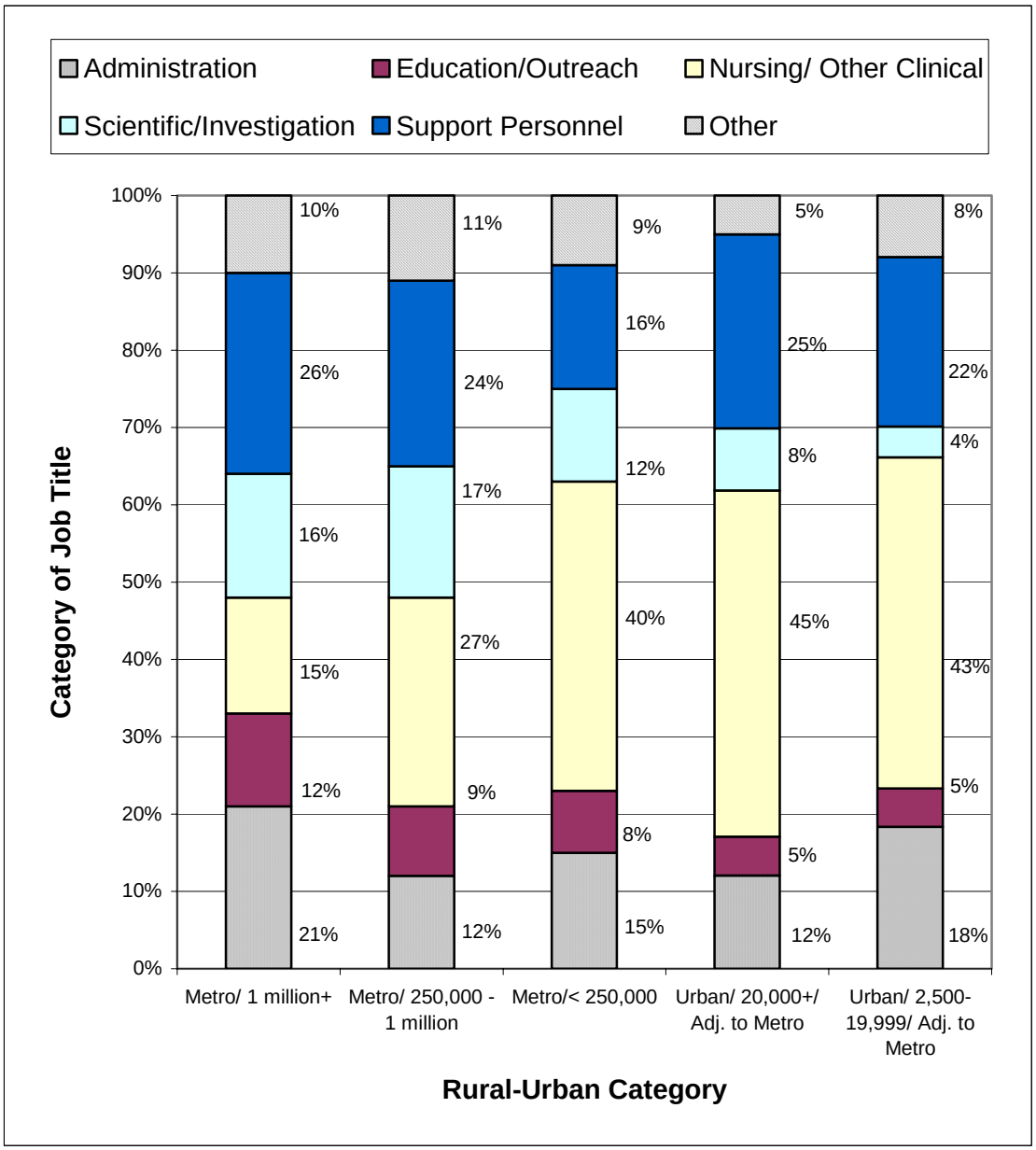
Administrators were among the oldest public health workers, with a median age of 51.5, followed by Nurses and Other Clinical staff, both with a median age of 50. Workers in Scientific/Investigation titles tended to be the youngest, with a median age of 44.

Figure 8: Median Ages of LHD Employees by Job Title Group, New York, 2006 (N = 1919)



There was some variation in staffing patterns by the size of the county. LHDs serving small rural areas had a greater percent of staff in nursing and other clinical titles compared to LHDs serving larger urban areas, and less staff in Scientific/Investigation titles.

Figure 9: Staffing Patterns of LHDs by Rural or Urban, New York, 2006 (N = 1828)



Credentials

Many public health workers were licensed or registered by the state as health professionals. Licensed registered nursing was the health profession most commonly found in LHDs. Nearly one-third (30%) of LHD employees were RNs, although not all reported working in nursing titles. The majority of those holding RN licenses were in nursing titles (76%), while 17% were in administrative titles. Other clinical credentials included Licensed Practical Nurse, Medical Doctor, Nurse Practitioner, Licensed Master Social Worker, Licensed Clinical Social Worker,

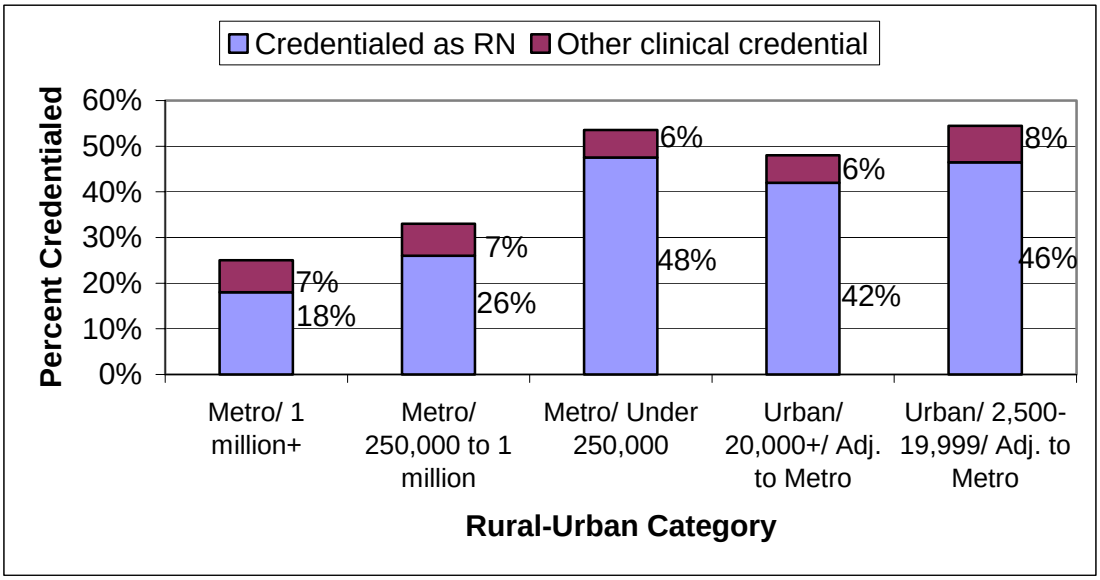
and Registered Physician Assistant[8]. Seven percent of LHD employees held a clinical credential other than RN[9], and only 1% of employees were licensed physicians.

Understanding the credentials held by persons in various types of job titles was revealing in terms of the types of opportunities for clinical professionals within LHDs.

- The most common credential held by administrators was licensed RN. Thirty-one percent of those in administration job titles were credentialed as RNs, while 12% reported another specific clinical credential.
- Five percent of those in Education/Outreach titles were credentialed as licensed RNs, and 22% held another clinical credential.
- Forty-one percent of those in Epidemiology/Disease Control titles were licensed RNs.
- Those in Other Clinical job titles were most likely to hold a specific clinical credential other than nursing (30%), while 43% reported holding a credential not otherwise specified.

It is worth noting that RNs were represented in many job titles in all agencies, but this was especially true in smaller, rural counties where 46% of employees were RNs (compared to 33% nationally[10]) and another 8% had another clinical credential. In the larger, urban counties 18% of employees were RNs (consistent with 22% nationally[11]) and 7% had another clinical credential.

Figure 10: Percent of LHD Employees with RN or Other Specific Clinical Credential, by Urban Status, New York, 2006 (N = 1964)

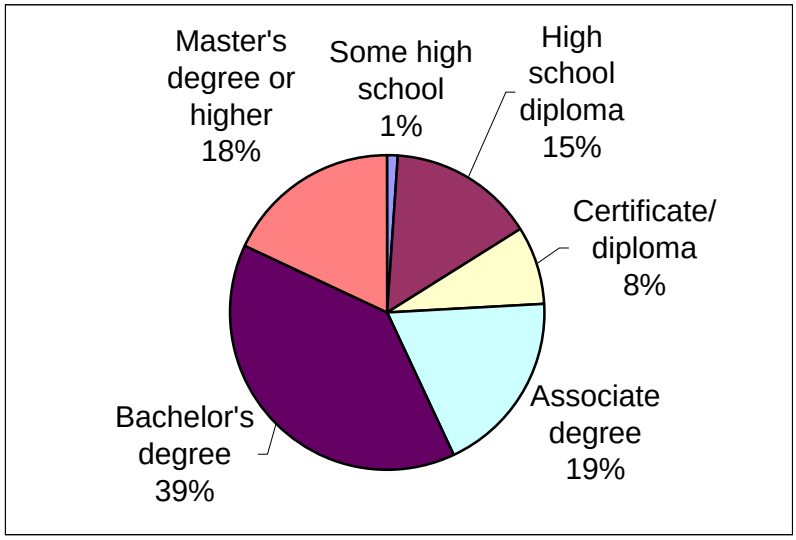


[8] For a complete list of specific clinical credentials, see item 9 in the survey instrument in the Appendix.
[9] "Other clinical credential" was defined here as any specific credential included in Question 9 except for RN and professional engineer. Credentials other than those specified (e.g., write-in responses) were not included.
[10] NACCHO, 2005. National Profile of Local Health Departments, pg. 34. This was based on a somewhat different breakdown of county size: <25,000; 25,000-49,999; 50,000-99,999; 100,000-499,999; and 500,000+.
[11] Ibid.

Highest Degree

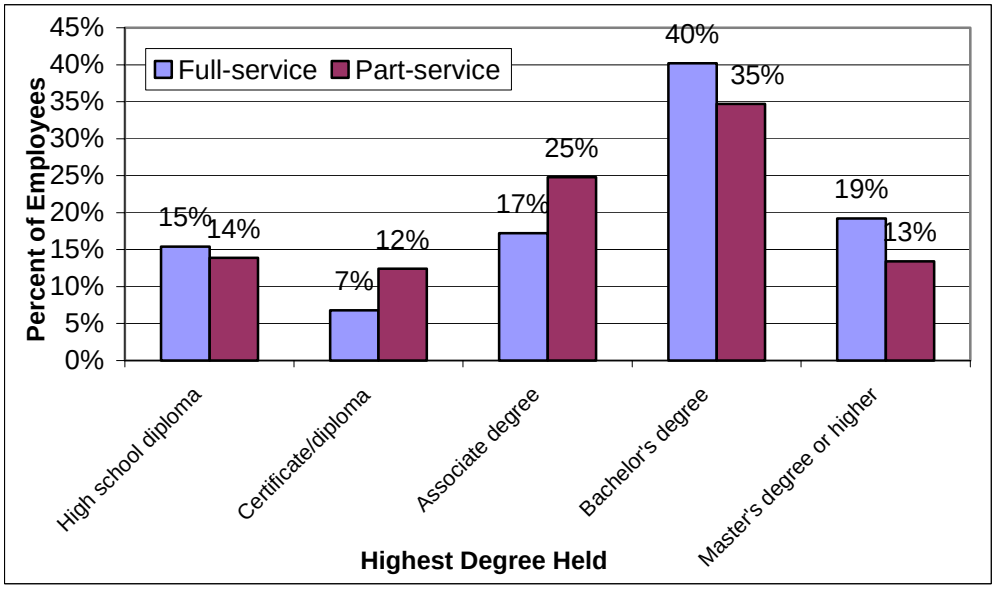
The LHD workforce in New York tended to be highly educated, with almost one in five employees holding a master's degree or higher (18%) and another four in ten (39%) holding a bachelor's degree.

Figure 11: Highest Degree Held By LHD Employees, New York, 2006 (N = 2003)



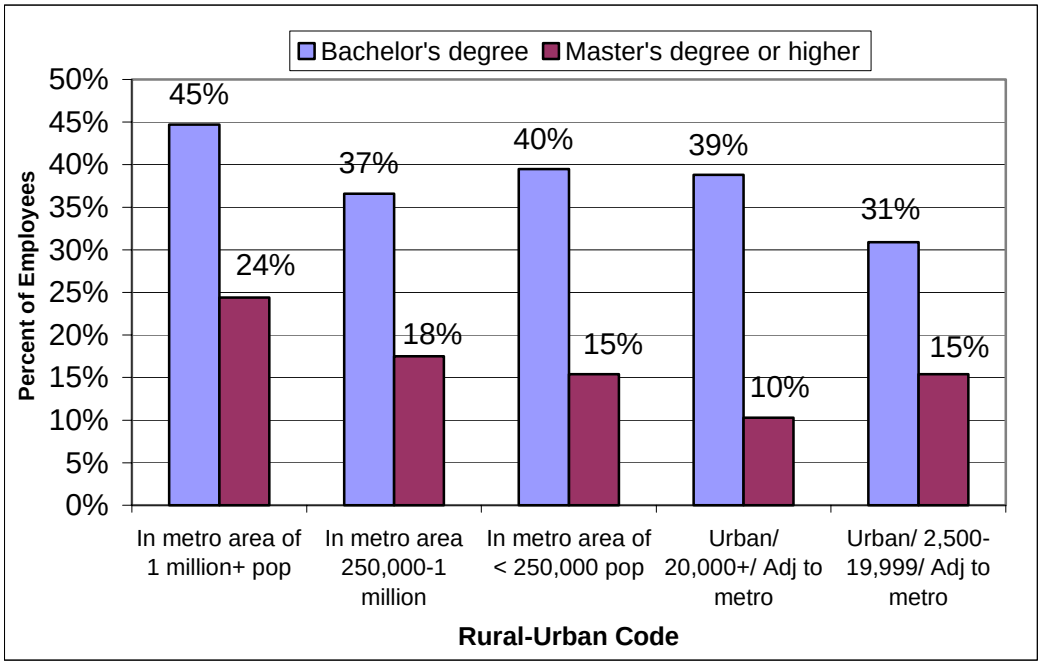
Employees of full-service LHDs were more likely than employees of part-service LHDs to hold a bachelor's degree or higher, while post-secondary certificate and diplomas and associate degrees were more common in part-service than full-service LHDs.

Figure 12: Highest Degree Held By LHD Employees, by Full-Service or Part-Service LHD, New York, 2006 (N = 1973)



In the largest counties, more than two-thirds of LHD employees had a bachelor's degree or higher, compared to fewer than half in counties with an urban population of 2,500-19,999, adjacent to a metro area.

Figure 13: Highest Degree Held By LHD Employees, by Urban Status, New York, 2006 (N=1899)



Employees in the categories of Scientific Investigation, Administration, and Epidemiology/Disease Control were the most likely to hold a bachelor's degree or higher. Employees in the job categories of Support Personnel, Other Clinical, and Other were the least likely to possess a bachelor's degree or higher. Fewer than 2% of LHD workers possessed a master's degree in Public Health.

Table 3: Percent of Public Health Workers by Job Title Categories With A Bachelor's Degree or Higher, New York, 2006 (N=1,901)

	Full-Service LHDs	Part-Service LHDs	All LHDs
Administration	89%	78%	87%
Scientific / Investigation	82%	75%	82%
Education/Outreach	73%	86%	74%
Epidemiology/Disease Control	71%	NR	71%
Other	63%	77%	65%
Nursing	64%	50%	59%
Other Clinical	43%	37%	42%
Support Personnel	19%	7%	17%

NR=Not reportable due to insufficient number of cases

Current Enrollment

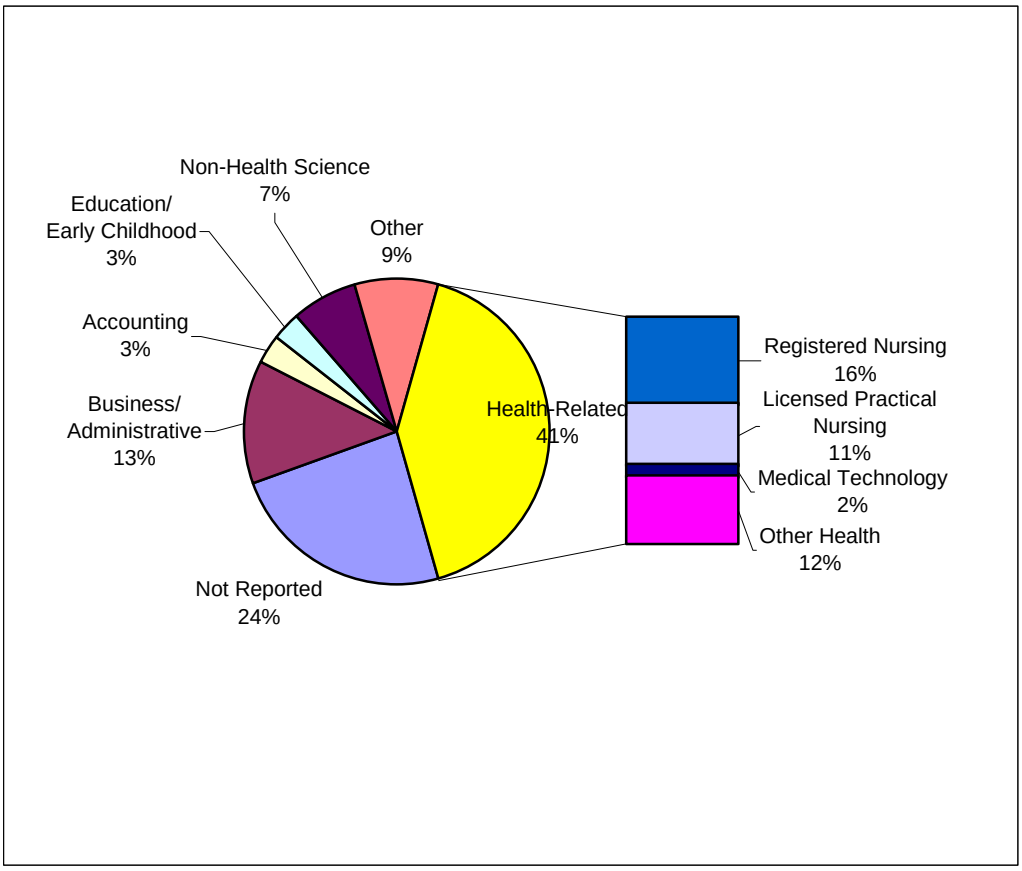
Less than 1% of respondents reported being currently enrolled in a post-secondary certificate or diploma program, while 2% were currently enrolled in an associate degree program. Three percent were enrolled in bachelor's degree programs at the time of the survey, and 2% were enrolled in a master's degree program. Twenty percent of the latter were pursuing a master's in Public Health.

Fields of Study by Degree

Certificate/Diplomas. Nineteen percent of respondents reported having at least one certificate/diploma, although this question was poorly understood and respondents indicated a mix of both vocational credentials and post-graduate certificates. Some respondents indicated "High school" or "Regents" as the field of their diploma even though a separate space was given to report high school diploma. When respondents gave one of these answers as their field of study, it was recoded to certificate/diploma "no" and high school "yes," but a large number of respondents who claimed a certificate/diploma (24%) did not indicate any field, and many of these respondents may have been referring to their high school or Regents diploma.

The most commonly cited first certificate or diploma was Registered Nursing (16%), followed by Business/Administrative (which included secretarial or clerical programs) at 13%. Some of these may have been business-track high school diplomas, however. The third most common field for a certificate/diploma was Licensed Practical Nursing (11%). This was followed by Accounting and Education/Early Childhood (both 3%). Two percent of respondents indicated a certificate or diploma in some sort of medical technology. Twelve percent had their certificate or diploma in some other health-related field, and 7% had their certificate/diploma in some other non-health science field.

Figure 14: Field of First Certificate/Diploma, LHD Workers, New York, 2006 (N=412)

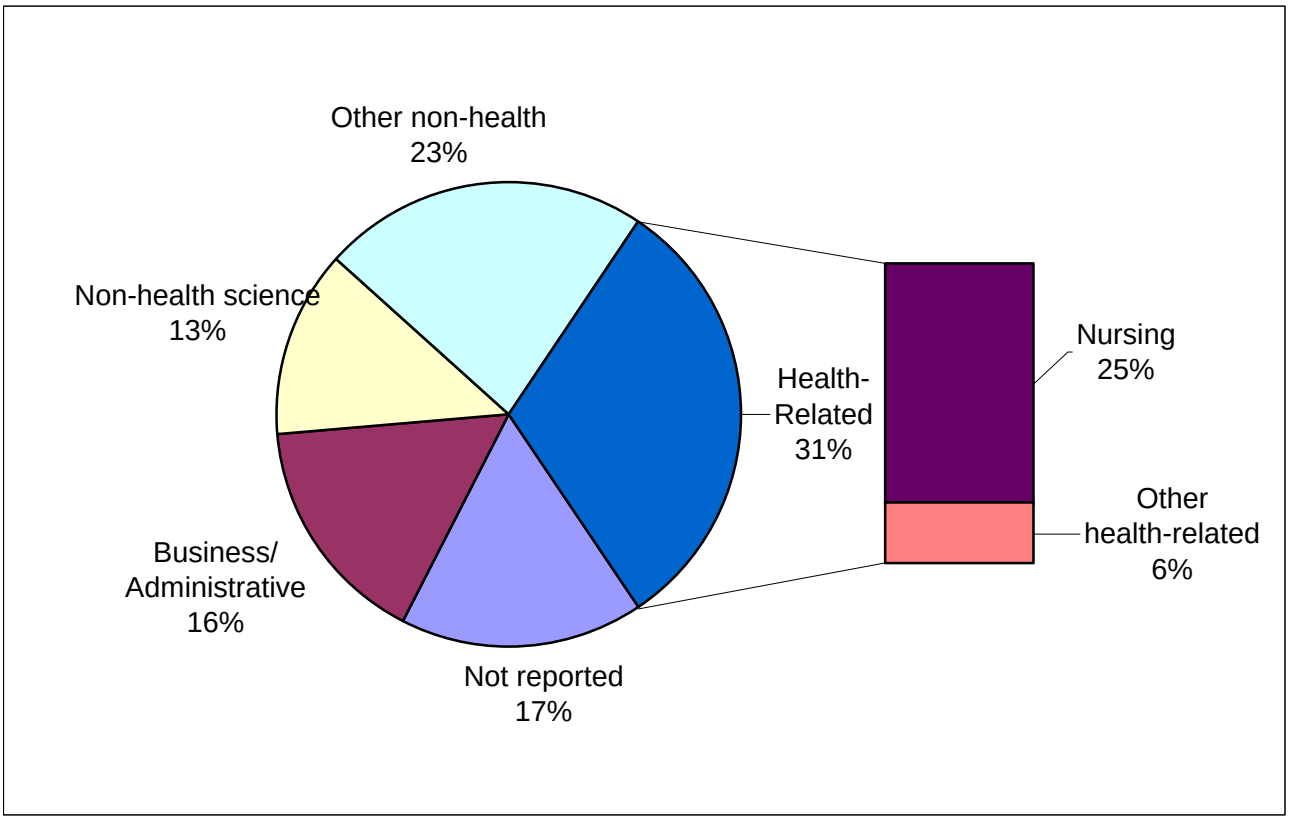


Note: For an explanation of how degree fields were categorized, see Appendix A.

Fourteen percent of those with a post-secondary certificate/diploma reported holding a second certificate/diploma. Thirty-eight percent did not report the field of their second certificate, and 34% reported a health-related field. The remaining 28% were spread across a variety of fields.

Associate degrees. One-third (33%) of respondents, had completed at least one associate degree. Of these, 17% did not report a field. Nursing was by far the most common field reported, with 25% holding an associate degree in Nursing. The second most common field was Business/Administrative/Accounting (16%). Thirteen percent of associate degree holders had degrees in science fields that were not explicitly health related, and 6% had degrees in a health-related field other than Nursing. The remaining 23% were a combination of Liberal Arts/Humanities, Social Sciences, and vocational fields.

Figure 15: Field of First Associate Degree, LHD Workers, New York, 2006 (N=686)

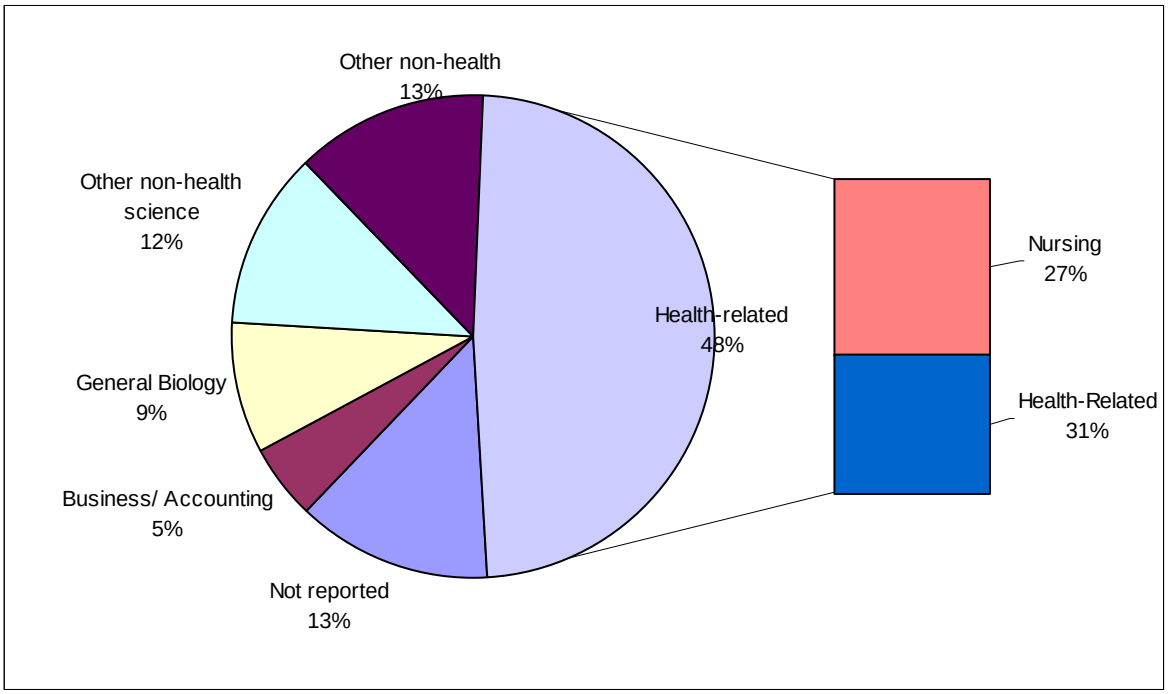


Note: For an explanation of how degree fields were categorized, see Appendix A.

Fourteen percent of all associate degree holders indicated they had completed a second associate degree. Almost half of these (46%), however, did not report in what field. Of those who reported a field, 25% earned their second associate in Nursing.

Bachelor's degrees. Fifty-four percent of LHD workers had at least one bachelor's degree. Thirteen percent of those reporting a bachelor's degree did not report the field in which the degree was held. The bachelor's degree most commonly reported was Nursing (27%), followed by Biology (9% - a number that does not include biological specialties such as environmental biology or botany). Degrees in Business Administration or Accounting remained common (5%), but degrees in the non-health-related sciences (other than general biology) were more common (12%). Overall, more than one of five bachelor's degrees (21%) was in a non-health-related science (including general biology). Health-related degrees other than nursing were also very common (21%, including 6% in psychology and social work).

Figure 16: Field of First Bachelor's Degree, LHD Workers, New York, 2006 (N=1,131)

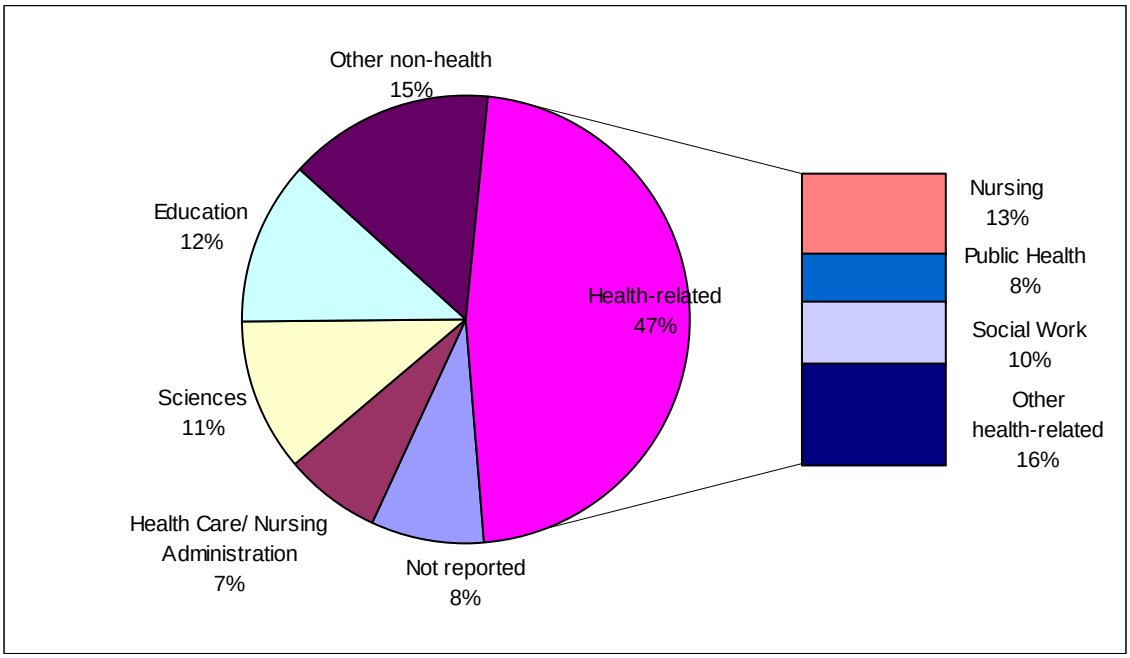


Note: For an explanation of how degree fields were categorized, see Appendix A.

Seven percent of bachelor's degree holders completed a second bachelor's degree. Forty-one percent of these did not report a field, and another 22% held their second bachelor's degree in Nursing. Ten percent held their second bachelor's degree in one of the sciences, with Biology being the most common, and 10% held their second degree in a health-related field other than nursing.

Master's degrees. Seventeen percent of respondents completed at least one master's degree. The most common field was Nursing (13%), followed by Education (12%) and Social Work (10%). Public Health accounted for 8% of first master's degrees, followed by Health Care Administration (including Nursing Administration) at 7%. Eleven percent of respondents had their master's in a science field, and 16% had their degree in a health-related field other than Nursing, Social Work, Public Health, and Health Care Administration. Eight percent did not report the field in which they held their first master's degree. Seven percent of master's degree holders had earned a second master's degree.

Figure 17: Field of First Master's Degree, LHD Workers, New York, 2006 (N=353)



Note: For an explanation of how degree fields were categorized, see Appendix A.

Doctorates and Professional Degrees. Respondents with doctorates or professional degrees comprised only 2% of LHD workers. Fifty-seven percent of those with doctorates or professional degrees held medical doctorates, 27% held professional degrees, and the remaining 16% held other doctorates.

Fields of Study Summarized

The most common fields of study, as we have seen, varied by degree level. Areas of particular interest, however, included Nursing, Public Health/Epidemiology, Business/Administration (including Public Administration and other fields that prepare students for leadership roles), Biology/Life Sciences, Engineering, Environmental Health/Science, and Education[12].

Overall, 24% of LHD workers reported a degree in Registered Nursing. Just 2% reported degrees in each of Public Health, some field of Engineering, and Environmental Sciences. Seven percent of LHD workers reported a degree in a Business or Administrative field (not including programs at the certificate or associate level that appeared geared toward clerical work), 7% in Biology, and 4% in Education.

Some LHD workers (5%) have formal credentials in more than one of these fields. For example, 5% of those reporting a Nursing degree also reported a degree in a leadership field, and 2% reported a degree in Life Sciences and 2% in Education. Two percent also reported a Public

[12] For a discussion of how these fields were defined, see Appendix A.

Health degree. Similarly, 10% of those with a Public Health degree also had some sort of leadership/administration degree, 28% had a Life Sciences degree, and 20% had a Nursing degree.

III. FUNCTIONS OF THE WORKFORCE

Respondents were asked to indicate the percent of their time in 10-20% increments in a typical month that they spent on each of 35 responsibilities within 16 public health roles[13]. Unfortunately, the structure of the question was misunderstood by a large number of respondents. All discussions of roles and responsibilities were based on employees reporting spending *any* of their time on a given responsibility. The amount of time spent was not analyzed.

The broad nature of duties within a LHD was highlighted by the fact that clerical duties was the responsibility reported by the greatest percent (47%) of LHD employees, followed by clinical health services (38%), and disseminating public health information (34%). Employees in part-service LHDs were more likely than those in full-service LHDs to report some involvement in many of the tasks included in the survey. This probably reflected less specialization of tasks in smaller agencies where employees may be called on to spend small amounts of time on a wide array of tasks. Employees in full-service LHDs were more likely, however, to report some involvement in policy analysis and in enforcing regulatory compliance than employees in part-service LHDs.

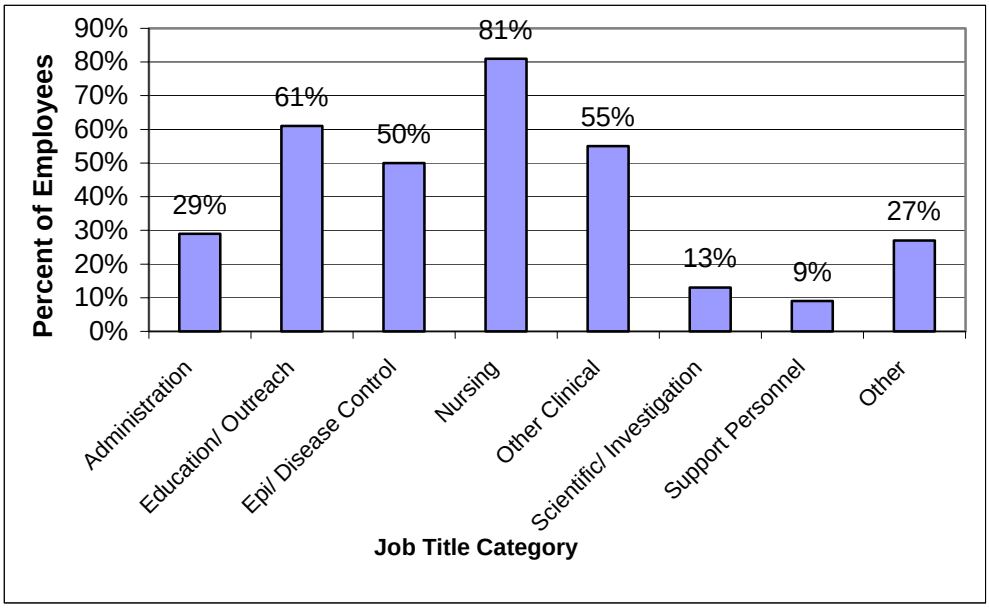
[13] 1-19%, 20-39%, 40-59%, 60-79%, or 80-100%.

Table 4: Percent of LHD Employees Spending Any Time Performing the Following Responsibilities (N = 2078)

	All	Full-Service	Part-Service
Any time in clerical services	47%	48%	44%
Any time providing clinical health services	38%	34%	55%
Any time disseminating public health information	34%	32%	43%
Any time providing prevention and outreach	32%	30%	41%
Any time collecting and analyzing data	32%	31%	36%
Any time providing education/services to reduce disease risk	31%	29%	41%
Any time in workforce development	31%	31%	32%
Any time in policy analysis and development	29%	31%	26%
Any time in communication	29%	28%	32%
Any time providing health education	28%	23%	49%
Any time in executive leadership	28%	28%	31%
Any time addressing prevention priorities	26%	24%	36%
Any time community assessments	26%	26%	30%
Any time providing environmental health education	25%	25%	27%
Any time conduct program evaluation	24%	24%	27%
Any time planning for/responding to environmental events	22%	22%	24%
Any time monitoring non-infectious disease	21%	19%	32%
Any time reporting notifiable conditions	21%	19%	27%
Any time in information and technology systems	20%	20%	21%
Any time communicating urgent public health messages	19%	18%	24%
Any time disease surveillance	18%	18%	22%
Any time enforcing compliance with regulations	18%	21%	10%
Any time public health laboratory	18%	17%	21%
Any time identifying disease response	17%	16%	23%
Any time selecting pubic health priorities	17%	16%	24%
Any time investigating outbreaks	17%	17%	16%
Any time tracking environmental health risks and illnesses	15%	16%	13%
Any time using disease tracking system	14%	14%	16%
Any time involving community in setting environmental health priorities	12%	12%	15%
Any time conducting risk communication activities	11%	11%	13%
Any time in professional and facility licensing	6%	6%	7%
Any time facilities maintenance	4%	3%	4%
Any time regulating EMS/trauma services	2%	2%	3%

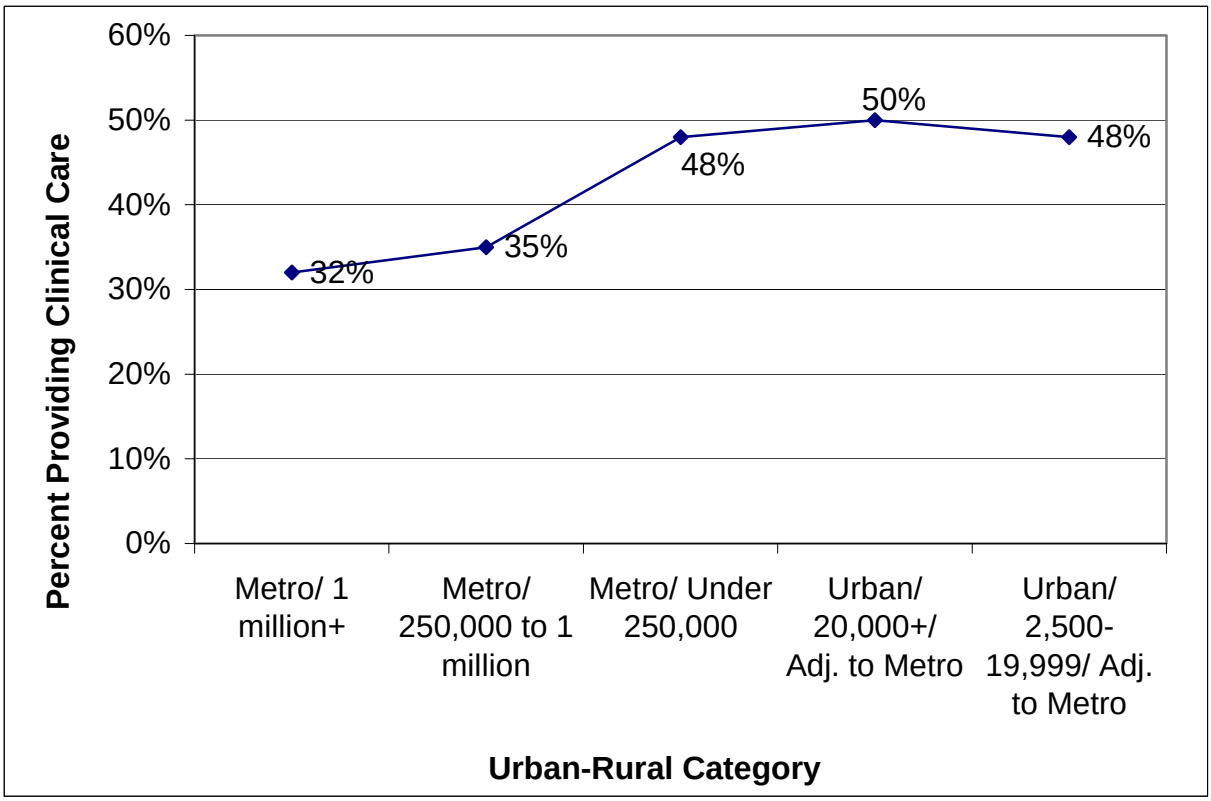
Perhaps the largest difference in functions was between clinical and non-clinical functions. Thirty-eight percent of LHD employees indicated they spent some time "providing health care services in a clinical setting or on a home visit basis." The likelihood of providing clinical care varied, however, by both job title and rural or urban context. Those in Nursing and Education/Outreach job titles were most likely to provide clinical care. Surprisingly, 45% of those in non-nursing clinical titles did not report providing clinical care.

Figure 18: Percent of LHD Employees by Job Title Group Spending Any Time Providing Health Care Services in a Clinical Setting, New York, 2006 (N = 1929)



It was also clear that clinical functions were more common among employees in LHDs serving smaller rural areas, as shown below.

Figure 19: LHD Employees Providing Clinical Care by Urban Status, New York, 2006 (N=1963)



Fifty-seven percent of those providing clinical care were licensed as RNs, while another 10% were not RNs, but held another clinical credential. Still, 27% of RNs and 46% of those with other clinical credentials did *not* report providing clinical services.

IV. TRAINING NEEDS

Future Education

Overall, 37% of LHD employees were interested in pursuing an additional educational credential.

- Three percent of employees were interested in pursuing a post-secondary diploma/certificate, and 4% were interested in pursuing an associate degree.
- Twelve percent of employees were interested in pursuing another bachelor's degree (but few in public health).

- Nineteen percent of employees were interested in pursuing another master's degree. Thirty-five percent of these employees were interested in public health degrees.
- Five percent of employees were interested in pursuing doctoral degrees. Twenty-three percent of these employees were interested in public health degrees.

There was little systematic variation in interest in pursuing an additional degree. Regardless of rural or urban location, at least one-third of all LHD employees were interested in pursing an additional degree.

The type of degree public health workers were interested in pursuing depended a great deal on their current educational attainment. Some of those with high school diplomas were interested in pursing an associate degree (17%), while others were interested in pursuing bachelor's degrees (9%). Similarly, those with a certificate or diploma regarded the associate or bachelor's degree as a possible next step (11% and 18%, respectively). Those who held an associate degree were primarily interested in pursing a bachelor's degree (41%), while those with a bachelor's degree were interested in pursuing a master's degree (36%).

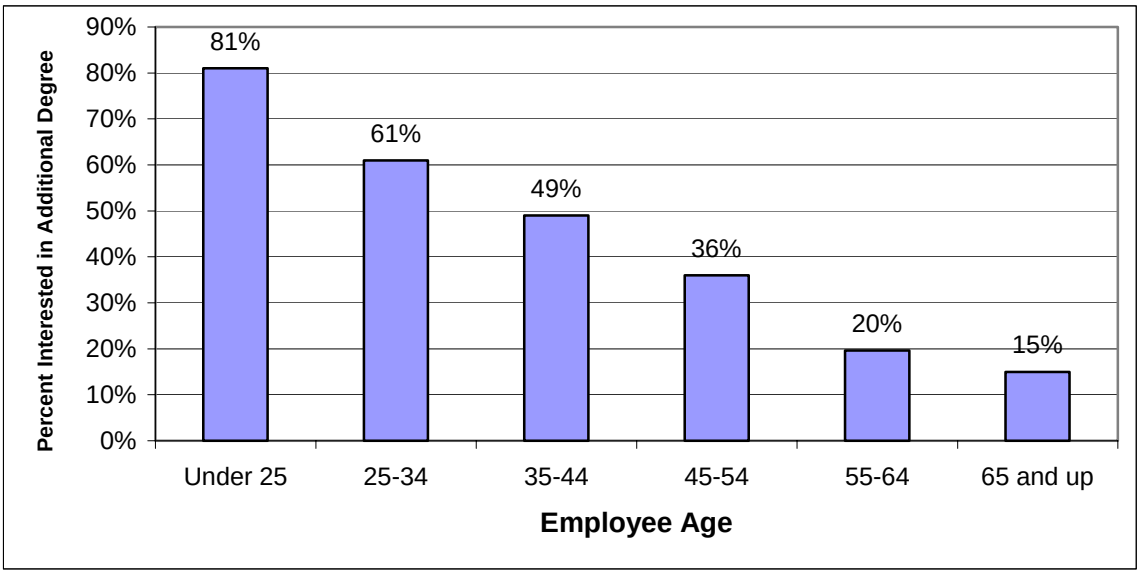
Table 5: Percent of LHD Employees Interested in Additional Education by Their Highest Educational Attainment, New York, 2006 (N = 2003)

	Additional certificate/diploma	Additional associate	Additional bachelor's	Additional master's	Additional doctorate	Any additional education
High school diploma	5%	17%	9%	4%	NR	29%
Certificate/diploma	3%	11%	18%	NR	NR	30%
Associate degree	NR	3%	41%	10%	1%	46%
Bachelor's degree	3%	NR	3%	36%	3%	42%
Master's degree or higher	2%	NR	1%	13%	17%	31%
Total	3%	4%	12%	19%	5%	38%

NR = Numbers insufficient to report

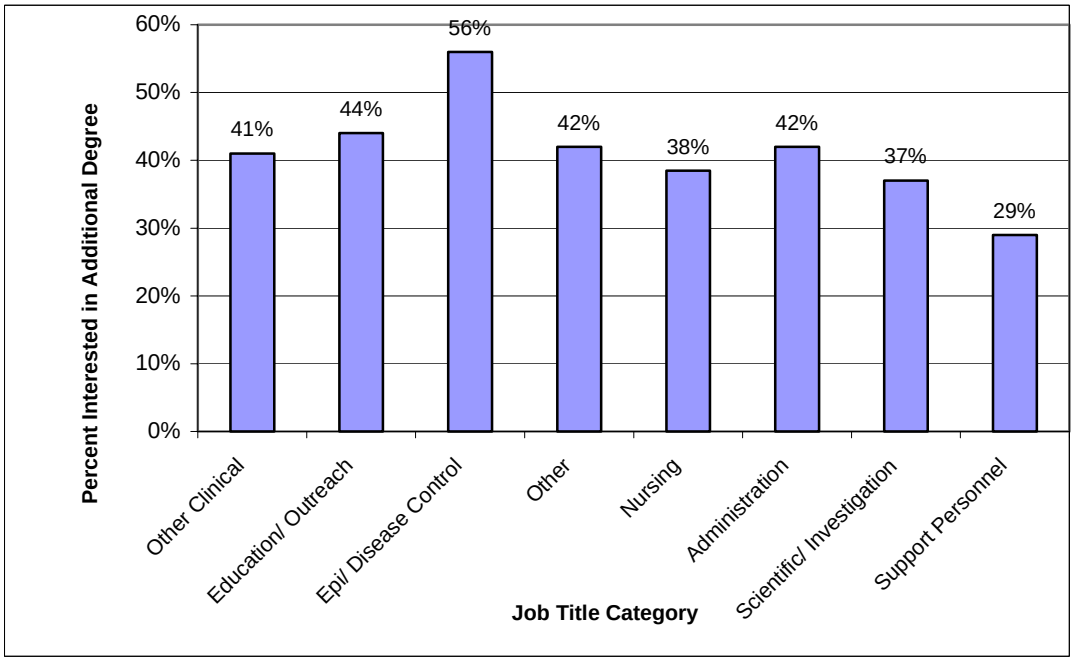
The likelihood that a LHD employee was interested in pursing an additional degree declined with age. A majority of LHD employees younger than age 35 wanted to pursue an additional degree. Those with less experience in public health or in their current job were also more likely to want additional education, but this was not surprising given that the less experienced workers also tended to be younger. Employees interested in more education had been at their current jobs for about five years, compared to eight years for those not interested in further education.

Figure 20: Percent of LHD Employees Interested in Pursuing an Additional Degree by Age, New York, 2006 (N = 2063)



A significant percent of employees across all job title groups were interested in pursuing additional degrees.

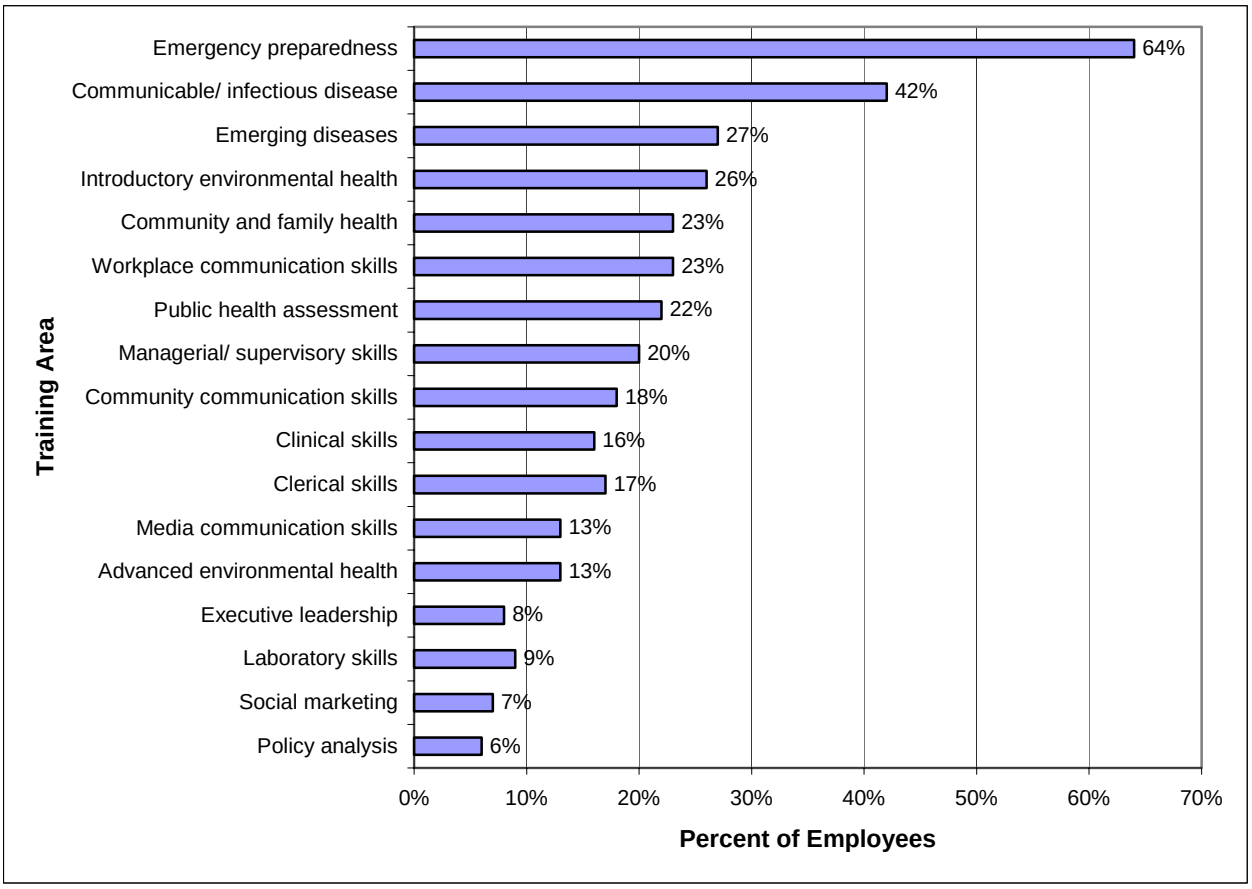
Figure 21: Percent of LHD Employees Interested in Pursuing Additional Degree by Job Title Group, New York, 2006 (N = 1920)



Continuing Education Received/Desired

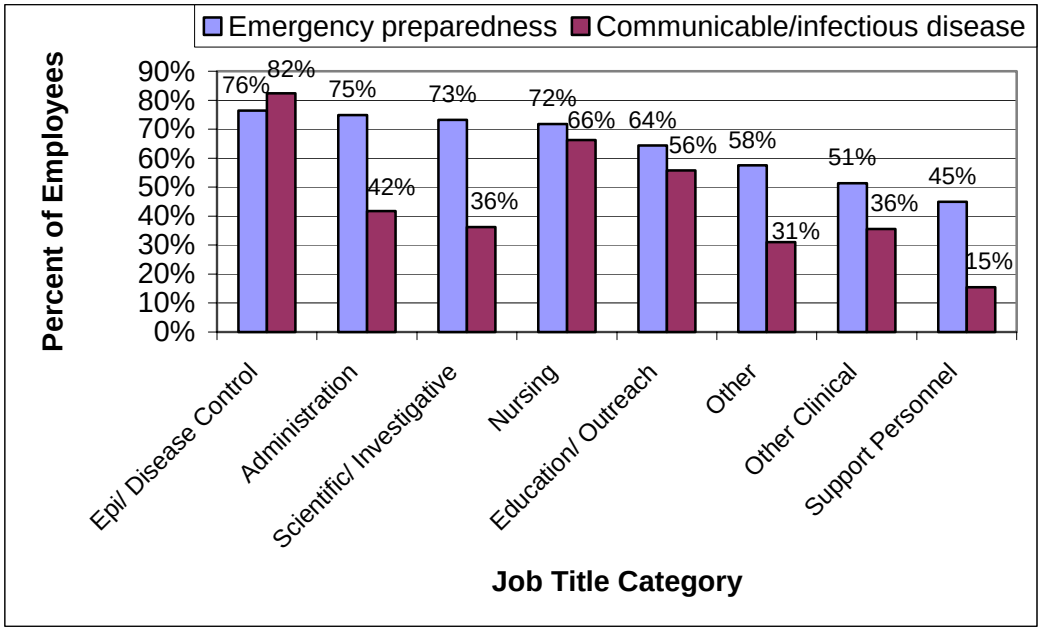
It was clear that emergency preparedness and communicable/infectious disease were the training areas of greatest interest in LHDs. Sixty-four percent of employees reported receiving continuing education (CE) in emergency preparedness, and 42% reported receiving training in communicable/infectious disease. The frequency of both of these types of CE may have been influenced by greater funding for and availability of this type of training due to interest generated by current and past events such as Avian Flu, the September 11, 2001 terrorist attacks, and the 2005 devastation in New Orleans resulting from Hurricane Katrina.

Figure 22: Areas in Which LHD Employees Have Received Training in the Past Two Years, New York, 2006 (N = 2078)



The percent of local public health workers receiving CE varied by job title. Emergency preparedness CE was most common among those in Epidemiology/Disease Control and Administration titles, followed by Scientific/Investigation and Nursing. Communicable/Infectious Disease CE was most common among those in Epidemiology/Disease Control titles, and those in Nursing titles.

Figure 23: Specific Areas LHD Employees Have Received Training by Job Title Group, New York, 2006 (N = 1920)



The topics in which the largest number of public health workers wanted more CE, irrespective of whether they had already received training in that area were Managerial/Supervisory Skills (18%), Emerging Diseases (16%), Emergency Preparedness (16%), and Public Health Assessment (16%).

Table 6: Percent of LHD Employees Who Wanted Training in a Role, Whether or Not They Had Already Received Training, New York, 2006 (N = 2078)

Wanted training in...	Of those who had already received training in this area	Of those who had not yet received training in this area	All
Managerial/supervisory skills	18%	18%	18%
Emerging diseases	22%	14%	16%
Emergency preparedness	16%	16%	16%
Public health assessment	18%	15%	16%
Communicable/infectious disease	17%	12%	14%
Executive leadership	17%	14%	14%
Community and family health	17%	13%	14%
Advanced environmental health	24%	12%	14%
Community communication skills	14%	13%	13%
Introductory environmental health	14%	13%	13%
Workplace communication skills	11%	13%	13%
Policy analysis	11%	12%	12%
Media communication skills	13%	11%	11%
Social marketing	18%	9%	9%
Clinical skills	19%	6%	8%
Laboratory skills	21%	5%	7%
Clerical skills	13%	4%	6%

Mentoring

It was presumed that the experiences of being mentored or mentoring others were potentially important to ensuring satisfaction and retention of public health employees, and the survey included a question asking about these experiences. The word “mentoring” was intended to connote a formal or informal long-term, one-on-one relationship between a new and an experienced employee in which the experienced employee was personally committed to providing career guidance to the novice. Focus groups with respondents indicated, however, that many respondents interpreted “mentoring” as on-the-job training, which may be both more formal and more short-term than was intended by the use of the word “mentoring” in the survey. Results from the survey question included that:

- Thirty-four percent of employees had been mentored in their public health careers;
- Twenty-six percent of employees were interested in being mentored;
- Forty-one percent of employees were interested in mentoring others; and
- Fifty-three percent of employees felt a person needs training to be a mentor.

Having been mentored greatly increased the likelihood that one was interested in mentoring others. Two-thirds (66%) of those who said they were mentored reported interest in mentoring others.

V. RECRUITMENT AND RETENTION

The average LHD employee had worked in their current position for about seven years, and had worked in the agency for about nine years. Sixty-three percent of LHD employees reported the same amount of time in both their current positions and agencies, implying that they had not changed jobs. Those who worked in public health positions previous to their current positions spent a median of eight years at their previous public health job before assuming their current positions.

The average LHD employee reported working in public health for about 10 years. Eighty-four percent of employees did not appear to have had prior public health experience before working for their current agencies. Those who had worked in public health before their current agencies spent a median of four years in public health before being hired at their agencies.

The majority of LHD employees (68%) reported working in health care other than public health. The median previous health care experience among those who had any was 12 years.

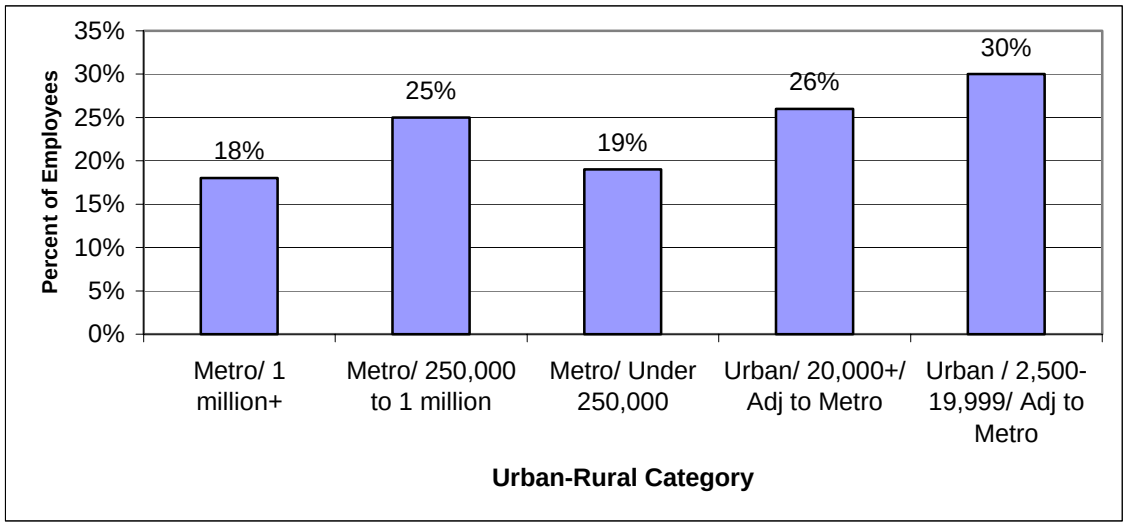
New to the Field of Public Health

Twenty-three percent of public health workers began their careers in public health within the last five years.

Men and women were about equally as likely to report that they were new to public health. Blacks/African-Americans, Asians, and Hispanic/Latinos were much more likely to be new to public health than non-Hispanic Whites (34%, 33%, and 31%, respectively, versus 22%). This suggested that recent recruitment efforts had been more successful at attracting a diverse candidate pool. More research is needed on the experiences of minority employees in LHDs.

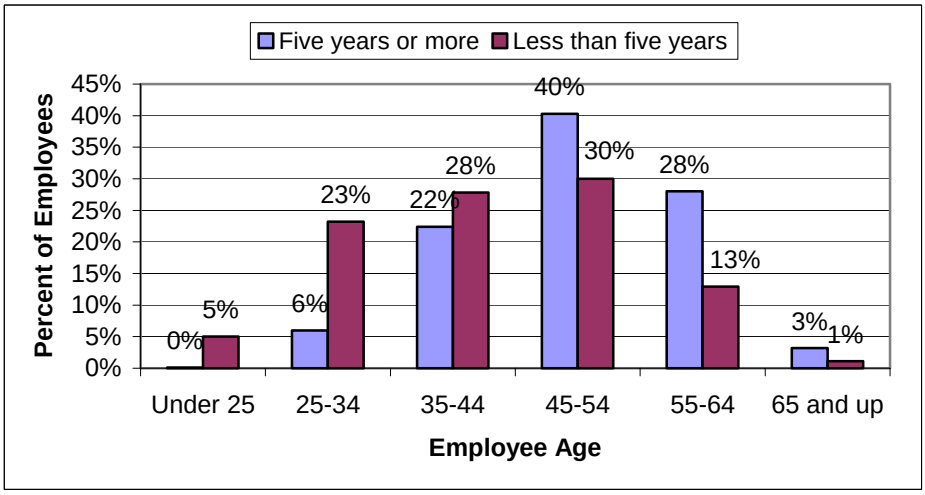
Generally, less urban LHDs tended to have a greater percentage of their workforce as recent recruits into the field of public health than their more urban counterparts.

Figure 24: Percent of Employees Who Entered Public Health in the Last Five Years by Rural or Urban, New York, 2006 (N = 1863)



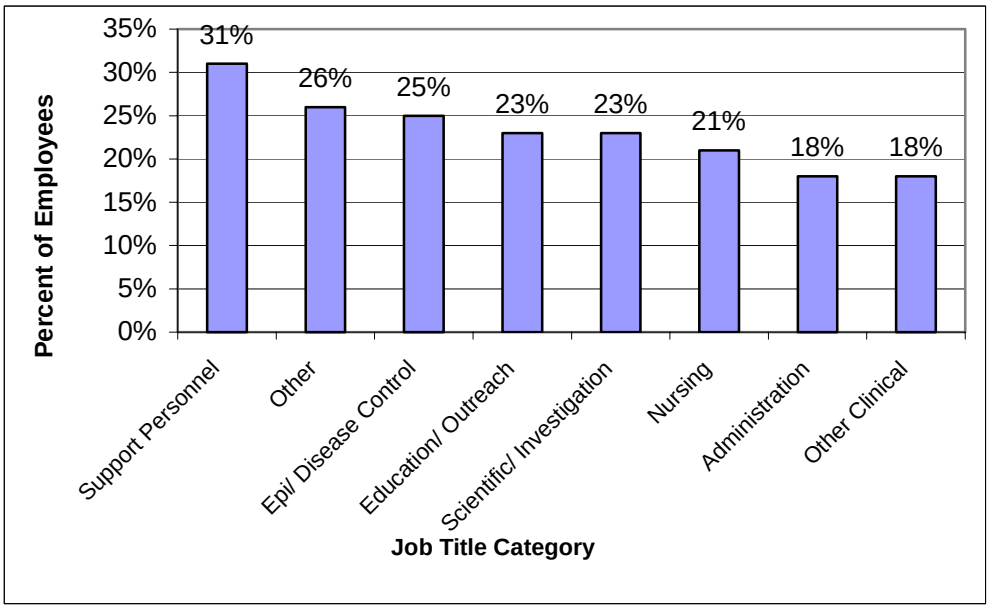
Not surprisingly, entry into the field of public health was more common at younger ages. At the same time, nearly one-third of new entrants were age 45-54, and more than one in 10 were age 55-64. This indicates a potential for the field of public health to recruit workers from other fields as possible second careers.

Figure 25: Age Distribution of LHD Employees by Years in Public Health, New York, 2006 (N = 1955)



Support Personnel titles were most likely to be held by people with limited experience in the field of public health, while fewer than one in four LHD employees in Nursing, Other Clinical, or Administration titles were new to public health.

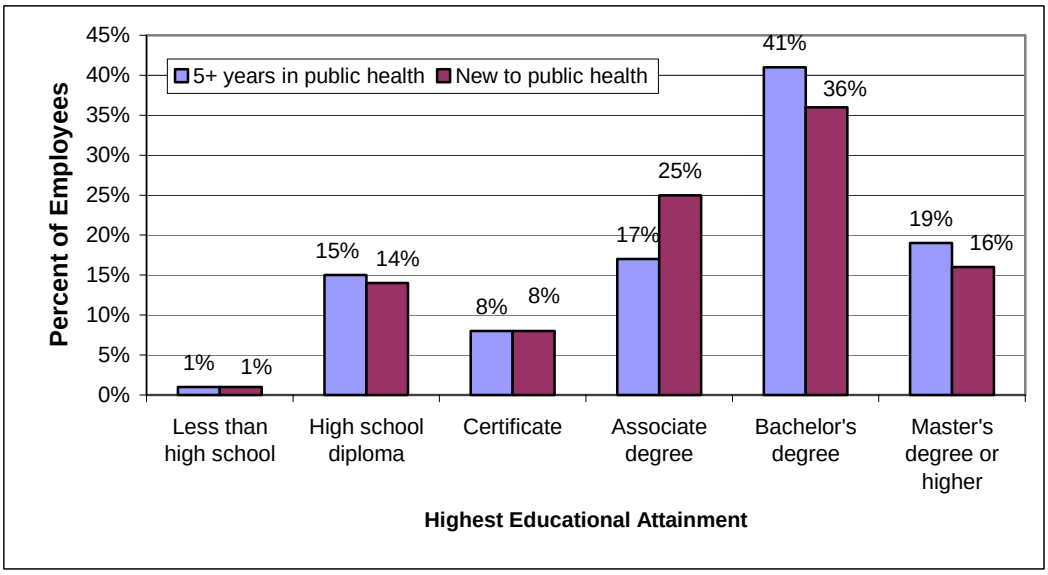
Figure 26: Percent of LHD Employees New to Public Health in Last Five Years, New York, 2006 (N = 1830)



It might be hypothesized that newer entrants to the public health workforce would be better educated than their predecessors, but this proved not to be the case. While there were virtually no differences in the percent holding bachelor's degrees, new entrants were more likely to hold an associate degree and less likely to hold a master's degree as their highest level of education.

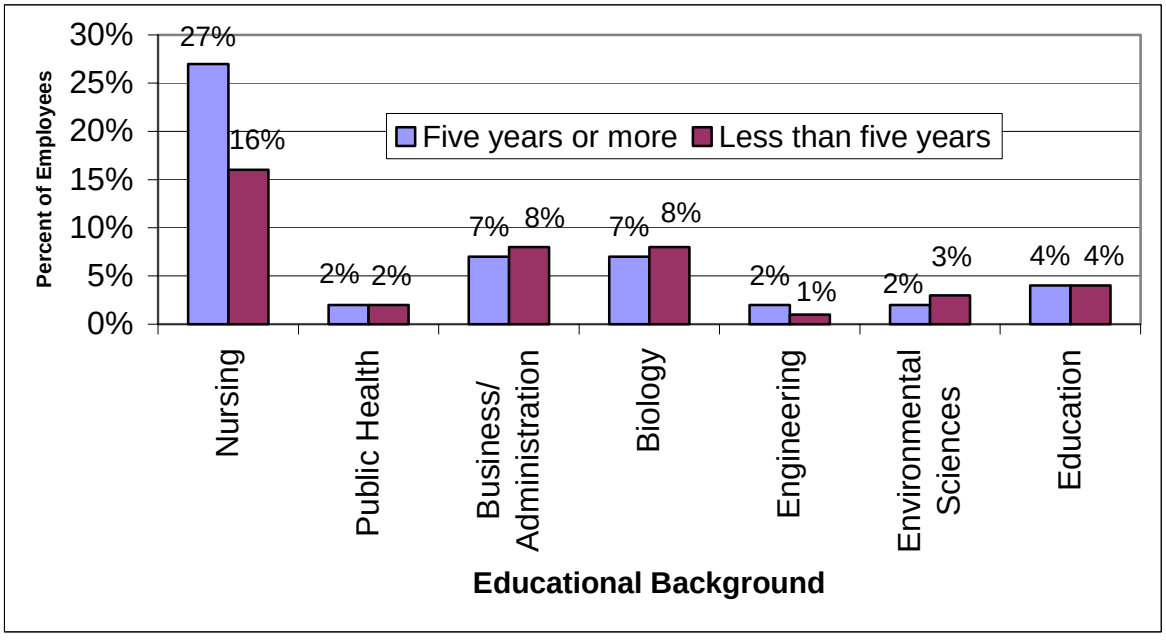
This raised the question of whether new entrants to the field of public health today were less educated than new entrants a decade or two ago, or whether LHD employees commonly returned for higher levels of education later in their public health career.

Figure 27: Highest Educational Attainment New and Other LHD Employees, New York, 2006 (N = 1904)



Workers new to public health had educational backgrounds in very similar fields to those who had been working in public health for five years or more. The one exception was having an educational background in Nursing, which was much less common among new entrants (16%) than among those who had worked in public health longer (27%). Interestingly, there was no difference in the percent of employees holding a degree in Public Health.

Figure 28: Educational Backgrounds of New and Other LHD Employees, New York, 2006 (N = 1965)



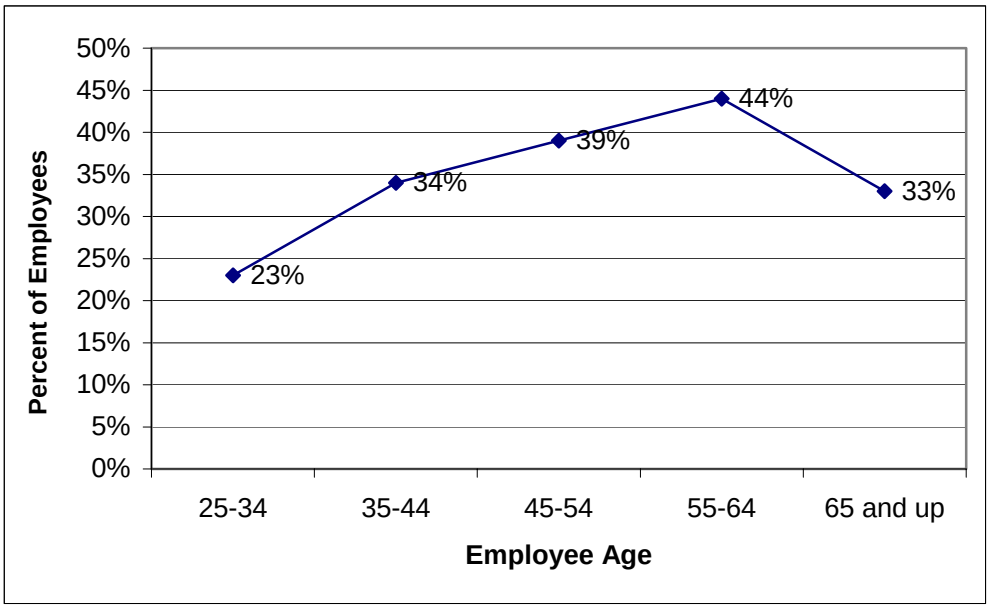
Mobility within the Agency

By comparing the number of years employees worked in their current job positions and in their current agencies, it was possible to estimate whether employees experienced job mobility within their current organizations. Overall, 37% of employees with valid responses for both pieces of information had changed jobs within their agencies. A median of eight years had passed since the move into the current jobs. About one-third of these employees had moved into their current jobs less than five years ago.

While non-Hispanic White and Black/African-American employees experienced mobility within the agency at comparable rates (both 38%), Asians were slightly less likely to have changed jobs within the agency (33%), and Hispanic/Latino employees were dramatically less likely to have changed jobs within the agency (13%). The reasons for this were not clear. It is possible that Asians started out in more advanced positions to begin with, but the data do not allow examination of this possibility.

The likelihood of mobility within the agency increased markedly with age (probably reflecting longer tenure at the agency), up until age 65.

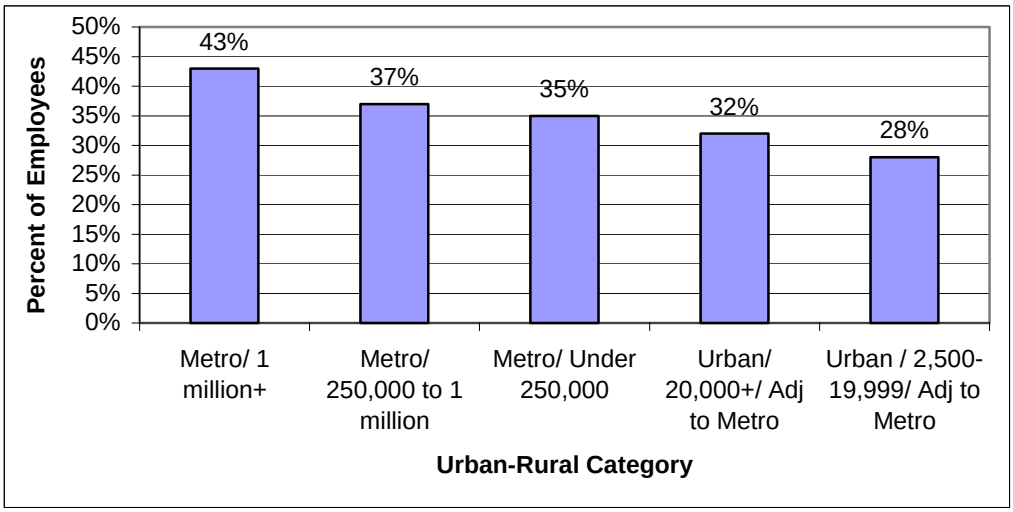
Figure 29: Percent of LHD Employees Changing Jobs within Agency, by Age, New York, 2006 (N=1729)



Note: Those under 25 not shown due to insufficient N.

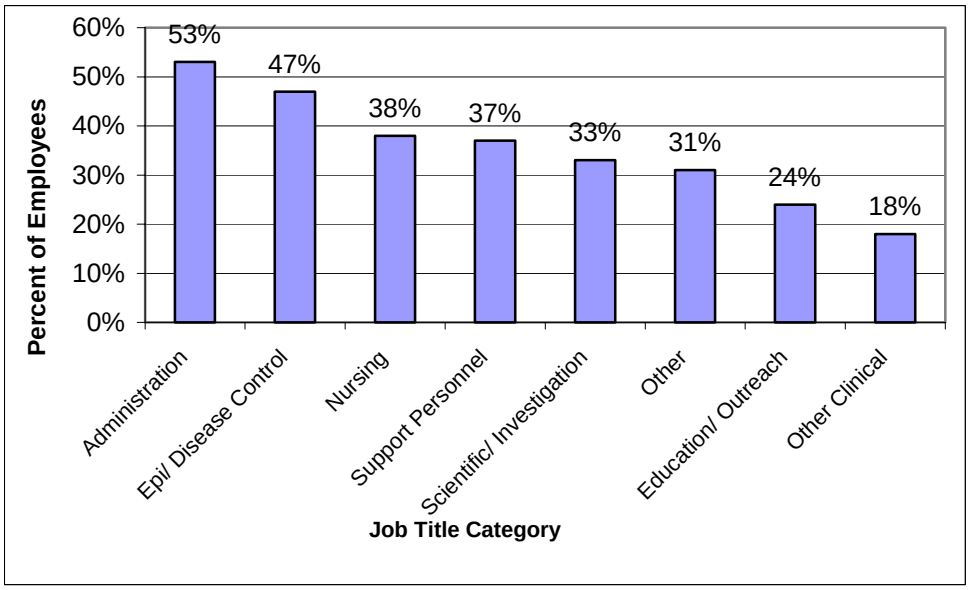
The likelihood of mobility decreased in less urban counties, as shown below. In the largest, most urban counties, nearly half of all employees had experienced intra-agency mobility (43%), while this was only slightly more than one-quarter of employees (28%) in the smallest, least urban counties.

Figure 30: Percent of LHD Employees Changing Jobs within Agency, by Urban Status, New York, 2006



Employees with at least one clinical credential were more likely to experience mobility than those without a clinical credential (42% versus 34%). Those in Administration titles were the most likely to have been hired into their current position from within the agency (53%), followed by those in Epidemiology/Disease Control positions (47%).

Figure 31: Percent of LHD Employees Changing Jobs within Agency, by Job Title Group, New York, 2006



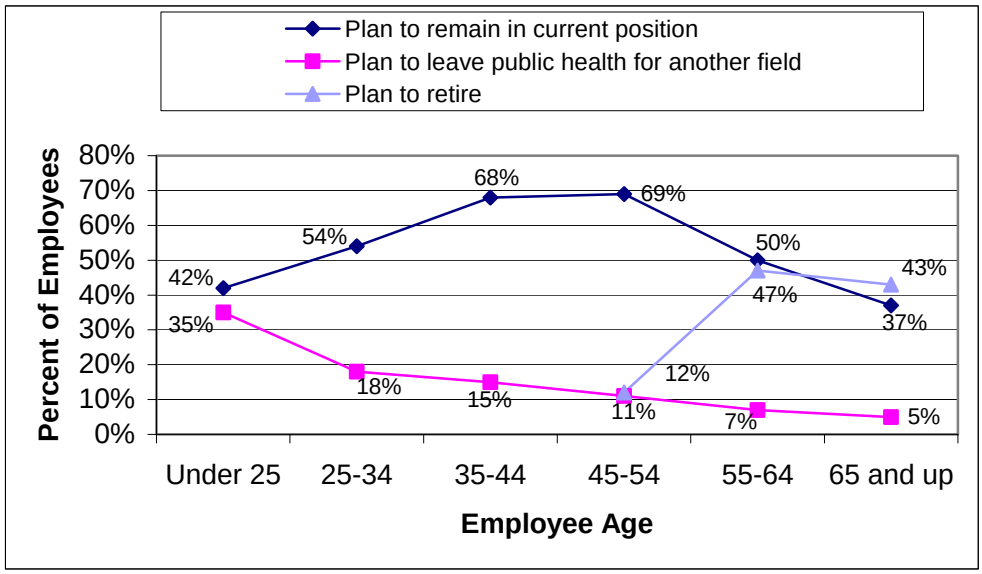
Retention and Future Plans

The majority of public health workers (62%) reported plans to stay in their current positions for the next five years, although 16% of these workers also indicated interest in seeking new positions within the agencies. (Overall, 23% of public health workers reported plans to seek new positions within the agencies.)

Twelve percent of public health workers reported plans to seek new public health positions with other agencies, and 13% reported plans to leave the field of public health within five years. Of those, 18% planned to retire, and 2% planned to temporarily or permanently leave the labor force.

These plans varied dramatically by age, however. Younger public health workers were the least likely to plan to remain in their current jobs, although many said they planned to seek new positions within the agencies. Still, many young public health workers planned to leave the field of public health altogether to work in another field in the next five years. At the other end of the age spectrum, many public health workers older than age 65 (43%) and between the ages of 55 and 64 (47%) planned to retire.

Figure 32: Career Plans of LHD Employees in the Next Five Years by Age, New York, 2006 (N = 2063)

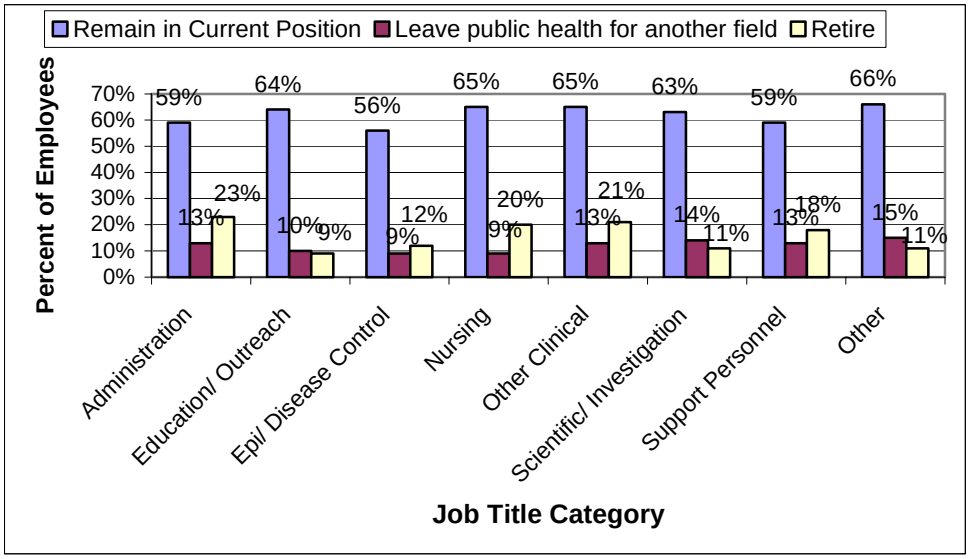


Note: Other possible responses (not shown) were "seek new position within agency," "seek new public health position in another agency," and "leave labor force/permanently or temporarily." Respondents could choose multiple responses, so responses did not total to 100%.
Note: Retirement plans among those younger than 45 are not shown due to insufficient Ns.

Plans to remain in current positions were highest among those in "Other" job titles (66%), which included such diverse specific titles as architect, attorney, crime analysis, and dog control, but public health workers in these titles were also most likely to plan to leave public health for other fields. Plans to remain in current position were lowest among those in Epidemiology/Disease

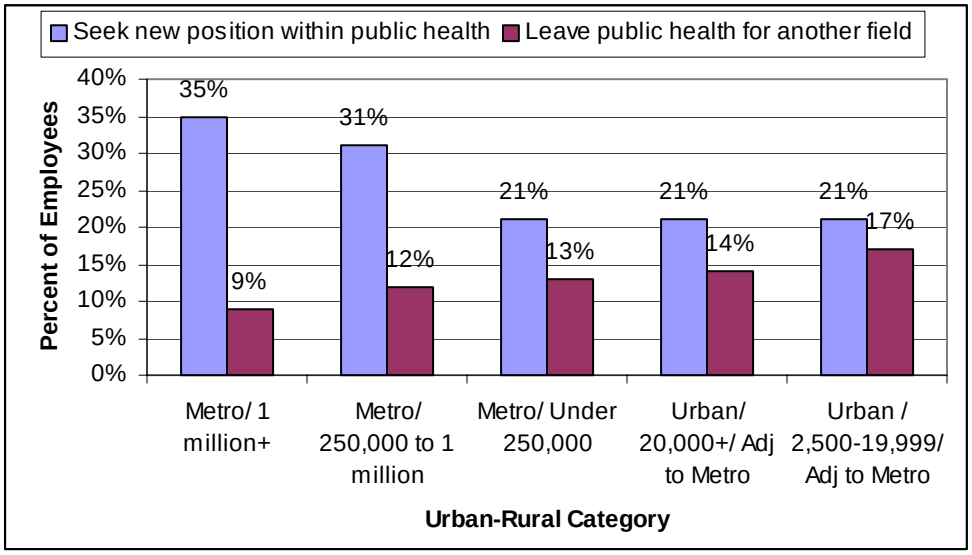
Control titles (56%). Public health workers in Administration were most likely to report plans to retire (23%).

Figure 33: Career Plans of LHD Employees by Job Title Group, New York, 2006 (N = 1920)



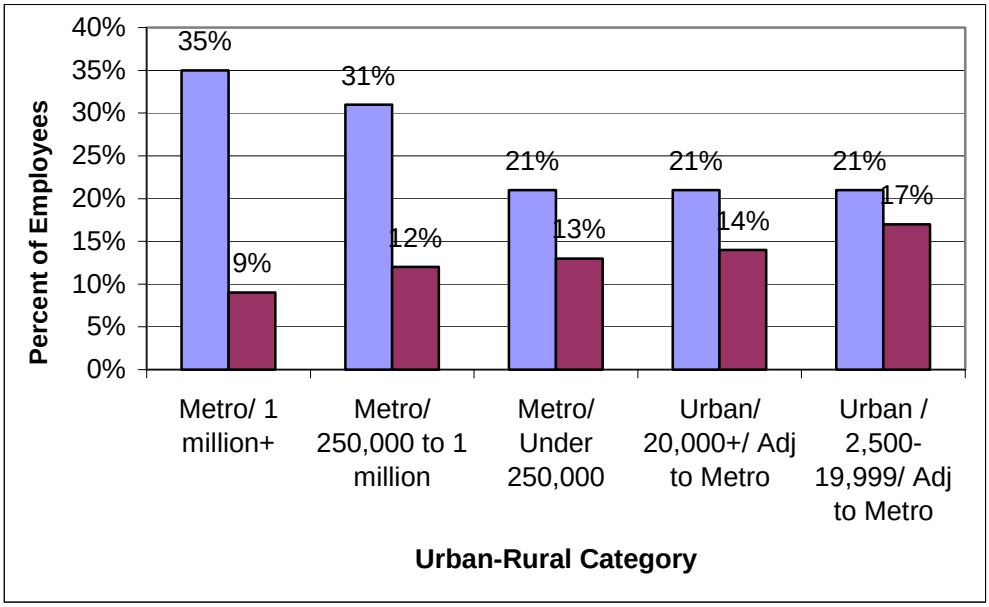
There was little variation in retirement by urban status of the county. There were, however, some differences in terms of seeking new jobs in public health or leaving public health for other fields. Public health workers in LHDs serving larger, more urban areas were most likely to report plans to seek new jobs within public health, but leas t likely to plan to leave public health for other fields (perhaps because alternative positions within public health were much more limited in smaller counties).

Figure 34: Career Plans of LHD Employees by Urban Status, New York, 2006 (N = 2039)



Black/African-American and Hispanic/Latino public health workers were much less likely than either non-Hispanic White or Asian public health workers to report plans to remain in their current positions. This did not appear to be due to a tendency to leave the field of public health, but to look for new positions within public health, either in their own or other agencies. This may be related to a greater tendency of minorities to work in large urban counties where alternate opportunities in public health are more available. Plans to retire were highest for non-Hispanic White public health workers (19%), and lower for Asians, Blacks/African-Americans, and Hispanic/Latinos (9%, 6%, and 10%, respectively)[14].

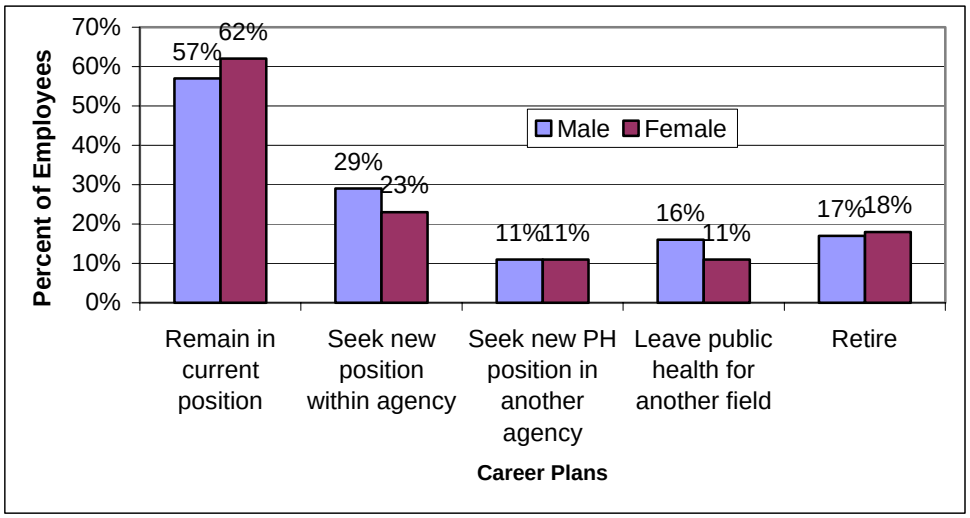
Figure 35: Career Plans of LHD Employees by Race, New York, 2006 (N = 2043)



There were also some gender differences in future plans. Women were slightly more likely to plan to remain in current positions than men, while men were more likely to plan to seek new positions within the agencies. Men were also more likely than women to plan to leave public health for other fields. There were no gender differences in terms of plans to retire or leave the workforce.

[14] Similar issues were observed in regard to Hispanic versus non-Hispanic ethnicity, with Hispanic public health workers less likely than non-Hispanics to plan to remain in their current positions and more likely to plan to leave their agencies or leave the field of public health. The number of Hispanic respondents was, however, not sufficient for making inferences about the effect of ethnicity.

Figure 36: Career Plans of LHD Employees by Gender, New York, 2006 (N = 2058)



DISCUSSION

This study highlights many workforce challenges faced by LHDs in New York. The LHD workforce is aging and is less diverse than the population it serves. While nearly one-quarter of LHD employees began their public health careers in the past five years, 20% of those younger than age 35 reported plans to leave the field of public health in the next five years. This is in addition to the 18% of employees who reported retirement plans. Workers in the LHDs serving larger, more urban areas appeared less likely to plan to leave the field.

Employees reported a great deal of interest in public health training in a variety of areas, including emergency preparedness, communicable infectious diseases and managerial/supervisory skills. One-third of employees (and more than half of those younger than age 35) reported interest in obtaining additional degrees. A particular challenge for small LHDs is to create career ladders for their existing workforce in order to provide internal promotion opportunities for employees who advance their education.

In addition, this study suggests review and application of specific activities by LHDs to address the specific workforce issues of cultural competence and competition with health services settings for a limited nursing resource.

The issues raised by the enumeration study need to be monitored over time, especially as health departments create and implement policies aimed at improving recruitment and retention. Understanding the reasons for employee departures would benefit from further study. Regular use of exit interviews or surveys could provide useful data about the factors that "push" employees out of public health jobs or "pull" them into other fields.

As the health care system becomes more concerned with the prevention of chronic disease in the face of an aging population, programs addressing population health will become increasingly

central to managing the nation's health resources. LHDs are the backbone of New York's health programs. Continuing attention to the issues that face this critical workforce is needed in order to maintain adequate and effective local health programs.

This report's data point to the importance of taking steps in New York to 1) attract new recruits to local public health, 2) provide career development to the current local public health workforce, 3) implement better retention strategies, and 4) regularly collect data on the local public health workforce.

In order to attract new recruits to public health, we must learn more about what attracts potential public health workers to the field. This study suggests that most new recruits to public health have educational backgrounds in fields other than public health, and that many are age 45 and older. Marketing strategies are needed to reach these groups. Service-obligated scholarships or loan repayment programs might also be useful in bringing more new graduates into local public health.

The data show that the workforce has a great deal of interest in career development. Initiatives that increase accessible public health training opportunities and provide support and assistance for public health workers to further their education, both graduate and undergraduate, might improve retention of younger public health workers. It would also be useful if effective career ladders were in place within LHDs as well.

Finally, the effects of any initiatives to improve the adequacy of the local public health workforce can only be evaluated in the presence of ongoing data monitoring of the public health workforce. There is a need to monitor the size and composition of the public health workforce on a regular basis to better understand roles and responsibilities of workers in the context of New York's local public health system. These data could be used to inform programs and policies to recruit and retain public health workers. In addition, relevant data could assist the New York State Public Health Workforce Task Force to measure progress toward achieving its goals for a competent public health workforce of sufficient size to meet the needs of all New York's citizens.

Appendix A: Classification of Fields of Study

In the sections titled "Fields of Study by Degree" and "Fields of Study Summarized," fields of study were collapsed into larger categories in order to summarize them for presentation. Generally, categorization of fields was consistent with the Classification of Instructional Programs codes (CIP codes) used by the National Center for Education Statistics (http://nces.ed.gov/pubs2002/cip2000/index.asp). The following sections summarize which sets of CIP codes correspond to the categories used in this report.

Fields of Study by Degree. In this section, specific educational programs are collapsed into the following categories (depending upon degree level): Health-Related; Business/Administrative; Education/Early Childhood; Non-Health Sciences; and Other Non-Health. Accounting was broken out from Business/Administrative at the certificate/diploma level and General Biology was broken out from other sciences at the bachelor's degree level because of the large numbers. At the master's level, Health Care/Nursing Administration received its own category. At all degree levels, Health-Related fields were broken out into specific fields as far as their numbers permitted.

Category	Corresponding CIP Codes
Health-Related:	Series 51: Health Professions and Related Clinical Sciences
Business/Administrative:	Series 52: Business, Management, Marketing, and Related Support Services
Education/Early Childhood:	Series 13: Education
Non-Health Sciences:	Series 1: Agriculture, Agriculture Operations, and Related Sciences Series 3: Natural Resources and Conservation Series 11: Computer and Information Sciences and Support Services Series 14: Engineering Series 15: Engineering Technologies/Technicians Series 26: Biological and Biomedical Sciences Series 40: Physical Sciences Series 41: Science Technologies/Technicians
Health Care/ Nursing Administration:	51.07 and 51.1602
Other Non-Health:	Any fields not in the above categories

Fields of Study Summarized. The categorization used in this section was different than the one used above because the purpose was not to collapse all degree fields into exhaustive and mutually exclusive categories, but to select fields of particular relevance to local public health practice for a closer look.

Category	Corresponding CIP Codes
Nursing:	51.16 (except 51.1602)
Public Health/Epidemiology:	51.22 and 26.1309
Business/Administration:	Series 52, 51.07, 51.1602, 44.04
Biology/Life Sciences:	Series 26 and 40 (except 26.1309)
Engineering:	Series 14 and 15
Environmental Health/Science:	Series 1 and 3; 51.2202
Education:	Series 13

Appendix B: Survey Instrument

AN ENUMERATION OF THE LOCAL PUBLIC HEALTH WORKFORCE IN NEW YORK STATE

The Center for Health Workforce Studies at the University at Albany School of Public Health, in collaboration with the New York State Department of Health and the New York State Association of City and County Health Officials, is conducting a survey to learn more about the public health workforce at local health departments in New York State. The survey collects basic demographic data as well as information on educational background, job responsibilities, and training needs, and should be completed by all employees. This is an important opportunity to collect relevant information that can help plan for New York's future public health workforce needs.

The survey is anonymous. The survey takes less than 10 minutes to complete. Individual responses will be kept confidential. Survey results will only be reported in aggregate.

MARKING INSTRUCTIONS

- Use a No. 2 pencil or blue or black ink pen only.
- Do not use pens with ink that soaks through the paper.
- Make solid marks that fill the oval completely.
- Make no stray marks on this form.
- Do not fold, tear, or mutilate this form.

CORRECT ✓ ✗ INCORRECT

I. BACKGROUND

1. For what county or city health department are you employed?

○ Albany	○ Herkimer	○ Saratoga
○ Allegany	○ Jefferson	○ Schenectady
○ Broome	○ Lewis	○ Schoharie
○ Cattaraugus	○ Livingston	○ Schuyler
○ Cayuga	○ Madison	○ Seneca
○ Chautauqua	○ Monroe	○ St. Lawrence
○ Chemung	○ Montgomery	○ Steuben
○ Chenango	○ Nassau	○ Suffolk
○ Clinton	○ New York City	○ Sullivan
○ Columbia	○ Niagara	○ Tioga
○ Cortland	○ Oneida	○ Tompkins
○ Delaware	○ Onondaga	○ Ulster
○ Dutchess	○ Ontario	○ Warren
○ Erie	○ Orange	○ Washington
○ Essex	○ Orleans	○ Wayne
○ Franklin	○ Oswego	○ Westchester
○ Fulton	○ Otsego	○ Wyoming
○ Genesee	○ Putnam	○ Yates
○ Greene	○ Rensselaer	
○ Hamilton	○ Rockland	

2. Gender: ○ Male ○ Female

3. Race: *(Please mark only one.)*
- ○ Asian/Pacific Islander
- ○ Black/African American
- ○ Native American/Alaskan Native
- ○ White
- ○ Other: ______________________

4. Ethnic background:
- ○ Hispanic/Latino
- ○ Not Hispanic/Latino

5. Year of birth: 1 9 _ _

(0 1 2 3 4 5 6 7 8 9 | 0 1 2 3 4 5 6 7 8 9)

6a. Do you speak a language other than English?
○ Yes ○ No

6b. If yes, what language(s)? *(Mark all that apply.)*
- ○ Spanish
- ○ Chinese
- ○ Other (specify): ______________________

7. Educational background: *(Mark all that apply.)*

	Completed	Currently enrolled	Field(s) of study	Required for current job?
	Yes	Yes	*Specify:*	Yes
Some high school	○	○	________	○
High school diploma/GED	○	○	________	○
Certificate/diploma (1st)	○	○	________	○
Certificate/diploma (2nd)	○	○	________	○
Associate degree (1st)	○	○	________	○
Associate degree (2nd)	○	○	________	○
Bachelors degree (1st)	○	○	________	○
Bachelors degree (2nd)	○	○	________	○
Bachelors degree (3rd)	○	○	________	○
Masters degree (1st)	○	○	________	○
Master's degree (2nd)	○	○	________	○
Master's degree (3rd)	○	○	________	○
Doctoral degree	○	○	________	○
Professional degree	○	○	________	○
M.D. or D.O.	○	○	________	○
Other: ________	○	○	________	○

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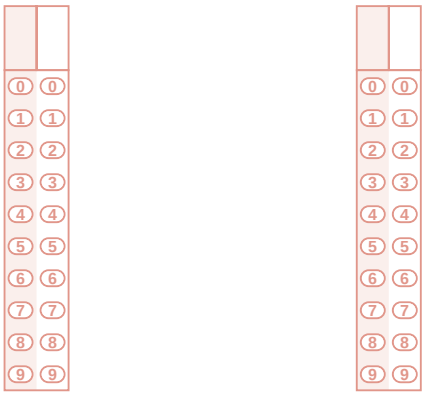
8. Years experience:

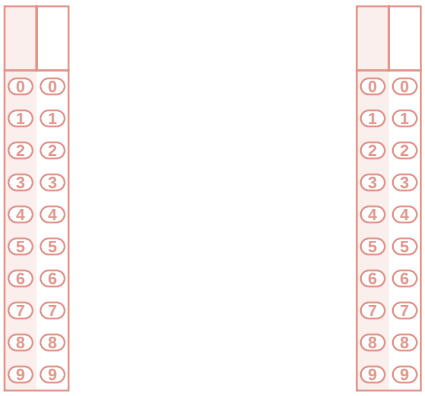
a. In current job position

b. Working for current agency (including current job)



c. Working in public health (including current job)

d. Working in health care other than public health



9. Professional credentials or licensure:

	Currently hold	Required for current position?
	Yes	Yes
Registered professional nurse (RN)	○	○
Licensed practical nurse (LPN)	○	○
Certified Dietician-Nutritionist	○	○
Licensed physician	○	○
Licensed veterinarian	○	○
Licensed Nurse practitioner (NP)	○	○
Registered physician assistant (RPA)	○	○
Licensed master social worker	○	○
Licensed clinical social worker	○	○
Professional Engineer (PE)	○	○
Licensed dentist	○	○
Licensed dental hygienist	○	○
Other _____	○	○

10. Are you interested in pursuing an additional degree?

	Yes	Field(s) of study:
Certificate/diploma	○	
Associate degree	○	
Bachelors degree	○	
Masters degree	○	
Doctoral degree	○	
Professional degree	○	

11. Please indicate the areas in which you…

	Have received training in the past 2 years	Would like to receive training in the future
Executive leadership	○	○
Policy analysis	○	○
Clerical skills	○	○
Communication skills		
Media	○	○
Workplace	○	○
Community	○	○
Managerial/supervisory skills	○	○
Public health assessment	○	○
Communicable/infectious diseases	○	○
Emerging diseases	○	○
Environmental health issues		
Introduction/overview	○	○
Advanced topics	○	○
Community and family health	○	○
Clinical skills	○	○
Laboratory skills	○	○
Social marketing	○	○
Emergency preparedness	○	○

12. Mentorship experiences:

	Yes	No
Have you been mentored during your public health career?	○	○
Are you interested in being mentored?	○	○
Are you interested in mentoring others in public health?	○	○
Do you feel you need training in order to be an effective mentor?	○	○

13. In the next five years, do you plan to… ?

(Please mark all that apply.)

- ○ Remain in current position
- ○ Seek new position within agency
- ○ Seek new public health position in another agency
- ○ Leave public health for another field
- ○ Retire
- ○ Leave labor force permanently/temporarily

14. Average number of hours worked per week: →

15. Are you a contract/per diem/ temporary worker?

○ Yes ○ No

16. Formal Job Title *(Please mark only one.)*

Category	Profession/Occupation
Administration	Admin/PH Leader ○
	Dir. Weights and Measures ○
	Environmental Program Mgr. ○
	Laboratory Supervisor ○
	Medical Service Analyst ○
	MERS Coordinator ○
	Migrant Program Coordinator ○
	Morgue Keeper ○
	PH Advisor ○
	Planner ○
	Program Coordinator ○
	Project Manager ○
	Staff Analyst ○
	Volunteer Coordinator ○
Education/ Outreach	Community Health/Outreach ○
	EMS Instructor ○
	Health Education ○
	Lactation Consultant ○
	Nutritionist Aide ○
	Nutritionist ○
	Public Health Representative ○
	Public Relations ○
Epi/Disease Control	Comm. Disease Staff ○
	Dis. Control Investigator ○
	Epidemiologist ○
MD	MD ○
Nursing	Nurse Practitioner ○
	Public Health Nurse ○
	Community Health Nurse ○
	Other Registered Nurse ○
	Licensed Practical Nurse ○
Other Clinical	Audiologist ○
	Clinic Aide ○
	Dental Staff ○
	Forensic Attend ○
	Home Health Aide ○
	Pharmacist ○
	Social Worker (MSW) ○
	Radiology/x-ray ○
	Social Worker Assistant ○
	Substance Abuse ○

Category	Profession/Occupation
Scientific/ Investigation	Bacteriologist ○
	Biostatistician ○
	Bio-terrorism Staff ○
	Engineer ○
	Environmental Specialist ○
	Environmental Technician ○
	Industrial Hygienist ○
	Investigator ○
	Laboratory Assistant ○
	Laboratory Technician ○
	Laboratory Worker ○
	Medical Investigation/Exam ○
	Microbiologist ○
	Pest Control ○
	Public Health Chemist ○
	Physicist ○
	Poison Information Specialist ○
	Research Scientist ○
	Research Technician ○
	Sanitarian ○
	Scientist ○
	Toxicologist ○
Support Personnel	Program Aide ○
	Public Health Assistant ○
	Support Staff ○
Other	Architect ○
	Attorney ○
	Crime Analysis ○
	Dog Control ○
	Evidence Property Control ○
	Graphic Artist ○
	Medical Records ○
	Photographer ○
	Plumber ○
	Veterinarian ○
	Other (please specify): ○

continue . . .

17. **Instructions:** Please indicate the percent of your time in a typical month that you spend on each activity. Please respond in reference to the activities you perform as part of your job regardless of your official job title. *(Mark one per row.)*

Role	Responsibilities	None	1-9%	10-19%	20-39%	40-59%	60-79%	80-100%
Executive leadership	Strategic planning; organizational mission, vision and values; policy development; serve as key public health spokesperson	◯	◯	◯	◯	◯	◯	◯
Policy Analysis and Development	Analyze, evaluate & communicate public policy choices; interpret & apply laws/regulations; liaison between state and local health dept.	◯	◯	◯	◯	◯	◯	◯
Clerical services	Financial/management support services; administrative support	◯	◯	◯	◯	◯	◯	◯
Information and Technology Systems	Develop policies, procedures and technology systems for data collection, transmission and storage; provide "help desk" functions	◯	◯	◯	◯	◯	◯	◯
Communication	Provide public information dissemination; interact with media & legislators; write guidelines for internal & external communication	◯	◯	◯	◯	◯	◯	◯
Workforce Development, Performance Management and Training	Build staff competency through training and/or quality improvement strategies; apply personnel rules; develop systems for addressing personnel deficiencies; develop emergency preparedness/response capabilities	◯	◯	◯	◯	◯	◯	◯
Public Health Assessment	Monitor non-infectious and/or chronic diseases	◯	◯	◯	◯	◯	◯	◯
	Collect and analyze data	◯	◯	◯	◯	◯	◯	◯
	Conduct program evaluation and consultation	◯	◯	◯	◯	◯	◯	◯
	Community and/or environmental health assessment	◯	◯	◯	◯	◯	◯	◯
Communicable and Infectious Disease Protection	Provide surveillance and identification of emerging health threats	◯	◯	◯	◯	◯	◯	◯
	Report notifiable conditions	◯	◯	◯	◯	◯	◯	◯
	Use a communicable disease tracking system	◯	◯	◯	◯	◯	◯	◯
	Identify roles/responsibilities for response to public health threats	◯	◯	◯	◯	◯	◯	◯
	Communicate urgent public health messages	◯	◯	◯	◯	◯	◯	◯
	Investigate communicable disease outbreaks	◯	◯	◯	◯	◯	◯	◯
	Provide education/services to reduce risks	◯	◯	◯	◯	◯	◯	◯
Environmental Health	Provide environmental health education	◯	◯	◯	◯	◯	◯	◯
	Involve the community in setting environmental health priorities	◯	◯	◯	◯	◯	◯	◯
	Planning for/responding to environmental events, natural disasters	◯	◯	◯	◯	◯	◯	◯
	Conduct risk communication activities	◯	◯	◯	◯	◯	◯	◯
	Track, record or report environmental health risks and illnesses	◯	◯	◯	◯	◯	◯	◯
	Enforce compliance with environmental health regulations	◯	◯	◯	◯	◯	◯	◯
Community and Family Health Promotion and Prevention	Select public health priorities	◯	◯	◯	◯	◯	◯	◯
	Address prevention priorities	◯	◯	◯	◯	◯	◯	◯
	Disseminate information	◯	◯	◯	◯	◯	◯	◯
	Provide prevention, early intervention and outreach services	◯	◯	◯	◯	◯	◯	◯
	Provide clinical consultations	◯	◯	◯	◯	◯	◯	◯
	Health education	◯	◯	◯	◯	◯	◯	◯
Clinical	Provide health care services in a clinical setting or home visit basis	◯	◯	◯	◯	◯	◯	◯
Licensing and Credentialing	Professional or facility licensing	◯	◯	◯	◯	◯	◯	◯
EMS/Trauma	Regulate EMS/Trauma services	◯	◯	◯	◯	◯	◯	◯
Public Health Laboratory	Testing/screening of specimens; specimen collecting, handling and investigation	◯	◯	◯	◯	◯	◯	◯
Facilities Maintenance	Cleaning, landscaping, and building maintenance/repair	◯	◯	◯	◯	◯	◯	◯
Other (specify):	________________	◯	◯	◯	◯	◯	◯	◯

Thank you for your participation in this important survey!

Please put completed questionnaire in enclosed envelope and drop in the mail.

Center for Health Workforce Studies
School of Public Health, University at Albany
7 University Place, Rm. B-334
Rensselaer, NY 12144-3458
518-402-0250

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