

Research Brief

CHANGES IN OCCUPATIONS *of* LOCAL HEALTH DEPARTMENT STAFF



This brief examines changes in local health departments' (LHDs) employment of selected professions from 1989 to 2005.

INTRODUCTION

This research brief examines changes in local health departments' (LHDs) employment of staff within selected occupations from 1989 to 2005. Intended for LHD leaders, policy-makers, and organizations that educate and train the public health workforce, this brief documents how the composition of the LHD workforce has responded to changes in LHD services and activities.

Overall, the results of this study show that the percentage of LHDs that employ epidemiologists, health educators, and public information specialists increased substantially between 1989 and 2005, while the percentage of LHDs that employ physicians decreased significantly. There was little change in the percentage of LHDs employing nurses, environmental health specialists and scientists, and clerical staff.

METHODS

This analysis uses data collected in the first (1989) and fourth (2005) National Profile of Local Health Departments (Profile) studies. Every LHD in the U.S. received the Profile questionnaire. In 1989, 77 percent of LHDs responded to the Profile questionnaire, which was distributed via mail. In 2005, 80 percent responded to a Web-based Profile questionnaire. The study populations for the 1989 and 2005 Profile studies differ due to changes in the organization of LHDs in some states and changes in the interpretation of "local health department" over the intervening years.¹ The comprehensive Profile reports include more details on the methodologies used in each study.^{2,3} Both the 1989 and 2005 Profile studies collected data on selected occupations of

staff employed by LHDs. The 1989 Profile questionnaire included a list of 13 occupations and two checkboxes to indicate whether each occupation was staffed with full-time or part-time employee(s). The 1989 study did not collect data on the numbers of LHD staff in specific occupations. The 2005 Profile questionnaire included a list of 12 occupations and asked respondents to indicate whether they employed each, and, if possible, to provide the total number of full-time employees (FTEs) within each occupation. Data for the following eight occupations could be compared between the two studies:

- Clerical staff
- Environmental health specialist or scientist (including sanitarians, toxicologists, environmental engineers, and other scientists and technicians)
- Epidemiologist
- Health educator
- Nurse (RN or LPN)
- Nutritionist or dietician
- Physician
- Public information specialist

This analysis uses a cross-sectional comparison of data from these two Profile studies. Significance was determined by comparing the Wald 95% confidence intervals of the statistics.

Subgroup analysis by population size of LHD jurisdiction used the following three categories:

- Small LHDs: serve populations less than 50,000.
- Medium-sized LHDs: serve populations from 50,000 to 499,999.
- Large LHDs: serve populations of 500,000 or more.

RESULTS

Table 1 summarizes the data on employment of these selected occupations by LHDs in 1989 and 2005.

OCCUPATION	1989	2005	Difference (2005 – 1989)
Clerical staff	94%	97%	2%
Nurse	92%	94%	3%
EH specialist or scientist	80%	82%	2%
Physician	62%	43%	-19%
Nutritionist	51%	57%	6%
Health educator	37%	55%	18%
Epidemiologist	11%	25%	14%
Public information specialist	6%	18%	12%

NOTE: Percentages employing each occupation (except EH specialist or scientist) are significantly different in 1989 vs. 2005.



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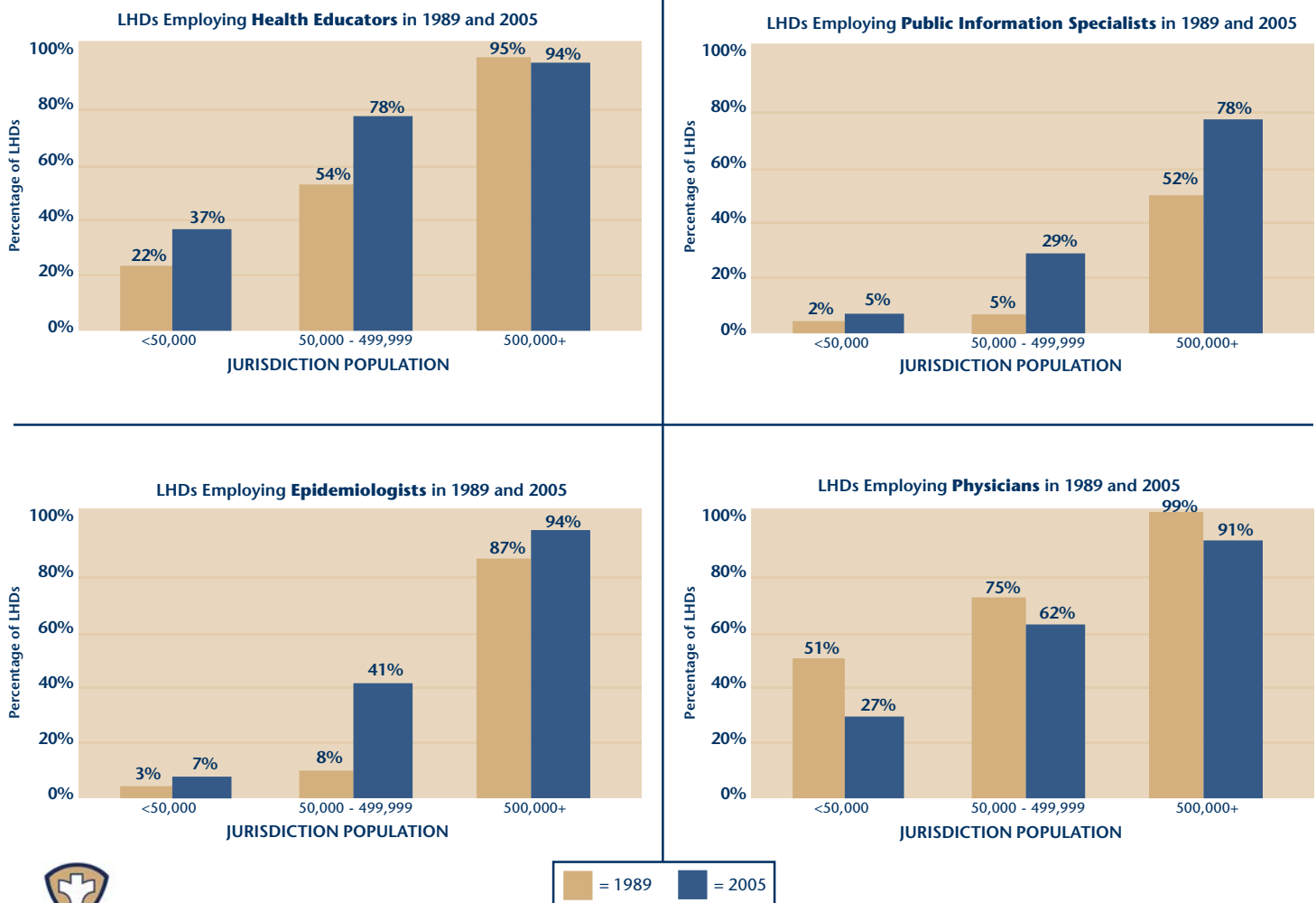
The percentage of LHDs employing physicians declined between 1989 and 2005. Sixty-two percent of LHDs employed physicians in 1989, compared with 43 percent in 2005. The percentages of LHDs employing health educators (increase of 18%), epidemiologists (increase of 14%), and public information specialists (increase of 12%) showed the largest increases between 1989 and 2005. The percentage of LHDs employing clerical staff, nurses, and EH specialists changed little during this time period. The percentage of LHDs employing nutritionists grew modestly (57% vs. 51%).

physicians. A large increase in employment by medium-sized LHDs accounts for most of the increase in employment of epidemiologists.

A large increase in employment by medium-sized LHDs and a moderate increase in employment by small LHDs accounts for most of the increase in employment of health educators. Large increases in employment by medium-sized and large LHDs account for most of the increase in employment of public information specialists.

Figure 1 shows the differences in employment of four occupations by LHDs serving jurisdictions of differing population sizes. A large decrease in employment by small LHDs and a moderate decrease in employment by medium-sized LHDs account for most of the decrease in employment of

FIGURE 1: Percentage of LHDs Employing Staff in Selected Occupations in 1989 and 2005 (by Size of Jurisdiction Population)



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DISCUSSION

Both the 2005 Profile study and the 2000 Public Health Workforce Enumeration show that nurses, environmental health professionals (including sanitarians), and clerical staff comprise the largest proportion of the LHD workforce.⁴ Nearly all LHDs employ staff in these three categories, and the percentages have changed little since 1989.

The percentage of LHDs employing certain specialized professions—epidemiologists, health educators, and public information specialists—has increased since 1989. While most large LHDs employed each of these occupations in 1989, few medium-sized LHDs employed epidemiologists or public information specialists in 1989 and approximately half of medium-sized LHDs employed health educators. In 2005, a large majority of medium-sized LHDs employed health educators and many employed epidemiologists and public information specialists. Small LHDs still do not typically hire epidemiologists and public information specialists, but over one-third of small LHDs now employ health educators.

Increases in employment of specialized occupations mirror changes in the types of activities and services that LHDs provide. A cross-sectional comparison of the percentages of LHDs providing selected activities and services in 1992 and 2005 showed that the percentages of LHDs that provide most clinical services and some environmental activities decreased while the percentages of LHDs providing certain epidemiology and surveillance services increased.⁵ In addition, the 2005 Profile showed that many LHDs engage in program areas that were not included in prior Profile studies. These program areas, including emergency preparedness and a number of population-based primary prevention activities, require the skills of epidemiologists, health educators, and public information specialists.

The 2005 Profile study provides further evidence that expansion of certain program areas drives an increase in employment of epidemiologists and health educators.⁶ Respondents provided information on anticipated future shortages of five professions (nurses, environmental health specialists, epidemiologists, health educators, and information technology specialists) and the reasons for anticipated shortages. Respondents cited program expansion and new programs most often as reasons for anticipated shortages of both epidemiologists and health educators. In contrast, staff retirement and attrition were cited most frequently as reasons for anticipated shortages of nurses and environmental health specialists.

Staff in additional occupations are being employed by LHDs in increasing numbers, but these occupations could not be compared between the first and fourth Profile studies. A 1999 survey of LHD infrastructure asked LHD leaders to list occupations that they expected to be most needed in five years. In addition to some of the occupations discussed in this research brief, a number of respondents indicated that they expected to need information technology (IT) specialists within five years. The IT specialist occupation was included for the first time in the 2005 Profile study, which showed that 30 percent of all LHDs (and a majority of LHDs serving populations of 100,000 or more) employ IT specialists.⁷ The need for LHD staff with IT and management skills is expected to increase as LHDs become more sophisticated in their use of electronic records and other public health informatics.⁸ An occupation that has experienced even greater growth over the past several years is that of emergency preparedness coordinator. Nearly 60 percent of all LHDs employed emergency preparedness coordinators in 2005, the first time this occupation was included in the Profile questionnaire.⁹ The high percentage reflects LHDs' increasing focus on emergency preparedness and the funding to support such positions through the Centers for Disease Control and Prevention's Cooperative Agreements on Public Health Preparedness and Response for Bioterrorism.¹⁰

CONCLUSION

In conclusion, many LHDs have added expertise to their workforce over the past two decades by hiring health educators, emergency preparedness coordinators, epidemiologists, IT specialists, and public information specialists. While some of these specialized staff were employed almost exclusively by LHDs serving large populations in 1989, many medium-sized LHDs employed them in 2005. The increasing variety of the professions included in the LHD workforce parallels the changing scope of LHD activities, which increasingly include emergency preparedness, surveillance and epidemiology, and population-based primary prevention programs and activities.



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ADDITIONAL INFORMATION

NACCHO is the national organization representing local health departments (including city, county, metro, district, and tribal agencies).

NACCHO supports efforts that protect and improve the health of all people and all communities by promoting national policy, developing resources and programs, seeking health equity, and supporting effective local public health practice and systems.

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ENDNOTES

- ¹ Certain local and regional units of state health agencies that were not included in prior Profile studies were included in the study population for the 2005 Profile. More information about changes in study populations is available in *2005 National Profile of Local Health Departments* (see note 3), page 4.
- ² National Association of County Health Officials. (1990). *National Profile of Local Health Departments*. Washington, DC: NACCHO. Available from: http://www.naccho.org/topics/infrastructure/PH_infrastructureresearch/previousLPHaprofiles.cfm
- ³ National Association of County and City Health Officials. (2006). *2005 National Profile of Local Health Departments* (page 2). Washington, DC: NACCHO. Available from: <http://www.naccho.org/topics/infrastructure/2005Profile.cfm>
- ⁴ Health Resources and Services Administration. (2000). *The Public Health Work Force: Enumeration 2000*. Rockville, MD: U.S. Department of Health and Human Services.
- ⁵ National Association of County and City Health Officials. (2006). *2005 National Profile of Local Health Departments* (page 58). Washington, DC: NACCHO.
- ⁶ National Association of County and City Health Officials. (2007). *The Local Health Department Workforce: Findings from the 2005 National Profile of Local Health Departments Study*. Washington, DC: NACCHO. Available from: <http://www.naccho.org/topics/infrastructure/2005Profile.cfm>
- ⁷ National Association of County and City Health Officials. (2006). *2005 National Profile of Local Health Departments* (page 32). Washington, DC: NACCHO.
- ⁸ National Association of County and City Health Officials (2007). *Informatics at Local Health Departments: Findings from the 2005 National Profile of Local Health Departments Study*. Washington, DC: NACCHO. Available from: <http://www.naccho.org/topics/infrastructure/2005Profile.cfm>
- ⁹ See note 7.
- ¹⁰ National Association of County and City Health Officials. (2006). *2005 National Profile of Local Health Departments* (pages 40–41). Washington, DC: NACCHO.

