2005 NATIONAL PROFILE *of* LOCAL HEALTH DEPARTMENTS

NACCHO
NATIONAL ASSOCIATION OF COUNTY & CITY HEALTH OFFICIALS

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NACCHO is the national organization representing local health departments. 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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July 2006

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Acknowledgments

2005 National Profile of Local Health Departments Study Director and Report Author:

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NACCHO expresses sincere gratitude to the members of the Profile Advisory Group for their advice and assistance throughout the 2005 National Profile of Local Health Departments study.

Leaders in many public health organizations, particularly state associations of local health officials and state health agencies, worked diligently to encourage their colleagues to complete the Profile questionnaire. NACCHO thanks ESRI for providing copies of *Cartographies of Disease* by Tom Koch as an incentive for LHDs to complete the Profile questionnaire.

Many other individuals contributed to the 2005 Profile study. Carol Brown of NACCHO provided guidance on all aspects of the Profile study, drawing on the wealth of experience she gained through previous Profile studies. Jennifer Stanley of the Public Health Foundation led the Profile administration and follow-up activities. Dave Gutzman of CustomInsight.com developed the Web-based interface for the Profile questionnaire. Les Beitsch and Nir Menachemi of Florida State University assisted with data cleaning. Sarah Schenck provided writing support and copyediting for this report. Mary Argodale did the graphic design and layout.

Many NACCHO staff members provided comments on the draft Profile report: Zarnaaz Bashir, Donna Brown, Heidi Deutsch, Julia Joh Elligers, Grace Gorenflo, Richard Hofrichter, Jennifer Joseph, Jennifer Li, Cindy Phillips, and Danielle Poux.

Finally, NACCHO gratefully acknowledges the support of the Centers for Disease Control and Prevention, which made the 2005 Profile study possible.

Message from the NACCHO President and Executive Director

On behalf of the National Association of County and City Health Officials (NACCHO), we are pleased to present the *2005 National Profile of Local Health Departments*. This publication is NACCHO's most recent report on the characteristics of the nation's local health department infrastructure.

As the national voice of local public health, NACCHO is the premiere organization representing local health departments. We are committed to helping local public health professionals connect with people, resources, opportunities, and ideas that will allow them to have a real impact on the communities they serve. Conducting research on local health departments, systems, and public health practice is an integral part of NACCHO's strategic plan.

This study is the fourth in the *Profile* series. It incorporated new data collection and analysis methodologies that improved how quickly the data were collected and disseminated. We are pleased to provide these data, as well as additional information, to a variety of audiences in support of future planning and policy development at the local level.

NACCHO extends its gratitude to the local health department executives and staff who participated in this project and to the Centers for Disease Control and Prevention for supporting this research. We also recognize the time and effort that representatives of other organizations and academicians contributed by serving on the Profile Advisory Group. The efforts of many public health leaders to encourage their colleagues to complete their Profile questionnaires were key to the success of the 2005 Profile study. Without this collaborative effort, the study would not have been possible.

We welcome your feedback and comments at info@naccho.org.

Sincerely,

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2005 National Profile of Local Health Departments

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Table of Contents

List of Figures

List of Figures (CONTINUED)

CHAPTER

1

Introduction

Study Purpose and Scope

The purpose of the National Profile of Local Health Departments study is to develop a comprehensive and accurate description of local health department (LHD) infrastructure and practice. Public health infrastructure comprises "the resources and relationships necessary to carry out the core functions and essential services of public health."[1] Public health infrastructure includes many different types of resources, including legal, physical, human, financial, informational, and organizational. The Profile study examines each type through an in-depth questionnaire provided to every LHD in the U.S. The 2005 Profile report includes information on a wide range of LHD-related topics, including jurisdiction; governance; financing; characteristics of top executives; workforce; activities and services; planning and performance improvement; partnerships; policy-making activities; and information technology. An 80% overall response rate was achieved, totaling 2,300 LHDs.

Data from the Profile study are used by many people and organizations. LHD staff members use Profile data to compare their LHDs or those within their states to others nationwide. Profile data are used to inform public health policy at the local, state, and federal levels, and to support projects to improve local public health practice. Profile data are used in universities to educate future public health workforce members about LHDs, and by researchers to answer questions about public health practice.

Local Health Departments in the Public Health System

The Institute of Medicine defines public health as "what we as a society do collectively to assure the conditions in which people can be healthy."[2] The definition of public health was elaborated as three core functions (assessment, policy development, assurance), and then as ten essential public health services.[3] The public health system includes many organizations—public- and private-sector—that can influence the public's health; however, governmental agencies are the backbone of the public health system.[4] At the local level, the LHD is the foundation of the public health system that includes other local and state governmental agencies, health care providers, academic institutions, businesses, the media, and a variety of non-governmental organizations.

In 2005, NACCHO published *Operational Definition of a Functional Local Health Department*.[5] This set of standards, framed around the ten essential public health services, describes what everyone, regardless of where they live, should expect from their LHD (Figure 1.1).

Although there is this single set of standards, LHDs vary greatly in capacity, authority, and resources. Consequently, LHDs use a variety of strategies and arrangements to meet these standards. The Profile results characterize this diversity among LHDs.

Figure 1.1 | **Operational Definition of a Functional Local Health Department**

1. Monitor health status and understand health issues facing the community
2. Protect people from health problems and health hazards
3. Give people information they need to make healthy choices
4. Engage the community to identify and solve health problems
5. Develop public health policies and plans
6. Enforce public health laws and regulations
7. Help people receive health services
8. Maintain a competent public health workforce
9. Evaluate and improve programs and interventions
10. Contribute to and apply the evidence base of public health

Other National Studies of LHD Infrastructure

The 2005 Profile study is the fourth in the series of National Profile of Local Health Departments studies undertaken by NACCHO in cooperation with the Centers for Disease Control and Prevention (CDC). Prior studies were conducted in 1989,[6] 1992-3,[7] and 1996-7.[8] In addition, NACCHO conducted the Local Public Health Agency Infrastructure study in 1999.[9] For further information, the 1992-3 Profile of Local Health Departments report provides a brief review of studies of LHDs conducted prior to the NACCHO Profile series.

Survey Methodology

The 2005 Profile study methodology is outlined below, including study population, instruments, sampling strategy, questionnaire distribution, and follow-up activities.

Study Population

Every National Profile of Local Health Departments study has used the same definition of an LHD: "an administrative or service unit of local or state government concerned with health, and carrying some responsibility for the health of a jurisdiction smaller than the state." LHDs operate in every state except Rhode Island. NACCHO uses its database of LHDs, in consultation with state health agencies and state associations of local health officials, to identify the LHDs to be included in the study population. A total of 2,864 LHDs were included in the 2005 Profile study population. Figure 1.2 displays the number of LHDs in each state that were included.

Figure 1.2 | **2005 National Profile of LHDs Study Population and Response Rates (by State)**

State	Number of LHDs in denominator	Number of LHDs completing questionnaire	Response rate
Alabama	50	50	100%
Alaska	24	24	100%
Arizona	15	15	100%
Arkansas	78	78	100%
California	62	58	94%
Colorado	66	49	74%
Connecticut	95	62	65%
Delaware	2	2	100%
District of Columbia	1	1	100%
Florida	67	66	99%
Georgia	159	137	86%
Hawaii	5	2	40%
Idaho	7	7	100%
Illinois	92	89	97%
Indiana	94	70	74%
Iowa	103	92	89%
Kansas	101	88	87%
Kentucky	55	43	78%
Louisiana	10	8	80%
Maine	2	2	100%
Maryland	24	23	96%
Massachusetts	324	166	51%
Michigan	44	44	100%
Minnesota	77	70	91%
Mississippi	9	9	100%
Missouri	115	83	72%
Montana	51	41	80%
Nebraska	24	24	100%
Nevada	16	15	94%
New Hampshire	2	2	100%
New Jersey	116	69	59%
New Mexico	6	5	83%
New York	58	56	97%
North Carolina	86	81	94%
North Dakota	28	25	89%
Ohio	136	109	80%
Oklahoma	69	69	100%
Oregon	34	32	94%
Pennsylvania	16	16	100%
South Carolina	11	11	100%
South Dakota	62	60	97%
Tennessee	96	44	46%
Texas	112	71	63%
Utah	12	8	67%
Vermont	12	12	100%
Virginia	35	35	100%
Washington	35	32	91%
West Virginia	49	40	82%
Wisconsin	94	93	99%
Wyoming	23	12	52%
Totals	2,864	2,300	80%

Applying the Profile definition of LHDs in some states is not straightforward; consequently, the study population for each Profile study varies. In particular, determining which local or district units of state health agencies should be included is complex. In many states with centralized public health systems, there are both local units (which may be called county health departments, health units, field offices, etc.) and district or regional offices that support these local units. Either the local or the regional units are included in the Profile study population, but not both. NACCHO consults with officials in state health agencies to determine which units best can respond to the Profile questionnaire. Local units of the state health agency completed the Profile questionnaire in Alabama,[10] Arkansas, and Tennessee. Regional or district units completed the Profile questionnaire in Kentucky, Louisiana, Mississippi, New Mexico, and Virginia.[11] The 2005 Profile study included local units of the state health agency in Alaska, Nevada, Pennsylvania, South Dakota, and Texas; these LHDs had not been included in prior Profile studies, but appeared in 2005 to meet the Profile definition of an LHD.

Certain states with decentralized public health systems also present challenges to identifying LHDs to include in the Profile study population. Massachusetts has 352 LHDs (many called Boards of Health), but NACCHO had contact information for only 324 of them at the time that Profile questionnaires were distributed. New Hampshire also has many local boards of health, but they are not recognized by the state health agency as LHDs. Thus only two New Hampshire LHDs were included in the Profile study. NACCHO's database includes 147 LHDs in Texas, but many of these are not recognized by the state health agency. NACCHO consulted with officials at both the Texas Department of State Health Services and the Texas Association of Local Health Officials to determine which LHDs should be included in the Profile study.

In many jurisdictions, there are multiple governmental agencies that "carry some responsibility for health." For example, some environmental health services are often provided by an agency other than the LHD. Emergency medical services, mental health services, and substance abuse services most often are provided by agencies other than the LHD. Though these governmental agencies would technically meet the Profile definition of an LHD, they have never been included in the Profile study population. For each jurisdiction, only the governmental agency with primary responsibility for public health is included in the Profile study population.[12]

Instruments

The questionnaire for the 2005 Profile study was structured as a core questionnaire (which was sent to all LHDs) and three separate modules (which were sent to samples of LHDs; Figure 1.3). Copies of the instruments are available on the NACCHO Web site.[13] Members of NACCHO's Profile Advisory Group provided input on the topics and questions to be included. When possible, question wording similar or identical to that of past Profile studies was used so that comparisons could be made. In some cases, however, the Profile Advisory Group believed questions should be changed to either obtain more specific information or to improve clarity. A pilot test was conducted with 45 LHDs and some questions were modified based on feedback from these participants. The instruments were not evaluated for validity or reliability.

The questionnaire was administered primarily in a Web-based format, although a paper version was also available. The Web-based interface, developed by CustomInsight.com, allowed respondents to complete the questionnaire over time, and was designed to facilitate completion by multiple

Figure 1.3 | **Module Questionnaire Topics**

Module 1	Performance improvement Accreditation Emergency preparedness Partnerships and collaboration Community health improvement planning Governance Changes in funding
Module 2	Workforce
Module 3	LHD activities in selected program areas Health inequities Policy-making and advocacy Information management

staff members, which is particularly important for large LHDs. The administration system for the Web-based survey also allowed NACCHO to see which LHDs had begun working on the questionnaire.

Sampling Strategy

The Profile core questionnaire was sent to every LHD in the study population. The study used stratified random sampling (without replacement) to select LHDs to receive the Profile modules. The sampling frame was stratified by size of population served by the LHD, a strategy that has traditionally been used by NACCHO. Because the analysis plan called for making comparisons among LHDs serving different population sizes, LHDs in the largest population categories were over-sampled so that a sufficient number would be included in the sample for each module. Every LHD serving a population of over 500,000 received one of the three modules, while over half of LHDs serving populations of less than 50,000 received the core questionnaire only. Most LHDs serving mid-sized populations received one of the modules. Figure 1.4 shows the number of LHDs in each module sample, by population strata.

Questionnaire Distribution and Follow-Up Activities

The 2005 Profile questionnaire was launched on June 16, 2005, with an e-mail message to all LHDs for which NACCHO had an e-mail address. Each e-mail message included a unique password for the recipient LHD, which provided access to that LHD's questionnaire. Questionnaires were preloaded with contact information for study LHDs from the NACCHO database. NACCHO mailed paper questionnaires to all LHDs for which no working e-mail address was available.

NACCHO's follow-up plan included three phases and was designed to maximize response to the questionnaire. During Phase 1, non-respondents received four e-mail messages encouraging them to complete the questionnaire. Each message was personalized for the recipient with their log-in information and unique password. In addition, a postcard containing that same information was sent in July to all LHDs that had not yet activated their questionnaire link. Phase 1 closed on August 1, 2006, with an overall response rate of approximately 52%.

During Phase 2, NACCHO recruited state-level "champions" who were asked to contact the directors of non-responding LHDs in their states and to encourage them to complete the Profile questionnaire. The champions included NACCHO Board members, leaders of state associations of local health officials, and state health agency staff. Updated lists of non-respondents were provided to these champions periodically throughout Phase 2. In addition, a postcard containing log-in information and three e-mail messages were sent to non-respondents during this phase. Phase 2 closed on September 16, 2005, with an overall response rate of approximately 65%.

During Phase 3, a paper questionnaire (core only) was mailed to each non-respondent. NACCHO continued to supply state-level champions with lists of non-respondents and to send e-mail reminders to non-respondents. During this phase, staff telephoned non-respondents who had begun to complete the Profile questionnaire and all non-respondents in states with particularly low response rates to encourage them to complete the questionnaire. The deadline for this phase was October 28, 2005, though the on-line system was open through November while the data from the paper questionnaires were entered by staff.

Figure 1.4 | **Numbers of LHDs in Module Samples (by Size of Population Served)**

Size of population served	Module 1	Module 2	Module 3
<25,000	168	169	167
25,000–49,999	92	95	91
50,000–74,999	62	62	62
75,000–99,999	45	46	47
100,000–199,999	60	55	61
200,000–499,999	54	55	54
500,000–999,999	22	23	24
1,000,000 +	14	16	13
Total number of LHDs	517	521	519

Survey Response

The final response rate for the 2005 Profile questionnaire was 80% (2300 of 2864). This response rate is higher than those of the 1989 Profile study (77%) and 1992-3 Profile study (72%), but lower than that of the 1996-7 Profile study (88%). The lengths of these Profile instruments vary considerably, which may account of some of the difference in response rates. The 2005 Profile questionnaire was longer than the 1989 and 1996-7 Profile questionnaires, but shorter than the 1992-3 Profile questionnaire.

The vast majority of the questionnaires were completed in the Web-based format. Only 98 questionnaires (4% of all completed questionnaires) were submitted in paper format.

Response rates varied by the size of population served (Figure 1.5), with lower response rates for LHDs serving smaller populations. A similar response rate trend was observed in the 1989 and the 1996-7 Profile studies; the response rate for the 1992-3 Profile study showed less variation by the size of population served.

Figure 1.6 provides the response rate for each Profile instrument. These response rates varied from 77% for the core questionnaire only to 84% for the core questionnaire plus Module 1. The lower response rate for the core questionnaire only reflects the fact that most of the recipients of this instrument were LHDs serving smaller populations, which had lower response rates than those serving larger populations.

Response rates for states varied from 40% to 100%. Response rates for all states are provided in Figure 1.2. The states that had response rates lower than 60% are New Jersey (59%), Wyoming (52%), Massachusetts (51%), Tennessee (46%), and Hawaii (40%). State-specific statistics presented for these states throughout this report should be viewed with caution because of the large number of non-respondents.

Figure 1.5 | **Response Rate (by Size of Population Served)**

Size of population served	Response rate
<25,000	73%
25,000–49,999	82%
50,000–74,999	84%
75,000–99,999	91%
100,000–199,999	88%
200,000–499,999	90%
500,000–999,999	91%
1,000,000 +	98%

Figure 1.6 | **Response Rate (by Profile Instrument)**

Instrument	Response rate
Core questionnaire only	77%
Core plus Module 1	84%
Core plus Module 2	82%
Core plus Module 3	81%

Analysis

The data collected in the Profile study are self-reported. NACCHO does not verify the data provided by LHDs. NACCHO examined the data for inconsistent responses to multiple choice questions and for outlying values for numeric responses in order to identify and eliminate data points that were likely to be erroneous.

Data analysis was conducted using Stata Version 9. Unless specifically stated in the report, analyses of data from the core questionnaire were not adjusted for non-response. This is consistent with analyses for prior Profile studies. Analyses of the module data included sample weighting to produce estimates for all LHDs and adjustments for non-response by population strata.

The findings presented in this report are descriptive statistics for all LHDs and, for some variables, for subgroups of LHDs. Subgroup analyses were conducted by state, by size of population served, by type of governance, and by degree of urbanization. NACCHO defined two governance categories: units of a state health agency and units of local government. These definitions are elaborated in Chapter 2. NACCHO used the rural-urban commuting areas (RUCA) method to categorize LHD jurisdictions by degree of urbanization. The RUCA method is a Census tract-based classification scheme that utilizes the standard Bureau of Census urban area and place definitions in combination with commuting information to characterize all of the nation's census tracts regarding their rural and urban status and their relationships.[14] For this study, LHDs were classified by matching their zip codes to the zip code approximations for RUCAs.[15] RUCAs 1-3.99 were classified as urban, 4-6.99 as suburban/micropolitan, and 7-10.99 as rural/small town.

Most figures derived from the Profile core data and all figures derived from the Profile module data include the number of observations. Because some respondents skipped questions, the number of observations varies slightly among questions. The number of observations is omitted when a figure includes data from several questions and when including all of the different numbers of observations would clutter the figure.

Study Limitations

Inclusion of a large number of LHDs and an overall response rate of 80% are important strengths of the 2005 Profile study. There are a number of limitations, however, that should be considered when using the results of this study. A primary limitation is that all data are self-reported by LHD staff and are not independently verified. In addition, the questions included in the Profile questionnaire were not tested for validity or reliability. Low response rates for a few states, and somewhat lower response rates for LHDs serving small populations than for those serving large populations, limit the accuracy of estimates for all LHDs and bias estimates toward larger LHDs. Comparisons with data from prior Profile studies are provided in some chapters, but these comparisons should be viewed with caution because both the study population (denominator) and the respondents (numerator) are different for each Profile study.

Endnotes

1 Turnock, B.J. (2001). *Public Health: What It Is and How It Works*. Gaithersburg, MD: Aspen Publishers, Inc.

2 Institute of Medicine. (1988). *The Future of Public Health*. Washington, DC: National Academy Press.

3 U.S. Public Health Service, Public Health Functions Steering Committee. (1994). *Public Health in America*. Washington, DC.

4 Institute of Medicine. (2002). *The Future of the Public's Health in the 21st Century*. Washington, DC: National Academy Press.

5 National Association of County and City Health Officials. (2005). *Operational Definition of a Functional Local Health Department*. Washington, DC: NACCHO. Available at www.naccho.org/topics/infrastructure/operationaldefinition.cfm.

6 National Association of County Health Officials. (1990). *National Profile of Local Health Departments*. Washington, DC: NACCHO. Available at www.naccho.org/topics/infrastructure/PH_infrastructureresearch/previous LPHAprofiles.cfm.

7 National Association of County and City Health Officials. (1995). *1992-1993 National Profile of Local Health Departments*. Washington, DC: NACCHO. Available at www.naccho.org/topics/infrastructure/PH_infrastructureresearch/previousLPHAprofiles.cfm.

8 National Association of County and City Health Officials. (1998). *Preliminary Results from the 1997 Profile of U.S. Local Health Departments*. Washington, DC: NACCHO. Available at http://archive.naccho.org/documents/Research_Brief_1.pdf.

9 National Association of County and City Health Officials. (2001). *Local Public Health Agency Infrastructure: A Chartbook*. Washington, DC: NACCHO. Available at http://archive.naccho.org/documents/chartbook.html.

10 Though Profile questionnaires were issued to individual county units in Alabama, some health officials chose to provide a single response for an entire district. Thus, responses for Alabama are a mixture of county units and districts.

11 Kentucky, Louisiana, and Virginia include some single jurisdiction LHDs in addition to regional/district LHDs.

12 An exception to this rule is Colorado, where some counties have both public health nursing agencies and environmental health agencies that are recognized as local health departments by the state health agency. In these cases, both county agencies were included in the Profile study population.

13 Instruments are available at www.naccho.org/topics/infrastructure/2005Profile.cfm.

14 RUCAs are used by the Health Resources and Services Administration (HRSA) to define rural areas for various grant programs. More information about RUCAs is available at www.raconline.org/info_guides/ruraldef/ruraldeffaq.php.

15 RUCA version 2.0 (July 2005) is based on 2004 ZIP codes and 2000 Census commuting data. Retrieved December 5, 2005, from http://depts.washington.edu/uwruca/download.html.

CHAPTER

2

Overview of LHDs: Jurisdiction and Governance

Fast Facts

73% of LHDs serve a county or combined city-county jurisdiction.

62% of LHDs serve small jurisdictions (populations of less than 50,000), but these small jurisdictions account for only 10% of the U.S. population.

A majority of the U.S. population (approximately 54%) live in the jurisdictions of the 6% of LHDs that serve populations of more than 500,000.

79% of LHDs operate as units of local government.

74% of LHDs serve a jurisdiction with a local board of health.

12% of LHD jurisdictional boundaries overlap with the boundaries of a federally recognized tribal government.

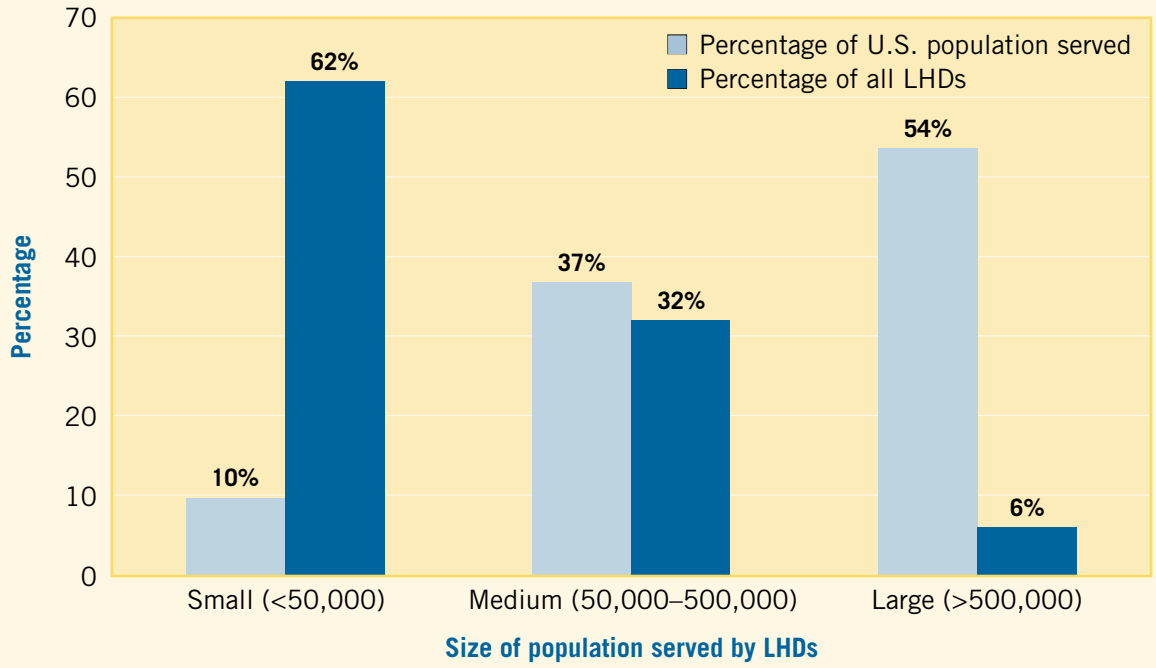
The LHDs in the United States serve a variety of different jurisdiction types, with populations ranging from less than 1,000 to nearly 10 million. The governance of LHDs varies from state to state, and in some cases even within a state.

Population Size of Jurisdiction

The majority of LHDs serve small districts, with 62% serving less than 50,000 residents. Only 6% of LHDs serve large districts (over 500,000 residents). In contrast, the majority of individuals in the U.S. are served by LHDs with large jurisdictions. Only 10% of the population is served by LHDs in jurisdictions with populations of less than 50,000, whereas 54% is served by LHDs in jurisdictions with populations of more than 500,000. This difference is illustrated in Figure 2.1.

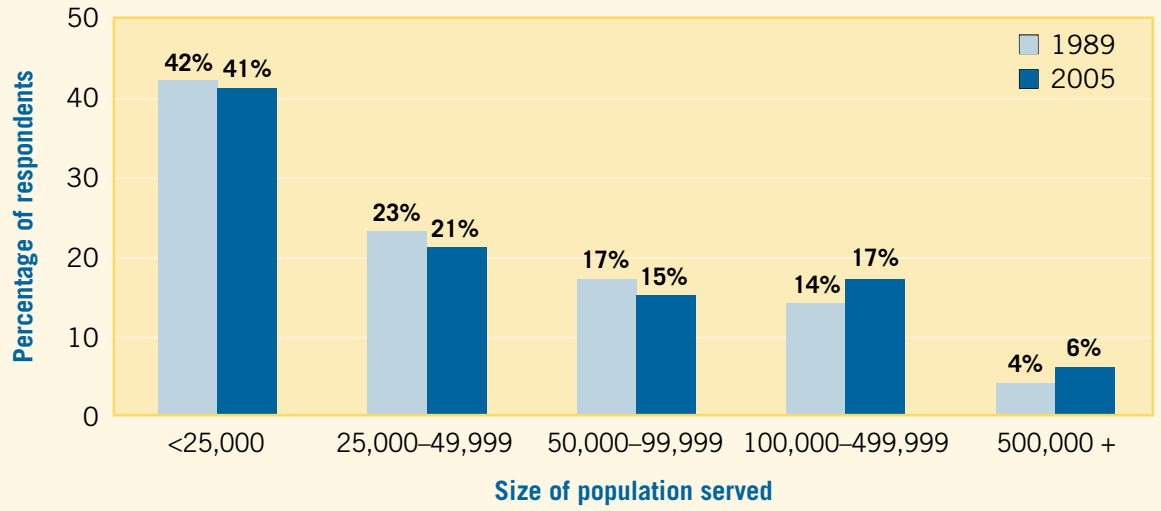
In Figure 2.2, jurisdiction population sizes are compared across years, based on Profile data from 1989 and 2005. This shows an overall decrease in the number of LHDs serving smaller populations (under 100,000), and an increase in the number of LHDs serving larger populations (over 100,000). These differences are relatively small, and additional analyses would be needed to determine whether this reflects overall U.S. population growth or consolidation of smaller jurisdictions during the years between the studies.

Figure 2.1 | **LHD Jurisdictions (by Size of Population Served)**



n=2,296

Figure 2.2 | **Size of Population Served by LHDs: 1989 and 2005 Profile Studies**

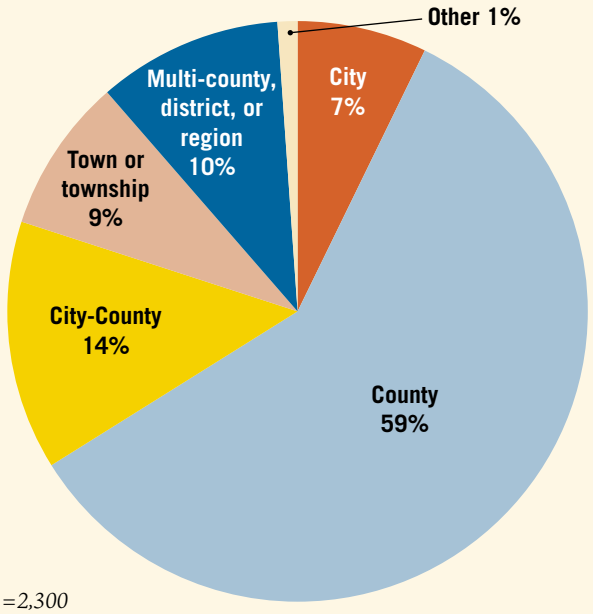


Type of Jurisdiction

Figure 2.3 illustrates the types of jurisdictions served by LHDs. Seventy-three percent of LHDs serve county or combined city-county jurisdictions. Ten percent of LHDs serve district or regional jurisdictions, which usually cover multiple counties, though regions consisting of multiple towns or cities are found in some states.

In addition, 12% of respondents indicated that the boundaries of their LHD jurisdictions overlap with the boundaries of a federally recognized tribal government. Ten percent of respondents did not know whether their jurisdictional boundaries overlap with a tribal area.

Figure 2.3 | **Type of Jurisdiction**

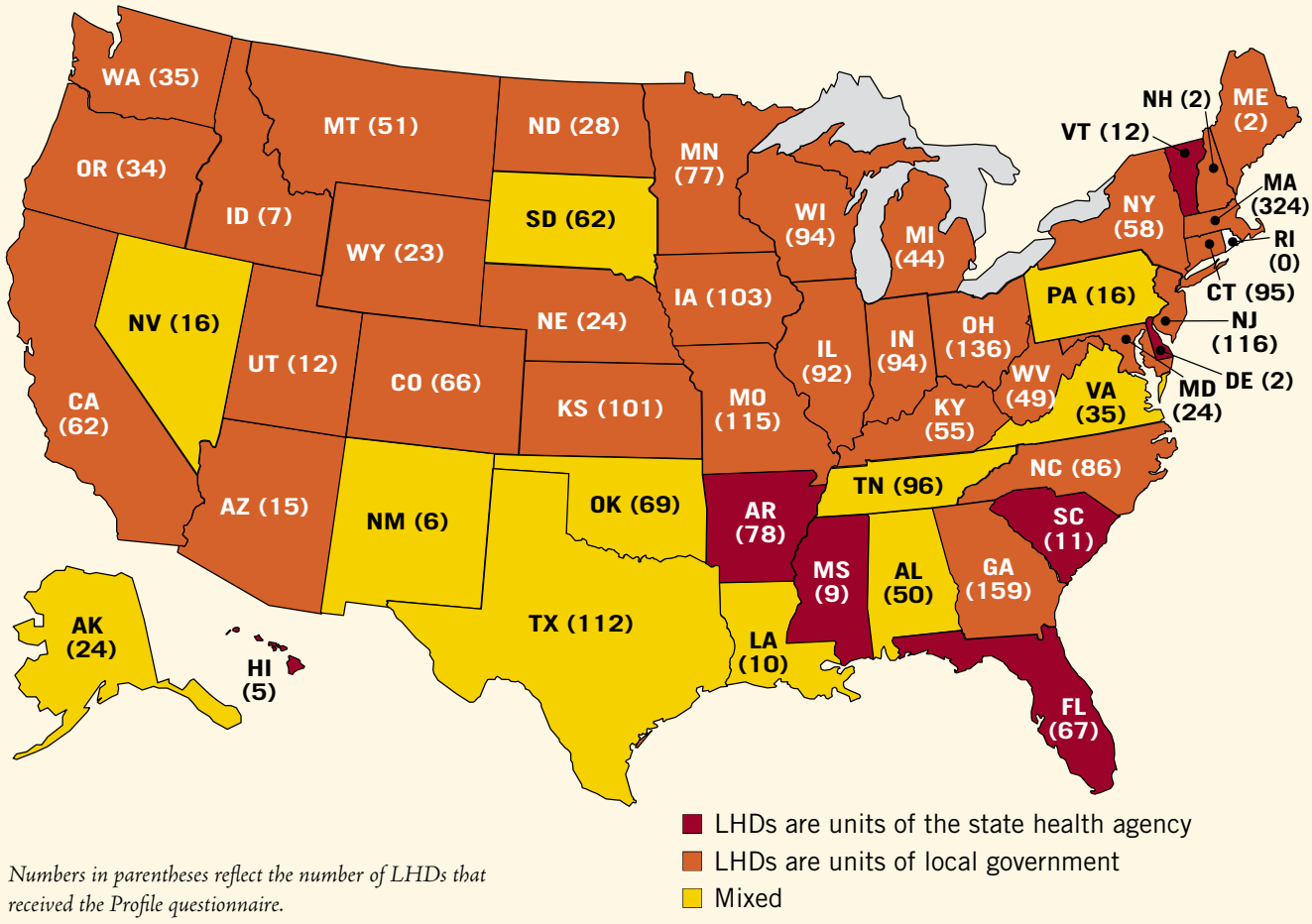


n=2,300

Type of Governance

Four categories are most often used to describe states by the type of LHD governance: centralized, decentralized, mixed, and shared. Because these categories are not well-defined, different sources categorize states differently.[1,2,3,4] Because a definitive study of LHD governance was outside the scope of the Profile study, a simpler three-category system is used. Figure 2.4 shows the type of LHD governance by state, using three categories: all LHDs are units of the state health agency; all LHDs are units of local government (i.e., no LHDs are units of the state health agency); and some LHDs are units of the state health agency and some are units of local government (mixed). It is important to recognize that there is considerable heterogeneity within each category in terms of LHD relationships with state and local government. Nonetheless, this report will use the first two categories—units of the state health agency and units of local government—for subgroup analyses. Seventy-nine percent of LHDs are units of local government; 21% of LHDs are units of the state health agency.[5]

Figure 2.4 | **LHDs Included in the 2005 National Profile Study (by State and Type of Governance)**



Numbers in parentheses reflect the number of LHDs that received the Profile questionnaire.

Local Boards of Health

Seventy-four percent of respondents indicated that they have a local board of health in their jurisdiction (Figure 2.5). Local boards of health are found more often in jurisdictions serving smaller populations; 78% of jurisdictions serving populations of less than 100,000 have a local board of health, and only 31% of jurisdictions serving populations of 1 million or more have a local board of health. Local boards of health are also more prevalent in jurisdictions where the LHD is a unit of local government. Thirty-two percent of LHDs that are units of the state health agency serve jurisdictions with a local board of health, while 85% of LHDs that are units of local government serve jurisdictions with a local board of health. Local boards of health are found in most states; Arkansas, Delaware, Hawaii, Louisiana, Mississippi, New Mexico, Rhode Island, and South Dakota are the only states *without* local boards of health.[6]

Figure 2.5 | **LHDs with a Local Board of Health in the Jurisdiction (by Size of Population Served)**

Size of population served	Number	Percentage with local board of health
All LHDs	*2,293*	*74%*
<25,000	930	76%
25,000–49,999	490	82%
50,000–99,999	346	79%
100,000–249,999	281	71%
250,000–499,999	119	55%
500,000–999,999	79	58%
1,000,000 +	48	31%

Most local board of health members are appointed (Figure 2.6). Less than 10% of local boards of health include members specifically elected by the public to serve in this capacity, and 19% are comprised entirely of other elected officials (e.g., the county council also serves as the local board of health). A large majority of local boards of health have governing and/or policy-making authority (Figure 2.7); 13% are advisory only.

Figure 2.6 | **Selection of Local Board of Health Members**

	Percentage of respondents
Specifically elected by public to serve on BoH	9%
Entirely comprised of elected officials	19%
Appointed	69%
None of the above	8%
Multiple methods	5%

n=1,709

Figure 2.7 | **Functions of Local Boards of Health**

	Number of respondents	Percentage of respondents
Governing	1,251	73%
Policy making	1,316	77%
Advising	1,423	83%
All 3 functions	988	58%
Advisory only	228	13%

n=1,709

Endnotes

1 Centers for Disease Control. (1991). *Profile of State and Territorial Public Health Systems: United States, 1990*. Washington, DC: U.S. Department of Health and Human Services.

2 National Association of County and City Health Officials. (1998). *Research Brief Number 2: NACCHO Survey Examines State/Local Health Department Relationships*. Washington, DC: NACCHO.

3 Health Resources and Services Administration. (2000). *The Public Health Work Force: Enumeration 2000*. Rockville, MD: U.S. Department of Health and Human Services.

4 Association of State and Territorial Health Officials. (2005). *2005 SHO Salary and Agency Infrastructure Survey*. Washington, DC: ASTHO.

5 A very small number of LHDs are governed by non-governmental entities (e.g., report to a hospital or other non-profit board). For Profile analyses, these LHDs were included in the units of local government category, as they are not units of a state health agency.

6 Source: National Association of Local Boards of Health database.

CHAPTER

3

Financing

Fast Facts

One-third of LHDs have annual expenditures of under $500,000; one-fifth of LHDs have annual expenditures of over $5 million.

The median LHD per capita annual expenditure (excluding clinical services revenues) is $23.

Local sources provide the greatest percentage of LHD revenues (29%), followed by state direct sources (23%), and federal funds passed through to LHDs by state agencies (13%).

LHD per capita funding and revenue sources vary greatly by state.

The diversity among LHDs is clearly evident when LHD financing is examined. LHD annual budgets range over six orders of magnitude, from several New England boards of health reporting annual expenditures of less than $10,000 to the New York City Department of Health and Mental Hygiene with annual expenditures of over $1 billion. Examining LHD revenue sources also demonstrates the varied ways that states and local communities have chosen to fund local public health activities and services.

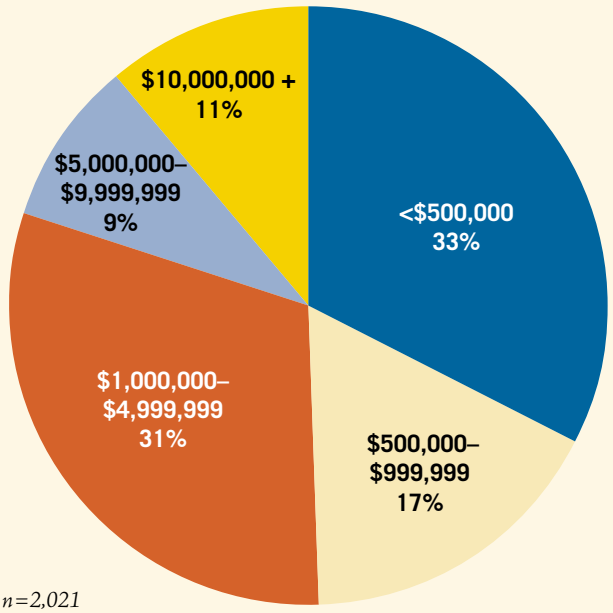
Total Annual LHD Expenditures

Each respondent was asked to report total LHD expenditures for the most recently completed fiscal year and for the fiscal year prior. Most respondents reported 2004 (59%) or 2005 (40%) as the most recently completed fiscal year.

Total annual LHD expenditures are presented in Figure 3.1. Fifty percent of LHDs have annual expenditures of under $1 million; 33% have annual expenditures of under $500,000. Twenty percent of LHDs have annual expenditures of $5 million or more, of which slightly over half (11% of all LHDs) have annual expenditures of $10 million or more.

Figure 3.2 displays the mean total annual LHD expenditures by the size of population served, as well as 25th, 50th, and 75th percentiles for each population group.

Figure 3.1 | **Total Annual LHD Expenditures**



n=2,021

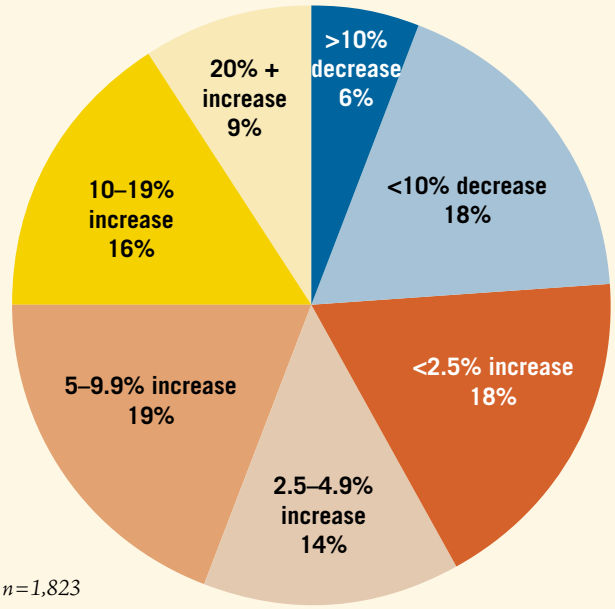
Figure 3.2 | **Total Annual LHD Expenditures (by Size of Population Served)**

Size of population served	Mean	25th percentile	50th percentile	75th percentile
<25,000	$509,000	$166,000	$339,000	$618,000
25,000–49,999	$1,380,000	$496,000	$890,000	$1,670,000
50,000–99,999	$3,550,000	$1,120,000	$1,970,000	$3,480,000
100,000–249,999	$6,260,000	$2,750,000	$5,120,000	$8,000,000
250,000–499,999	$13,600,000	$7,010,000	$11,000,000	$17,200,000
500,000–999,999	$32,500,000	$13,700,000	$23,300,000	$41,000,000
1,000,000 +	$151,000,000	$37,000,000	$56,500,000	$102,000,000
All LHDs	*$6,870,000*	*$373,000*	*$1,020,000*	*$3,520,000*

n=2,108

Figure 3.3 illustrates change in annual expenditures between the most recent fiscal year and the year prior. Twenty-four percent of LHDs experienced decreases in total annual expenditures between these years. Fifty-one percent of LHDs reported increases of less than 10%, while 25% reported increases of 10% or more.

Figure 3.3 | **Change in Total Annual LHD Expenditures**



n=1,823

Compares annual expenditures for the most recently completed fiscal year and year prior.

Total Annual LHD Expenditures: Comparison with 1992-3 Profile Study

Median total annual LHD expenditures by jurisdiction population size for 2005 Profile respondents were compared to figures from the 1992-3 Profile survey (adjusted to 2004 dollars) and are presented in Figure 3.4. Because it is not clear which consumer price index accurately adjusts for public health dollars over time, inflation adjustments were made using a hybrid index that combines the consumer price index for all urban consumers (CPI-U) and the consumer price index for medical care (CPI-MC) in a weighted average.[1]

The analysis does not reveal a clear trend in median expenditures by size of population served. In most population categories, median LHD expenditures increased between 1992-3 and 2005. Increases ranged from 9% to 30%. For one population category (500,000 to 999,999), median expenditures decreased by 14%.

Figure 3.4 | **Median Total Annual LHD Expenditures (by Size of Population Served): 1992-3 and 2005 Profile Studies**

	1992-3 Profile		2005 Profile	Percentage change
Size of population served	Unadjusted	Inflation adjusted		
<25,000	$180,000	$260,000	$339,000	30%
25,000–49,999	$500,000	$700,000	$890,000	27%
50,000–99,999	$1,300,000	$1,800,000	$1,970,000	9%
100,000–249,999	$2,900,000	$4,100,000	$5,120,000	25%
250,000–499,999	$6,900,000	$9,700,000	$11,000,000	13%
500,000–999,999	$19,000,000	$27,000,000	$23,300,000	-14%
1,000,000 +	$33,000,000	$46,000,000	$56,500,000	23%

Inflation adjusted using a hybrid index based on the CPI-U and CPI-MC (see text).

A longitudinal analysis might identify reasons for the observed differences between the 1992-3 and the 2005 Profile survey results. Factors such as changes in survey respondents, or changes in LHD jurisdiction population sizes resulting in shifts between population size categories, might explain the differences observed over time. The initiation or discontinuation of programs between 1992-3 and 2005 might also account for differences in LHD expenditures between these two study periods.

Annual Per Capita LHD Expenditures

Examining annual per capita LHD expenditures provides information on differences in governmental local public health investments. However, comparisons among LHDs should be made with caution for a number of reasons. For example, the services provided by LHDs vary greatly. Some LHDs provide extensive clinical services while others provide few or none. In some jurisdictions, LHDs provide a wide range of environmental health services, whereas in other jurisdictions, other governmental agencies are responsible for environmental health services. Additionally, the need for public health services varies by community and should be considered when making comparisons.

To reduce the variation due to the provision of clinical services, revenues from Medicare, Medicaid, and other reimbursements for medical care (specifically, private insurance and patient personal fees) were subtracted from the total expenditures of each LHD. If an LHD uses revenues from clinical services to subsidize expenditures for population-based services, this adjustment will underestimate its expenditures for public health services. This subtotal was divided by the jurisdiction population size to compute per capita expenditures for each LHD.

Figure 3.5 provides mean and median per capita expenditures for all LHDs, as well as broken down by size of population served, degree of urbanization, and type of

Figure 3.5 | **Annual Per Capita LHD Expenditures (by LHD Characteristics)**

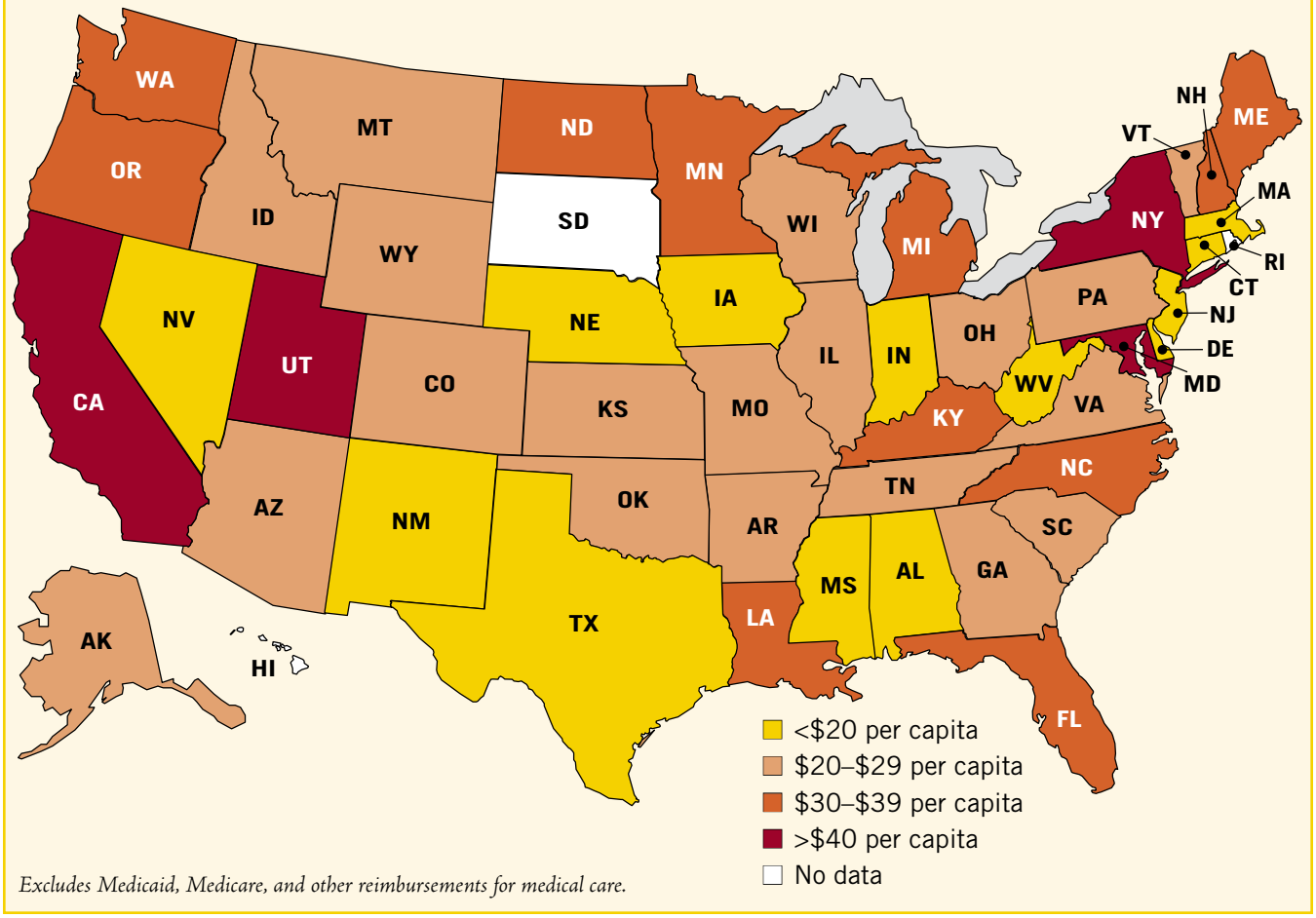
	Non-clinical revenues*		All revenues	
LHD characteristics	**Median**	**Mean**	**Median**	**Mean**
All LHDs	*$23*	*$32*	*$29*	*$41*
Size of population served				
<25,000	$23	$29	$30	$41
25,000–49,999	$21	$29	$25	$38
50,000–99,999	$21	$37	$28	$39
100,000–249,999	$27	$32	$34	$40
250,000–499,999	$24	$32	$30	$38
500,000–999,999	$31	$40	$35	$46
1,000,000 +	$33	$68	$34	$74
Type of governance				
Unit of local government	$23	$33	$30	$42
Unit of the state health agency	$23	$28	$28	$35
Degree of urbanization				
Urban	$21	$29	$24	$33
Suburban/micropolitan	$24	$39	$31	$43
Rural/small town	$25	$32	$35	$47

** Excludes Medicaid, Medicare and other reimbursements for medical care.*

governance. The mean per capita LHD expenditure across all respondents is $32; the median is $23. The unadjusted figures (including clinical services revenues) are provided for comparison. The data suggest modest differences among different categories of LHDs, with mean per capita expenditures highest for suburban jurisdictions and jurisdictions serving populations over 500,000.

The computed per capita LHD expenditures were also examined for differences among states. These comparisons show larger differences than those described above. Median per capita LHD expenditures range from a low of $9 in Massachusetts to a high of $94 in Maryland. Figure 3.6 illustrates median per capita LHD expenditures (excluding clinical services revenues) by state.

Figure 3.6 | **Median Annual Per Capita LHD Expenditures (by State)**

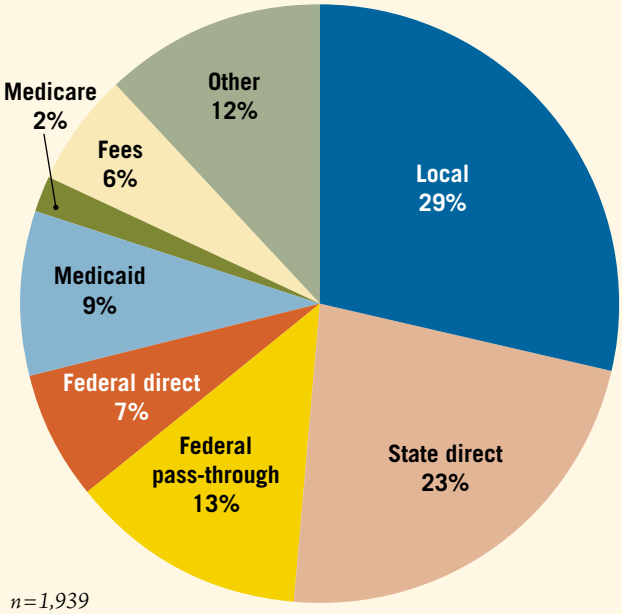


Excludes Medicaid, Medicare, and other reimbursements for medical care.

Sources of LHD Revenues

Funding for LHDs comes from a variety of sources, including revenues from local government; revenues from state government (state direct); federal funds passed through to LHDs by state agencies (federal pass-through funds); direct funding from federal agencies (e.g., CDC, HRSA, SAMHSA); reimbursement from Medicare, Medicaid, and other insurers; regulatory and patient personal fees; and other sources (e.g., funding from private foundations). Figure 3.7 displays the overall percentages of total LHD revenues by funding source. Local sources provide the greatest percentage of LHD revenues (29%), followed by state direct sources (23%) and federal pass-through sources (13%).

Figure 3.7 | **Total LHD Revenues from Various Sources**



n=1,939

Figure 3.8 presents the mean percentages of LHD revenues from selected sources by the size of population served. Funding trends for LHDs show modest differences across population categories. In general, the percentage of total LHD revenues provided by local sources decreases as the size of the population served increases (from 37% for LHDs serving populations of under 25,000, to 25% for those serving 1 million or more). In contrast, the percentage of total revenues provided by state direct sources increases as population size increases (from 19% for LHDs serving populations of under 25,000, to 28% for those serving 1 million or more). The percentage of revenues from federal direct sources also increases as population size increases. LHDs serving populations of 500,000 or more average 8% of revenues from federal direct sources, while LHDs serving smaller jurisdictions average no more than 3% from federal direct sources.

Larger differences are seen when revenue source data are presented by governance type (Figure 3.9). LHDs that are units of the state health agency differ from LHDs that are units of local government. Not surprisingly, local funds contribute to a greater percentage of total revenues on average for LHDs that are units of local government than for LHDs that are units of the state health agency. The latter receive larger percentages of revenues from both state direct and federal pass-through sources.

Figure 3.8 | **Mean Percentage of LHD Revenues from Selected Sources (by Size of Population Served)**

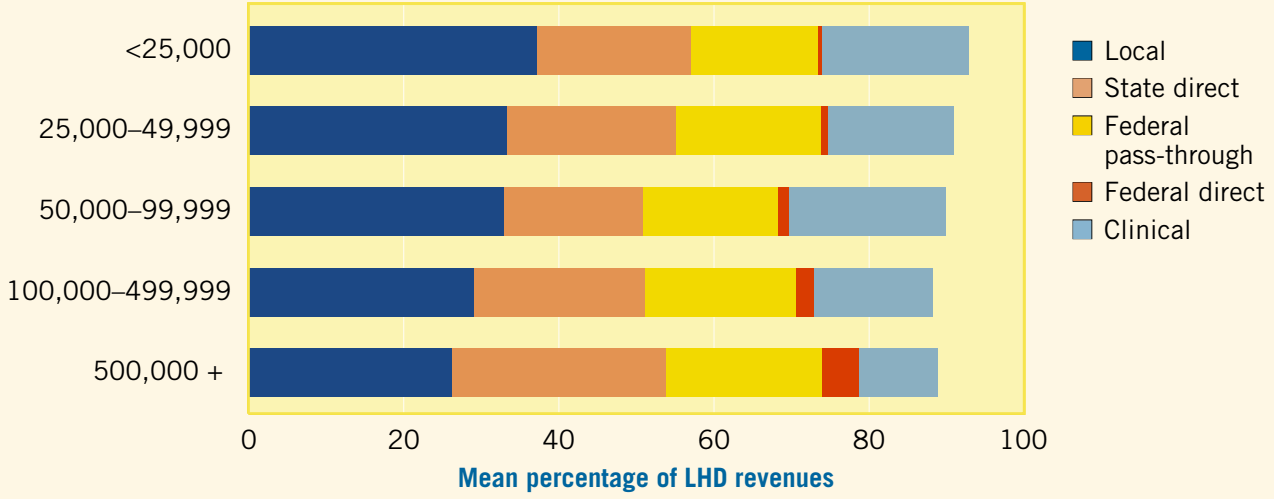


Figure 3.9 | **Mean Percentage of LHD Revenues from Selected Sources (by Type of Governance)**

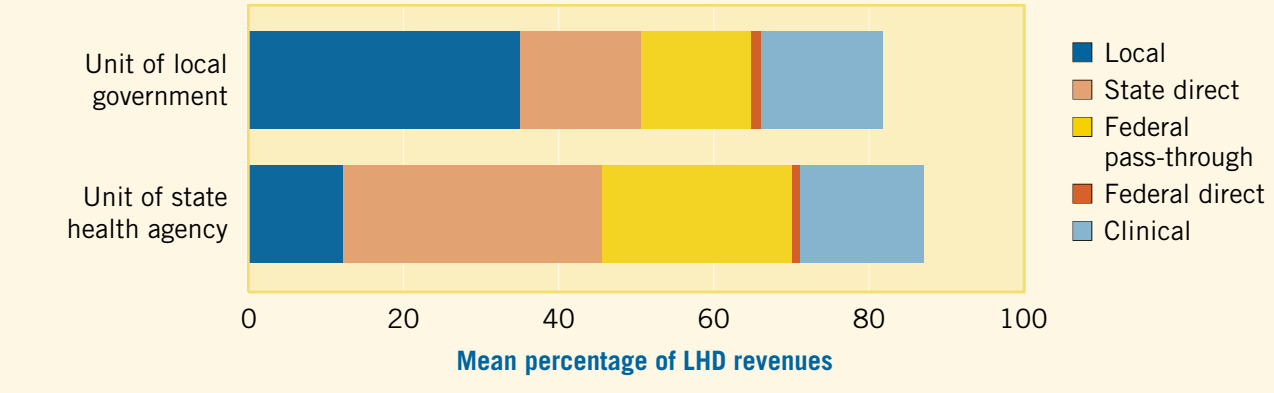


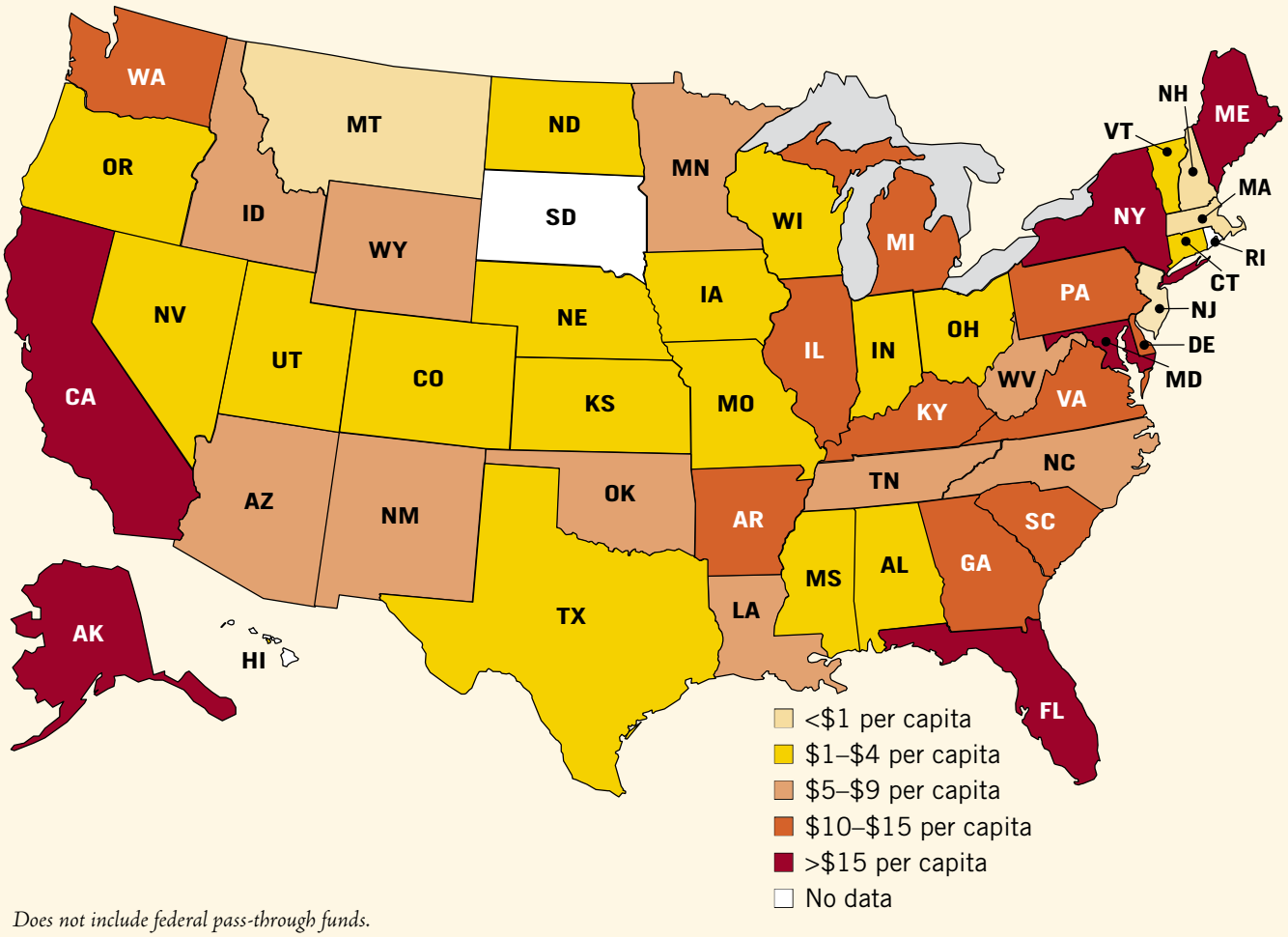
Figure 3.10 | **Total LHD Revenues from Selected Sources (by State)**

State	Local	State direct	Federal pass-through	Federal direct	Medicare and Medicaid	Other sources*
AK	25%	27%	15%	11%	12%	11%
AL	20%	6%	13%	5%	45%	12%
AR	5%	53%	40%	0%	2%	0%
AZ	20%	14%	43%	10%	2%	11%
CA	22%	23%	8%	8%	8%	31%
CO	45%	6%	22%	5%	4%	17%
CT	48%	13%	8%	22%	0%	9%
DE	0%	79%	8%	0%	12%	1%
FL	12%	37%	14%	7%	14%	17%
GA	18%	30%	13%	1%	11%	26%
IA	18%	13%	16%	2%	35%	16%
ID	14%	19%	37%	1%	10%	19%
IL	27%	21%	15%	19%	9%	10%
IN	59%	8%	15%	0%	1%	18%
KS	32%	11%	20%	10%	11%	17%
KY	19%	15%	19%	2%	34%	10%
LA	1%	18%	57%	3%	9%	12%
MA	55%	9%	4%	9%	7%	15%
MD	24%	42%	20%	1%	6%	6%
ME	25%	50%	2%	10%	7%	6%
MI	33%	21%	21%	1%	11%	13%
MN	37%	5%	4%	1%	5%	48%
MO	57%	7%	14%	3%	10%	10%
MS	12%	16%	40%	0%	25%	6%
MT	20%	2%	18%	15%	24%	20%
NC	36%	13%	9%	0%	30%	13%
ND	32%	7%	33%	0%	6%	22%
NE	26%	15%	28%	3%	5%	24%
NH	41%	1%	22%	8%	0%	28%
NJ	60%	17%	6%	1%	10%	7%
NM	0%	54%	46%	0%	0%	0%
NV	35%	4%	18%	10%	0%	33%
NY	34%	32%	3%	12%	14%	5%
OH	33%	14%	11%	1%	15%	26%
OK	42%	27%	23%	1%	1%	5%
OR	27%	8%	18%	9%	23%	14%
PA	16%	34%	19%	14%	8%	7%
SC	3%	31%	24%	0%	32%	9%
TN	45%	15%	18%	3%	7%	13%
TX	42%	12%	31%	9%	1%	5%
UT	29%	7%	34%	0%	4%	26%
VA	41%	31%	11%	1%	5%	12%
VT	0%	17%	81%	0%	0%	2%
WA	14%	26%	26%	1%	6%	27%
WI	44%	8%	17%	7%	11%	13%
WV	10%	34%	25%	0%	16%	14%
WY	42%	19%	18%	0%	8%	12%

**Other sources in this case include both regularory and patient personal fees and other sources (e.g., private foundations).*

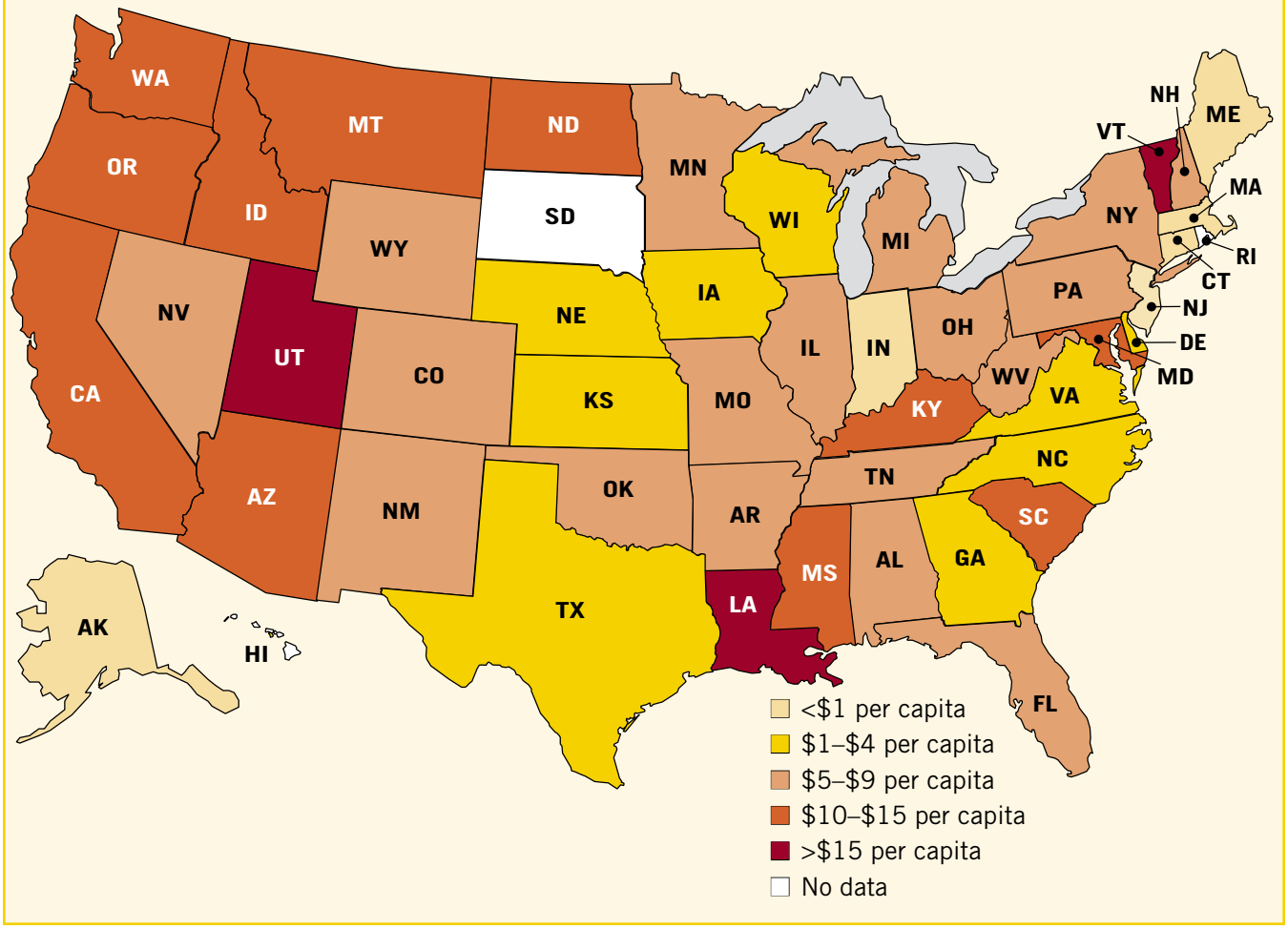
The largest differences in funding sources are apparent when revenue data are examined by state. Percentages of total LHD revenues for selected sources are provided for each state in Figure 3.10. Figures 3.11 and 3.12 combine data on total LHD expenditures and percentages of revenues from selected sources to show median LHD revenues per capita from state direct sources (Figure 3.11) and federal pass-through sources (Figure 3.12) for each state. Median state direct funding for LHDs ranges from $0 per capita (Massachusetts, Montana, New Hampshire, New Jersey) to $41 per capita (Maryland). Median federal pass-through funding for LHDs ranges from $0 per capita (Alaska, Connecticut, Indiana, Maine, Massachusetts, New Jersey) to $23 per capita (Louisiana, Utah). When examining the differences in funding patterns among states, the differences in public health system structures and in taxing authorities granted by states to local governments should also be considered.

Figure 3.11 | **Median Per Capita LHD Revenues: State Direct Sources (by State)**



Does not include federal pass-through funds.

Figure 3.12 | **Median Per Capita LHD Revenues: Federal Pass-Through Sources (by State)**



Endnote

1 CPI-U is the consumer price index for all urban consumers, which covers 87% of all consumers in the U.S. This is the CPI reported frequently in the media. CPI-MC is the consumer price index for medical care, one of the components that contributes to the CPI-U. Because LHDs provide both medical and non-medical services, neither inflator is ideal for capturing increased costs for LHDs. The hybrid index uses a weighted average of these two indices; the weighting is based on the proportion of LHD revenues from clinical services as reported in the 1992-3 Profile (approximately 17%). Prices for medical care have increased more rapidly than the overall consumer price index over the past two decades.

CHAPTER

4

LHD Leaders

Fast Facts

86% of LHDs have a full-time top agency executive.

55% of LHD top executives are women.

Nearly half of LHD top executives are in their 50s.

32% of LHD top executives have been in their current positions for ten years or more.

58% of LHD top executives hold graduate-level degrees.

51% of LHD top executives hold medical or nursing degrees.

LHD top executives go by many different names across the U.S.: Health Officer, Director, Administrator, Health Commissioner, Nurse Manager, Hometown Health Improvement Leader, and many other variations. The 2005 Profile report includes information about the full-time status, gender, race and ethnicity, age, education, and tenure of LHD top agency executives.

Full-Time Status

Eighty-six percent of LHDs have a full-time top agency executive. Most LHDs with a part-time executive serve relatively small populations. Only 15 LHDs serving a population of 100,000 or more reported a part-time top executive. As illustrated in Figure 4.1, the percentage of LHDs with a part-time top executive has decreased from 21% in 1992-3 to 14% in 2005.

Gender

Fifty-five percent of LHD top executives are female, an increase from 40% in 1992-3 (Figure 4.1). LHDs serving smaller populations are more likely than those serving larger populations to have a female top executive. There are more female than male top executives in LHDs serving populations under 50,000, but more male than female top executives in LHDs serving more than 100,000. The numbers of male and female top executives in the 50,000 to 99,999 population category are almost equal.

Figure 4.1 | **Characteristics of Top Agency Executive: 1992-3 and 2005 Profile Studies**

	Percentage of top agency executives	
	1992-3	2005
Part-time	21%	14%
Female	40%	55%
Race other than White	4%	9%
Hispanic ethnicity	2%	1%

Race and Ethnicity

Ninety-two percent of LHD top executives are White (Figure 4.2). Though the percentages of top executives of other races are small, they have increased since 1992-3 (Figure 4.1). Nearly five percent of top executives are Black or African American, up from two percent in 1992-3. LHDs serving larger populations are more likely than those serving smaller populations to have a top executive of a race other than White. Twenty-three percent of LHDs serving populations of 500,000 or more have a top executive of a race other than White. Top executives of races other than White are also more common in jurisdictions serving diverse populations. Twenty percent of LHDs serving populations that are at least 25% races other than White have a top executive of another race. The number of Hispanic LHD top executives remains small. Thirty-two respondents (1.5% of total) reported a top executive of Hispanic ethnicity.

Figure 4.2 | **Race and Ethnicity of Top Agency Executive**

	Number	Percentage
Race		
White	2,082	90.5%
Black or African American	109	4.8%
American Indian and Alaska native	36	1.6%
Asian	21	0.9%
Native Hawaiian and other Pacific islander	7	0.3%
Other race	14	0.6%
Ethnicity		
Hispanic	32	1.5%

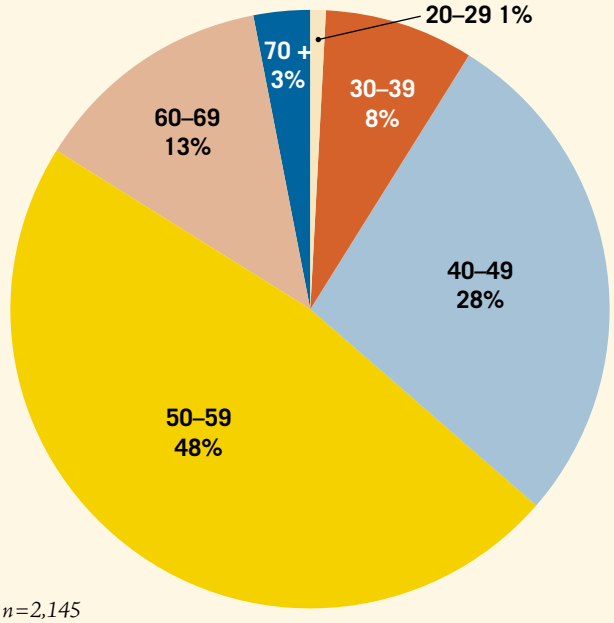
Respondents could select more than one race category.

Race and ethnicity were provided in separate responses.

Age

The mean (and median) age of LHD top executives is 52 years. Figure 4.3 illustrates the age distribution of LHD top executives. Nearly half of LHD top executives are in their 50s, and 88% are between 40 and 69 years old.

Figure 4.3 | **Age of Top Agency Executive**



n=2,145

Academic Degrees

Figure 4.4 provides information about the degrees held by top agency executives. Most LHD top executives have earned graduate-level degrees. Fifty-eight percent of all LHD top executives have masters- or doctoral-level degrees. Moreover, 75% of LHD top executives serving jurisdictions larger than 25,000 have graduate-level degrees. Nineteen percent of all LHD top executives have public health graduate degrees (MPH or DrPH), with higher percentages of executives holding such degrees in larger jurisdictions. Thirty-three percent of LHD executives serving populations of 50,000 or more and 46% of those serving populations of 500,000 or more have graduate public health degrees.

A similar trend with population size is seen when examining medical degrees. The percentage of LHD top executives with medical degrees ranges from 9% in jurisdictions with populations of less than 25,000 to 46% in jurisdictions with populations of 500,000 or more. In contrast, top executives serving small jurisdictions are more likely to hold nursing degrees, ranging from 49% in jurisdictions with populations less than 25,000 to 12% in jurisdictions with populations of 500,000 or more. The degree held by the top executive is strongly related to gender. Twenty-nine percent of male top executives have a medical degree, compared with 7% of female top executives. Sixty percent of female top executives have nursing degrees, compared with 3% of male top executives.

Figure 4.4 | **Education of Top Agency Executive**

	Number	Percentage
Highest level degree		
Bachelors	622	27%
Masters	862	37%
Doctorate	487	21%
No response	329	14%
Specialty area		
Public health	430	19%
Nursing	786	34%
Medical	387	17%

Public health degrees include MPH and DrPH.
Nursing degrees include RN, BSN, and MSN.
Medical degrees include MD, DVM, and DDS.

Respondents could select multiple responses.

Tenure

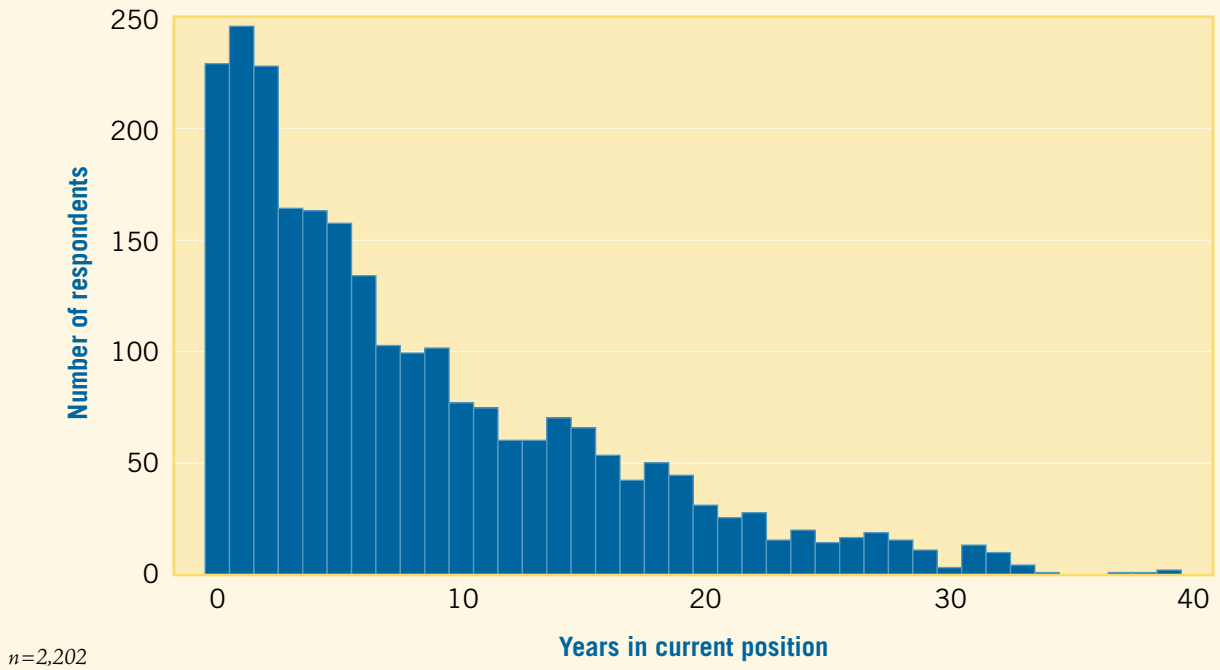
The mean time that LHD top executives have served in their current positions is eight years. Figure 4.5 shows the mean tenure of LHD executives by LHD characteristics. There is little variation in top executive tenure for different types of jurisdictions or different sizes of population served below 500,000. Top executives serving jurisdictions with populations of 500,000 or more have shorter tenure on average than those serving smaller jurisdictions (mean of 6 vs. 8 years). Figure 4.6 is a histogram of the tenure of top agency executives. Twenty-seven percent of LHD top executives have held their current positions for two years or less; 32% have held their current positions for ten years or more.

Figure 4.5 | **Tenure of Top Agency Executive (by LHD Characteristics)**

LHD characteristics	Mean tenure (years)
All LHDs	*8.2*
Size of population served	
<25,000	7.9
25,000–49,999	9.3
50,000–99,999	8.6
100,000–499,999	7.8
500,000 +	6.2
Type of jurisdiction	
City	9.2
County	7.8
City-County	8.6
Town/township	9.0
Multi-county/district/region	8.1
Type of governance	
Unit of state health agency	6.9
Unit of local government	8.5

n=2,202

Figure 4.6 | **Tenure of Top Agency Executive**



n=2,202

CHAPTER

5

LHD Workforce

Fast Facts

Approximately 160,000 FTE workers are employed by LHDs.

36% of LHDs employ fewer than 10 FTE workers.

Between 1996-7 and 2005, the median number of employees remained relatively constant for most LHDs, but decreased for LHDs serving populations of 500,000 or more.

Nearly 100% of LHDs in most population size categories employ administrative or clerical personnel; nurses; and managers and directors.

59% of LHDs have an emergency preparedness coordinator.

40% of the LHD workforce is comprised of employees in three occupational categories: nurses; environmental health specialists and scientists; and managers and directors.

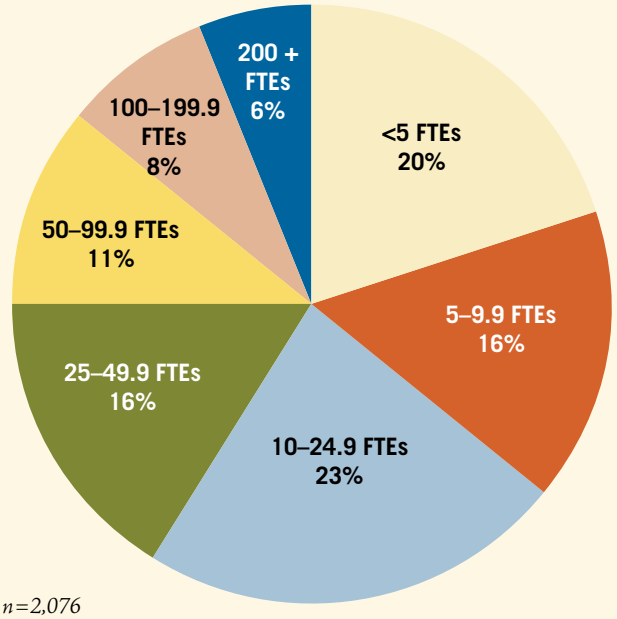
Approximately 20% of LHD employees will be eligible for retirement within five years.

LHD employees are front-line workers in the nation's public health system and a major component of the local public health workforce. Enumerating the public health workforce is a very complex task, and the 2005 Profile study makes a major contribution toward describing, and thus understanding the make-up of, the LHD workforce. The 2005 Profile questionnaire asked for information on total LHD employees, expressed both in numbers of employees and in full-time equivalent (FTE) workers. In addition, respondents were asked to provide information about the occupations represented among their LHD employees and the number of FTE workers (FTEs) for each occupation.

Numbers of Employees Within LHDs

The numbers of FTEs[1] employed by LHDs is presented in Figure 5.1. Twenty percent of LHDs employ fewer than five FTEs, and nearly 60% employ fewer than 25. Only 14% employ more than 100 FTEs. Figure 5.2 shows the number of employees and FTEs by LHD jurisdiction population size. As expected, these figures increase consistently as the population size increases, ranging from a median of 8 employees (6 FTEs) for LHDs serving populations under 25,000, to a median of 491 employees (467 FTEs) for LHDs serving populations of 1 million or more.

Figure 5.1 | **FTEs Employed by LHDs**



n=2,076

Figure 5.3 compares data from the 1996-7 and 2005 Profile studies on the median numbers of employees and FTEs working in LHDs. This comparison shows essentially no change in numbers of employees for LHDs serving populations of less than 500,000. LHDs serving larger populations reported markedly smaller numbers of employees (24% decrease for LHDs serving 500,000–999,999 and 30% decrease for LHDs serving 1 million or more). To investigate whether this difference could be due to the different study populations for the two studies, the 2005 statistics were recalculated omitting the local units of state health agencies in Alaska, Nevada, Pennsylvania, South Dakota, and Texas that were not included in the 1996-7 Profile study.[2] Excluding these units changed the statistics slightly for LHDs in the 500,000 to 999,999 population category and substantially for the largest LHDs (23% decrease in median number of employees for LHDs serving 500,000 to 999,999; 15% decrease for LHDs serving 1 million or more).

Further comparisons of the 1996-7 and 2005 Profile data reveal that a number of these large LHDs reported very large changes (positive and negative) in numbers of employees, perhaps indicating that different governmental agencies are now delivering certain public health services (e.g., clinical services, environmental health services) in those jurisdictions. As discussed in the limitations section in Chapter 1 of this report, these results should be considered only as suggestive, as a true longitudinal analysis was not conducted. Nonetheless, these results are consistent with other findings of the 2005 Profile study, including decreases in the percentage of LHDs active in certain programmatic areas.[3]

Figure 5.2 | **Employees and FTEs at LHDs (by Size of Population Served)**

	Number of employees			Number of FTEs		
Size of population served	Mean	Median	Number of respondents	Mean	Median	Number of respondents
<25,000	12	8	916	9	6	846
25,000–49,999	26	18	478	22	16	445
50,000–99,999	50	37	335	43	33	317
100,000–249,999	101	84	267	91	75	247
250,000–499,999	182	161	112	166	150	111
500,000–999,999	375	310	70	327	285	65
1,000,000 +	765	491	44	770	467	43
All LHDs	*67*	*19*	*2,222*	*61*	*16*	*2,074*

Figure 5.3 | **Employees and FTEs at LHDs (by Size of Population Served): 1996-7 and 2005 Profile Studies**

	Median number of employees			Median number of FTEs		
Size of population served	1996-7	2005—all respondents	2005—subset	1996-7	2005—all respondents	2005—subset
<25,000	8	8	9	6	6	6
25,000–49,999	18	18	19	15	16	16
50,000–99,999	43	37	37	36	33	33
100,000–249,999	91	84	84	83	75	75
250,000–499,999	168	161	161	150	150	150
500,000–999,999	410	310	315	424	285	285
1,000,000 +	700	491	594	613	467	520
All LHDs	*20*	*19*	*20*	*16*	*16*	*17*

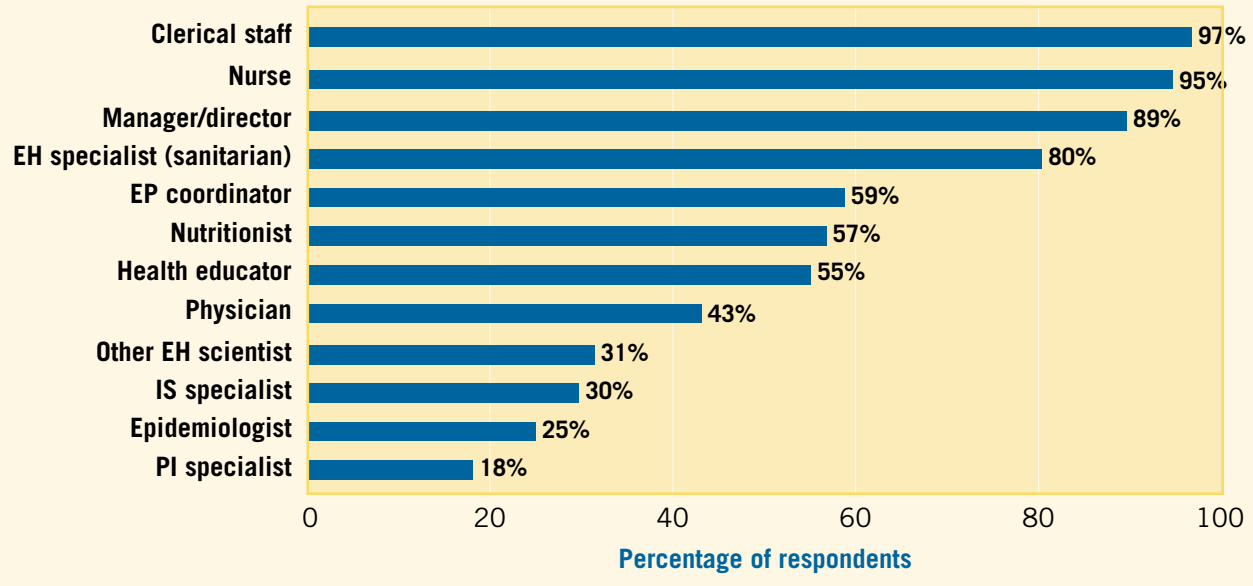
The 2005 subset was computed by omitting LHDs in AK, NV, PA, SD, and TX that were not included in 1996-7 Profile study.

Occupations Represented Among LHD Employees

Profile respondents were asked to report whether they employ staff in a selection of occupations and, if possible, to report the total FTEs employed in each. The selected occupations were not intended to be exhaustive; rather, they represent occupations that comprise the majority of the LHD workforce (e.g., managers/directors, nurses, environmental health (EH) specialists, clerical staff) or are currently of particular interest (e.g., epidemiologists, emergency preparedness (EP) coordinators, public information (PI) specialists). Comparing the total FTEs reported to the sum of the FTEs reported for the selected occupations indicates that many LHDs employ staff in occupations that were not included in the Profile questionnaire.

Figure 5.4 shows the percentages of LHDs employing staff from selected occupations. Clerical personnel and nurses are each employed by over 90% of LHDs, managers/directors and environmental health specialists (sanitarians) each by

Figure 5.4 | **LHDs with Employees in Selected Occupations**



over 80%. By contrast, information systems (IS) specialists, epidemiologists, and public information specialists are each employed by 30% of LHDs or fewer. Another notable finding is that only 43% of LHDs employ physicians, a marked decrease from 62% of LHDs in 1989.[4]

When compared across population size categories, a greater percentage of LHDs serving larger jurisdictions have employees from each selected occupation than do those serving smaller jurisdictions (Figure 5.5).

Figure 5.6 shows the median number of FTEs working in LHDs in selected occupations by the size of population served. In effect, the numbers presented depict the "typical" staffing of LHDs within each population category. Figure 5.7 shows typical staffing patterns for LHDs serving jurisdictions in three different population categories. The occupations most often found at LHDs serving less than 50,000 are managers/directors, nurses, environmental health specialists, and clerical staff. Most LHDs serving 50,000 or more also employ nutritionists, health educators, and emergency preparedness coordinators. Additional specialized occupations are represented among the employees of most LHDs serving between 100,000 and 500,000, including physicians, epidemiologists, environmental health scientists, and information systems specialists.

Figure 5.5 | **LHDs with Employees in Selected Occupations (by Size of Population Served)**

	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–249,999	250,000–499,999	500,000–999,999	1,000,000 +
Clerical staff	97%	93%	98%	99%	100%	99%	100%	100%
Nurse	95%	90%	97%	97%	98%	100%	99%	100%
Manager/director	89%	79%	94%	95%	100%	100%	99%	100%
EH specialist (sanitarian)	80%	69%	83%	87%	93%	92%	91%	88%
EP coordinator	59%	36%	58%	69%	79%	90%	99%	96%
Nutritionist	57%	35%	55%	63%	83%	91%	89%	91%
Health educator	55%	26%	55%	72%	81%	88%	94%	96%
Physician	43%	20%	39%	49%	68%	82%	88%	96%
Other EH scientist	31%	14%	25%	38%	51%	64%	76%	73%
IS specialist	30%	9%	17%	31%	57%	71%	87%	96%
Epidemiologist	25%	5%	12%	19%	50%	78%	91%	98%
PI specialist	18%	4%	7%	16%	33%	55%	74%	86%

Figure 5.6 | **FTEs Employed by LHDs in Selected Occupations (by Size of Population Served)**

	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +	*All LHDs*
Median number of employees	8	18	37	100	363	19
Median FTEs						
All LHD staff	*6*	*16*	*33*	*88*	*325*	*16*
Clerical staff	2	4	8	23	72	4
Nurse	2	5	10	20	69	6
Manager/director	1	1	1	5	15	1
EH specialist (sanitarian)	1	2	3	9	24	2
EP coordinator	0	0	1	1	1	1
Nutritionist	0	0	1	3	8	0
Health educator	0	0	1	2	6	1
Physician	0	0	0	1	3	0
Other EH scientist	0	0	0	1	5	0
IS specialist	0	0	0	1	3	0
Epidemiologist	0	0	0	1	2	0
PI specialist	0	0	0	0	1	0

Figure 5.7 | **"Typical" Staffing Patterns for LHDs Serving Jurisdictions Within Selected Population Size Categories**

Serving <25,000 **6 FTEs, including:**	Serving 50,000–100,000 **33 FTEs, including:**	Serving 100,000–500,000 **88 FTEs, including:**
1 manager/director	1 manager/director	5 managers/directors
2 nurses	10 nurses	20 nurses
1 EH specialist	3 EH specialists	9 EH specialists
2 clerical staff	8 clerical staff	23 clerical staff
	1 nutritionist	3 nutritionists
	1 health educator	2 health educators
	1 EP coordinator	1 EP coordinator
		1 physician
		1 epidemiologist
		1 EH scientist
		1 IS specialist

Size and Composition of LHD Workforce

2005 Profile data on total FTE LHD staff and number of FTEs in selected LHD occupations were used to estimate the size and composition of the LHD workforce in the U.S. These estimates were made using data only from respondents who provided responses for both total FTEs and every one of the occupations listed in the questionnaire (1,388 respondents, which represents 60% of all Profile respondents and 48% of all LHDs).[5] Estimates were adjusted for non-response.

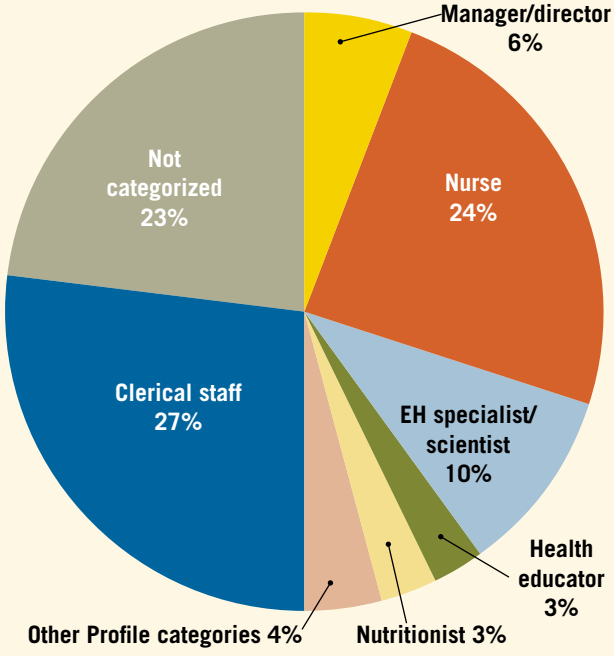
Figure 5.8 | **Estimate of Size and Composition of LHD Workforce**

	Best estimate	95% confidence interval	Percentage of all LHD staff
All LHD staff	*160,000*	*140,000 – 170,000*	
Manager/director	9,900	8,600 – 11,000	6.4%
Nurse	38,000	34,000 – 41,000	24.4%
Physician	2,000	1,600 – 2,500	1.3%
EH specialist (sanitarian)	12,000	11,000 – 14,000	8.0%
Other EH scientist	3,400	2,600 – 4,300	2.2%
Epidemiologist	1,300	950 – 1,600	0.8%
Health educator	4,500	3,800 – 5,100	2.9%
Nutritionist	4,400	3,900 – 5,000	2.8%
IS specialist	1,700	1,400 – 2,000	1.1%
PI specialist	450	370 – 520	0.3%
EP coordinator	1,400	1,300 – 1,500	0.9%
Clerical staff	40,000	36,000 – 44,000	25.8%

The total number of LHD staff (expressed as FTEs) is estimated at 160,000 (Figure 5.8) with a 95% confidence interval of 140,000 to 170,000. This figure is consistent with the estimate of approximately 150,000 reported by Gebbie in 2000.[6] This figure is considerably lower than the figure of 246,300 FTE health workers reported by the U.S. Census Bureau in its 2005 report on public employment data.[7] It is important to recognize that the Census Bureau total includes governmental public health workers from agencies other than the LHD, including those providing emergency medical, mental health, substance abuse, animal control, and other environmental health services. As discussed in Chapter 7 of this report, these functions are carried out by governmental agencies other than the LHD in many jurisdictions.

Figure 5.9 illustrates the proportions of the LHD workforce representing the selected occupations included in the Profile questionnaire. Clerical staff (27%), nurses (24%), and EH specialists and other EH scientists (10%) are the three largest categories of LHD staff. The occupations included in the Profile questionnaire did not capture 23% of LHD staff.

Figure 5.9 | **Occupations in the LHD Workforce**



The LHD Workforce and Retirement

Concern has been expressed about the possibility that a large percentage of public health workers will be eligible for retirement in the near future, resulting in a loss of valuable expertise and potential workforce shortages. A 2003 study found that the average percentage of state public health workers (across all responding states) eligible for retirement was 24%.[8] A module of the 2005 Profile questionnaire included questions to assess the issue of impending retirement among LHD employees. Figure 5.10 shows the percentage of respondents who had determined the percentage of their employees who will be eligible for retirement within the next five years. Overall, 59% of LHDs had made this determination, with LHDs serving the largest jurisdictions least likely to have done so.

Of those LHDs that had made this determination, the mean percentage of employees eligible for retirement within the next five years is 20%. In general, LHDs serving smaller populations reported larger percentages of staff eligible for retirement within the next five years than those serving larger populations. LHDs that had not determined the percentage of staff eligible for retirement were asked to estimate this percentage. The mean estimated percentage is 15%, with higher percentages (up to a mean of 26%) estimated by LHDs serving larger jurisdictions. When all data provided by respondents (determined or estimated) were combined,[9] the mean percentage of LHD staff eligible for retirement within the next five years is 19%.

Figure 5.10 | **LHD Staff Eligible for Retirement Within Five Years (by Size of Population Served)**

Size of population served	Have determined percentage of staff eligible for retirement (n=412)	Percentage of staff eligible		
		Determined (n=232)	Estimated (n=106)	Combined* (n=335)
All LHDs	*59%*	*20%*	*15%*	*19%*
<25,000	65%	24%	10%	21%
25,000–49,999	63%	16%	19%	17%
50,000–99,999	58%	18%	17%	18%
100,000–499,999	48%	16%	13%	15%
500,000 +	33%	15%	26%	20%

** Combined percentage calculated by using reported estimates for those LHDs that had not determined the percentage of staff eligible for retirement within five years.*

Endnotes

1 One FTE worker equals one full-time employee, two half-time employees, etc.

2 See page 4 of this report.

3 See page 58 of this report.

4 National Association of County Health Officials. (1990). *National Profile of Local Health Departments.* Washington, DC: NACCHO. Available at www.naccho.org/topics/infrastructure/PH_infrastructureresearch/previous LPHAprofiles.cfm.

5 Calculations were also made using a larger number of responses—all respondents who provided both total FTEs and FTEs for at least some occupations (n=1,969). The 95% confidence intervals from the two different estimates overlapped substantially for total FTEs and for each occupational category.

6 Health Resources and Services Administration. (2000). *The Public Health Work Force: Enumeration 2000*. Rockville, MD: U.S. Department of Health and Human Services.

7 U.S. Census Bureau. (2005). *Federal, State, and Local Governments Public Employment and Payroll Data* (local government data, 2005). Available at www.census.gov/govs/www/apes.html.

8 Association of State and Territorial Health Officials. (2003). *State Public Health Employee Worker Shortage Report: A Civil Service Recruitment and Retention Crisis.* Washington, DC: ASTHO. Available at www.astho.org/pubs/Workforce-Survey-Report-2.pdf.

9 If a respondent had determined the percentage of staff eligible for retirement within five years, that number was used. Otherwise, the estimated percentage of staff was used.

CHAPTER

6

Emergency Preparedness

Fast Facts

73% of LHDs have received funding from the CDC Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism through their state health agency.

$0.99 is the mean per capita funding that LHDs received from the CDC preparedness cooperative agreement.

51% of LHDs have hired additional FTEs using funding from the CDC preparedness cooperative agreement.

37% of LHDs responded to an actual public health emergency in the past year, and nearly all LHDs conducted emergency preparedness activities during that time period.

Many LHD functions and services were reported to be stronger as a result of efforts to improve emergency preparedness over the last three years.

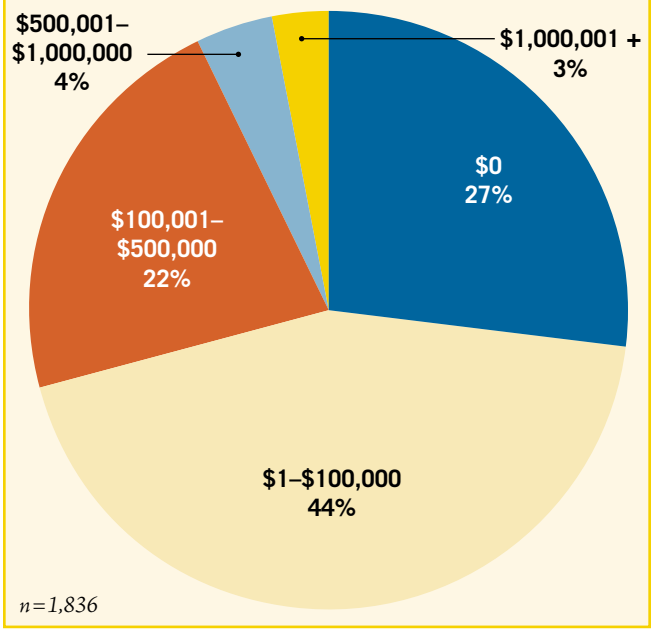
Responding to disease outbreaks, environmental hazards, and natural disasters are essential services of LHDs. Since September 2001, public health agencies at all levels in the U.S. have increased emphasis on emergency preparedness, focusing particularly on the threat of bioterrorism. Federal funding for the CDC Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism (CDC preparedness cooperative agreement) increased dramatically from $67 million in FY 2001 to $940 million in FY 2003. This cooperative agreement is intended to build state and local public health preparedness capacity in a number of areas critical to emergency response, including preparedness planning, surveillance and epidemiology capacity, laboratory capacity, information technology, communications, and training.

CDC Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism

Most LHDs do not receive preparedness cooperative agreement funding directly from the CDC.[1] These funds are awarded to state health agencies, which control the distribution of funds to LHDs. The CDC guidance to states for this funding requires that each state demonstrate meaningful collaboration between the state health agency and local health departments.

Seventy-three percent of LHDs received CDC preparedness cooperative agreement funding via their state health agencies in their most recent fiscal year; 29% of LHDs received more than $100,000 from this source (Figure 6.1). As expected, LHDs serving jurisdictions with larger populations received more funding than those serving smaller populations (Figure 6.2). To provide perspective on these funding levels, the percentage of the total LHD budget provided by the CDC preparedness cooperative agreement was computed. The median percentage for all LHDs was 2.5% of the total budget, and there was little variation when examined by size of population served.

Figure 6.1 | **CDC Preparedness Funding Received by LHDs**



n=1,836

Per capita funding from the CDC preparedness cooperative agreement was computed by dividing the funds received by an LHD by the size of population it serves. The median per capita LHD funding during the most recently completed fiscal year is $0.99; the mean per capita LHD funding for this time period is $1.57. Figure 6.3 provides these statistics by degree of urbanization and by type of governance. Urban areas received notably less funding per capita than suburban/micropolitan areas and small town/rural areas. LHDs that are units of the state health agency received less funding per capita than those that are units of local government.

Figure 6.2 | **CDC Preparedness Funding Received by LHDs (by Size of Population Served)**

Size of population served	Number of LHDs	Mean	Median
<25,000	683	$23,000	$7,300
25,000-49,999	402	$57,000	$38,000
50,000-99,999	285	$86,000	$70,000
100,000-249,999	249	$200,000	$160,000
250,000-499,999	105	$340,000	$330,000
500,000-999,999	71	$710,000	$650,000
>1,000,000	39	$3,300,000	$680,000
All LHDs	*1,834*	*$180,000*	*$35,000*

Includes funds received by LHDs from their state health agency through CDC's Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism.

Though the intent of this CDC cooperative agreement program is to upgrade preparedness for and response to bioterrorism and other public health emergencies in both state and local public health jurisdictions, the extent to which funding has actually reached LHDs varies by state. In ten states (AK, AL, AR, DE, GA, MA, NJ, NM, OK, TN), over half of the LHDs who responded reported receiving no funds from this program. In ten more states (CT, FL, LA, ME, MO, MS, NC, SC, TX, VA), over half of the LHDs who responded reported receiving less than $1 per capita. Figure 6.4 illustrates the mean per capita funding received by LHDs in each state through the CDC preparedness cooperative agreement.

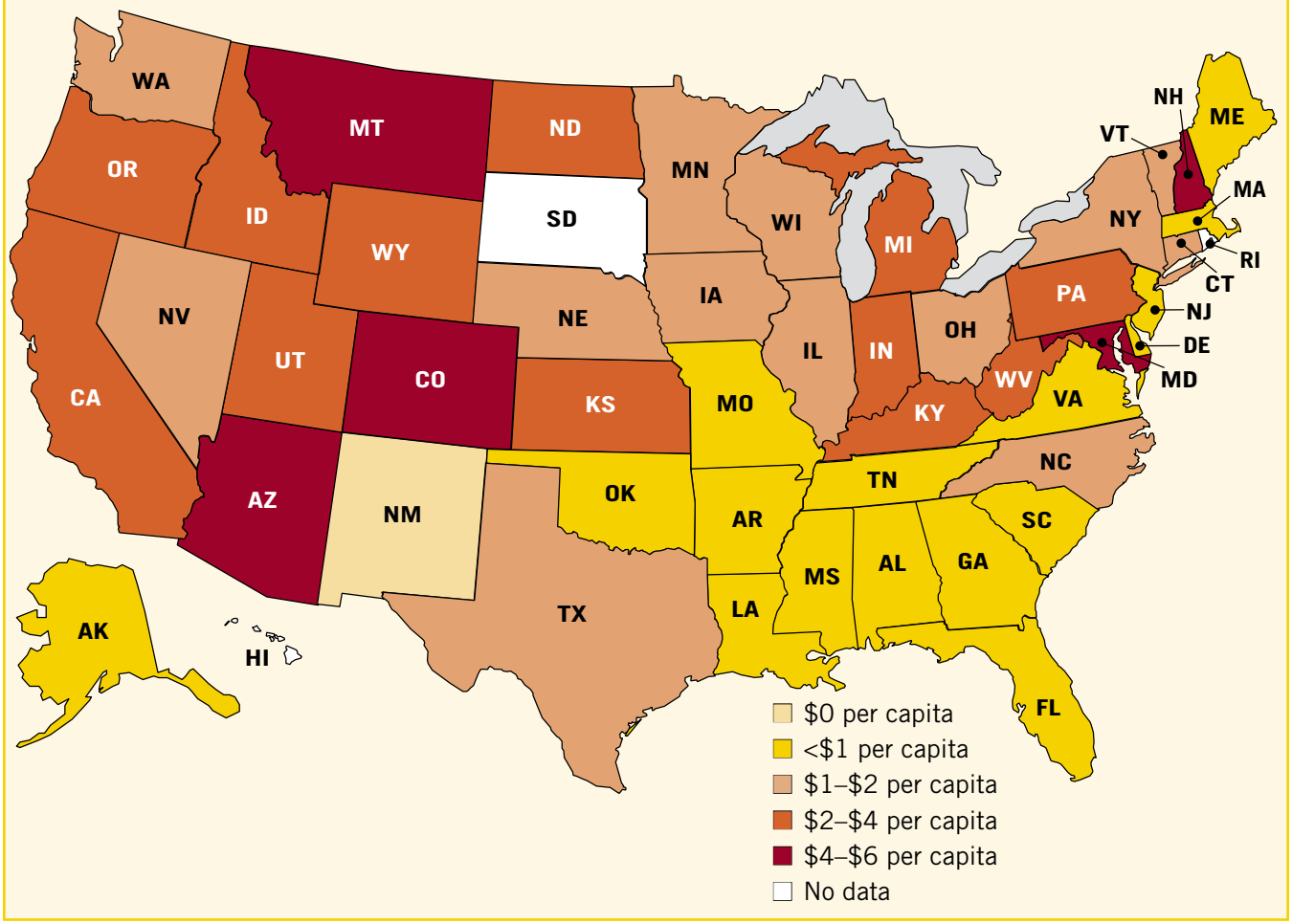
Figure 6.3 | **Per Capita CDC Preparedness Funding Received by LHDs (by LHD Characteristics)**

LHD characteristics	LHD funding per capita mean	median
All LHDs	*$1.57*	*$0.99*
Degree of urbanization		
Urban	$1.00	$0.64
Suburban/micropolitan	$1.61	$1.23
Small town/rural	$2.18	$1.40
Type of governance		
Unit of local government	$1.77	$1.22
Unit of state health agency	$0.50	$0.00

n=1,834

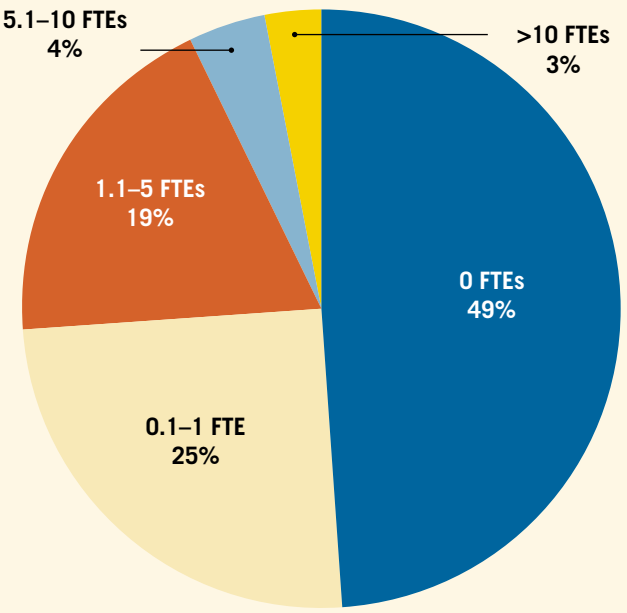
Includes funds received by LHDs from their state health agencies through the CDC Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism.

Figure 6.4 | **Mean Per Capita CDC Preparedness Funding Received by LHDs (by State)**



LHDs have used CDC preparedness cooperative agreement funding for a wide range of required activities, including upgrading communications equipment, developing surveillance systems, and training staff. Additionally, some LHDs have used this funding to hire more staff. The 2,029 LHDs who responded to the question about the number of FTEs they hired using funds from this program reported hiring a total of 3,020 FTEs. However, only 26% of LHDs used CDC preparedness cooperative agreement funding to hire more than one FTE, and 49% hired no staff with these funds (Figure 6.5).

Figure 6.5 | **FTEs Hired by LHDs Using CDC Preparedness Funding**



n=2,029

Includes funds received by LHDs from their state health agencies through the CDC Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism.

Emergency Preparedness Activities and Change in LHD Functions

Respondents were asked whether selected emergency preparedness activities had been conducted by their LHD within the past 12 months. Their responses confirm that nearly all LHDs are actively involved in emergency preparedness activities (Figure 6.6). Ninety-eight percent of LHDs reported doing at least one of the listed activities. Two activities were each conducted by over 90% of LHDs: participated in drills or exercises, and developed or updated a written emergency plan. Eighty-seven percent of LHDs provided emergency preparedness training to staff.

Figure 6.6 | **LHDs that Conducted Selected Emergency Preparedness Activities in the Past Year**

Activity	Percentage of respondents
Participated in drills or exercises	92%
Developed or updated a written emergency plan	90%
Provided emergency preparedness training to staff	87%
Assessed emergency preparedness competencies of staff	71%
Reviewed relevant legal authorities	65%
Participated in an actual public health emergency	37%
None of the above	2%

n=2,300

A Profile questionnaire module asked respondents to report on changes in selected LHD functions and services over the preceding three years as a result of efforts to improve emergency preparedness. Functions and services most frequently reported to be stronger as a result of such efforts include preparedness planning, communication systems, workforce training, information systems, public health surveillance, and epidemiology (Figure 6.7).

No more than 6% of respondents reported a particular function or service to be weaker as a result of efforts to improve emergency preparedness. In fact, between 27% and 36% of respondents reported that functions that are not directly related to emergency preparedness (such as primary prevention, regulation and inspection, and maternal and child health) are stronger as a result of efforts by their LHDs to improve preparedness.

Figure 6.7 | **Change in Selected LHD Functions over the Last Three Years as a Result of Efforts to Improve Emergency Preparedness**

LHD function or service	Stronger	No change	Weaker
Preparedness planning	97%	3%	0%
Communication systems	94%	6%	0%
Workforce training	91%	8%	1%
Information systems	88%	12%	0%
Public health surveillance	86%	13%	1%
Epidemiology	83%	16%	2%
Legal basis for PH actions	63%	37%	1%
Relationships with other local, state or federal agencies	63%	37%	1%
Immunization services	62%	36%	2%
Surge capacity	59%	40%	1%
Access to laboratory services	54%	45%	2%
Screening for diseases and conditions	49%	50%	1%
Other environmental health activities	43%	54%	3%
Treatment for communicable diseases	40%	59%	1%
Population-based primary prevention services	36%	60%	4%
Other health services	31%	63%	6%
Regulation, inspection and licensing activities	31%	66%	3%
Maternal and child health services	27%	68%	5%

n=393

Endnote

1 The LHDs in New York City, Chicago, Los Angeles, and Washington, DC, receive preparedness cooperative agreement funding directly from the CDC.

CHAPTER

7

Activities

Fast Facts

91% of LHDs provide adult immunizations; 90% of LHDs provide childhood immunizations.

In at least 75% of LHD jurisdictions, a governmental agency provides screening for tuberculosis, HIV/AIDS, sexually transmitted diseases (STDs), blood lead levels, and high blood pressure.

75% of LHDs provide treatment for tuberculosis; 61% of LHDs provide treatment for sexually transmitted diseases.

67% of LHDs provide WIC services; 58% provide family planning services.

69% of LHDs provide tobacco use prevention services; 56% provide obesity prevention services.

89% of LHDs conduct surveillance and epidemiology for communicable/infectious diseases.

75% of LHDs provide food safety education.

Local health departments are a critical component of the local public health system, which includes governmental agencies, healthcare providers, community organizations, schools, businesses, the media, and others. The local public health system carries out many activities that contribute to the goal of creating and maintaining conditions in which people can be healthy. The specific roles filled by each of these components of the local public health system—including the LHD—vary among communities. The role of every LHD is to intentionally coordinate all public health activities in a community, regardless of which organization may take the lead in a particular area.[1] The 2005 Profile study provides a wealth of information about local public health activities.

Overview of LHD Activities

The Profile questionnaire included a list of 75 public health-related activities and services. For each item in the list, respondents were asked to indicate *all* of the organizations in their jurisdictions that had conducted that activity or service during the past year. The choices for each item were: performed by LHD directly; contracted by LHD; done by state governmental agency; done by another local governmental agency; done by someone else (non-governmental entity); not available in jurisdiction; and unknown. For the purposes of this report, the term "non-governmental organization" (NGO) includes many different types of organizations, including physician practices, hospitals, community-based organizations, and other voluntary organizations. Figures 7.1–7.4 provide a brief overview of LHD activities and services. More detail about these activities and services is included in the remainder of this chapter.

Figure 7.1 presents the ten activities and services provided most frequently by LHDs. Notably, only eight of the 75 listed are provided by 75% or more of LHDs, illustrating the heterogeneity in the types of activities and services that LHDs provide. Adult and childhood immunization provision are the most frequently provided LHD services (91% and 90% respectively).

Figure 7.2 presents the ten activities and services most frequently provided by LHDs via contracts with other organizations. Few LHDs contract with other organizations to provide services. Only laboratory services (11%) are provided via contract by more than 10% of LHDs.

Figure 7.1 | **Activities and Services Most Frequently Provided by LHDs**

Rank	Activity or service	Percentage of jurisdictions
1	Adult immunization provision	91%
2	Childhood immunization provision	90%
3	Communicable/infectious disease surveillance	89%
4	Tuberculosis screening	85%
5	Food service establishment inspection or licensing	76%
6	Environmental health surveillance	75%
7	Food safety education	75%
8	Tuberculosis treatment	75%
9	High blood pressure screening	72%
10	Tobacco use prevention	69%

Figure 7.2 | **Activities and Services Most Frequently Provided via LHD Contracts**

Rank	Activity or service	Percentage of jurisdictions
1	Laboratory services	11%
2	STD screening	7%
3	Prenatal care	7%
4	Cancer screening	7%
5	Family planning services	6%
6	HIV/AIDS treatment	6%
7	Obstetrical care	6%
8	Adult immunization provision	6%
9	Tobacco use prevention	6%
10	STD treatment	6%

Figure 7.3 presents the eleven public health-related activities and services most frequently provided by a local governmental agency other than the LHD. Except for school health activities and mental illness prevention, all of these activities and services are in the environmental health arena.

Figure 7.4 presents the ten activities and services most frequently available *only* through NGOs. The majority of these are clinical services, such as comprehensive primary care (73%), obstetrical care (66%), and oral health care (55%), though some screening and prevention services, specifically cardiovascular disease screening (48%) and mental illness prevention (40%), are also included.

Figure 7.3 | Activities and Services Most Frequently Provided by Other Local Governmental Agencies

Rank	Activity or service	Percentage of jurisdictions
1	Animal control	63%
2	Land use planning	59%
3	Hazmat response	58%
4	Emergency medical services	48%
5	Housing inspections	39%
6	Hazardous waste disposal	33%
7	School health activities	30%
8	Noise pollution activities	29%
9	Surface water protection	28%
10	Pollution prevention	28%
11	Mental illness prevention	28%

Figure 7.4 | Activities and Services Most Frequently Provided Only by Non-Governmental Organizations

Rank	Activity or service	Percentage of jurisdictions
1	Comprehensive primary care	73%
2	Obstetrical care	66%
3	Home health care	59%
4	Oral health care	55%
5	Behavioral/mental health services	52%
6	Substance abuse services	51%
7	Cardiovascular disease screening	48%
8	HIV/AIDS treatment	46%
9	Prenatal care	44%
10	Mental illness prevention	40%

Activities Provided Within LHD Jurisdictions

Previous Profile studies asked respondents only whether their LHD provided (directly or via contract) specific activities and services. The 2005 Profile study collected more detailed information about all of the organizations that provide these activities and services in LHD jurisdictions. Because of the large number of possible combinations of organizations reported by respondents, only those considered by NACCHO to be most relevant for each category of activity or service are presented in the bar charts in this chapter. Also included are tables showing the percentages of LHDs that conduct each activity or service (directly or via contract) overall, and by size of population served.

Immunization Provision

Immunization provision is an almost universal LHD service. Nearly all LHDs provide both adult and childhood immunizations (91% and 90% respectively), ranging across jurisdictional population size categories from 88% to 96% providing adult immunizations and 84% to 96% providing childhood immunizations (Figure 7.5). For both services, the lower percentages of LHDs providing the service were found among those serving the smallest (fewer than 50,000) and largest (500,000 or more) populations, and the higher percentages were for those serving populations of between 50,000 and 499,999.

Figure 7.5 | **LHDs Providing Immunization Services (by Size of Population Served)**

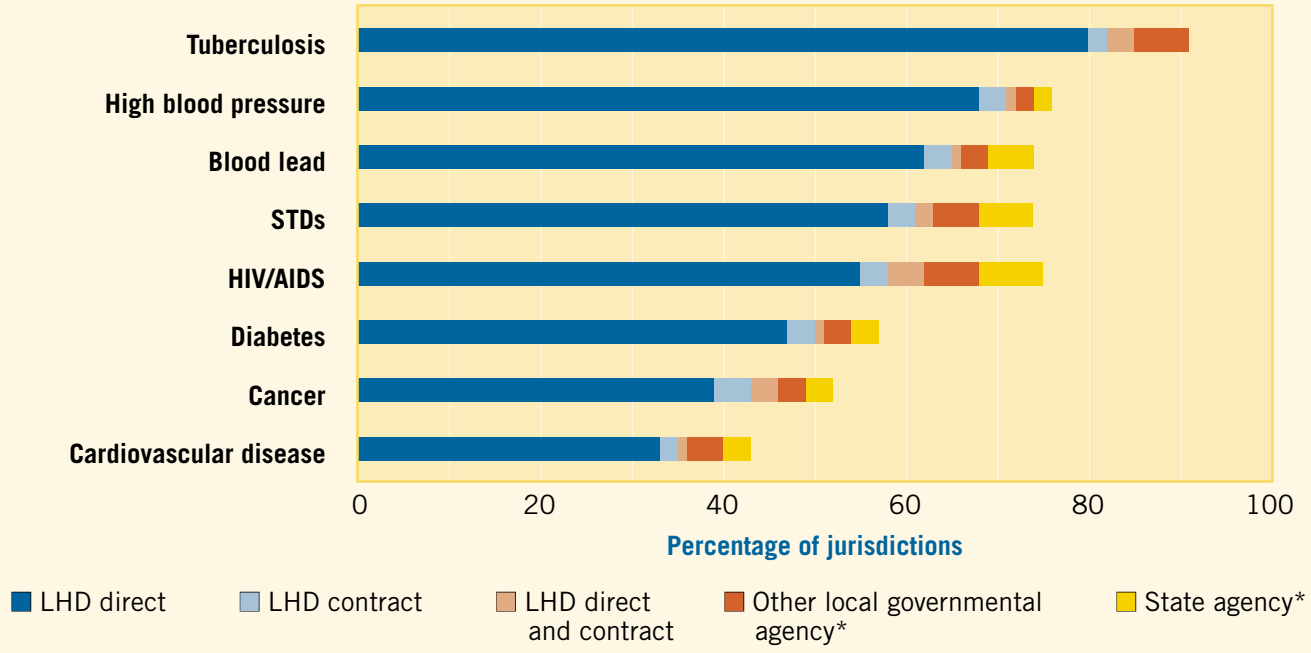
Immunization category	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Adult	91%	88%	90%	95%	96%	91%
Childhood	90%	84%	91%	95%	96%	92%

Screening for Diseases and Conditions

In most jurisdictions, governmental agencies including LHDs, state agencies, and other local governmental agencies, provide screening for diseases and conditions, particularly for communicable diseases. In at least 75% of jurisdictions, screening for tuberculosis, HIV/AIDS, sexually transmitted diseases, blood lead, and high blood pressure are provided by a governmental agency (Figure 7.6). For all of these selected diseases and conditions, the LHD is the most frequently cited governmental agency providing screening services.

Overall, LHDs most frequently provide screening for tuberculosis (85%) and high blood pressure (72%; Figure 7.7). Fewer LHDs provide screening for chronic diseases such as diabetes, cancer, and cardiovascular disease. LHDs serving larger jurisdictions (populations of 100,000 or more) provide screening for HIV/AIDS (87% or more) and sexually transmitted diseases (89% or more) more frequently than those serving smaller jurisdictions (less than 60%). The other screening services show less variation across population size categories, but for all conditions except high blood pressure and diabetes, LHDs serving larger populations (100,000 or more) offer screening services more often than those serving smaller populations (less than 50,000).

Figure 7.6 | Governmental Agencies Providing Screening for Diseases and Conditions



** Provided by other agency only, not LHD.*

Figure 7.7 | LHDs Providing Screening for Diseases and Conditions (by Size of Population Served)

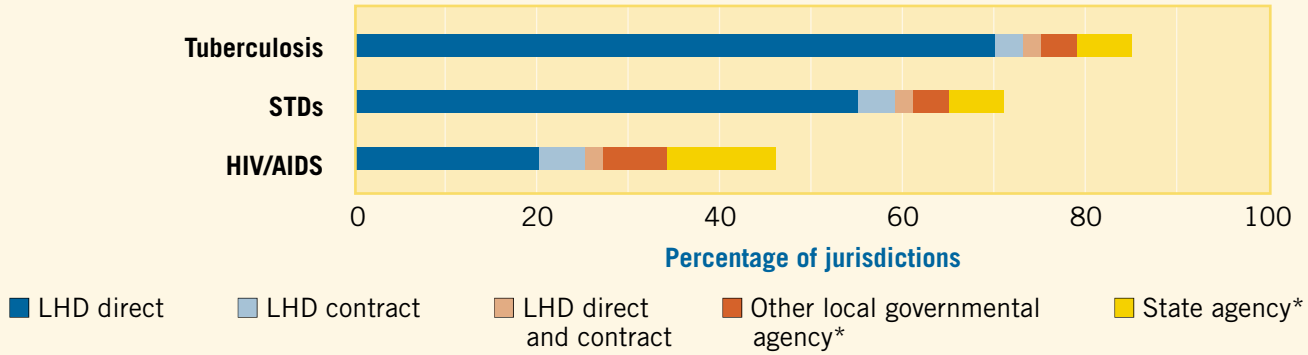
Disease or condition	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Tuberculosis	85%	77%	87%	89%	95%	90%
High blood pressure	72%	74%	76%	75%	62%	69%
Blood lead	66%	57%	69%	69%	76%	76%
STDs	64%	49%	59%	73%	89%	91%
HIV/AIDS	62%	45%	60%	71%	87%	90%
Diabetes	51%	51%	52%	50%	47%	61%
Cancer	46%	37%	47%	53%	55%	65%
Cardiovascular disease	36%	31%	38%	42%	39%	48%

Treatment for Communicable Diseases

Treatment for tuberculosis and sexually transmitted diseases is available from a governmental agency in more than 75% of all jurisdictions (Figure 7.8). Treatment for HIV/AIDS is available from a governmental agency in slightly less than half of all jurisdictions. For all three selected communicable disease areas examined, the LHD is the governmental agency most often providing treatment either directly, via contract, or both.

Most LHDs provide treatment for tuberculosis (75%) and sexually transmitted diseases (61%; Figure 7.9). HIV/AIDS treatment is provided by the majority of LHDs (54%) only in the largest population category (those serving 500,000 or more). For all three communicable disease areas, LHDs serving larger populations are more likely to provide treatment services than those serving smaller populations, though the difference is more pronounced for treatment for HIV/AIDS and sexually transmitted diseases than for tuberculosis.

Figure 7.8 | **Governmental Agencies Providing Treatment for Communicable Diseases**



** Provided by other agency only, not LHD.*

Figure 7.9 | **LHDs Providing Treatment for Communicable Diseases (by Size of Population Served)**

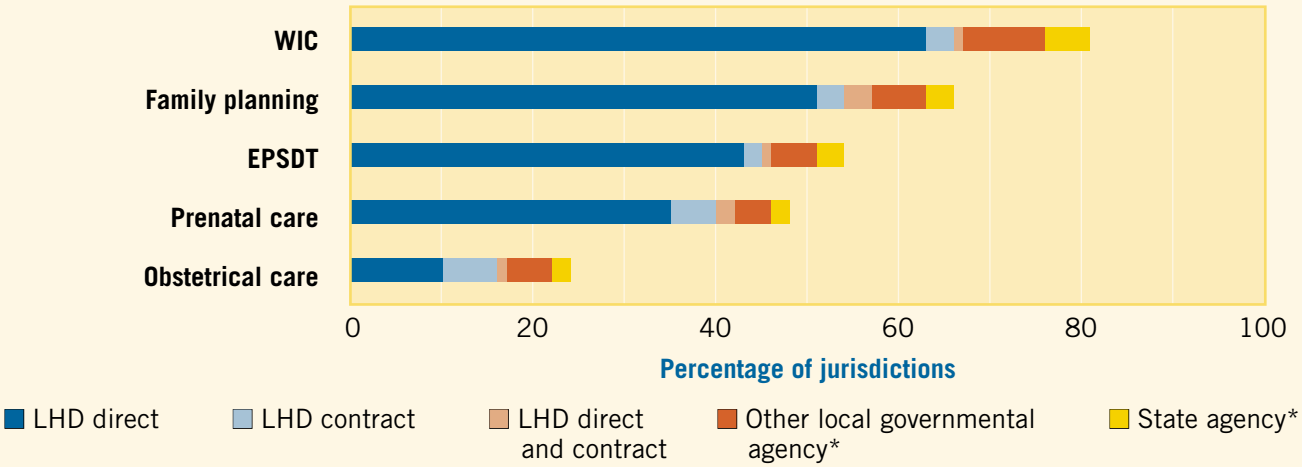
Communicable disease	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Tuberculosis	75%	64%	75%	79%	91%	88%
STDs	61%	47%	54%	71%	86%	88%
HIV/AIDS	26%	17%	22%	27%	42%	54%

Maternal and Child Health (MCH) Services

The Profile questionnaire asked respondents about the provision of several MCH services, including Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); family planning; Early and Periodic Screening, Diagnosis and Treatment (EPSDT); obstetrical care; and prenatal care. WIC and family planning services are available from a governmental agency in over 70% of jurisdictions; EPSDT and prenatal care are available from a governmental agency in over half of jurisdictions (Figure 7.10). Obstetrical care is available from a governmental agency in only 24% of jurisdictions. For all of the MCH services examined, the LHD is the governmental agency most likely to provide the service.

As shown in Figure 7.11, the MCH services most frequently provided by LHDs are WIC (67%) and family planning (58%). Overall, LHDs serving larger populations are more likely to provide each selected MCH service than those serving smaller populations.

Figure 7.10 | **Governmental Agencies Providing Maternal and Child Health Services**



** Provided by other agency only, not LHD.*

Figure 7.11 | **LHDs Providing Maternal and Child Health Services (by Size of Population Served)**

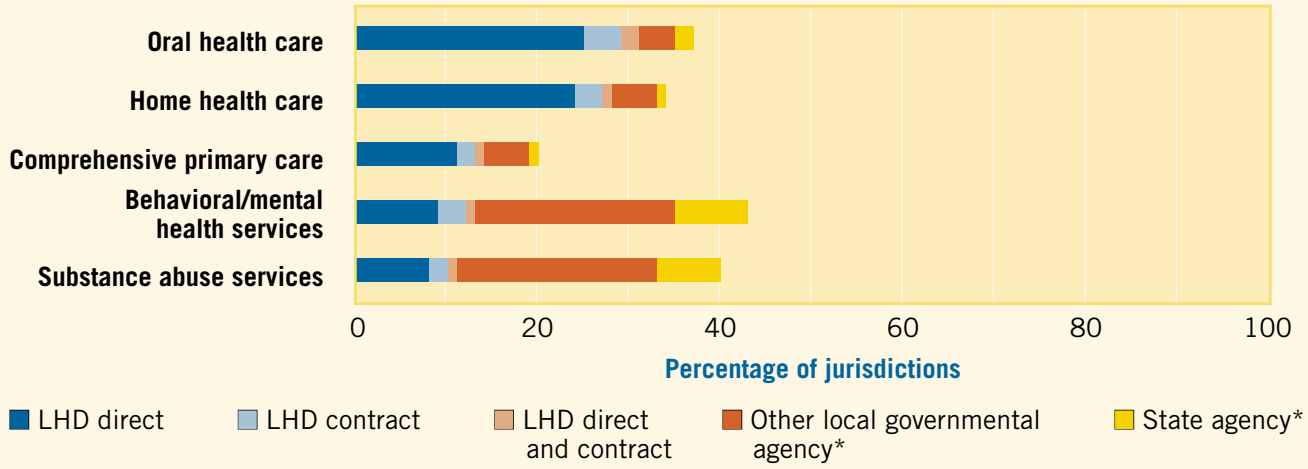
Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
WIC	67%	61%	63%	68%	81%	78%
Family planning	58%	51%	56%	62%	67%	74%
EPSDT	46%	42%	44%	50%	47%	61%
Prenatal care	42%	36%	40%	45%	51%	52%
Obstetrical care	16%	10%	13%	17%	25%	28%

Other Health Services

Other health services (including oral health care, home health care, comprehensive primary care, behavioral/mental health services, and substance abuse services) are available from a governmental agency in less than half of all jurisdictions (Figure 7.12). The LHD is the governmental agency that most often provides oral health care (31% of jurisdictions), home health care (28%), and primary care (11%). Other local governmental agencies more often provide behavioral/mental health services (22%) and substance abuse services (22%).

The other health services provided most frequently by LHDs are oral health care (31%) and home health care (28%). Over half of LHDs serving populations of 100,000 or more provide oral health care (Figure 7.13). Only 14% of all LHDs provide primary health care, including only one-third of LHDs serving populations of 500,000 or more. In general, LHDs serving larger populations more frequently provide these other health services than those serving smaller populations, with the exception of home health care, which is provided most frequently by LHDs serving small populations.

Figure 7.12 | **Governmental Agencies Providing Other Health Services**



* *Provided by other agency only, not LHD.*

Figure 7.13 | **LHDs Providing Other Health Services (by Size of Population Served)**

Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Oral health care	31%	18%	24%	39%	50%	64%
Home health care	28%	32%	26%	29%	23%	20%
Comprehensive primary care	14%	8%	9%	20%	23%	34%
Behavioral/mental health services	13%	8%	12%	16%	17%	31%
Substance abuse services	11%	5%	9%	14%	18%	36%

Population-Based Primary Prevention Services

Figure 7.14 illustrates the many different organizations that provide population-based primary prevention services for selected conditions and behaviors. Governmental agencies most often provide primary prevention services in the areas of tobacco use (75% of jurisdictions), obesity (61%), and unintended pregnancy (54%). Governmental agencies less often provide primary prevention services in the areas of violence (33% of jurisdictions) and mental illness (24%). Primary prevention services addressing injury, violence, substance abuse, and mental illness are most frequently provided by NGOs.

As shown in Figure 7.15, tobacco use prevention is the primary prevention service most frequently provided by LHDs (69%), followed by obesity prevention (56%), and unintended pregnancy prevention (51%). Few LHDs provide primary prevention services for substance abuse (26%), violence (25%), or mental illness (14%). LHDs serving larger populations are consistently more likely to provide the primary prevention services examined than those serving smaller populations. In fact, there are at least 20 percentage points between LHDs serving less than 25,000 and those serving 500,000 or more for many of these services.

Figure 7.14 | **Organizations Providing Population-Based Primary Prevention Services**

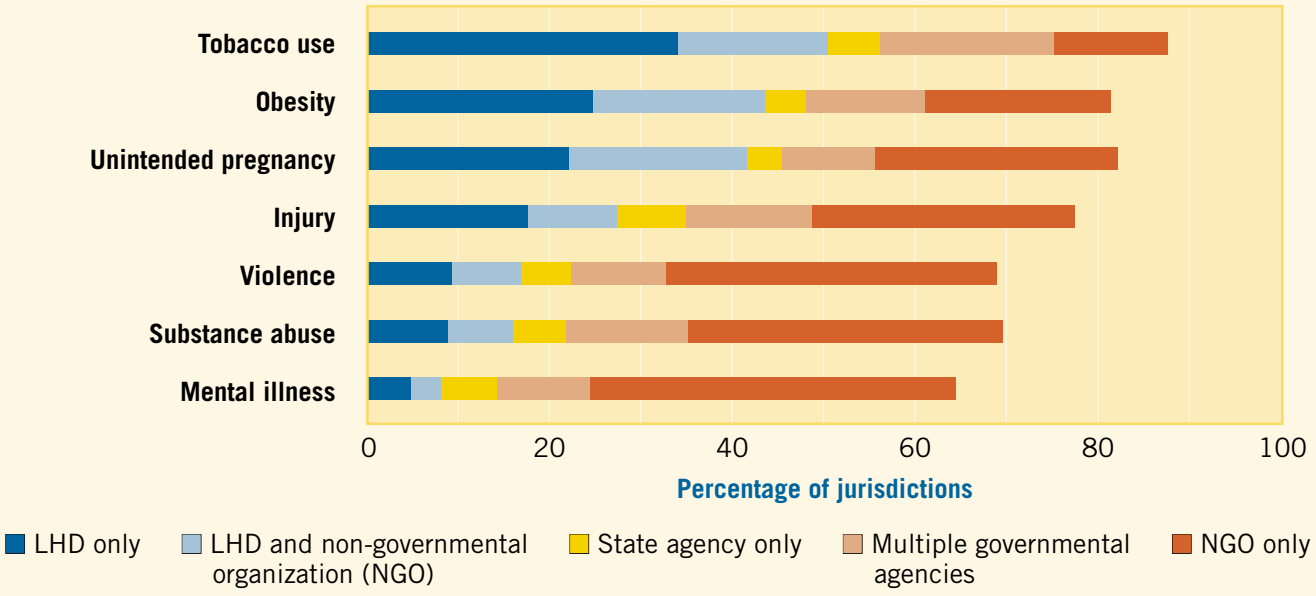


Figure 7.15 | **LHDs Providing Population-Based Primary Prevention Services (by Size of Population Served)**

Condition or behavior	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Tobacco use	69%	60%	70%	75%	76%	87%
Obesity	56%	46%	57%	60%	66%	79%
Unintended pregnancy	51%	44%	48%	56%	64%	62%
Injury	40%	33%	34%	49%	50%	61%
Substance abuse	26%	20%	26%	29%	30%	44%
Violence	25%	20%	20%	31%	31%	48%
Mental illness	14%	11%	13%	17%	15%	28%

Surveillance and Epidemiology

Governmental agencies (including LHDs, other local governmental agencies, and state agencies) conduct surveillance and epidemiology activities for environmental health and communicable/infectious disease in over 80% of jurisdictions, and for chronic disease and behavioral risk factors in over 50% of jurisdictions (Figure 7.16). LHDs are most likely to be involved in surveillance and epidemiology for the environmental health and communicable/infectious disease areas. Surveillance and epidemiology for chronic disease, behavioral risk factors, and injury are most often done by state agencies or NGOs.

Syndromic surveillance is the use of health-related data that precedes diagnosis and signals sufficient probability of a case or an outbreak to warrant further public health response. While syndromic surveillance has traditionally been used to identify potential cases of disease, its utility for identifying bioterrorism-related outbreaks is increasingly being explored by public health professionals.[2] Syndromic surveillance is conducted in over 60% of jurisdictions by LHDs, state agencies, and NGOs.

As shown in Figure 7.17, nearly all LHDs conduct surveillance and epidemiology for communicable/infectious disease (89%), and most conduct these activities for environmental health (75%). Less than half of all LHDs conduct surveillance and epidemiology for the remaining selected areas, though these activities are more common in LHDs serving larger populations than in those serving smaller populations. The majority of the largest LHDs (serving populations of 500,000 or more) provide surveillance and epidemiology for all of the selected areas excluding injury (49%). Approximately one-third of all LHDs conduct syndromic surveillance, with nearly two-thirds of the largest LHDs (serving populations of 500,000 or more) conducting this activity.

Figure 7.16 | **Organizations Providing Surveillance and Epidemiology**

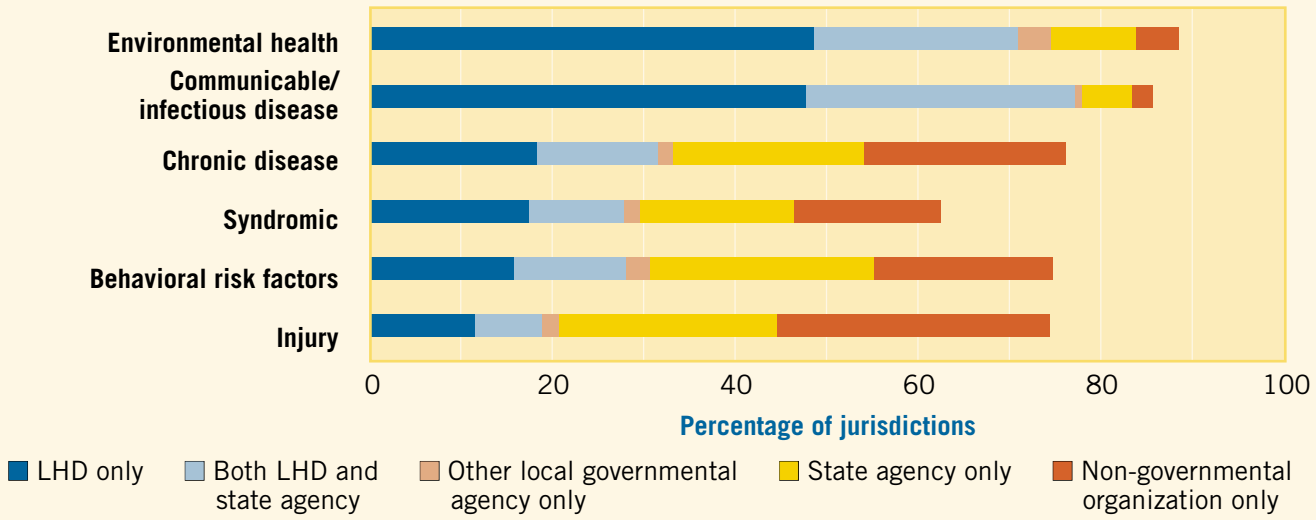


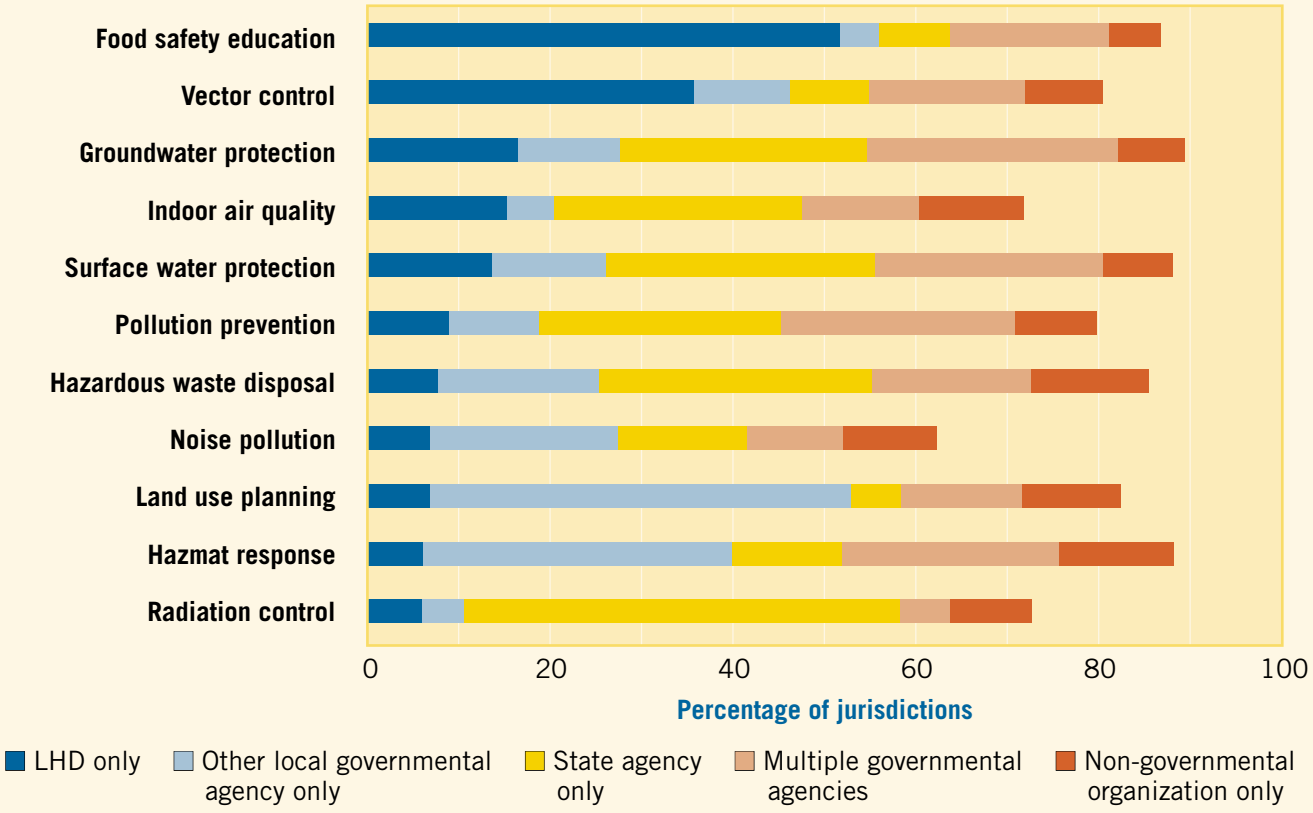
Figure 7.17 | **LHDs Providing Surveillance and Epidemiology (by Size of Population Served)**

Category	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Communicable/infectious disease	89%	81%	91%	95%	96%	96%
Environmental health	75%	64%	79%	86%	87%	83%
Chronic disease	41%	34%	38%	45%	53%	65%
Behavioral risk factors	36%	28%	35%	40%	45%	57%
Syndromic	33%	23%	30%	33%	51%	65%
Injury	24%	17%	20%	27%	33%	49%

Environmental Health Activities

LHD involvement in environmental health activities varies widely across the U.S. In some jurisdictions, LHDs are involved in many environmental health activities. In other jurisdictions, many environmental health activities are conducted by other local agencies or by state agencies. Figure 7.18 summarizes information about the organizations that conduct selected environmental health activities in LHD jurisdictions. Governmental agencies most frequently conduct all of these environmental health activities. LHDs are the governmental agencies most likely to provide food safety education and vector control for their jurisdictions. Other local governmental agencies most often conduct activities related to land use planning, hazardous materials (hazmat) response, and noise pollution. State agencies most often conduct activities related to radiation control, hazardous waste disposal, and indoor air quality. Pollution prevention, groundwater protection, and surface water protection are provided by a variety of organizations, often by multiple governmental agencies.

Figure 7.18 | **Organizations Engaged in Environmental Health Activities**



As shown in Figure 7.19, food safety education is the activity most frequently conducted by LHDs (75%), followed by vector control (54%). Few LHDs are involved in radiation control, noise pollution, land use planning, hazardous waste disposal, or hazmat response (under 20% for each service). In general, LHDs serving larger populations are more likely than those serving smaller populations to conduct a given activity.

Figure 7.19 | **LHDs Engaged in Environmental Health Activities (by Size of Population Served)**

Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Food safety education	75%	64%	80%	84%	86%	76%
Vector control	54%	41%	58%	64%	69%	69%
Groundwater protection	40%	31%	40%	44%	54%	43%
Surface water protection	33%	27%	33%	38%	40%	36%
Indoor air quality	29%	21%	28%	32%	40%	52%
Pollution prevention	28%	21%	26%	35%	38%	43%
Hazmat response	19%	15%	19%	21%	25%	28%
Hazardous waste disposal	18%	16%	16%	18%	22%	26%
Land use planning	16%	13%	17%	18%	18%	21%
Noise pollution	14%	12%	15%	15%	14%	20%
Radiation control	10%	7%	9%	14%	12%	24%

Regulation, Inspection, and Licensing Activities

The Profile questionnaire collected information on the organizations engaged in 19 public health-related regulation, inspection, and licensing activities. This information is summarized in Figure 7.20. Many types of organizations (mostly governmental agencies) are involved in public health regulation, inspection, and licensing activities. NGOs are responsible for these activities in a small percentage of jurisdictions.

LHDs are the most frequent regulators, inspectors, and/or licensors of food service establishments; public swimming pools; septic tank installation; schools and daycare centers; private drinking water; hotels and motels; lead inspection; campgrounds and RVs; and smoke-free ordinances. State agencies are the most frequent regulators, inspectors, and/or licensors of health-related facilities; public drinking water; tobacco retailers; cosmetology businesses; and food and milk processing. Multiple governmental agencies are involved in regulating, inspecting, and licensing public health activities in some jurisdictions.

Figure 7.20 | **Organizations Engaged in Regulation, Inspection, and/or Licensing Activities**

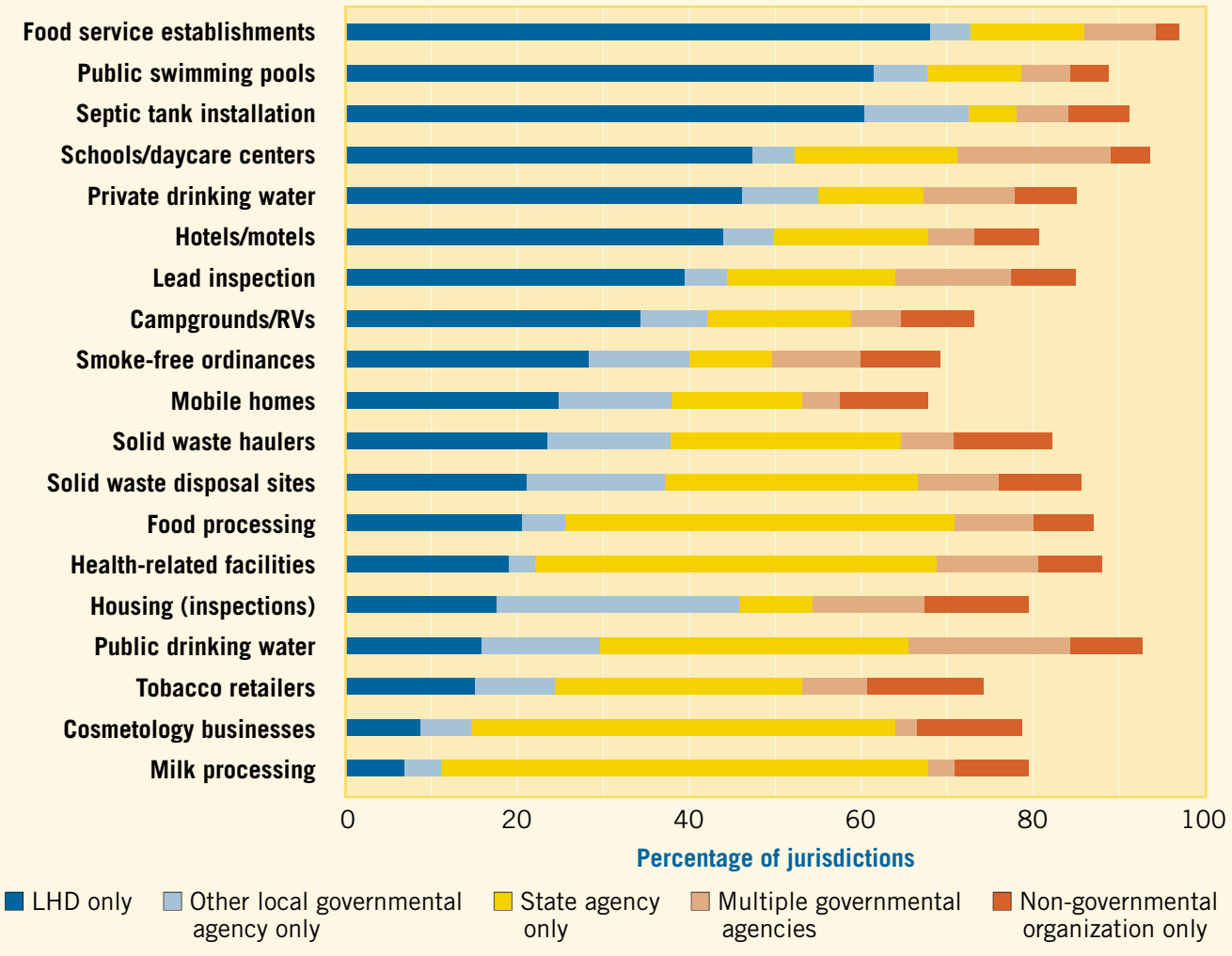


Figure 7.21 summarizes LHD involvement in regulation, inspection, and licensing activities by size of population served. Unlike most other public health activities and services, LHD involvement in regulation, inspection, and licensing activities is *not* strongly related to the size of population served.

Figure 7.21 | LHDs Engaged in Regulation, Inspection, and/or Licensing Activities (by Size of Population Served)

Area of regulation, inspection, and/or licensing	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Food service establishments	76%	66%	79%	86%	88%	75%
Public swimming pools	67%	54%	70%	76%	82%	77%
Septic tank installation	66%	61%	62%	69%	80%	62%
Schools/daycare centers	65%	56%	66%	72%	75%	68%
Private drinking water	57%	51%	59%	60%	68%	51%
Lead inspection	53%	44%	52%	58%	69%	67%
Hotels/motels	49%	44%	52%	58%	53%	43%
Campgrounds/RVs	39%	28%	42%	45%	53%	49%
Smoke-free ordinances	38%	33%	38%	41%	41%	50%
Public drinking water	30%	24%	29%	35%	41%	37%
Health-related facilities	30%	26%	32%	35%	34%	37%
Food processing	30%	25%	30%	32%	36%	34%
Mobile homes	29%	19%	31%	38%	39%	31%
Housing (inspections)	28%	27%	30%	31%	27%	34%
Solid waste disposal sites	28%	24%	26%	27%	39%	35%
Solid waste haulers	27%	25%	23%	30%	32%	26%
Tobacco retailers	21%	18%	23%	1%	22%	31%
Cosmetology businesses	11%	10%	10%	14%	11%	11%
Milk processing	9%	8%	8%	10%	11%	13%

Other Public Health Activities

LHDs do not frequently conduct the other public health activities examined in the Profile study (Figure 7.22). Other governmental agencies, local and state, as well as NGOs, are more involved in these activities than LHDs.

Overall, LHDs serving larger populations are more likely to conduct the other selected public health activities than those serving smaller populations (Figure 7.23). Over 40% of LHDs are active in outreach and enrollment for medical insurance and in school health activities. LHDs serving larger populations are much more likely to be involved in outreach and enrollment for medical insurance (61%) than those serving smaller populations (42%). There is less variation across population size categories for school health activities. Veterinary public health activities are provided over three times more often by LHDs serving the largest populations than by those serving the smallest populations. Few LHDs are involved in occupational safety and health (12%) or in emergency medical services (7%).

Figure 7.22 | Organizations Engaged in Other Public Health Activities

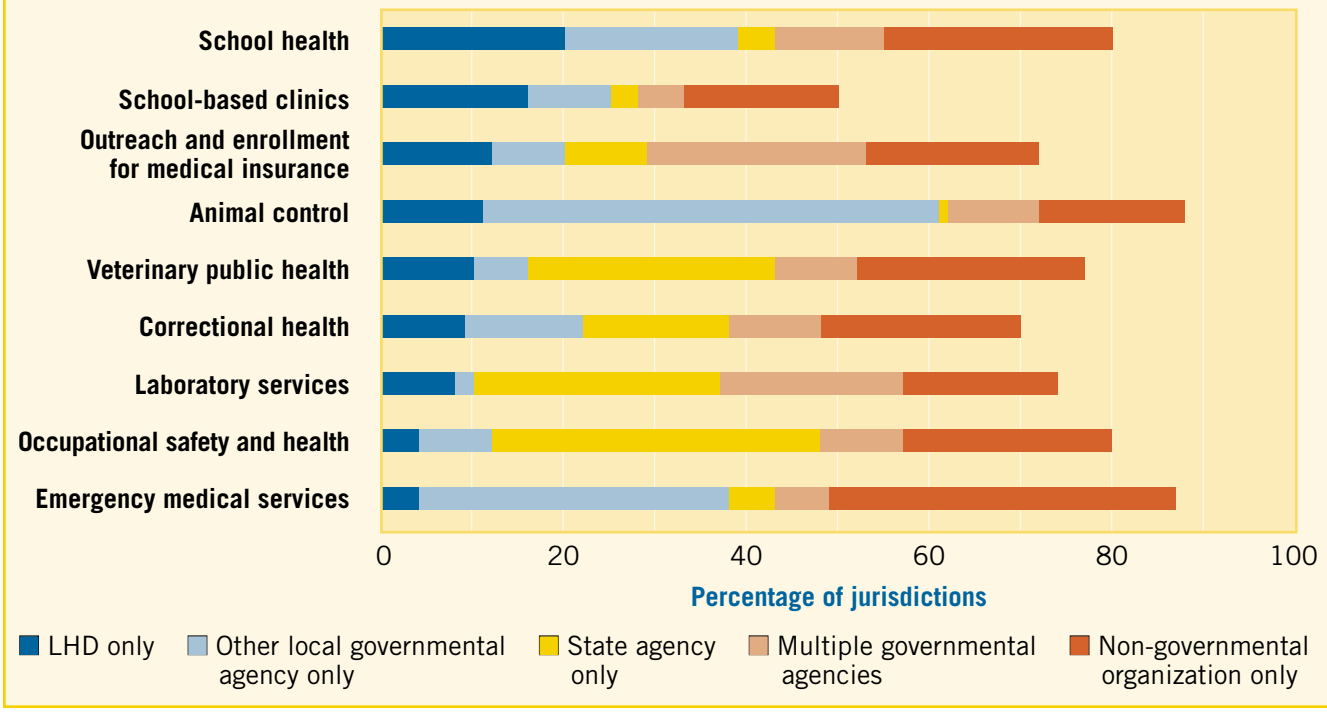


Figure 7.23 | LHDs Engaged in Other Public Health Activities (by Size of Population Served)

Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Outreach and enrollment for medical insurance	42%	35%	38%	51%	52%	61%
School health	41%	37%	42%	42%	46%	47%
Laboratory services	31%	21%	24%	33%	53%	65%
School-based clinics	25%	25%	24%	21%	23%	38%
Animal control	21%	16%	22%	29%	24%	31%
Veterinary public health	21%	13%	23%	26%	25%	43%
Correctional health	20%	16%	22%	21%	21%	35%
Occupational safety and health	12%	10%	12%	15%	14%	26%
Emergency medical services	7%	4%	5%	6%	11%	26%

Comparisons with Prior Profile Studies

There is interest in examining how the types of activities and services provided by LHDs in 2005 compare with those in the past decade, as assessed by earlier Profile studies. Making these comparisons is complicated by several factors. First, the wording of the questions about LHD activities and services is different in each of the four Profile questionnaires.[3] Specifically, the 2005 questionnaire asked about *all* of the organizations within the LHD jurisdiction that performed these activities and services, while prior Profile questionnaires asked only whether the LHD performed them. Second, the set of LHDs included in the study population (the "denominator") was different for each study.[4] Third, the set of LHDs that completed the questionnaire (the "numerator") was different for each study. A longitudinal analysis of the data would eliminate this uncertainty but is outside the scope of the 2005 study. Finally, the list of public health-related activities and services included in each Profile questionnaire was different; in some cases the same activities and services were included with slightly different wording.

Notwithstanding these limitations, Figure 7.24 presents a comparison of the percentages of LHDs that reported activity in selected areas in the 1992-3 and 2005 Profile studies. The 1992-3 study was selected for comparison because the question wording used was judged to be most similar to that used for the 2005 study. The wording of the 1996-7 study services-related questions ("directly provided, *contributed resources to* or contracted for services"—emphasis added) was considered too different from the 2005 wording for the data to be compared. The specific activities and services included in this table are those that were included in both studies and for which the wording was identical or very similar.

This comparison suggests that fewer LHDs are involved in provision of clinical services (e.g., comprehensive primary care, obstetrical care, home health care, prenatal care) and in certain environmental health activities (e.g., public and private drinking water regulation, groundwater and surface water protection) in 2005 compared with 1992-3. This is consistent with anecdotal evidence that suggests that there is a trend among health departments to transition clinical services to other providers and to focus more on population-based activities and services. More LHDs are involved in surveillance (e.g., of behavioral risk factors, injury) in 2005. There is little change in LHD involvement in those screening or regulatory activities that can be compared between the two studies. The 1992-3 study did not collect information about primary prevention or emergency preparedness activities, so comparisons cannot be made.

Figure 7.24 | **LHD Activity in Selected Program Areas: 1992-3 and 2005 Profile Study Findings and Differences**

Service area	1992-3	2005	1992-3 to 2005 difference (absolute)	1992-3 to 2005 difference (relative)
Behavioral risk factors surveillance	20%	36%	16%	80%
Injury surveillance	19%	24%	5%	26%
Communicable disease surveillance	82%	89%	7%	9%
School-based clinics	24%	25%	1%	4%
Injury control	40%	40%	0%	0%
Tuberculosis screening	85%	85%	0%	0%
Chronic disease surveillance	41%	41%	0%	0%
Public swimming pool regulation	68%	67%	-1%	-1%
Vector control	56%	54%	-2%	-4%
Food service establishment regulation	79%	76%	-3%	-4%
STD treatment	65%	61%	-4%	-6%
Health-related facilities regulation	32%	30%	-2%	-6%
STD screening	70%	64%	-6%	-9%
HIV/AIDS screening	68%	62%	-6%	-9%
WIC	77%	67%	-10%	-13%
Family planning services	67%	58%	-9%	-13%
High blood pressure screening	84%	72%	-12%	-14%
Diabetes screening	60%	51%	-9%	-15%
HIV/AIDS treatment	32%	26%	-6%	-19%
Indoor air quality activities	36%	29%	-7%	-19%
Private drinking water protection	73%	57%	-16%	-22%
Oral health care	44%	31%	-13%	-30%
Groundwater protection	57%	40%	-17%	-30%
School health activities	59%	41%	-18%	-31%
Prenatal care	63%	42%	-21%	-33%
EPSDT	70%	46%	-24%	-34%
Surface water protection	52%	33%	-19%	-37%
Public drinking water protection	52%	30%	-22%	-42%
Laboratory services	60%	32%	-28%	-47%
Home health care	53%	28%	-25%	-47%
Occupational safety and health activities	23%	12%	-11%	-48%
Obstetrical care	32%	16%	-16%	-50%
Radiation control	20%	10%	-10%	-50%
Animal control	44%	21%	-23%	-52%
Comprehensive primary care	30%	14%	-16%	-53%

1992-3 wording: Please indicate whether your local health department provides each of the services listed below. It is recognized that this is a fairly exhaustive list, please mark "no activity" when appropriate. (Responses: directly provides service; contracts to provide service; no activity)

2005 wording: For each activity in the charts below and on the following pages, check the boxes that describe who has conducted that activity in your jurisdiction during the past year. Indicate whether your LHD performs the activity, contracts for it, or both.

Reported percentages reflect services and activities that LHDs perform directly, contract for, or both.

Endnotes

1 National Association of County and City Health Officials. (2005). *Operational Definition of a Functional Local Health Department*. Washington, DC: NACCHO. Available at www.naccho.org/topics/infrastructure/operationaldefinition.cfm.

2 Visit www.cdc.gov/epo/dphsi/syndromic.htm.

3 The survey instruments for prior Profile studies are available at www.naccho.org/topics/infrastructure/PH_infrastructureresearch/previousLPHAprofiles.cfm. The 2005 Profile instruments are available at www.naccho.org/topics/infrastructure/2005Profile.cfm.

4 See page 4 of this report for details on differences among the Profile study populations.

CHAPTER

8

Planning and Performance Improvement

Fast Facts

51% of LHDs have completed a community health assessment in the last three years.

54% of LHDs have participated in community health improvement planning in the last three years.

71% of LHDs have undertaken performance improvement activities in the last three years.

16% of LHDs are involved in some type of accreditation program.

Community health assessment and community health improvement planning are essential LHD services. In a community health assessment process, an LHD works with organizations and individuals within its community to collect and analyze a wide variety of information about the community's health and well-being. A community health improvement plan serves as a blueprint for improving a community's health and includes specific action steps toward meeting established goals.

Performance improvement is a systematic process of designing, developing, and implementing methods to address performance gaps, in order to achieve better results.[1] Accreditation is the periodic issuance of credentials or endorsements to organizations that meet a specified set of performance standards.[2] Performance improvement and accreditation activities are ways LHDs can strengthen the activities and services they provide and, ultimately, improve the health of their communities.

All of these processes help LHDs more effectively meet the unique needs of their communities.

Community Health Assessment and Health Improvement Planning

Figure 8.1 shows the percentages of LHDs that have participated in completing community health assessment (CHA) and community health improvement planning (CHIP) in the last three years. Community health assessment was defined in the Profile questionnaire as "the process whereby a local health agency and its community engage in assessing the health needs of their community and investigate adverse health effects and health hazards to create a 'snap-shot' of a community's health." By definition, CHA is done in partnership with community organizations. A community health improvement plan was defined as "a series of timely and meaningful action steps that define and direct the distribution of health services and resources to improve your community's health, or definite strategic action steps to improve health status in the community."

Overall, 78% of LHDs have completed a CHA in the last three years and/or intend to complete one in the next three years, and 54% of LHDs have completed a CHIP in the last three years. Proportions of LHDs active in CHA and CHIP are similar to those found in NACCHO's 1999 Local Public Health Agency Infrastructure Study,[3] which reported that 75% of LHDs had completed or planned to complete a CHA within the next three years, and 53% of LHDs had participated in CHIP. The findings presented in Figure 8.2 illustrate that LHDs serving larger populations are more likely to participate in CHA and CHIP than those serving smaller populations.

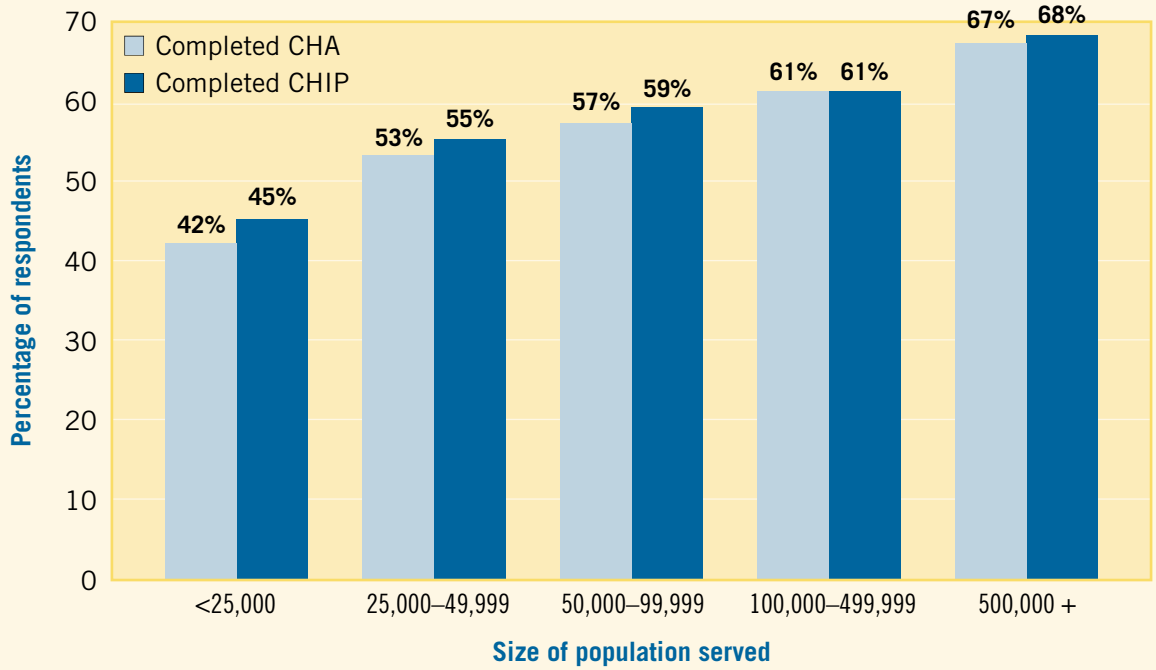
Figure 8.1 | **LHD Participation in Community Health Assessment (CHA) and Community Health Improvement Planning (CHIP)**

	Percentage of respondents
LHD completed CHA in last 3 years	51%
LHD plans to complete CHA in next 3 years	65%
LHD completed CHIP in last 3 years	54%
CHIP based on community health assessment*	86%
CHIP linked to state health improvement plan*	68%

n=2,280

**Includes only those LHDs that completed CHIP (n=1,202)*

Figure 8.2 | **LHD Participation in Community Health Assessment (CHA) and Community Health Improvement Planning (CHIP) (by Size of Population Served)**

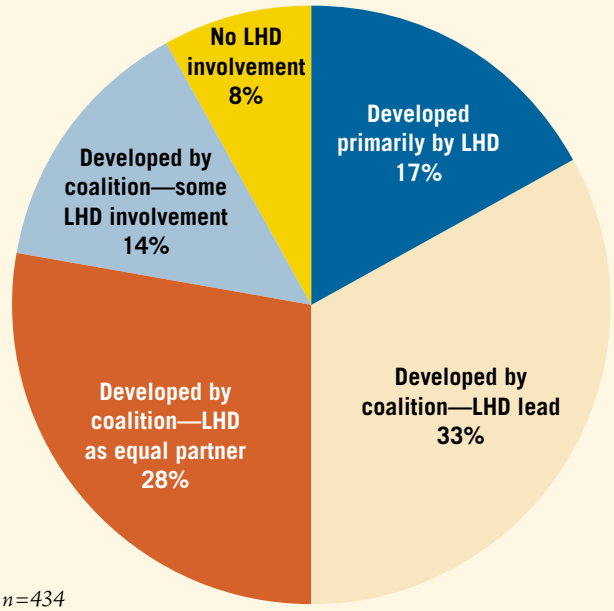


Includes LHDs that have completed CHA or CHIP in last 3 years.

CHA is conducted regularly by many LHDs. Seventy-four percent of the LHDs that have completed a CHA in the last three years also plan to complete another CHA within the next three years. Analysis also confirms that CHA and CHIP activities are closely linked. Seventy-nine percent of LHDs that have completed a CHA also have participated in CHIP, whereas only 26% of LHDs that have not completed a CHA have participated in CHIP.

CHIP is usually done in partnership with other organizations (Figure 8.3). Three-quarters of LHDs reported that their CHIP was conducted by a coalition, with the LHD most frequently serving as the leader of the coalition. Local boards of health were involved in CHIP in 59% of the LHD jurisdictions with a local board of health.

Figure 8.3 | **LHD Role in Developing Community Health Improvement Plan**



n=434

Performance Improvement

A Profile questionnaire module included questions about LHD involvement in performance improvement activities. Seventy-one percent of LHDs reported involvement in performance improvement activities in the last three years (Figure 8.4). LHDs serving large populations were more likely to report involvement in performance improvement activities than those serving small populations. Figure 8.5 illustrates the proportion of LHDs involved in selected area of performance improvement. LHDs most frequently reported performance improvement activities addressing customer focus and satisfaction.

LHD participation in CHIP and performance improvement activities appear to be associated. Eighty percent of LHDs involved in CHIP also were involved in performance improvement activities, whereas only 61% of LHDs that were not involved in CHIP were involved in such activities.

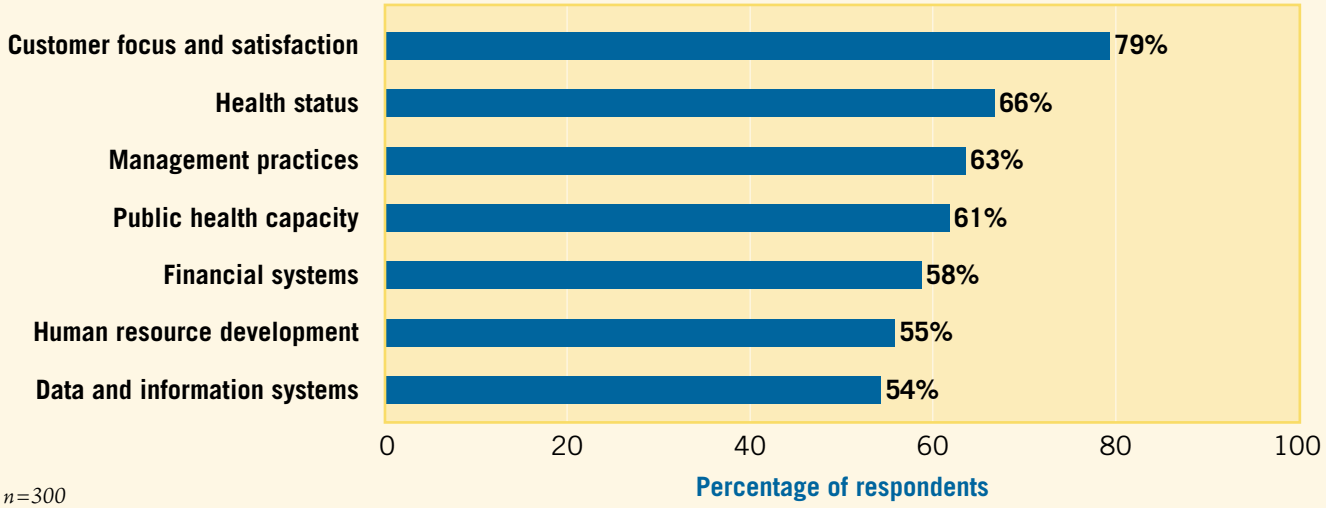
Figure 8.4 | **LHD Participation in Performance Improvement Activity (by Size of Population Served)**

Size of population served	Percentage of respondents
All LHDs	*71%*
<25,000	63%
25,000–49,999	67%
50,000–99,999	73%
100,000–499,999	73%
500,000 +	89%

n=423

Includes LHDs involved in some performance improvement activity in last 3 years.

Figure 8.5 | **LHD Participation in Performance Improvement Activity in Selected Areas**



n=300

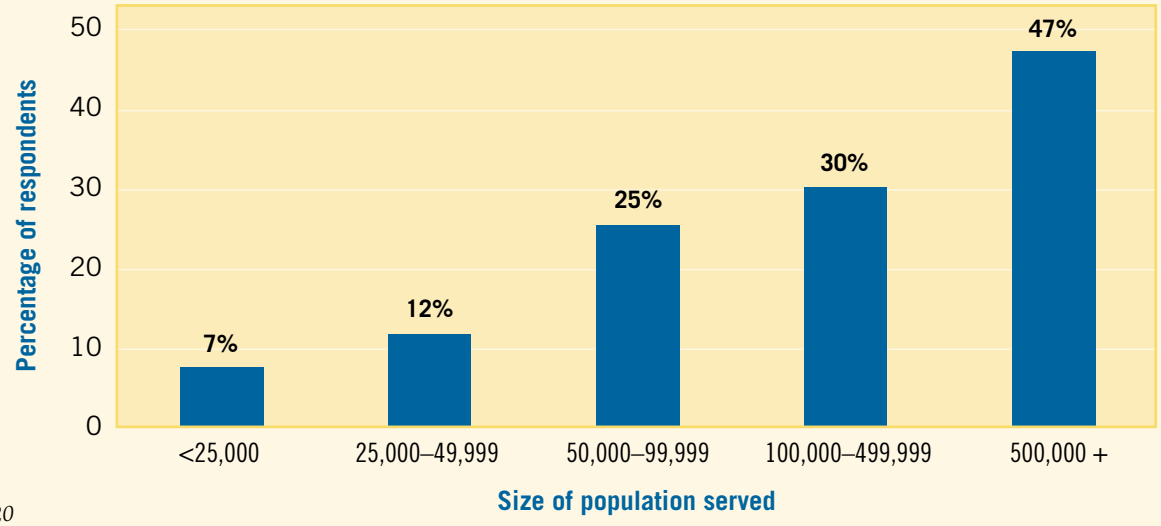
Includes LHDs involved in some performance improvement activity in last 3 years.

Accreditation Programs

LHD involvement in accreditation programs is much less common than LHD involvement in performance improvement activities. Sixteen percent of respondents to a Profile questionnaire module reported that they are involved in some type of accreditation program. Figure 8.6 illustrates that involvement in an accreditation program is strongly dependent on size of population served, with 47% of LHDs serving 500,000 or more involved in accreditation programs, versus 7% of LHDs serving less than 25,000.

Data on LHD participation in specific accreditation programs are provided in Figure 8.7. The programs by which LHDs are most often either accredited or seeking accreditation are state-established accreditation programs (9%) and laboratory accreditation programs (9%). Three states currently have programs specifically to accredit LHDs. Michigan and North Carolina have mandatory programs, and Missouri has a voluntary program. LHDs in those states account for 56% of the respondents involved in state-established accreditation programs (26 of 46). Further inquiry would be needed to determine the nature of the other state-established accreditation programs in which LHDs reported involvement. They may be state-established programs to accredit a specific LHD program (rather than the LHD itself), or respondents may have interpreted 'accreditation' as including state performance improvement programs that are not technically accreditation programs.

Figure 8.6 | **LHD Participation in Accreditation Programs (by Size of Population Served)**



n=420

Figure 8.7 | **LHD Participation in Selected Accreditation Programs**

	Percentage of respondents
State-established accreditation program	9%
Laboratory accreditation program	9%
Joint Commission on Accreditation for Healthcare Organizations	2%

n=395

Includes both LHDs that are accredited and those seeking accreditation.

Two percent of LHDs are accredited or seeking accreditation through the Joint Commission on Accreditation for Healthcare Organizations (JCAHO). Less than 0.5% of LHDs are involved in accreditation programs with the Community Health Accreditation Program, the Commission on Accreditation of Rehabilitation Facilities, the Emergency Management Accreditation Program, or the Council on Accreditation.

LHD participation in accreditation programs is associated with participation in performance improvement efforts. Eighty-eight percent of LHDs that are involved in some type of accreditation program are also pursuing performance improvement efforts, compared with 66% of LHDs that are not involved in an accreditation program.

Endnotes

1 Turning Point. (undated). *From Silos to Systems: Using Performance Management to Improve the Public's Health*. Washington, DC: Public Health Foundation.

2 Theilen, L. (2004). *Exploring Public Health Experience with Standards and Accreditation*. Princeton, NJ: The Robert Wood Johnson Foundation.

3 National Association of County and City Health Officials. (2001). *Local Public Health Agency Infrastructure: A Chartbook*. Washington, DC: NACCHO. Available at http://archive.naccho.org/documents/chartbook.html.

CHAPTER

9

Partnerships and Policy-Making

Fast Facts

88% of LHDs have increased collaboration with other community organizations over the last three years.

Over 90% of LHDs have partnered with schools, emergency responders, the media, physicians, and/or community organizations.

80% of LHDs have communicated with government officials regarding proposed public health laws, regulations, and ordinances.

62% of LHDs support community efforts to address the root causes of health inequities.

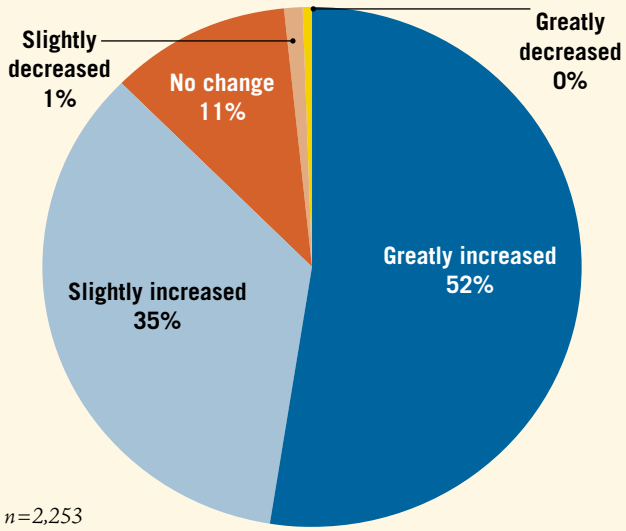
A host of agencies and organizations are involved in creating conditions in which people can be healthy. A key role of the LHD is to provide leadership within the local public health system through partnerships with these many agencies and organizations. Through work to address health inequities, as well as efforts to improve emergency preparedness, LHDs have expanded their community partnerships far beyond traditional arenas. Elected officials and other policy-makers are important partners in protecting the public's health, and most LHDs are actively involved in policy-making and advocacy activities.

LHD Collaboration with Community Organizations

Nearly all LHDs reported increased collaboration with other community agencies and organizations in the last three years (Figure 9.1). Fifty-two percent of LHDs reported greatly increased, and 35% reported slightly increased, collaboration with other agencies and organizations. These increases are similar across jurisdiction population sizes. This finding is consistent with anecdotal information that suggests that emergency preparedness efforts, greatly enhanced in recent years, frequently result in strengthened relationships with community partners.

A Profile questionnaire module included a set of questions that asked respondents to characterize their collaborations with a wide range of potential community partners in the last year.[1] Figure 9.2 displays the percentages of respondents that reported some kind of collaboration with each selected type of organization, and the percentages that

Figure 9.1 | **Change in LHD Collaboration with Community Organizations in Last Three Years**



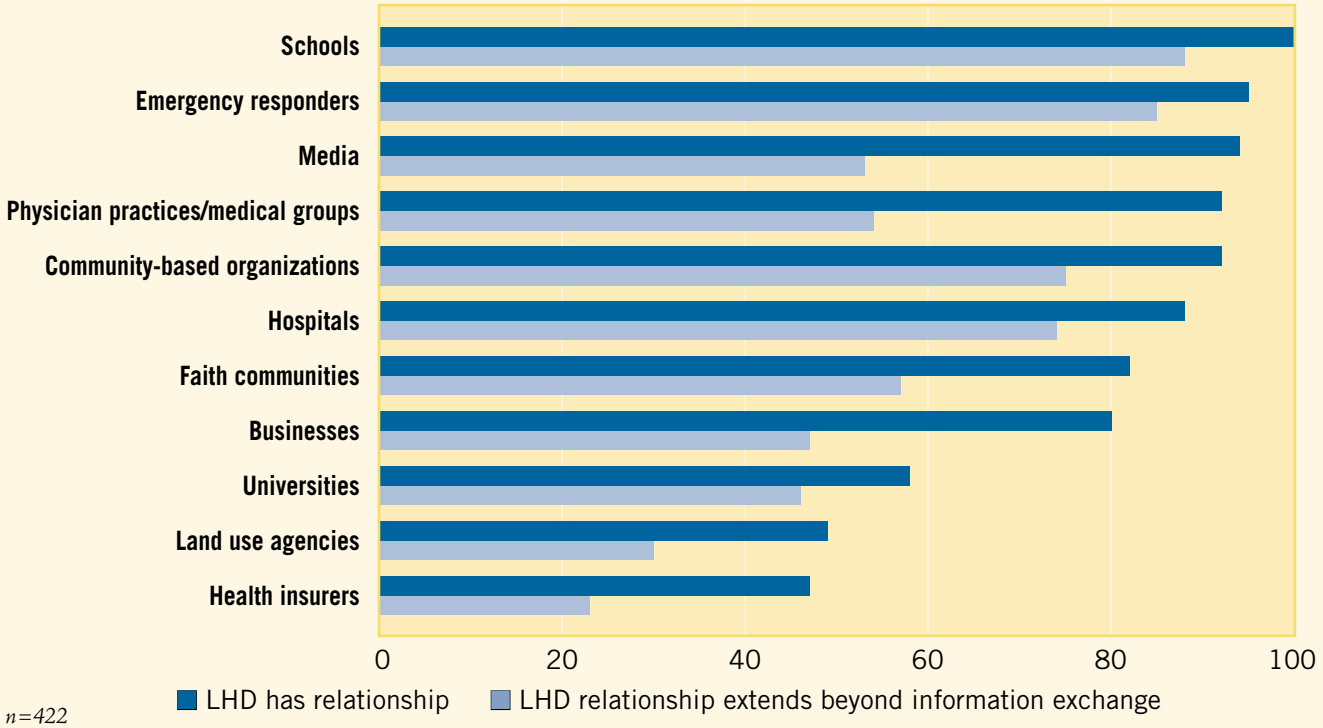
n=2,253

Figure 9.2 | **LHD Collaboration with Selected Types of Organizations**

Type of Organization	LHD has relationship	LHD relationship extends beyond information exchange
Schools	100%	88%
Emergency responders	95%	85%
Media	94%	53%
Physician practices /medical groups	92%	54%
Community-based organizations	92%	75%
Other voluntary or non-profit organizations	89%	69%
Hospitals	88%	74%
Other health care providers	85%	53%
Faith communities	82%	57%
Cooperative extensions	81%	62%
Businesses	80%	47%
Environmental and conservation organizations	70%	39%
Parks and recreation organizations	68%	47%
Libraries	65%	31%
Economic and community development agencies	64%	42%
Housing agencies	63%	33%
Universities	58%	46%
Community health centers	57%	43%
Utility companies/agencies	54%	24%
Transportation organizations	50%	28%
Land use agencies	49%	30%
Health insurers	47%	23%
Tribal governmental agencies	18%	15%

n=422

Figure 9.3 | **LHD Collaboration with Selected Types of Organizations**



n=422

reported a relationship beyond simply exchanging information (working together on activities or projects, or providing financial resources). Figure 9.3 presents this same information graphically for a subset of the selected types of organizations.

With each of the following types of organizations, over 90% of respondents reported having a collaborative relationship: schools, emergency responders, the media, physician practices/medical groups, and community-based organizations. Over 70% of LHDs reported a relationship beyond information exchange with schools, emergency responders, community-based organizations, and hospitals. LHDs are less likely to report relationships with utility companies/agencies (54%), transportation organizations (50%), land use agencies (49%), health insurers (47%), and tribal governmental agencies (18%).

Figure 9.4 displays the percentages of LHDs that reported providing financial support to other types of community organizations. LHDs most frequently provide financial support to schools (14%) and community-based organizations (11%).

Figure 9.4 | **LHDs Providing Financial Support to Other Community Organizations**

Type of Organization	Percentage of respondents
Schools	14%
Community-based organizations	11%
Hospitals	8%
Emergency responders	8%
Community health centers	8%
Other voluntary or non-profit organizations	8%
Faith communities	5%
Cooperative extensions	5%
Universities	4%
Other health care providers	3%
Physician practices/medical groups	3%
Parks and recreation organizations	3%
Media	3%
Transportation organizations	2%

Less than 1% of LHDs reported providing financial support to organizations included in Figure 9.2 but not listed in this table.

LHD Policy-Making and Advocacy Activities

Respondents were asked in a Profile questionnaire module to characterize the extent to which their LHDs have participated in selected policy-making and advocacy activities over the last two years.[2] Figure 9.5 shows the percentages of respondents that reported any participation in these activities, and includes breakdowns by size of population served and governance type. In each of the following activities, at least 80% of all LHDs reported participation: working with the media, appearing before civic groups, communicating with officials, and participating in local boards or panels.

LHDs serving larger populations (50,000 or more) were more likely than those serving smaller populations (less than 50,000) to participate in each of the activities, with the exception of participating in discussions with the local board of health. For most of the activities, a higher percentage of LHDs that are units of local government reported participation, compared to LHDs that are units of the state health agency. Most of these differences were not significant, with the exception of participating in discussions with the local board of health; giving public testimony to state or local policymakers (other than the local board of health); and providing technical assistance for drafting proposed legislation, regulations, or ordinances.

Figure 9.5 | **LHD Participation in Selected Policy-Making and Advocacy Activities (by LHD Characteristics)**

	Percentage of respondents				
	All LHDs	LHDs serving		LHDs that are units of	
		smaller populations (<50,000)	larger populations (50,000 +)	local government	state health agency
Selected policy-making and advocacy activity	n=423	n=196	n=227	n=336	n=87
Worked with the media to inform public health (PH) policy	85%	80%	96%	85%	86%
Appeared before civic group to speak about PH issues	83%	78%	93%	82%	86%
Communicated with officials regarding proposed legislation, regulations, or ordinances	80%	74%	94%	82%	73%
Participated on local boards or advisory panels responsible for PH policy	80%	74%	92%	82%	73%
Participated in discussions with local board of health (LBoH)*	78%	94%	95%	96%	81%
Prepared issue briefs for local or state policymakers	69%	60%	86%	71%	61%
Appeared on radio or TV to speak about PH issues	69%	57%	92%	70%	65%
Gave public testimony to state or local policymakers (other than LBoH)	60%	50%	80%	65%	38%
Particiapted on state boards or advisory panels responsible for PH policy	60%	48%	84%	62%	50%
Provided technical assistance for drafting proposed legislation, regulations, or ordinances	58%	45%	84%	61%	43%

**Reflects percentage of respondents in jurisdictions with a local board of health.*

Addressing Health Inequities

Health inequity is a term used to describe differences in the health status among groups within a population that are systematic, avoidable, and unfair. In the United States, health inequities exist for almost all conventionally measured health outcomes. The causes of health inequities include racism and class and gender discrimination, which generate deteriorating social and economic environments, an absence of basic social services, a lack of affordable housing, poor schools, and limited access to transportation. Many LHDs are working to address these root causes of health inequities, and this work typically involves advocacy, partnering with other community agencies and organizations, and tracking influences on health inequity.

Figure 9.6 | **LHD Activities to Address Health Inequities**

Activity	Percentage of respondents
Supporting community efforts to change the causes of health inequities	62%
Educating officials about health inequities and their causes	56%
Describing health inequities in LHD jurisdiction using data	55%
Training workforce on health inequities and their causes	51%
Prioritizing resources and programs to reduce health inequities	50%
Taking public policy positions	28%
Recruiting workforce from communities adversely impacted by health inequities	26%
Conducting original research linking health to differences in social or environmental conditions	11%
None of these	21%

n-402

Includes LHDs reporting activity in last three years.

A Profile questionnaire module included questions to assess LHD efforts to address health inequities in communities. Figure 9.6 displays the percentages of LHDs that reported activity in selected areas within the last three years. With each of the following activities, over half of respondents reported LHD engagement: supporting community efforts to change the causes of health inequities (62%); educating officials about health inequities and their causes (56%); describing health inequities in LHD jurisdiction using data (55%); and training workforce on health inequities and their causes (51%). Respondents were also asked to characterize the status of efforts within their LHDs to address health inequities (Figure 9.7). These results suggest that some LHDs have made addressing health inequities a major focus of their activities. Thirty-three percent of respondents have dedicated staff members who focus on health inequities, and 32% reported applying for grants to reduce health inequities.

Figure 9.7 | **Characterization of LHD Efforts to Address Health Inequities**

Statement	Percentage of respondents
Staff have at least some tools and resources necessary to address health inequities	63%
Health inequity efforts are integrated into the work of many programs	60%
Most staff understand the causes and consequences of health inequities	56%
Dedicated staff focus on health inequity efforts in our LHD	33%
LHD applied for/received grants to reduce health inequities	32%
Administration believes that work on health inequities is beyond our agency mandate	7%
None of the above	15%

n=397

Includes respondents that checked each statement.

Endnotes

1 Choices were: exchange information; work together on activities or projects; LHD provides financial resources; LHD has leadership role within partnership; no relationship; and, organization does not exist in jurisdiction. Respondents were asked to check all that applied.

2 Choices were: none; a little; some; and a lot. Respondents were asked to check one only. Percentages in Figure 9.5 include LHDs that selected a little, some, or a lot.

CHAPTER

10

Information Technology and Management

Fast Facts

98% of LHDs have some type of Internet access, and 93% have high-speed Internet access.

27% of LHDs control their data management operations, while 32% share control with their state health agency or city/county information technology department.

70% of LHDs have a Web site.

The capacity to efficiently and effectively use information is fundamental to all public health activities. Consequently, information management and communication are key components of the foundation, or infrastructure, on which the public health system is built. LHDs have made great progress in recent years with acquiring and using information technology.

LHD Access to Information Technology

Access to information technology has increased rapidly for LHD staff over the past decade. Access to computers and the Internet is nearly universal, and the vast majority of LHDs are equipped with high-speed Internet access and cellular phones. Figure 10.1 illustrates the percentages of LHDs that do *not* supply any LHD staff with selected technologies, by size of population served. LHDs serving small populations are more likely to be without these technologies than those serving large populations.

An electronic communications survey conducted by NACCHO in 1999 provides a baseline for comparison.[1] In 1999, less than half of all LHDs (47%) reported having continuous, high-speed Internet access. Access varied by size of population served, ranging from 28% for jurisdictions serving populations of less than 25,000 to 80% for jurisdictions serving populations of more than 1 million. Federal funding for the Health Alert Network[2] has been an important factor in achieving nearly universal Internet access for LHDs.

Fourteen percent of all LHDs (and 25% of those serving populations of less than 25,000) do not supply any staff with cellular phones. Personal data assistants (PDAs), such as the Blackberry or Palm Pilot, are becoming more common; half of all LHDs supply them to some staff. Figure 10.2 provides information on the mean percentage of LHD staff supplied with selected technologies, by size of population served. While computer and Internet access are typically supplied to nearly all staff, cell phones and PDAs are supplied to a much smaller fraction of staff (likely based on job function).

Figure 10.1 | **LHDs Without Selected Information and Communications Technologies (by Size of Population Served)**

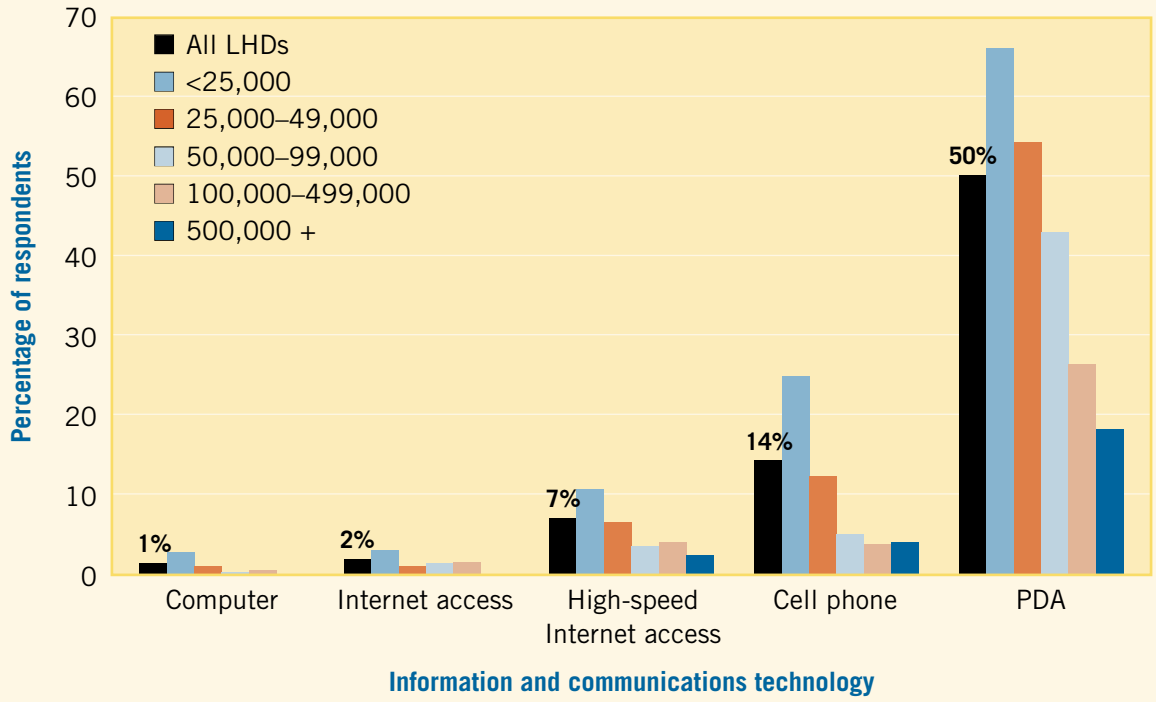


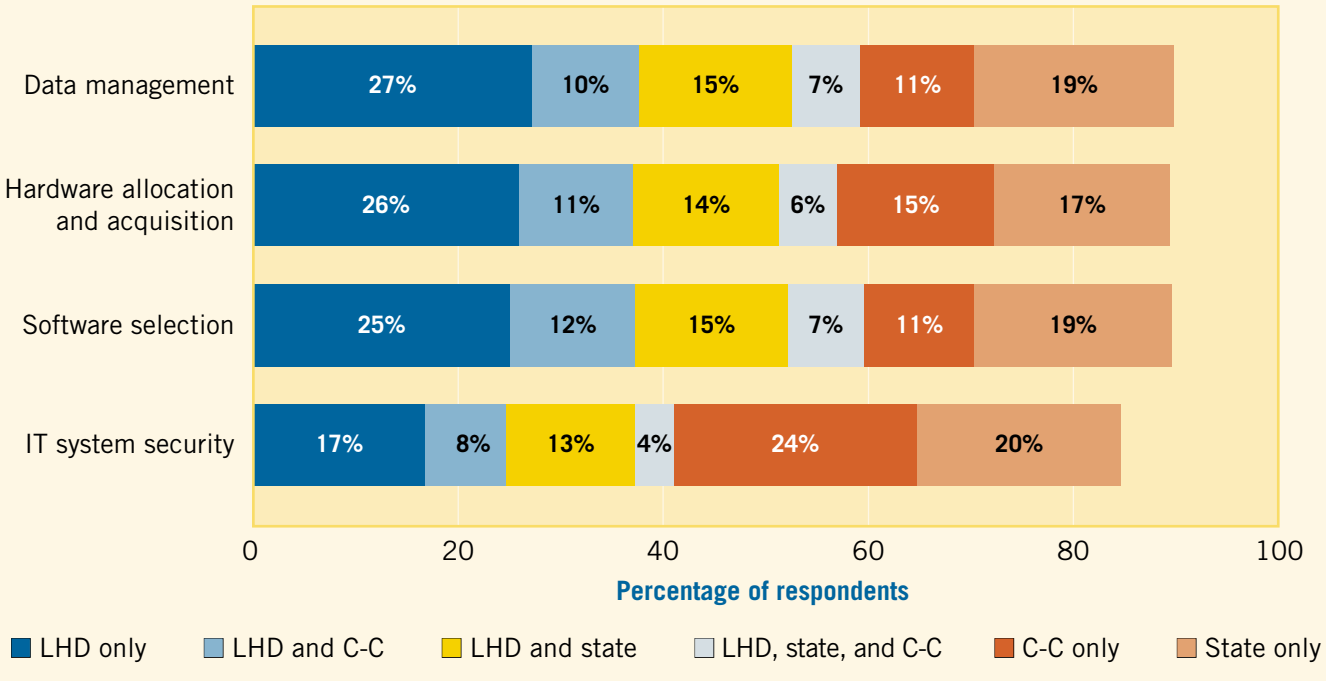
Figure 10.2 | **Mean Percentage of Staff Supplied by LHD with Selected Information and Communications Technologies (by Size of Population Served)**

Technology supplied by LHD	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000 +
Computer	91%	90%	94%	91%	91%	91%
Internet access	91%	91%	94%	88%	88%	90%
High-speed Internet access	85%	84%	87%	85%	85%	85%
Cell phone	34%	35%	35%	37%	30%	28%
PDA	10%	12%	11%	9%	9%	8%

Management of LHD Information Technology

Because LHDs are usually units of local government or units of the state health agency, other agencies are sometimes involved in managing information technology for LHDs. Respondents were asked to indicate all of the agencies that control selected information management functions for their LHDs. Figure 10.3 summarizes the responses to this question.[3] Less than 30% of LHDs have sole control over any of these functions. Since respondents indicated that only 30% of LHDs employ information systems specialists,[4] it is not surprising to see that other agencies (such as the state health agency or the city/county information technology department) are involved in these functions. Between 57% and 60% of LHDs exercise some control over hardware allocation and acquisition, software selection, and data management for the LHD. Forty-two percent of LHDs exercise some degree of control over information technology (IT) system security.

Figure 10.3 | **Control of Selected LHD Information Management Functions**



C-C = city or county IT department.

LHD Web Sites

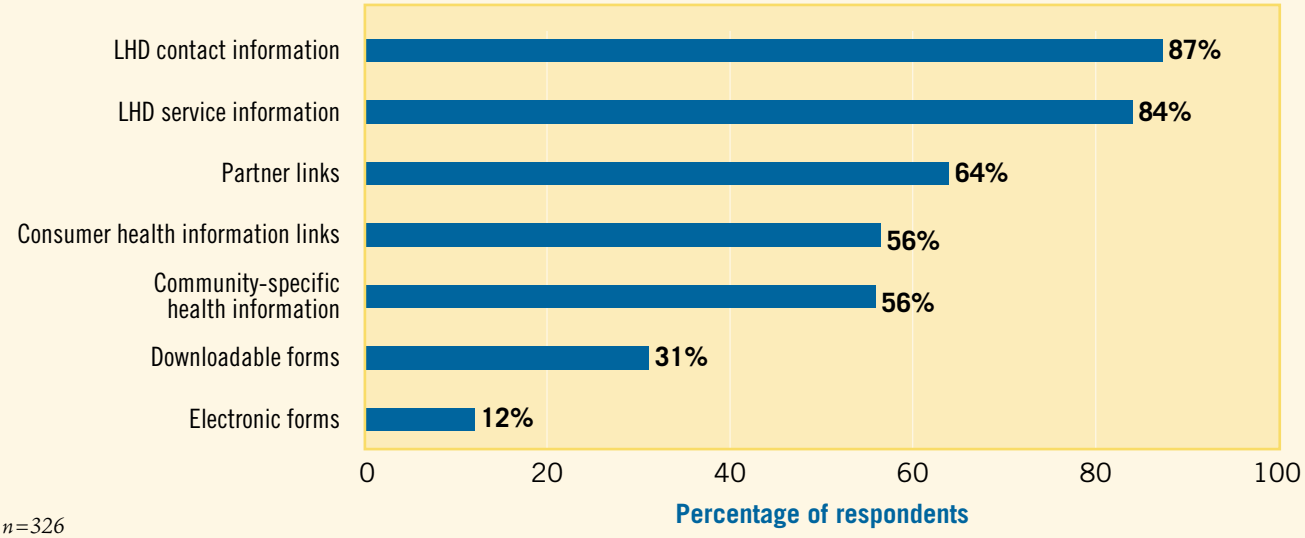
Information on LHD Web sites was collected in a Profile questionnaire module. Seventy percent of all LHDs, and 89% of LHDs serving populations of 50,000 or more, have Web sites (Figure 10.4). Figure 10.5 provides information on the contents of these Web sites. A large majority of LHD Web sites include LHD contact and service information, and many include links to partner organizations and to sources of consumer health information, as well as community-specific health information generated by the LHD. Some LHDs have forms for regulated entities available on-line, though few can accept these forms electronically.

Figure 10.4 | **LHDs with a Web Site (by Size of Population Served)**

Size of population served	Percentage of respondents
All LHDs	*70%*
<25,000	55%
25,000–49,999	74%
50,000–99,999	87%
100,000–499,999	89%
500,000 +	92%

n=423

Figure 10.5 | **Features of LHD Web Sites**



n=326

Endnotes

1 National Association of County and City Health Officials. (1999). *Information Technology Capacity and Local Public Health Agencies. NACCHO Research Brief Number 4.* Washington, DC: NACCHO. Available at http://archive.naccho.org/documents/Research_Brief_4.pdf.

2 The Health Alert Network program, which began in 2000 and has since been integrated into CDC's emergency preparedness program, provided funding to help state and local health departments acquire capacities for secure high-speed electronic communication.

3 Responses displayed in Figure 10.3 do not total 100% because the "someone else" category was omitted from the figure for clarity.

4 See pages 31-32 of this report.

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